The Relationship Between an Institution's Intercollegiate Financial Support and Success in Intercollegiate Athletics

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ABSTRACT

Experts warn intercollegiate athletics administrators of over-commercialization and the inevitability of budget crisis due to increasing costs associated with Title IX compliance, the current arms race, and decreased state financial support of public universities. It is imperative that alternative capital management solutions are identified. Rather than resource acquisition, this research emphasizes resource allocation and capital management resolutions for those in budget deficit. The primary purpose of this study was to determine the nature of the relationship between an institution's financial support of its intercollegiate athletic department and that department's success on the playing field. Specifically, this research attempted to determine if athletic departments can rely on a systematic approach to budget allocation rather than simply or primarily relying on revenue generation, with departmental outcome success measured by the former national Sears Directors' Cup (SDC) standings. By studying the relationship between athletic success measured by the SDC and the financial resource allocation in respective athletic departments, this study provides a methodical analysis of capital management within intercollegiate athletics at the Division I level.

Reporting a 69% response rate, a regression analysis identifies a set of six specific allocation variables as significant predictors of success in the SDC as measured by point accumulation over a three year period. Recruiting expenditures, student aid, coaches' salaries, team operational expenses, administrative operational expenses are derived from the Equity in Athletics Disclosure Act (EADA) report and capital expenses or debt service was identified by respective athletic representatives. Also, these six allocation variables account for over 90% of the variance in SDC point accumulation.

This study also validates concerns of an "arms race" in intercollegiate athletics by empirically reporting a significant difference between successful and unsuccessful intercollegiate programs, not only in terms of total budget but also budget allocation. This, coupled with a significant relationship between a gross budget amount and success in the SDC, supports claims that certain Division I universities have a distinct financial advantage over others and that disparity leads to success in the SDC. Although this research offers a model of financial allocation for athletic administrators, it confirms that money does matter.

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CHAPTER I

Introduction

The National Collegiate Athletics Association (NCAA) was founded in part to endorse intercollegiate athletics as a crucial component of the institution in addition to the student-athlete's contributions to the integrity of the student body, while promoting principled values such as diversity, proper management of fiscal resources, national championship competition and student athlete development (NCAA, 2002a). Athletic departments have become very large economic, social, and political agents in American higher education, and are easily among the largest operational units on campus (Padilla & Baumer, 1994). In an attempt to maintain competitiveness on the playing field, intercollegiate athletic administrators now compete in an "arms race" (facility construction, increasing travel and equipment costs, inflated coaches salaries) creating budget and mission distortions as well as concern for the future stability and integrity of intercollegiate athletics ("Big Ten faculties", 2001; Rolnick, 1998; Suggs, 2001a; Suggs, 2001c). With the changing face of intercollegiate athletics and the state of our fluctuating economy, athletic departments are being forced to do more with less while sustaining sizable budget cuts, which in turn force changes in their traditional patterns of operation. Although intercollegiate athletic programs have an obligation to their academy's mission, the latest shift towards a more commercialized approach is increasing the finances necessary to compete nationally; especially at the Division I level (Atwell, 2001). The condition to be self-supporting encourages programs to seek commercial sponsors and to expand their revenues in nontraditional ways, such as luxury suite sales and licensing

contracts, which further differentiates the athletic department from the very educational programs on campus they are meant to supplement.

In an attempt to explore the efficacy of budget reallocation rather than budget inflation, effective fiscal management may be the answer to the ever-present growing arms race. While commercial banks have been the primary source of debt finance, many lending institutions are now emphasizing capital efficiency rather than asset growth (Sissen, 1999). Borrowed from strategic management literature is the Resource-Based View (RBV) of the firm, which places emphasis on those resources most probable to allow organizations to endure a sustained competitive advantage over their competition (Amis, Pant & Slack, 1997; Barney, 1991; Barney, Wright & Ketchen, 2001; Hall, 1992; Mahoney, 1995; Mahoney & Pandian, 1992; Smart & Wolfe, 2000). This endured competitive advantage will be enjoyed by those who place emphasis on proper resource management rather than resource acquisition. Also, reacting to today's struggling economy, financial and economic literature resound with the concepts of fiscal and capital management, financial efficiency, and resource allocation (Haddock, 2001; Mintz, 2002; Nelson, 2002; Peacock & Copper, 2000; Pratt, 2002; Sissen, 1999; Zolkos, 2000). Additionally, although state appropriations for higher education generally increased throughout the 1990's due to a strong economy, cost management strategies and improved productivity are common themes in higher education literature as state support of public universities is now decreasing due to other priorities (Gaither, 2002; Layzell & Caruthers, 2002; Middaugh, 2002; Robst, 2001).

An inspection of the field of sport management, and more specifically intercollegiate athletics, finds little research or literature pertaining to cost reduction,

resource reallocation, or fiscal and capital management in athletic departments. Rather, most studies offer solutions based in both traditional and innovative forms of revenue generation such as merchandising, licensing, athletic development, sponsorship sales, television and radio contracts, naming rights, suite sales, endorsement contracts, and ticket revenue (Amis, Pant & Slack, 1997; Atwell, 2001; Byers, 1998; Bynum, 2002; Covell, 2001; Furst & Schmidt, 2001; Howard, 1999; Howard & Crompton, 1995; Kellogg, 2002; Mahony & Pastore, 1998; Padilla & Baumer, 1994; Plinske, 1999; Rolnick, 1998; Sperber, 1990; Sperber, 2000; Stotlar, 2002; Suggs, 2002d; Weiner, 2002; Zimbalist, 2001). The trend in intercollegiate athletics is to make more so you can spend more, but not all departments have this luxury. Inevitable trade-offs exist between profit maximization strategies and the academic purpose and goals of a major university, and the successful university will balance on that fine line better than will those enduring sustained deficits (Padilla & Baumer, 1994). The bottom line is that university presidents and athletic administrators must use capital management strategies in order to efficiently and effectively control costs while remaining competitive on the playing field.

There have been many attempts to define success in intercollegiate athletics. Measures of success in intercollegiate athletics include goal attainment, ability to properly manage system resources, budget efficiency, stakeholder satisfaction, employee longevity, and win-loss percentage (Cunningham, 2002; Putler & Wolfe, 1999; Sack, 2001; Scott, 1999; Smart & Wolfe, 2000; Trail & Chelladurai, 2000). Generally indicating an organization's overall operating purpose, examination of intercollegiate athletic department mission statements suggests that of highest priority to athletic administrators is winning as well as financial stability. Presented by Sears, Roebuck and

Co., *USA Today* through 2002, and the National Association of Collegiate Directors of Athletics today, the Directors' Cup, formerly Sears Directors' Cup (SDC) as it will be referred throughout, is currently the only objective cross-sectional all-sports national recognition award in intercollegiate athletics. Any intercollegiate athletic program competing in post-season championships are not only representing its institution on the playing field, but also vying for points in the SDC standings. A commonly accepted economic principal is that a larger budget should in turn lead to more success. Intuitively, the larger an athletic budget the more on field success that athletic department should endure. This widely accepted model by athletic administrators has lead to the growing arms race and existing economic turbulence in intercollegiate athletics. If a link between resource allocation and SDC success can be established, athletic administrators will then have options for success other than revenue generation.

Purpose of Study

The primary purpose of this study was to determine the nature of the relationship between an institution's financial support of its intercollegiate athletic department and that department's success on the playing field. Specifically, this research will attempt to determine if athletic departments can rely on a systematic approach to budget allocation rather than revenue generation, with departmental outcome success measured by the national Sears Directors' Cup standings. Recognizing that there are many variables to be considered in athletic success, the Sears Directors' Cup places emphasis on a broad-based competitive athletics program that experiences success in national competition.

This study will provide a literature review, which initially presents an overview of the National Collegiate Athletic Association, the major governing body of intercollegiate

athletics, followed by a discussion of three major contributors to financial pressure in intercollegiate athletics: Title IX, the 'arms race', and declining state support of public universities. This discussion will be followed by an examination of literature aimed at solving some of these problems in intercollegiate athletics. Finally, literature found in business and higher education will be summarized, both of which highlight financial problems in their respective areas as well as suggestions for cost containment. This analysis will demonstrate the need to introduce such financial management strategies into a deficient sport management literature.

As athletic administrators are continually challenged to balance a red budget and account for their productivity, or lack thereof, fiscal efficiency should become a common theme. By studying the relationship between athletic success measured by SDC standings and the financial resource allocation in respective athletic departments, this study offers a methodical approach to capital management in intercollegiate athletics.

Significance of Study

As the economic significance of sports continues to increase, there is a growing need for economists and others in the sport management field to take advantage of the opportunity to develop a substantial base of literature (Olafson, 1990; Parks, Shewokis & Cosa, 1999; Szymanski, 2001). While there is an emergence of literature discussing both traditional as well as innovative alternatives to increase revenue in sport organizations, sport management research is still lagging behind research being developed in the fields of strategic management, finance, economics, and higher education. Consistent in the current sport management literature is thematic discussion on issues such as economic impact analysis (Chang & Canode, 2002; Howard & Crompton, 1995; Hudson, 2001),

commercialism (Amis, Pant & Slack, 1997; Atwell, 2001; Bynum, 2002; Howard & Crompton, 1995; Padilla & Baumer, 1994; Stotlar, 2002), development endeavors in universities and athletic departments (Plinske, 1999; Rhoads & Gerking, 2000), transformational leadership and organizational structure in intercollegiate athletics (Baxter, Margavia & Lambert, 1996; Cunningham, 2002; Mahony & Pastore, 1998; Putler & Wolfe, 1999; Scott, 1999; Stoldt, Miller & Comfort, 2001; Trail & Chelladurai, 2000; Weaver & Chelladurai, 2002), and warnings of academic transgressions (Byers, 1998; Rolnick, 1998; NCAA, 2000; Sack, 2001; Shulman & Bowen, 2001; Sperber, 2000; Sperber, 2002; Suggs, 2000b; Wyatt, 1999). There is little to nothing, however, suggesting capital management alternatives for athletic administrators who cannot afford to keep up with the arms race.

It has been documented and warned that the increase in commercialism in intercollegiate athletics may be detrimental to its future integrity (Atwell, 2001; Barlow, 2001a; Big Ten Faculties, 2001; Lee, 2000; Padilla & Baumer, 1994; Suggs, 2001a; Suggs, 2001c). The combination of rising financial pressure from massive new investments in facilities and coaches' compensation due to the arms race, Title IX compliance considerations (USGAO, 2001), and decreasing state appropriations to public universities (Kellogg, 2002; Lee, 2002b) acutely increases the premium on athletic success (Zimbalist, 2001). Division IA athletic department budgets are at an all time high, averaging over $22 million (NCAA, 2002a), with a NCAA high budget in The Ohio State University Department of Athletics in excess of $79 million (Lee, 2002a). Promoting efficient fiscal management rather than budget inflation, increased graduation rates rather than decreased admissions standards, equitable opportunities across all genres

rather than only those in high profile sports, as well as more representative on field success measures are all options for reform in intercollegiate athletics (NCAA, 2000).

While athletic administrators and academics in the sport management field continue to find ways to increase revenue in an attempt to offset spiraling costs, literature found outside of sport management may have some implications. Business managers in both the public and private sectors have for years attempted to advise ways to combat unnecessary costs and budget enlargements while continuing to compete for market share. Capital efficiency has become the battle cry of CFOs and finance directors worldwide. In the wake of the global economic slowdown, the dot-com demise, and the September 11 tragedy, financial institutions are reexamining their spending initiatives, leading to project resizing, encouraged better capital management, or reallocation of resources (Nelson, 2002). A low interest environment and increased economic turbulence have triggered a shift in focus to capital management and financial efficiency (Arwidi, 1999; Haddock, 2001; Mintz, 2002; Nelson, 2002; Peacock & Copper, 2000; Pratt, 2002; Sissen, 1999; Zolkos, 2000). Most specifically, the Resource-Based View (RBV) of the firm offers a unique strategic approach to resource allocation, again emphasizing the need for better capital management (Amis, Pant & Slack, 1997; Barney, 1991; Barney, Wright & Ketchen, 2001; Hall, 1992; Mahoney, 1995; Mahoney & Pandian, 1992; Smart & Wolfe, 2000). In fact, this theory suggests that less important is the actual acquisition of resources if proper allocation methods are observed for endured success. The notion of linking success, whether defined financially in corporate literature or as winning percentage in intercollegiate athletics, with resource distribution is an element too often ignored in the sport management literature. If it can be established that

emphasis placed on resource allocation rather than the arms race can lead to success on the playing field then extraordinary pressure will be lifted from athletics administrators, allowing them to concentrate on resource management rather than increasing revenues.

The sport management field has not yet begun to address neither the need for better capital management nor the benefits of it. Success is an important component of intercollegiate athletics, but that success must be measurable and must not come at the expense of the entire program. Linking success to resource allocation, most specifically budget allocation, may open financial management doors in intercollegiate athletics that have not yet been explored. By using athletic budget statements over the last three years to determine financial spending per operational unit and Sears Directors' Cup standings to establish success measures, this study will investigate possible relationships between budget allocation in intercollegiate athletic departments and the success that those respective athletics programs produce on the playing field. In doing so, a gap in the literature on fiscal efficiency in intercollegiate athletics will be addressed. If resource distribution does indeed predict success measured by the Sears Directors' Cup, perhaps athletic administrators can begin to rely far less on the "arms race".

This comparative analysis will be of particular interest for those institutions wishing to critically examine their current budget allocation while trying to remain nationally competitive on the playing field. The use of budget allocations rather than distributive gross amounts allows for generalizations to be made across all divisions of intercollegiate athletics and may serve as a model for future budget reforms. This study will also fill a void in the sport management literature that has been long a topic in areas

outside of sport, such as business organizations and higher education, with respect to capital management and cost containment.

Again, an unmet assumption in intercollegiate athletics has been that more money spent will directly lead to increased endured success on the playing field, measured by the Sears Directors' Cup. While athletic administrators struggle to keep up with the labeled arms race in intercollegiate athletics by looking for creative and innovative revenue streams, an important question that needs to be addressed empirically is whether resource allocation would better solve their budget crises. If resource allocation can be systematically linked to success in the Sears Directors' Cup, athletic administrators can then reprioritize their time and energies to capital and resource management. The following research questions thus guided the scope and direction of this investigation.

Research Questions

1. What is the percentage of an institution's overall budget allocated to its intercollegiate athletics program and its relationship with that program's success as measured by Sears Directors' Cup standings?
2. What is the relationship between the gross amount of an intercollegiate athletic department's budget and the program's success as measured by Sears Directors' Cup standings?
3. What is the distribution pattern (i.e., allocation) of dollars within an athletic department's budget and the relationship of that pattern to the department's success as measured by Sears Directors' Cup standings?

CHAPTER II

Review of the Literature

This chapter addresses the literature in the sport management industry, as well as briefly discussing related areas of business and higher education. An inspection of the literature specifically aimed at solving problems in intercollegiate athletics reveals severe deficiency in financial management and cost containment strategies, thus the need for a summary of similarly related issues in areas other than sport. This chapter will provide an overview of the National Collegiate Athletic Association, the major governing body of intercollegiate athletics, followed by a discussion of three major contributors to financial pressure in intercollegiate athletics: Title IX, the 'arms race', and declining state support of public universities. Then an examination of literature aimed at solving some of these problems in intercollegiate athletics will follow. Finally, literature found in business and higher education will be summarized, both of which highlight financial problems in their respective areas as well as suggestions for cost containment. Success in athletics will be operationally defined in the last section of this chapter, which will include how that measure is distributed, from where it originated, concluding with a discussion of other success measurement attempts in intercollegiate athletics and their use in the sport management literature.

The State of Intercollegiate Athletics

Originally drafted as the Intercollegiate Athletic Association of the United States (IAAUS), the National Collegiate Athletic Associate (NCAA) was borne to provide structure in rules and safety in intercollegiate football. Summoned by U.S. President Theodore Roosevelt in 1905, college athletics leaders met in New York City to discuss

rules changes and regulations that might save the collegiate game on the gridiron and tender structure never before offered to amateur sport. Originally constituted on March 31, 1906, the IAAUS existed as a discussion group and rules-making body for almost 15 years before sponsoring post season championships in college athletics. As of 1921 the intercollegiate athletics governing body, now the NCAA, existed to provide a platform for national championship competition, extending itself outside the football field, permeating all other competitive collegiate sports (http://www.ncaa.org/about/history.html).

As problems with recruiting, gambling, financial aid abuses, and uninhibited growth troubled the committee, the NCAA sought leadership in Walter Byers as its first executive director in 1951. Among other things, Byers gave the association a home with its headquarters in Kansas City, invoked a program to control televised football games, divided the member institutions into three divisions based on financial support from the university, and established three legislative branches to help govern rules, eligibility and championships (http://www.ncaa.org/about/history.html). Under only its fourth executive director in almost 100 years, current President Myles Brand, the NCAA continues to provide competitive opportunities for men and women as a supplement to their academic experience by working through their mission:

> *...Conduct efficiently the business of the Association as directed by the membership, a basic purpose of which is to maintain intercollegiate athletics as an integral part of the educational program and the athlete as an integral part of the student body.* (NCAA, 2002)

One resounding concern in intercollegiate athletics is the academic performance of student-athletes, more specifically their transgression from the student body at large.

The Game of Life: College Sports and Educational Values (Shulman & Bowen, 2001) addresses this concern by using the "college and beyond" data that has followed cohorts since 1959. This longitudinal study attempts to depict certain trends in intercollegiate athletics with regard to academic transgressions and proceeds to explain why certain observed patterns may be so. Contrary to public belief, student athletes at academically selective colleges and universities graduate at higher rates than do students at large. Statistics provided by the NCAA (2000) on college and university cohorts entering school in the fall of 1993 show that male student athletes graduate at a rate three percent lower than their non-athlete counterparts, with 51% of student athletes graduating in six years versus 54% of students at large. Female student athletes, on the other hand, enjoyed a graduation rate ten percent higher than their counterparts, with 69% of female student-athletes finishing school within six years as opposed to 59% of those students not involved in athletics. Also, both men and women student athletes enjoy a sizable earnings advantage over their classmates and student athletes are more often placed into leadership and management category jobs than are students at large (Shulman & Bowen, 2001). While student athletes still experience lower grade point averages than do those at large, these findings seem to suggest that although academic performance is important when considering whether or not a student graduates, student athletes may be obtaining other life skills deemed important by industrial or employment standards.

Title IX's Financial Challenge to Intercollegiate Athletics

Another significant issue in intercollegiate athletics is the continued effort of athletics departments to comply with Title IX. After years of lobbying for legislation to

help support women's athletics, the Educational Amendments Act of 1972 passed Title IX, which in part said:

> "No person in the U.S. shall, on the basis of sex, be excluded from participation in, be denied the benefits of or subjected to discrimination of any kind under any educational program or activity that receives federal funding." (Shaw, 1995)

Designed to alleviate and eventually eliminate disparate treatment of an under-represented gender in any federally funded institution or program, Title IX sought to right the wrong of past sexual discrimination in education. Although written with language allowing interpretation and regulation in any federally funded activity, Title IX has been most prominent in fighting cases of discrimination in athletics.

The Department of Education commissioned the Office of Civil Rights (OCR) to regulate Title IX compliance, leading the OCR to provide their Policy Interpretation, or better known as the three-prong test. The Policy Interpretation states that in order to be in compliance with Title IX, athletic departments must fulfill at least one of the following three tests:

1. Proportionality
2. History of Program Expansion
3. Accommodation of Interest (Shaw, 1995)

While athletic administrators use this guide to comply with Title IX they find themselves in a financial bind with the increased costs of adding women's varsity sports.

Commissioned by Congress to study intercollegiate athletic department patterns in the adding and discounting of men's and women's teams, the General Accounting Office (GAO) investigated all members of the National Collegiate Athletic Association (NCAA) and the National Association of Intercollegiate Athletics (NAIA) over the past

two decades (1982 – 1998). Through collection of participation statistics offered by the NCAA and NAIA as well as a questionnaire addressed to every athletic director in the 1310 combined institutions, the GAO set out to answer the following questions:

1. How did the number of men's and women's intercollegiate sport participants and teams at 4-year colleges and universities change since 1981-82?
2. How many colleges and universities added and discounted teams since the 92-93 season and what influenced their most recent decisions to and or discount teams?
3. How did colleges and universities make and implement decisions to add or discount sports teams?
4. When colleges or universities added teams, what types of strategies did they use to avoid discounting sports teams or severely reducing their funding?

Experiencing a 91% response rate from athletic directors (1,191 returned) and access to participation and team data from the past two decades, the GAO presented their findings in report in March 2001.

Among other things, the GAO report briefly spoke to the overall financial impact that adding or discounting sports has on a department's budget. On average across all divisions, adding a sport to an individual program causes a 6% increase in expenditures while discounting sports only facilitates a 4% decrease in the operating budget. Needless to say, football impacts the budget the greatest in either direction, increasing costs 31% on average when adding teams and reducing expenses by 24% on average when discounting. Lower profile sports such as golf or wrestling, however, generally impact the operating budget by a mere total of 2% either way. It is questionable if discounting athletic programs such as golf or wrestling truly helps to remedy a financial crisis.

Not surprisingly, the GAO also found that financial impact varies per level and size of athletic program and budget. Larger schools and athletic departments generally found in NCAA Division I colleges and universities, experienced smaller impact on their

budget when discounting or adding teams. Conversely, smaller schools, such as Division III or NAIA member institutions, experienced larger impacts financially. On average, when a women's team was added it impacted the expenditures in athletics by 3% in Division I, 5% at the Division III level, and 9% in NAIA institutions. Men saw a similar trend when adding teams with average increases of 2%, 8%, and 13% respectively.

In today's scope of intercollegiate athletics, financial integrity and fiscal responsibilities are at the top of departmental priority lists. The figures provided by the GAO do not support that simply discounting teams is the answer in financial crisis, nor that the addition of teams handcuffs administrators economically (with the exception of football, of course). Athletic directors and university administrators must look elsewhere to gain support for intercollegiate athletic programs while continuing to maintain control over internal expenditures.

Although over 70% of those colleges and universities that added intercollegiate teams were able to do so without having to discount another, fiscal management was not ignored. Short of an endless stream of endowment dollars, athletic department administrators increasingly have to rely on new and creative solutions to financially supporting their programs. In depth analysis of four individual programs (2 Division IA, 1 Division IAAA, and 1 Division III) revealed a number of suggestions for growth without sacrifice. These universities have all displayed the ability to add teams without having to cut teams or even severely contain costs across individual programs. All four emphasized that the environment must be right and they that "one size does not

necessarily fit all" (USGAO, 2001). In order to move forward there must be certain facilitating factors present, four of which are:

1. Presidential support of athletic growth for both genders
2. Athletic Director sees benefits for all when addition of teams are experienced
3. Identify new/innovative funding sources
4. Support of fans/community/alumni

Without at least the majority of these characteristics present, supplementation from elsewhere without cutting teams may not be possible.

Also identified by these four programs were strategies they have employed to help supplement athletic department growth and prosperity in numbers and finances. Among their suggestions were the obvious endeavors such as increased donations from alumni and community, more aggressive fund raising plans, and a reallocation of excess in the department's budget. Other, more innovative approaches included:

- Rental Fees: Allowing outside agencies or parties to use athletic facilities for many purposes at a certain fee priced considerable above that of cost
- Establish partnership between the university and local community
  - Cost sharing projects such as competition or storage facilities and hospitals have proven to benefit both athletic departments and second parties
  - Joint-venture endeavors have seen similar success
- Money put into investments that enjoy higher rate of return in interest
- Cap program fund raising and allow excess to be put into a "flex pot" for use at the athletic director's discretion
- Foster community relationships that will help with department reputation and image

Although not every college or university may be privileged enough to dwell in an environment that fosters such creativity or freedom, the point to comprehend is that there are viable sources of financial support available outside that of traditional methods. Regardless of historical experiences in intercollegiate athletics in terms of funding additional teams or claiming financial crisis to eliminate others, if college sport is to

survive, as we know it, additional sources of revenue or financing opportunities need to be entertained.

The 'Arms Race' in Intercollegiate Athletics

As the NCAA has grown, so too has the business of intercollegiate athletics. Now recognizing over 35 competitive men's and women's sports at the varsity level and sponsoring association in almost 1,300 member institutions, the NCAA has enjoyed heightened participation in college athletics around the nation (http://www.ncaa.org/fact_sheet.html). This increased level of participation and public recognition, however, has not gone without its accompanying unintended consequences. Although the NCAA attempts to control and govern intercollegiate athletics per its mission, the sheer number of departments and participants holds inevitable corruption and distortion. Originally commissioned in 1991 by the NCAA to address problems present in intercollegiate athletic programs, the Knight Foundation Commission on Intercollegiate Athletics recently presented their second set of recommendations for "Reconnecting College Sports and Higher Education" in an attempt to control a situation in sport that has seemingly lost control. In 1991, the Knight Foundation presented a "one-plus-three" approach to regain control of intercollegiate athletics, which include presidential control (one) over academic integrity, financial integrity, and independent certification for schools (three), which were the major concerns at that time. Although those issues have not been completely alleviated, the commission's new plan calls for a coalition of presidents (one) to uniformly and jointly address academic transgressions, an increasingly growing arms race, and heightened commercialization (three) in our athletic programs (NCAA, 2000). While this call to action of university presidents emphasizes a

need for academic enhancement by student-athletes and a reversal of an increasing athletic budget, it also acknowledges the inevitable commercialization of our society and the questionable role it plays in our athletic programs.

While compliance with Title IX continues to weigh on the minds of athletics administrators and academic transgressions by student-athletes are minimally being addressed through a number of programs offered by the NCAA, as well as shown by their gesture in recently hiring a university president, Myles Brand, to continue its mission, other areas of concern in intercollegiate athletics are being met with extreme pessimism. The developing "arms race" and increased commercialism in intercollegiate athletics is receiving tremendous scrutiny from academics, university administrators, and other experts in the academe and intercollegiate athletics. The "arms race" has been described in a number of ways, but perhaps best as a situation in which increased spending at one school are associated with increases at other schools, whether that is in terms of coach's salaries or new athletic facilities. (Litan, Orszag, & Orszan, 2003). Both Big Ten and Pac Ten faculty leaders have called for reform in intercollegiate athletics, specifically addressing concerns of growing budgets and commercialism (Suggs, 2001a; Suggs, 2001c). With a NCAA high budget in The Ohio State University Department of Athletics in excess of $79 million for the athletic year 2002-2003 (Lee, 2002a), Division IA athletic department budgets are at an all time high, averaging over $22 million (NCAA, 2002a). While the NCAA continues to promote its mission, it has become overwhelmingly obvious if a program wants to compete at the highest level in intercollegiate athletics it is going to cost a lot of money.

The backlash of this ever present arms race has been for colleges and universities to take structural and programming alternative measures with hopes of remaining competitive on the playing field. Just recently the University of Minnesota, under tremendous pressure from its central administration and board of regents, merged their women's and men's athletic departments with hopes of saving overlapping administrative costs in excess of $1.5 million (Suggs, 2002a; Suggs, 2002c). Even this suggestion was seemingly insignificant as the department sought to erase a projected $21 million deficit by also proposing program cuts of their men's and women's golf teams as well as the men's gymnastics program (Furst & Schmidt, 2001). Although community and alumni efforts to save the programs have to date kept them off the chopping block, the aforementioned programs are under constant pressure to prove their worth.

Even more common has been the focus on winning football and men's basketball programs with hopes of increased ticket sales, television revenue, suite sales, sponsorships, and alumni giving patterns to offset escalating departmental costs (Chang & Canode, 2002; Howard & Crompton, 1995; Miller, 1999; Padilla & Baumer, 1994; Rolnick, 1998; Sack, 2001; Sperber, 2002; Suggs, 1999a; Suggs, 1999b; Suggs, 2002d, Zimbalist, 2001). In order to compete for high profile athletes, universities have seen an explosion of facility renovations, expansions, and construction. Unfortunately, the growth is limited to a select few and the gap between the rich and poor athletics departments continues to grow. While colleges that are fortunate enough to operate in the black seem to enjoy sizable profits, those that experience budgets in the red have endured sizable losses (Suggs, 2000a; NCAA, 2001; NCAA, 2002a). Programs not endowed enough to support multimillion dollar facility ventures have taken to

eliminating home games in hopes of a sizable paycheck when visiting opponents such as Ohio State, Nebraska, Michigan, Notre Dame, or Oklahoma but it still hasn't stopped the rich from getting richer. Reporting on the growing arms race in intercollegiate athletics, the *Minneapolis Star Tribune* offered examples of stadium construction and renovation costs across the nation:

- Razorback Stadium (Arkansas) to get $110M facelift
- North Carolina State spends $102 million to fix up its stadium
- Florida State enlarges its stadium at a cost of $120 million
- Ohio State finishes a $187 million stadium renovation
- Penn State spends $93.5 million to expand its stadium
- University of California-Berkeley pours $100 million of improvements into its stadium
- Texas A&M spends $25 million to build a 110,000-square foot football administration, tutoring, and training center.
- Oklahoma hopes to raise $100 million for its football stadium
- Both Purdue and Wisconsin fix up their stadiums, spending nearly $100 million apiece.
- Minnesota spends $6 million to improve its football practice facility

(Weiner, 2002)

While these athletics departments continue to attract the best athletes, most experienced coaches and largest crowds, those without are seemingly left in envy.

Another tremendous revenue stream for the NCAA and Division I athletics has been its men's basketball programs. CBS has paid the NCAA $6.2 billion over eleven years for broadcast rights, primarily for its Division I basketball tournament. According to the NCAA revenue distribution formula with its new CBS contract, a school will now receive $780,000 for each win in the Division I men's basketball tournament. The Knight Commission reports, "The television money, when parceled out, never seems enough, and the benefits are never evenly distributed. The rich – that is, the schools more in demand by network schedule-makers – get richer, and the poor go deeper and deeper

into debt." Disparities have widened to the point where the many under funded programs trying to compete at the top level are perpetual losers, both on and off the field. Again, facility expenditures allow a fortunate few to reap these benefits while most are left hoping for "March Madness".

While issues of academic integrity and gender equity are seemingly and respectfully acknowledged and dealt with, the athletic arms race continues only on the strength of the widespread belief that nothing can be done about it. Expenditures spiral out of control only because administrators have become more concerned with financing what is in place than rethinking what they are doing (Barlow, 2001c). When faced with program reduction and department merger, the Board of Regents at the University of Minnesota stated, "the only viable strategy short of increased financial support is to significantly reduce expenses" (Furst & Schmid, 2001). While some programs attempt to fight the arms race with budget inflation, others are left chopping programs and skimming off the top of others.

Decreasing State Appropriations in Intercollegiate Athletics

In a time when athletics departments are counting on support from its central administration, decreasing state appropriations leave athletic administrators justifying their share. The University of Minnesota currently relies on a $10.8 million subsidy, largest in the Big Ten, from central administration to support its $41 million budget (Suggs, 2002a). As state financial support has decreased incrementally over the past decade and undergraduate tuition and fees have steadily climbed, the university community is less inclined to encourage continued allocation to athletics (Kellogg, 2002; Lee, 2002b). Administrators are now more than ever challenged with trying to do more

with less as the arms race escalates and budget appropriations are seemingly shifting towards self-sufficiency.

Intercollegiate Athletics in the Sport Industry

While the managed sport industry has increased from an estimated $50 billion in the late 1980's (Sandomir, 1998) to an unprecedented $350 billion a decade later (*The Nation*, 1998), intercollegiate athletics as a subdivision of the sport industry is feeling the pressures to keep up with the industry's economic growth. While it is true that in the pursuit of wins, athletic department revenues are growing at a significant rate, the consequence of this revenue growth has caused increasing expenses to force over 50% of Division I athletic departments into the red (Lee, 2000). Intercollegiate athletics in America has become a powerful economic enterprise (Atwell, 2001; Barlow, 2001a; Byers, 1998; Bynum, 2002; Covell, 2001; Fulks, 1998; Gagliardi, 2002; Howard, 1999; Howard & Crompton, 1995; Opperman, 2002; Padilla & Buamer, 1994; Rolnick, 1998; Sandomir, 1998; Schmidt, 2002; Shulman & Bowen, 2001; Sperber, 2002; Sperber, 2000; Sperber, 1990; Stotlar, 2002; Suggs, 1999a; Suggs, 1999b; Suggs, 2000b; Suggs, 2001a; Suggs, 2001b; Suggs, 2001c; Suggs, 2002d; Weiner, 2002; Zimbalist, 2001). Because of increasing pressures to balance ever-escalating budgets, Division I intercollegiate athletic programs are now looking to meet expenses in more creative and innovative ways than ever before.

There is an ever increasing opportunity for economists and others in the sport management field to develop a substantial base of literature as fiscal emphasis in sport continues to increase (Szymanski, 2001). Scholars in fields such as strategic management, finance, economics and higher education are introducing cost containment

methods while the sport management research continues to emphasize both traditional as well as innovative alternatives to increasing revenue in sport organizations. Themes in the current sport management literature are thematic discussion on issues such as economic impact analysis, commercialism, development endeavors in universities and athletic departments, transformational leadership in intercollegiate athletics, and warnings of academic transgressions (discussed earlier).

Perhaps the most significant contribution to capital management and resource allocation is borrowed from strategic management theory embedded in a notion discussed later – the resource-based view of the firm (RBV). Two particular studies have utilized this concept in an attempt to explain patterns in the sport management industry. While Amis, Pant and Slack (1997) generally apply the RBV to sport sponsorship at any level, Smart and Wolfe (2000) use the RBV to uncover characteristics of a sustainable competitive advantage in intercollegiate athletics. The RBV is often employed to provide an explanation for competitive advantage and, in turn, superior performance among for-profit firms (Barney, 1991; Black & Boal, 1994; Collis & Montgomery, 1995). Underlying the RBV is the assumption that a resource with the appropriate attributes may ensure, or at least contribute to, an enduring competitive advantage. For example, if an assistant football coach's salary has historically been deemed the most important aspect of endured program success because the probability of keeping that coach increases as does salary, then any given program would be remiss if they ignored that particular resource. If it is then researched and proven that common values and coaching styles among coaches better determines assistant coaching tenure, which in turn is a direct contributing attribute to program success, football programs would not be financially

efficient if they continued to place priority on increasing salaries. If organizations can determine which of those resources are most valuable to an endured competitive advantage then allocation, or reallocation, of resources may by a prudent business move.

Amis, Pant and Slack (1997) provided a framework to explain which distinct competencies give a firm an edge over its competition to any external characteristics such as industry structure or market trends in terms of sport sponsorship. Since commercial sponsorship is an investment, in cash or kind, with hopes of an exploitable commercial potential, sponsorship is a resource that may be valuable in sustainable competitive advantage. Results showed that there have traditionally been two ways in which a firm has been able to transfer an intangible resource such as sport sponsorship in an endured advantage; preponderance and serendipity. On one hand, preponderance refers to the approach taken with athlete endorsements where corporations hope to align themselves with a high profile athlete whose reputation and public image allows a mental association or relationship between the two. Serendipity, on the other hand, approaches the other end of the spectrum. Here corporations try to predict future trends by aligning themselves with an athlete who shows promise of future positive publicity but is not yet demanding market driven endorsement contract money. Regardless of whether an organization chooses to use preponderance or serendipity in their sponsorship objectives, sport sponsorship proves to be a valuable resource in predicting a sustained advantage over competition.

An exploratory investigation of Penn State University's football program (Smart & Wolfe, 2000) applied the RBV to account for its stable competitive advantage. Relying on logic that "suggests high performing individual athletic programs lead to

higher performing athletic departments, which, in turn, may enhance overall university performance both directly and indirectly" (p. 135), it was proposed that an institution that posses exploitable human and physical resources can take advantage of its enduring athletic success institution wide. Smart and Wolfe determined that those resources most accountable for Penn State's standing success of their football program were history, relationships, trust and organizational culture that have developed within the program's coaching staff. The authors go on to remind us that Mahoney (1995, p.92) suggests, "The catalyst for the resource-based theory is the resource of management...a firm may achieve (superior performance) not because it has better resources, but rather the core competencies of the firm involve making better use of its resources." In this particular analysis, staff longevity is most rewarding when considering importance of those resources necessary for sustained football program success. While success may vary among institutions, it is undoubtedly of priority to operate both efficiently and effectively. Whether presidential or administrative priorities call for success in financial measures or those associated with wins and losses, it is crucial to determine what allocation of resources is most effective.

Although this approach is most appropriate in a specific scope, as exemplified in the case of Penn State University's football program, the underlying notion lends itself to potential study in intercollegiate athletics. As Smart & Wolfe (2000) proved at Penn State University, resource emphasis within a specific program leads to that program's endured competitive advantage. If that concept is extended, proper allocation of resources within an entire department may in turn lead to the sustained success of that respective intercollegiate athletic program.

Often times when facility construction or renovation is proposed by a professional franchise or an intercollegiate athletic program, public money is sought to help offset costs. A common approach used by those seeking funds is to argue that the new facility or program will have a positive economic impact on the respective community or investors (Chang & Canode, 2002; Howard & Crompton, 1995; Hudson, 2001). The purpose of the economic impact analysis is to measure the change in economic activity resulting from a specific program or project. Hudson (2001) used meta-analysis to determine that the economic impact studies in his sample tended to use methodologies that would inflate the economic impact of the sports teams being studied. Although there are a few highly paid athletes or administrators relocating themselves to the community, the several lowly vendors employed to staff such events has very little effect on the local economy.

Studying the economic impact of the addition of an intercollegiate athletic football team at the University of South Alabama, Chang and Canode (2002) predicted that the benefits brought to the university and community were offset by the programs start-up expenditures and recommended that program expansion be tabled until further analysis could be done. Although the new football program was predicted to boost economy annually between $9,181,803 and $9,742,803 through visitor spending, transfer of local disposable income spending to the community, new jobs, taxes, and many others, considerations of Title IX requirements, facility maintenance costs, travel expenditures, and a slow economy makes the endeavor high risk.

Commercialism, by definition, is "the practices, methods, aims, and spirit of commerce or business" (American Heritage Dictionary, 1991). In sport, this constitutes

the use of sponsorship sales, television and radio contracts, naming rights, suite sales, endorsement contracts, and ticket revenue, to name a few (Amis, Pant & Slack, 1997; Atwell, 2001; Bynum, 2002; Howard & Crompton, 1995; Padilla & Baumer, 1994; Stotlar, 2002). Using methods borrowed from the private corporate sector, sport sponsorship in all of its forms is necessary for economic survival in the sport industry. While expenses continue to grow, and traditional methods of revenue are either tapped or decreasing, sport managers are turning to budget inflationary methods to combat escalating costs. While this approach has endured success on the professional sport front, the majority of intercollegiate athletic programs can very seldom take advantage of such revenue opportunities. When costs and prices continue to rise and revenue streams are seemingly dry, it is imperative that alternative methods of fiscal efficiency are presented to those who cannot afford to invest in commercialization ventures or simply do not have the resources available to take advantage of innovative revenue opportunities.

Colleges and universities rely heavily upon their alumni and other supporters to give generously to support all higher education programs, intercollegiate athletics included. One advantage that colleges and universities enjoy over their professional league counterparts is the captive audience of alumni who tend to generously support academic and athletic programs. To meet rising expenses, college and university presidents actively seek private contributions to support the educational mission of their institutions. An important strategic issue in this regard concerns the relative roles of successful athletics traditions (Plinske, 1999; Rhoads & Gerking, 2000). Using a fixed effects analysis of panel data for the period 1986-87 to 1995-96, Rhoads & Gerking (2000) found that there is little indication that year-to-year changes in athletic success

have an impact on levels of giving from non-alumni. However, evidence did present trends in alumni giving patterns in reaction to athletic performance. Years following football bowl wins or NCAA tournament appearances by men's basketball, alumni were more generous in their donations to both educational and athletic development funds. Alternatively, NCAA probation and poor performance years in football or men's basketball saw decreased alumni giving patterns. This suggests that athletic success plays a crucial role in the development process for both academia and athletic programming.

One of the most widely researched topics in the intercollegiate athletic literature comes from organizational management and transformational leadership theories. A tremendous amount of literature has been contributed trying to determine common leadership traits in intercollegiate athletics, perceptions of athletic administrators by their employees and its relationship with productivity, mentorship traits, opportunities and necessity in intercollegiate athletics, and organizational design (Baxter, Margavia & Lambert, 1996; Cunningham, 2002; Mahony & Pastore, 1998; Putler & Wolfe, 1999; Scott, 1999; Stoldt, Miller & Comfort, 2001; Trail & Chelladurai, 2000; Weaver & Chelladurai, 2002). Although the bulk of this literature touches upon many controversial and prudent issues in intercollegiate athletics, such as Title IX consequences and unintended consequences, lack of diversity in administrative positions, and motivational techniques in intercollegiate athletics, it makes no attempts at explaining the financial peril of intercollegiate athletics nor does it offer suggestion for economic or financial reform.

Financial Management Outside of Sport

Public and private business executives are perpetually searching for creative and innovative techniques to balance a seemingly spiraling budget while necessarily creating a competitive advantage in their respective market. While the economy continues to follow its downward cycle, a reexamination of spending initiatives has lead to project resizing, encouraged better capital management, and reallocation of resources (Nelson, 2002).

Suggestions for Financial Management in Business Literature

While the business of Division I intercollegiate athletics continues to escalate, so too does the controversy over its spiraling budgets. As mentioned earlier, it has become a race to build pristine multimillion-dollar facilities and pay high-priced coaches with hopes of attracting top-notch athletes. In doing so budgets have become out-of-control in intercollegiate athletics, leaving administrators and academics alike wondering how to reverse the deepening red. Business in both the public and private sectors have for years attempted to advise ways to combat unnecessary costs and budget enlargements while continuing to compete for market share. If college athletics are truly transposing into big-time business conglomerates, perhaps a brief inspection of the business literature related to fiscal management and resource allocation is prudent.

Capital efficiency has become the mantra of CFOs and finance directors worldwide. Generated by economic instability and a setting of decreasing interest rates, concentration has shifted towards capital management and fiscal efficiency (Haddock, 2001; Mintz, 2002; Nelson, 2002; Peacock & Copper, 2000; Pratt, 2002; Sissen, 1999; Zolkos, 2000). Contributing to project resizing or reallocation of organizational

resources has been the recent shift in spending initiatives of financial institutions (Nelson, 2002). Industries such as airline, paper, medical, technology, financial, and government agencies, to name a few, are experiencing an economic period that calls for stricter fiscal management.

Providing a prescription of radical fiscal management in, but not limited to, the pulp and paper industry, Arwidi et al (1999) suggested five basic principles that apply to companies that excel at capital productivity:

1. Companies set tough expectations for cash flow and returns
2. They ensure that planning is linked to the business strategy
3. They develop new attitudes toward risks
4. They redesign the process
5. The companies recognize performance

As the authors pointed out, perhaps the most crucial of these is maximizing the return on the total investment portfolio at an appropriate level of risk. This is an organizational mindset in which the culture of all managerial levels embraces and believes in the investment decisions. While this concept is very intangible in nature, forcing accountability in tangible ways is most likely to stimulate the biggest behavioral change in the company. Assigning all levels of managers to personal responsibilities for achieving the targets of the investment proposal may prompt these employees to consider improved analysis of certain investment proposals and reduce the size of the investment drastically.

Sissen (1999) reported, "...while commercial banks have been the primary source of debt finance, many banks are increasingly emphasizing capital efficiency rather than asset growth and have withdrawn from the low-margin aircraft finance business." (p. 2) Mintz (2002) discussed how the Canadian government promotes its country as a strong

business environment in which to operate because of their dedication to better fiscal management. Expenditure constraint, resource reallocation, tax cuts and debt relief have allowed growth in incomes for Canadians and more resources to fund social priorities (Mintz, 2002). Both examples show it has become increasingly more important to focus on those things that can be internally controlled rather than rely upon the instability of local, national or even global economy.

Although the business literature is very thorough in providing suggestion and alternative solutions to fiscal management, a recent development in the strategic management literature, the Resource-Based View (RBV) of the firm, is of particular interest in this review. Strategic management within any public or private sector is commonly underscored with the overriding aim to attain a position of sustainable competitive advantage (Amis, Pant & Slack, 1997; Barney, Wright & Ketchen, 2001). The RBV is often employed to provide explanation for competitive advantage and, in turn, superior performance among for-profit firms (Barney, 1991; Black & Boal, 1994; Collis & Montgomery, 1995). This perspective of understanding strategic advantage has attracted the attention of a growing number of scholars from various theoretical frameworks, including sport management (Amis, Pant & Slack, 1997; Mahoney, 1995; Mahoney & Pandian, 1992; Smart & Wolfe, 2000). Evidence of a competitive advantage has been established in the corporate sector that shows correlation to above normal economic performance (Barney, 1991). Six major categories of resources from which a sustainable advantage may be derived have been suggested: financial resources, physical resource, human resources, technological resources, organizational resources, and the resource of reputation (Smart & Wolfe, 2000). As these resources often times vary from

firm to firm, investment decisions need to be based on a firm-specific agenda, dependent upon an individual company's strategy and capabilities (Conner, 1994; Grant, 1991).

Overcoming an important limitation inherent in previous research developed to explain and predict competitive advantage, the RBV shifts its focus internally. Rather than focusing principally on external opportunities and threats, the RBV widens its focus to the internal role of organizational resources, which can be either tangible or intangible in nature (Duncan, Ginter & Swayne, 1998; Hall, 1992; Smart & Wolfe, 2000). As mentioned earlier, common values and beliefs among coaches may be predictive in football program success, which would be an example of an intangible organizational resource. However, if in fact it is most important to place emphasis on assistant coach's salary this tangible resource should be emphasized. By nature, the RBV suggests that any organizational resource properly utilized may lead to, if not guarantee, a sustained competitive advantage in a market with those competing for similar resources and consumers.

The RBV stipulates that firms are endowed with heterogeneous bundles of resources and that competitive advantage accrues if a resource or combination of resources is a) valuable, b) rare, and c) imperfectly imitable through duplication, substitution, or acquisition (Smart & Wolfe, 2000). Inherent in the third condition (inimitability) is the notion of imperfect mobility (Hall, 1992; Peteraf, 1993). These resources must be firm, specific, and not tradable, even if one firm is merged into another via acquisition (Hall, 1992). This theoretical framework is insistent that all three characteristics must be present in order for enjoyed sustainable competitive advantage.

Barney (1991) further defines resource attributes to have the potential of contributing to sustained competitive advantage:

1. It must be valuable in the sense of enabling an organization to exploit opportunities and/or neutralize threats. Resources that are valuable enable an organization to conceive of and/or implement strategies that improve its effectiveness.
2. It must be rare among current and potential competitors. A resource that is possessed by a large number of organizations will not be a source of competitive advantage.
3. It must be imperfectly imitable in the sense that competing organizations face cost and/or quality disadvantages in developing a duplicate of the resource or in developing an appropriate substitute for it.

Although this theory has had limited application in sport management literature, and even less so with relevance to intercollegiate athletics, its underlying concept has great utility for understanding the importance of resource emphasis and allocation. Although the RBV is intuitively appealing to study resource management in intercollegiate athletic departments as a whole, it will not be directly applied in this study. Rather than directly applying the model, the underlying concept will be similar. If it can be determined which specific resources are most crucial in sustained competitive advantage in intercollegiate athletics it would behoove athletics administrators to focus on resource reallocation. The notion of linking success, whether it is financially in corporate literature or wins and losses in intercollegiate athletics, with resource distribution is an element that has not been sufficiently addressed in the sport management literature.

Suggestions for Financial Management in Higher Education

It is important to inspect how higher education in general is keeping their house in order during financial uncertainty as this is ultimately where intercollegiate athletic

departments exist. As leaders and administrators in higher education recognize the importance of cost reduction and fiscal management, their associates in intercollegiate athletics must not stray. In fact, perhaps athletic administrators could borrow cost reduction and resource allocation tactics from their higher education colleagues. If athletic administrators are going to rely on state aid for financial support they will inevitably suffer if cost containment strategies are not employed.

Over the past decade, the increasing costs for a college education has become a prominent concern among the American public, institutions of higher education, and the state and federal governments. Although state appropriations for higher education generally increased throughout the 1990's due to a strong economy, cost management strategies and improved productivity are common themes in higher education literature (Gaither, 2002; Layzell & Caruthers, 2002; Middaugh, 2002; Robst, 2001). As escalating costs are continually of major concern in the academe, emphasis has been placed on efficiency and productivity. Now higher education administrators are faced with declining state and federal aid and must employ cost efficiency strategies in order to maintain competitive in the higher education marketplace. Middaugh (2002) suggests that while doing so, the cost of higher education is under scrutiny as "the 1998 congressionally created National Commission on the Cost of Higher Education called for greater accountability with respect to how colleges use fiscal and human resources and some level of federal oversight appears to be inevitable" (p. 43).

Howard Bowen (1980) said, while studying price and cost in higher education, that colleges and universities raise as much money as they can and then spend as much as they raise. In an attempt to control higher education costs and force institutions to

provide an education more efficiently, government officials are proposing use of performance measures and limited state appropriations for higher education. Robst (2001) suggests that reductions in state appropriations combined with increases in tuition revenue between the years 1991 and 1995 resulted in universities receiving a smaller proportion of revenues from state appropriations and a larger proportion from tuition. Operating under the assumption that reduced state appropriations would increase efficiency in higher education institutions, Robst attempts to prove, or disprove, this theory. In short, he found that institutions with a smaller state share of revenues are not more efficient than those with a larger share from the state. Also, the proportion of revenues from tuition increased during the sample period for the vast majority of universities due to tuition revenue growth combined with either reductions or limited growth in state appropriations. Contrary to public official claims, institutions with smaller state share declines increased efficiency more than institutions with larger state share reductions.

Gaither (2002) presents "a currently used participatory method of institutional choice to plan for financial setbacks" (p. 27). As stated earlier, the latter years of the 1990's were comfortable for American higher education, with healthy growth in enrollment followed by increased state appropriations. But projected fiscal outlook for the next decade looks less supportive as higher education costs increase along with enrollment while state and federally mandated programs, such as Medicare, will compete with higher education for limited dollars. A special report presented by *The Chronicle of Higher Education* concluded, "For public colleges, a decade of generous state budgets is over (Chronicle of Higher Education, 2001, p. A10). Institutions are now considering

traditional cost conserving methods such as consolidating programs, interinstitutional partnerships, and use of technology (Gaither, 2002). Gaither uncovered and advocated the necessity for anticipation and planning for cost efficiency programming due to today's economic climate. After enjoying a time of unrestricted program growth and fiscal prosperity, resource allocation, or reallocation, has become a necessary tool in offsetting predicted program contraction or other cost saving ventures. By anticipating an economic slowdown and potential appropriation reductions via priority setting and other fiscally responsible procedures, higher education can keep escalating costs at a minimum to its consumer...the student.

The opportunity cost of some higher education programming has severely limited the resources for other necessary activities. As programs funded by state appropriations increase escalating costs for students, other programs suffer as they seek cost cutting methods as a means of survival (Layzell & Caruthers, 2002). In an essay suggesting that not one single method is an adequate answer for all financial challenges in higher education, Layzell and Caruthers (2002) remind us that an institution's enrollment level has a direct impact on the cost, as well as efficiency, of providing services. Typically used to describe size-related effects on cost, "economy of scale" refers to the phenomenon in which the unit of cost of producing a good or service decreases as the number of units produced increases, thus allowing fixed costs to be distributed over a larger number of units. As applied to higher education, Layzell and Caruthers use this concept to suggest that the per-student cost should be lower at a larger institution than at one smaller, everything else being equal. Focusing on the consumers of higher education cost data and their varying perspectives as well as appropriate use of cost data and its

relationship with major issues in higher education, Layzell and Caruthers end their commentary with suggestions of a cost-sharing approach. Originally endorsed by the Carnegie Commission for Higher Education in the early 1970's, one recommendation was that students and their families (via tuition) should finance one-third of total educational costs and states and the federal government should bear the remaining two-thirds of the direct cost. While this approach has not been utilized verbatim, financing policies in higher education nationwide were guided by this recommendation. Again, as higher education is experiencing reductions in state appropriations they are forced to reassess allocations and account for costs.

Cunningham and Merisotis (2002) sought to, among other things; analyze the costs and prices in both the public and private not-for-profit sectors of education. While the aforementioned research focused exclusively on cost management and fiscal efficiency, this study includes considerations of revenue resources, of which tuition is only one supplemental source. Public and private institutions operate differently in terms of their revenue sources and the amount of political influence on decisions about tuition and enrollment levels. Public institutions are heavily subsidized with state tax dollars, and pricing decisions are policy decisions shared between state governments and institutional governing boards, with tuition revenues often treated as offsets to state appropriation levels. Thus, enrollment demand at public universities is determined less by market conditions, including price, than are enrollments at private institutions, where price-setting decisions are influenced by internal budget considerations. Private institutions, however, are more likely to be influenced by external market conditions, such as fluctuating income levels and perceptions of quality and reputation.

Cunningham and Merisotis found that both public and private institutions saw undergraduate tuition and fees increase between academic years 1888-89 and 1995-96. Also, both public and private institutions accounted for increasing proportions of total educational and general revenue over this same period with gross tuition revenue. While private institutions saw decreased revenue support from endowment income and private gifts, grants, and contracts, public institutions saw an incremental decrease in state appropriations that account for total revenue. It is important to note, however, that while state appropriations continue to decrease they still remain the greatest source of revenue and is the single most contributive factor associated with tuition and fees changes. Inherent in these findings is again the direct relationship between tuition and an institution's level of reliance on state support.

As experts warn intercollegiate athletics administrators of over-commercialization and the inevitability of budget crisis with the current arms race, it is imperative that research offers suggestion for alternative solutions in financial crisis. While current literature in sport management places emphasis on potential perils of the arms race, moral, structure and leadership issues, and alternative revenue streams, concepts abound in business and higher education literature have not yet been adopted. Instead of proposing solutions through increased revenue, which has proven at times to be less cost effective than productive, research needs to present fiscal efficiency and capital management resolutions for those in budget crisis. Perhaps the most relevant concept that can be applied is the idea presented by the resource-based view of the firm, which stipulates that sustained competitive advantage will follow those who place emphasis on proper resource management, rather than resource acquisition. It is time for athletic

administrators to accept fiscal responsibility by employing strategic financial management.

Success Measures in Intercollegiate Athletics

If it can be established that emphasis placed on resource allocation rather than the arms race can lead to success on the playing field then tremendous pressure will be lifted from athletic administrators, allowing them to focus on fiscal efficiency instead of increasing revenues. In order to determine proper allocation of resources that will lead to organizational success, it is important to define success in terms of intercollegiate athletics. The measure of success is one that is very individually defined; usually resting on whether or not a given entity has achieved that which it had set out to accomplish (Slack, 1997). Often, success can be measured in business by whether or not a given organization operates in excess or deficit from a financial perspective. The recent shift in the commercialization of intercollegiate athletics (Howard & Crompton, 1995; NCAA, 2001; Sperber, 1990; Sperber 2000) has seen both an increase in revenue generation attempts as well as concern over the distancing of the academic and athletic mission.

> "In the 1970's and 1980's, big-time athletic departments became franchises in College Sports Inc., a huge commercial entertainment enterprise with operating methods and objectives frequently opposed to the educational missions of the host universities" (Sperber, 2000).

Statistics provided by the NCAA (2002b) show that Division I athletics on average actually operate in the black, leaving a modest amount of excess, $600,000 on average, after all expenses have been covered. However, when broken into Division I sub-categories (Division IA, Division IAA, and Division IAAA) only the largest actually experience this surplus, and in fact less than ten departments in all account for the total

surplus (Shulman & Bowen, 2001). Therefore, financial stability and proper fiscal management are important concepts for athletic administrators.

Intercollegiate athletics has many levels on which success can be measured, often times stemming from historically problematic issues. Such areas of interest include compliance with NCAA regulations, gender equity, graduate rates or grade point average, financial stability, and the measure of wins and losses on the playing field. Literature in the field of sport management, specifically intercollegiate athletics, has attempted to define success in many ways. It can be argued that measuring success in an athletic department should include several operating and outcome factors other than simply number of championships won (Scott, 1999). Factors that have been suggested as measures of success in intercollegiate athletics include goal attainment, ability to properly manage system resources, budget efficiency, stakeholder satisfaction, employee longevity, and win-loss percentage (Cunningham, 2002; Putler & Wolfe, 1999; Sack, 2001; Scott, 1999; Smart & Wolfe, 2000; Trail & Chelladurai, 2000).

An organization's mission statement generally gives value and identity to an organization and describes the reason for the organization's existence (Slack, 1997). The following excerpts from three randomly selected Division I university athletic department mission statements resound common themes found in intercollegiate athletic success measures:

- "Notre Dame endeavors to maintain a highly competitive athletics program consistent with its tradition, heritage, and overall mission as a Catholic university. [The intercollegiate athletic department] comprises an integral part of Notre Dame's educational mission and will dedicate itself to the pursuit of excellence in intercollegiate athletics." (University of Notre Dame Athletics, 2002)

- "The University Athletic Association (UAA), demonstrating leadership in all aspects of intercollegiate athletics...will attain excellence in athletic performance, sportsmanship, financial strength, and superior fan satisfaction." (Florida University Athletic Association, 2002)

- "We will sustain a strong financial and community base of support by presenting outstanding intercollegiate athletic teams that provide quality entertainment, outstanding mentors and role models, and a positive public identity for the University." (The Ohio State University Department of Athletics, 2002)

Notable measures resound in each mission statement. Notions of financial prosperity and integrity, personal character, and winning are all integral priorities in intercollegiate athletics.

For the purpose of this study, success will be operationally defined as final athletic season standing in the Sears Directors' Cup. The following section will discuss the evolution of the Sears Directors' Cup and why it is an effective tool in measuring intercollegiate athletic success.

The Sears Directors' Cup

The competitive nature and intensity exhibited by young amateur athletes has not stopped at simply the desire to win one national championship in a particular sport, but rather recognition as being the most highly competitive and well-rounded program nationally at the collegiate level. Recognizing that an all sports award may induce emphasis in administrative and institutional support all sports, both high and low profile, the National Association of Collegiate Directors of Athletics (NACDA) first introduced its Directors' Cup during the 1993-94 athletic season. With the financial and administrative support from Sears, Roebuck and Company, the Sears Directors' Cup continues as the only cross-gender, cross-conference, all-sports national recognition in college athletics.

National Association of Collegiate Directors of Athletics (NACDA)

Headquartered in Cleveland, OH, and supporting memberships from more than 6,100 collegiate athletic administrators from the NCAA, NAIA, and junior and community colleges, NACDA is responsible for supporting athletic administrators and their duty to academics and intercollegiate athletics as well as serving as a platform for discussion, education and student mentoring. Founded in 1965, NACDA's mission is to "...serve as the professional association for those in the field of intercollegiate athletics administration". It provides educational opportunities and serves as a vehicle for networking, the exchange of information, and advocacy on behalf of the profession" (http://nacda.ocsn.com/nacda/nacda-admin.html). In addition to offering collaboration for athletic administrators through publishing industry journals and sponsoring annual professional conventions, NACDA provides programs and support for athletic professionals in compliance, marketing, facilities and athletic development. Also a resource for answers to frequently asked questions in intercollegiate athletics, current issues and news in the field as well as the most recent job listings across the nation, NACDA serves as an all-inclusive organization promoting the very nature of its membership.

In addition to the support of athletic administrators, student-athletes and future athletic administration professionals, NACDA also recognizes those intercollegiate athletic programs that promote success across all athletics, not simply those most often seen in the newspaper or on television. Hoping to identify intercollegiate athletic programs that address diversity in support of all athletics, NACDA first awarded the Sears Directors' Cup for the 1993-94 season

(http://nacda.fansonly.com/searsdirectorscup/nacda-searsdirectorscup.html). As this award promotes success across all programs in athletics, currently the only honor of its kind in intercollegiate athletics, emphasis placed on the Sears Directors' Cup final standings encourages programs to diversify their support into those programs that have seen little attention in the past. As the prestige of this prize grows so too does the importance of athletic administrators to recognize the value of an all-inclusive sports program at the collegiate level.

Evolution of the Sears Directors' Cup

In 1993-94, NACDA presented the first cross-sectional all-sports national recognition award for both men's and women's sports, the Sears Directors' Cup (SDC). This award, implemented to acknowledge those with broad-based competitive programs in intercollegiate athletics, has remained the only objective measure of its kind of on-field success in intercollegiate athletics (NACDA, 2002). Each June, four Waterford Crystal trophies are awarded to the institutions in NCAA Divisions I, II, and III and the National Association of Intercollegiate Athletics (NAIA) that compile the highest combined point totals in women's and men's sports. Initially, the SDC awarded points to individual athletic programs based on their final national standings in 14 core sports and 4 "wild card" sports, allowing each institution to choose those sports they excelled at outside of the traditional collegiate competition sports. Recognizing that scoring trends seemed to favor institutions that could afford to support those sports thought to be traditional (football, basketball, volleyball, baseball, golf, tennis, etc), NACDA implemented a number of scoring changes in 1997-98 that sought to level the field ("National-level

achievement", 1997). Scoring criteria for NCAA Division I athletics presented by the NACDA Web site (2002) is as follows:

- Each institution will count its top ten men's and top ten women's scoring teams toward SDC standings.
- Men may use any of the following varsity level sports: baseball, basketball, cross country, football, golf, gymnastics, ice hockey, lacrosse, soccer, swimming & diving, tennis, track & field, volleyball, water polo, and wrestling.
- Women may use any of the following varsity level sports: basketball, cross country, field hockey, golf, gymnastics, lacrosse, rowing, soccer, softball, swimming & diving, tennis, track & field, and volleyball.
- Points are awarded based on post-season championship appearances and success. (See Appendix A and B for team and individual scoring structure)

This new scoring structure does not differentiate or weight sports based on significance or perceived importance, but rather awards points systemically for every competition. For instance, if a university were to win the NCAA Division I Men's Basketball National Championship, that athletic department would be awarded the same point total as would a university whose athletic department saw their women's soccer team win the NCAA Division I Women's Soccer National Championship, 100 points. The points for all other places are now based upon bracket size (see Appendixes A & B).

Formerly presented by Sears, Roebuck and Co., *USA Today* and NACDA, the Sears Directors' Cup seems to have found a scoring system that rewards on-field performance across all sports, men's and women's, high or low profile, without bias or favoritism. Enjoying tremendous success in the SDC has been Stanford University, now reigning Division I Sears Directors' Cup champions eight years running (see Appendixes C, D, E, and F for five-year aggregate standings). Among those also finishing in the top five over the last five years are UCLA, Florida, Michigan, and Georgia, which shows a dedication to diversity in programming and support. The prestige of the Sears Directors'

Cup is evident as athletic directors now place precedence on the national all-sports award. "Each year Stanford's student-athletes and the athletics department strive to win the Sears Directors' Cup, the measuring stick for college athletics," said Stanford Athletics Director Ted Leland. "Through the Sears Directors' Cup program, Stanford's student-athletes, coaches and support staff are rewarded for their dedication to excellence in all sports." (http://nacda.ocsn.com/searsdirectorscup/previous/div1/1999-2000/final/div1-00final01.html)

The SDC standings are posted and updated regularly on the NACDA website and are archived since the 1993-94 season. These results are tabulated seasonally (fall, winter, spring) as well as annually, providing final SDC standings since its inception. Also available is SDC scoring broken down by individual school final standings as well as a detailed numerical description of the individual team points awarded to each institution.

Similar Success Measurement Attempts in Intercollegiate Athletics

The use of SDC standings or points has somewhat limited use in research. Sagas et al. (2000) used SDC points as an incentive to urge substantial proportionality in intercollegiate athletics in compliance with Title IX. Using the PAC 10 Conference as a case study, they found that there was a very strong correlation (.96) between an institution's overall SDC points and those points that came from women's sports. Also, a strong correlation (.82) was exhibited between the level of financial commitment to women's programs and their subsequent scoring in the SDC. Sagas et al. then suggested that revenue from bowl games and basketball payouts be distributed to individual conference athletic departments based on their respective SDC point totals. If a

department places priority in SDC standings and relies upon conference revenue sharing for financial survival, recognition of the high correlation between women's success and overall success would encourage colleges and universities to emphasize opportunities for women in athletics. Although this study used SDC standings to calculate percentage of revenue sharing, it failed to recognize the also high correlation noticed between men's sport point totals and SDC standings. It is only logical that if either men's or women's sports finish high in SDC points that would in turn result in a higher SDC finish.

In a recent publication of *U.S. News & World Report* ("America's best", 2002), all 321 NCAA Division I member institutions were surveyed and analyzed across four categories. After discounting those departments who had experienced NCAA sanctions over the last ten years, the remaining institutions were ranked according to gender equity, win/loss record, number of sports offered, and graduation rates. Although SDC standings were not utilized with this ranking method, the top twenty presented by *U.S. News & World Report* were measured in their overall wins on the competitive playing field, similar in premise to the Sears Directors' Cup.

A comparison between those finishing in the 2000-2001 *U.S. News & World Report* rankings and the top twenty of the 2000-2001 Sears Directors' Cup final standings reveals only four schools appearing in both, Stanford, Michigan, Penn State, and Duke (see Appendix G for complete results). Another interesting observation between the two is that the Sears Directors' Cup final standings exhibits success across many of the top six conferences in intercollegiate athletics (ACC, Big 10, Big 12, Big East, PAC 10, SEC), all conferences that experience tremendous payback from football bowl games and

NCAA basketball championships. The *U.S. News & World Report* rankings, however, includes five Ivy League institutions (Brown, Cornell, Dartmouth, Harvard, and Princeton), who have a conference-wide agreement not to make football bowl game appearances and have enjoyed little recent success in post-season basketball competition (http://www.ivyleaguesports.com/whatisivy/index.asp).

Another attempt to "grade" success in intercollegiate athletics has been presented by *The Sporting News* (2000) in their report, "The Sporting News' Best College Athletic Program for 2000". The evaluation looks at each school's entire athletic program, but it focuses on the two college sports that their fans tend to care about the most: football and men's basketball. All schools were graded in four categories: "Do we win?", "Do we graduate?", "Do we rock?", and "Do we play fair?". Schools were not only evaluated on how well their football and men's basketball programs faired, but also on the number of teams each school sponsored, the graduation rate for all student-athletes, the extent to which schools have complied with the gender equity requirements of Title IX, and finally the frequency of NCAA probation. While winning, graduating and playing fair are all very self explanatory, *The Sporting News* used "Do we rock?" as an attempt to measure the "fun" side of intercollegiate athletics, awarding more points for those programs that sell out, or come close to doing so, their football and men's basketball home games.

When comparing these final grade reports to the Sears Directors' Cup final standings of 2000-2001, the results are much more similar than when compared to the *U.S. News and World Report* rankings. Thirteen of the top twenty-five in *The Sporting News* report also appear in the top twenty-five SDC final rankings (see Appendix H). This is not surprising, given the nature of emphasis in *The Sporting News* grading scale.

As mentioned earlier, the SDC standings show parity in top twenty-five standings between the big six conferences, but leave little room for lower profile conference institutions. Since *The Sporting News* placed emphasis on football and men's basketball, those sports that the big six conference member schools dominate, it is only natural to see very similar results.

Sports Illustrated (2002) ranked all 324 of colleges in NCAA Division I programs, voting Texas the most successful athletic department in the nation in the academic year 2001-02. Using weighted measures on student-athlete graduation rates, final Sears Directors' Cup standings, wins and losses as well as money made from revenue producing sports such as football and men's basketball, nonrevenue sport on field success, intramural and club sport programming, and finally student support of athletics programs. The weighted scale used by *Sports Illustrated* is quite obviously similar to that used by *The Sporting News* as those schools that often dominate the higher profile sports enjoyed higher rankings than those that place more emphasis on the academic agenda of a student-athlete. Eighteen of the top twenty-five sports programs presented by *Sports Illustrated* are also found in the aggregate top twenty-five SDC standings over the last five years (see Appendix I). This should not come as a surprise, given that one of the criteria used by Taylor (2002) was final SDC standings.

Most recently, commissioned by the NCAA, Sebago Associates (Litan, Orszag, & Orszag, 2003) published an analysis of the empirical effects of intercollegiate athletics, with special emphasis placed on financial effects. The report relies on previous academic studies, Equity in Athletics Disclosure Act (EADA) reports, and data provided from other sources such as the Integrated Post-Secondary Education Data System to react to two

common views on empirical effects in intercollegiate athletics. One is referred to as the "Flutie effect", suggesting that a school benefits both directly and indirectly from their athletic programs. The other is that the reported "arms race" is threatening the integrity of college athletics as well as those universities who support them. Also, a survey of chief financial officers from 17 Division I schools was used to capture qualitative data pertaining to the utility of such aforementioned reports as well as their overall effectiveness in data recording. Ten hypotheses focusing on Division IA intercollegiate athletics were tested, five of which were confirmed.

One interesting finding was that budgets in intercollegiate athletics represented roughly 3.5% of the total institutional budget. This dispels anecdote that athletic costs, football in particular, consume large amounts of total institutional financial resources. After total institutional support was discovered, this study focuses its attention largely on the effects of football and men's basketball, attempting to draw conclusions to spending and revenue trends over the last couple decades. One discovery was that football and men's basketball markets show mobility in expenditure, revenue, and winning percentage. This indicates that over the course of time (1993-2001 in particular) there seems to be a shift in those programs that spend, make, and win, showing little persistence in quintiles.

With regard to operating expenditures, Litan, Orszag, & Orszag (2003) revealed that an increase in football and men's basketball operating expenses are not associated with any change, most notably an increase, in net revenue. Also, an increase in these same expenditures does not increase winning percentages, nor are higher winning percentages associated with an increase in net revenue. Although these findings are very

significant, the report does qualify itself in the fact that it has only studied medium-term effects, or over the last eight years. If continued analysis occurs over a longer period of time, trends that are longitudinal may be revealed.

Another noted deficiency is the lack of reliable and accurate information on capital expenditures. This data is not included on the EADA report and at no time is mandated for public submission. Also, inconsistencies in accounting and reporting methods for capital expenses and debt service payments make analysis difficult. This report did, however, deny cases made stating that the Flutie effect and an "arms race" are harming intercollegiate athletics and higher education.

Over the storied past of intercollegiate athletics many attempts have been made to determine success in operation, ranging from Title IX compliance in gender equity to academic performance. Each measure, however, is exposed to some subjectivity, opening the door to public scrutiny and misinterpretation. Sears Directors' Cup standings are the only objective measure of an all sports award nationwide. Also, it has been documented and warned that the increase in commercialism in intercollegiate athletics may be detrimental to its future integrity. The combination of rising financial pressure with massive new investments in facilities and coaches' compensation acutely increases the premium on athletic success (Zimbalist, 2001). Many suggestions of reform have been offered by the NCAA and others impacted by intercollegiate athletics, such as increased emphasis on graduation rates rather than decreased admissions standards, demanding efficient fiscal management practices rather than increased revenue endeavors and promotion of equitable opportunities across all sports instead of highlighting only those considered as traditional revenue generators (NCAA, 2000). Recognition that

athletic departments exist to provide excellence in performance while exonerating social and fiscal responsibility is one way for NACDA and the Sears Directors' Cup to contribute to enhanced integrity in intercollegiate athletics.

Summary

As experts warn intercollegiate athletics administrators of over-commercialization and the inevitability of budget crisis due to increasing costs associated with Title IX compliance, the current arms race, and decreased state financial support of public universities, it is imperative that research offers suggestion for alternative solutions during a time of financial crisis. An inspection of the field of sport management, and more specifically intercollegiate athletics, finds little research or literature pertaining to cost reduction, resource reallocation, or fiscal and capital management within athletic departments. Rather, most studies offer solutions based in both traditional and innovative forms of revenue generation such as merchandising, licensing, athletic development, sponsorship sales, television and radio contracts, naming rights, suite sales, endorsement contracts, and ticket revenue. Instead of proposing solutions through increased revenue, which has proven at times to be less cost effective than productive, research should examine present fiscal efficiency and capital management resolutions for those in budget crisis. Concepts are abounding in business and higher education literature that focus on resource allocation for endured organizational success. Perhaps the most applicable concept that can be applied is the notion presented by the resource-based view of the firm (RBV), which stipulates that sustained competitive advantage will follow those who place emphasis on proper resource management, rather than resource acquisition. The

bottom line is that university presidents and athletic administrators must consider employing capital management strategies to efficiently and effectively control costs.

Generally indicating an organization's overall operating purpose, examination of intercollegiate athletic department mission statements suggests that, in addition to financial stability, a high priority for athletic administrators is winning and losing. With respect to on the field success, the Sears Directors' Cup (SDC) is currently the only objective cross-sectional all-sports national recognition award in intercollegiate athletics. Any intercollegiate athletic program competing in post-season championship play is not only representing its institution on the playing field, but also vying for points in the SDC standings. Borrowing the notion from the RBV, an inspection into the relationship between the financial allocation in athletic department budgets and success on the playing field may provide athletic administrators with a model for sustained competitive advantage.

CHAPTER III

Methodology

Logical and appropriate methodology of the data is imperative for an adequate interpretation of the statistical analysis. In an article reporting data analysis in sport management research, Parks, Shewokis and Costa (1999) conclude that poor methodology in sport management research has undermined its reputation as a legitimate field of study. Olafson (1990) advised that "change cannot occur unless persons in positions of responsibility assume a major role in improving the quality of [sport management] research" (p. 116). Organized to present the material in a logical and consistent manner, this chapter will explain in detail the data collection procedures, instrumentation, procedures, and design and analysis of this investigation.

Data Collection Procedures

This research utilizes the Sears Directors' Cup (SDC) standings, provided by the National Association of Collegiate Directors of Athletics (NACDA), to determine the top 25 and bottom 25 placeholders in intercollegiate athletics aggregate over the last three years of intercollegiate athletic competition (1999-2000, 2000-2001, and 2001-2002). An aggregate calculation allows for a descriptive analysis of respective institutions longitudinally in an attempt to eliminate any extraneous variance due to unusual activity within any given year, such as large capital expenditures, atypical allocation of funds, or the addition or discounting of varsity teams. If analysis were to simply rely on data provided from a single year's activity, any one of these non-annual activities may not provide a complete picture over time.

Effective in 1997-98, NACDA made revisions in SDC scoring measures from previous years, citing the necessity to react to scoring trends since its inception in 1993-94, making the SDC more exciting and competitive ("National-level achievement", 1997). Since uniformity in scoring procedures is recognized for the last three competitive seasons, it is logical that these same seasons will be used in analysis of data.

Points are awarded to institutions based on NCAA national championship performance of both men's and women's varsity teams, as well as post-season championship bracket size (see Appendixes A and B). Calculation of the top and bottom 25 teams was performed systematically, accounting for both point accumulation as well as final standings. Each institution that placed in the top or bottom 25 over the last three years of competition was included in aggregate calculation of points and final standings. After all calculations were totaled, only those institutions whose aggregate score fell in the top and bottom twenty-five were used in the sample for analysis (see Appendixes C, D, E, and F). Interestingly, preliminary analysis of the top 25 SDC finishers in points and standings aggregate over the last three years yields exactly the same results. Of those 33 institutions that finished in the top 25 over the time span of interest, aggregate calculations revealed the same top 25 institutions regardless of analysis by standings or point totals (see Appendixes C and D).

The bottom 25, however, was not as easily calculated. If a given institution did not compete in post-season competition one year, but simply managed to qualify for post-season play the next, they may not appear in the SDC standings every year. In final standings and point totals calculation, those institutions that did not appear in any given year were awarded zero points and given the corresponding place associated with results.

For instance, Prairie View A&M finished 202nd with 10 points in 1997, which happened to fall in the bottom 25 that year. In 1998, however, Prairie View A&M did not compete in post-season competition in any varsity sport, thus leaving them out of the SDC standings. For that year, Prairie View A&M received zero points and was then placed in 256th place, as there was a 42-team tie for last place in the SDC. Institutions and their respective conference affiliation representing the aggregate top and bottom 25 in SDC standings are presented in Table 1.

Recognizing that a small portion of necessary data for analysis cannot be derived from the principle method (capital expenditures are not included in the public Equity in Athletics Disclosure Act Report [EADA]); a letter of request for this information was sent to the athletic administrators or financial representatives at the respective institutions. Therefore, these 52 individuals (there was a tie in both the bottom and top finishers, leaving 26 in both stratified subject groups) were identified and contacted for information for analysis in this research.

Instrument

In order to answer the research questions that framed this study, three different reporting methods were utilized to collect the necessary data: SDC standings report, the EADA report, and information gathered from athletic administrators. Validity and reliability of an instrument are crucial components of the generalizability of the end results (Howell, 1997). These three instruments were used in context of their intended reporting purposes and not embellished upon or altered in any way, upholding the integrity of the instrument as both reliable and valid.

Table 1

Sample Chosen by SDC Aggregate Standings

Top 25 Subject Institutions	Conference Affiliation	Bottom 25 Subject Institutions	Conference Affiliation
Stanford University	PAC 10	Xavier University	Atlantic 10
University of California, Los Angeles	PAC 10	Cornell University	Ivy League
University of Michigan	Big Ten	University of Alabama at Birmingham	Conference USA
University of Florida	SEC	U.S. Military Academy	Patriot League
University of Arizona	PAC 10	Liberty University	Big South
University of Georgia	SEC	Middle Tennessee State University	Sun Belt
University of North Carolina	ACC	University of Maryland-Baltimore County	America East/ECAC
University of Texas	Big 12	Appalachian State University	Southern
The Ohio State University	Big Ten	University of Maine	America East ECAC/Atlantic 10
Arizona State University	PAC 10	George Washington University	Atlantic 10
Penn State University	PAC 10	Coastal Carolina University	Big South
University of Southern California	Big 12	Cal State-Northridge	Big West
University of Nebraska	Big 12	Manhattan College	Metro Atlantic
Louisiana State University	SEC	Loyola Marymount University	West Coast
University of Notre Dame	Independent	Florida A&M University	Mid-Eastern
University of California, Berkeley	PAC 10	University of Toledo	Mid-American
University of Minnesota	Big Ten	University of Southern Mississippi	Conference USA
University of Tennessee	SEC	Iona College	Metro Atlantic
Brigham Young University	Mountain West	East Tennessee State University	Southern
University of Oklahoma	Big 12	University of Wisconsin-Milwaukee	Horizon League
University of South Carolina	SEC	Eastern Illinois University	Ohio Valley
University of Washington	PAC 10	University of Akron	Mid-American
University of Virginia	ACC	Arkansas State University	Sun Belt
Duke University	ACC	Drake University	Missouri Valley
Auburn University	SEC	Ball State University	Mid-American
University of Wisconsin	Big Ten	Tennessee Tech University	Ohio Valley

As previously discussed, the Sears Directors' Cup (SDC) standings were used to determine the top 25 and bottom 25 most and least successful intercollegiate athletic departments from fiscal years 2000-2002. The SDC standings are posted and updated regularly on the NACDA website and are archived since the 1993-94 season. These results are tabulated seasonally (fall, winter, spring) as well as annually, providing final SDC standings since its inception. Important for possible further research is the availability of SDC scoring to be viewed broken down by individual school final standings, as well as a detailed numerical description of the individual team points awarded.

In order to determine institutional support measured on a financial platform, Equity in Athletics Disclosure Act (EADA) reports were also utilized. Among other mandated reporting information, these reports supply all necessary financial data for this research except that of institutional capital expenditures in athletics. Included in the EADA report is the total institutional budget, the gross athletic department budget as well as the athletic budget broken down categorically, including items such as: coaches' salaries, recruiting expenditures, academic support and scholarships, team operational expenses, and administrative operational expenses. This document is submitted to the U.S. Department of Education as well as the NCAA every October 15, detailing the previous year's activities and is available to public upon request (EADA, 1994). Reports are available for the last three competitive seasons.

Recognizing that capital expenditure information is not noted in the public EADA report, additional inquiry was necessary to secure facility-spending information. As noted earlier, a letter of request was mailed to the appropriate individual at each of the 52

chosen institutions requesting capital expenditure information. This letter of request simply asked for capital expenditures at their individual institutions in intercollegiate athletics for the last three years. Although these data are not supplied on the EADA reporting statement, two recent studies have been able to secure such figures. The *U.S. News & World Report* ("America's Best College", 2002) utilized capital expenditure data to compile information necessary to rank intercollegiate athletic programs for their overall performance in the year 2000-01. Also, the NCAA's report on revenues and expenditures in intercollegiate athletics utilize capital expenditure information submitted by individual institutions (NCAA, 2001). While such information has been collected by past researchers, inevitable difficulty in obtaining such information is recognized.

Procedures

First, University of Minnesota Institutional Review Board (IRB) approval was obtained. Given the nature of the data collected and the intended use of the research, confidentiality was not ensured. This was clearly noted when requesting capital expenditure information from individual institutional contacts and may have influenced their decision to release such information. The use of information from the SDC standings and EADA reports, however, are of current public accessibility, rendering confidentiality less of an issue.

Upon IRB approval, aggregate SDC standings over the last three years were calculated in order to determine which institutions have placed in the top and bottom 25, respectively. Once again, each institution that placed in the top or bottom 25 over the last three years of competition was included in aggregate calculation of points and final standings. After all calculations were totaled, only those institutions who's aggregate

score fell in the top and bottom 25 (52 institutions in all due to ties) were included in the sample.

This initial ranking guided the request of EADA reports for each institution for the past three years. The information was requested from the individual who was listed as the Chief Financial Officer, Business Manager, or Financial Manager as determined by *The 2001-2002 National Directory of College Athletics*. Simultaneously, communication was initiated with the same individual requesting information on capital expenditures. This consisted of an initial letter of introduction, explanation, and request for EADA reports (see Appendix J) accompanied by a request for facility expenditure information (see Appendix K), both sent on March 28, 2003. A follow-up email was sent on April 3, 2003, to those same contacts in an attempt to capture those who may have not yet received the request and to encourage participation (see Appendix L). This revealed a few inconsistencies in the National Directory, which led to an update of appropriate contacts and another mailing of the same initial letter on April 10, 2003 (see Appendix J). Phone calls were placed on May 7, 2003, May 21, 2003, June 18, 2003, and July 9, 2003 to those who had not yet responded. Finally, on August 13, 2003, one last email was sent to the few who had yet to respond in an attempt to collect as many responses as possible (see Appendix M). In total, this study reflects a 69% response rate.

After all responses had been collected, calculation of aggregate institutional support, as it has been operationally defined, over the last three years was performed. This then allowed the investigator to employ the appropriate statistical procedures in order to address the underlying research questions of this investigation.

Design and Analysis

The lack of substantive literature on predictive analysis for budgets and success measures in intercollegiate athletics does not provide enough evidence for theoretical hypothesis formulation on the relationship between institutional support and success in SDC standings. Therefore, a descriptive analysis of the interrelationship in question was performed. Also, although percentages of budgets are of main interest in deciphering budget allocation, all calculations were performed using both raw numbers as well as percentages of budget in order to determine magnitude of effect and relationship. The following statistical procedures were therefore calculated:

1. Aggregate standings and scores of the SDC for the last three years were calculated in order to determine the top and bottom 25 athletic programs, which then became the sample for this study. As a result of ties, 52 institutions were contacted, 26 representing each the top and bottom 25.
2. T-tests were performed to determine group differences in independent variables between the aggregate scores of the top and bottom 25 finishers in SDC standings over the last three years. This calculation identified which of the independent variables differed significantly between the top and bottom finishers. Dependent and independent variables of interest for this research are presented in Table 2.
3. Pearson correlation coefficients were calculated to determine significant relationships between all independent variables and SDC success. This established the significance of the relationship between each independent variable and the success measure, SDC performance measured by three-year aggregate point accumulations.

4. A multiple regression was performed between the six budget allocation variables and the SDC standings to determine their weight of influence on SDC standings. One assumption that must be met when performing a multiple regression analysis is that of independence (Howell, 1997). Since allocation of a percentage must total 100%, each allocation variable is dependent upon the value of the others. Therefore, a multiple regression needed to be calculated on the raw budget figures, revealing which allocation variable best predicts success as measured by SDC standings.
5. Lastly, mean totals in budget allocation independent variables were tallied for the top and bottom 25 SDC finishers. This provided a model for budget allocation for the most and least successful intercollegiate athletic programs.

Table 2

Variables of Interest in Budget Analysis

Dependent Variables	Independent Variables
Aggregate Sears Cup Standings over 3 years*	Institutional Budget
Aggregate Sears Cup Points over 3 years*	Gross AD Budget
	Recruiting Expenditures
	Student Aid Expenditures
	Coaches Salaries
	Team Operational Expenses
	Administrative Operational Expenses
	Capital Expenditures

Note. Budgets are measured by reported expenses in respective fiscal years.

Preliminary analysis showed no difference between those institutions that finished in the top 25 points standings and the top 25 place standings in the SDC over fiscal years 2000-2002 (appendixes C & D). The bottom 25, however, exhibited slight differences in institutional order and frequency over the last three years. This was a consideration when determining the 52 final institutional subjects for analysis. Intuitively, place would seem to be of higher priority than point total, as awards and recognition are based on place rather than point accumulation. Regardless of point total, an institution's standing in the SDC is relative to point accumulation of all those competing in intercollegiate athletic competition. Recognizing this, SDC standings, rather than point totals, were used to determine both top and bottom 25 intercollegiate athletic programs to be included in the sample.

When performing correlation and regression analyses, it is important to avoid a dichotomy in the dependent variable (Howell, 1997). Therefore, the three-year aggregate point totals for each athletic department were used. This assured continuous data in the dependent variable and ensured all assumptions could be met.

CHAPTER IV

Results

This chapter will present the results of this study in terms of the research questions as outlined in Chapter I. In order to clearly communicate these results, this chapter will be divided into four general sections. The first section will provide the descriptive characteristics of the institutions that represented the top and bottom 25 in SDC standings. The second will present data pertaining to an intercollegiate institutional budget and that institution's department of intercollegiate athletics. Thirdly, this chapter will give a description of the relationship between an intercollegiate athletic department's budget and that department's measured success. Lastly, an examination of an athletic budget's allocated variables will help to determine if, in fact, one or more variables can account for success in intercollegiate athletics regarding resource allocation.

NCAA Division I Member Institutions – Descriptive Characteristics

One of the central most issues with the use of mail surveys and requests for information is that of nonresponse. Without appropriate follow-up procedures, the rate of return is likely to be less than 20% (Aaker, Kumar & Day, 2001). A total of 52 institutions who have scored in the Sears Directors' Cup (SDC) over the operating years of 2000 - 2002, 26 from the top and bottom respectively (designated as 2,1 respectively in statistical analysis coding), met the a priori conditions of the study, meaning SDC rankings from 2000 – 2002. Of the 52 departments of intercollegiate athletics contacted for information, responses were received from 36, or 69% (see Table 3).

Two pieces of information were requested of each chosen subject in this study. Equity in Athletics Disclosure Act (EADA) reports for fiscal years 2000 - 2002

experienced a higher rate of return than did the request for capital expenditures and debt service payments over those same years. Those institutions designated as successful in the SDC standings (top 25) saw an 88% (23) response rate for EADA reports while only 13 (50%) of the bottom 25 (unsuccessful) chose to volunteer that information. The capital expenditure data returned a lower rate of response, seeing only 19 (73%) of the top 25 institutions and 10 (38%) of the bottom 25 schools cooperate, or 29 (56%) in total.

Table 3

Sample Descriptives of Top 25 and Bottom 25 SDC Point Accumulators

	Top 25	Bottom 25	Total
N(response rate)			
EADA Reports	23(88%)	13(50%)	36(69%)
Facility/Capital Expenditures	19(73%)	10(38%)	29(56%)
NCAA Division			
IA	23 (100%)	4 (31%)	27 (75%)
IAA	0	4 (31%)	4 (11%)
IAAA	0	5 (38%)	5 (14%)
Institution Type			
Public	20 (87%)	10 (77%)	30 (83%)
Private	3 (13%)	3 (23%)	6 (17%)

Response rates are based on a total of 52 NCAA Division I institutions contacted, 26 each top and bottom.

Interesting to note is the NCAA Division I breakdown of institutions who not only chose to respond, but also fell into each stratified sample. The top 25 category is entirely comprised of NCAA Division IA institutions, while the bottom 25 designation is more diverse with 31% Division IA, 31% Division IAA, and 38% IAAA members. In all, 27 (75%) of the responding subjects participate as a NCAA Division IA member institution. Also, the majority of respondents participating in this study are public institutions, with only 6 (17%) of the total respondents operating in a private institutional environment.

Institutional Support of Intercollegiate Athletics

When examining expenditures in intercollegiate athletics, it is important to recognize their overall support from the broader institution; the issue at the heart of the first research question. As reported on EADA reports returned from the 36 volunteer institutions in this study, the average gross amount of institutional budget for those successful and unsuccessful in the SDC was significantly different ($t = 5.991$, $p = .000$). The top 25 institutions spend an average of $1,295,050,066 annually on expenditures relating to the operation of their respective institutions, including athletics. The bottom 25 institutions spent far less, averaging $244,528,457 per fiscal year (see Table 4). When considering the standardized correlation coefficient (r) of gross institutional budgets on SDC success, results suggest there to be a positively significant relationship (0.654, $p = .000$). It should be noted that in order to eliminate the dichotomy of the dependent variable (successful or unsuccessful) in correlation and regression analysis success in the SDC has been measured by total points accumulated in the SDC over the three years of interest, which is continuous data.

Table 4

Institution's Budget Relationship with SDC Performance (Aggregate Point Totals)

	Top 25	Bottom 25	*r* (sig)	*t value*
Gross Institutional Budget	$ 1,295,050,066	$ 244,528,457	0.654* (.000)	5.991*
% of Institutional Budget in Athletics	4.53%	4.44%	-0.043 (.814)	0.091

Note. Dollar amounts are aggregate over operating years 1999-2000, 2000-2001, and 2001-2002.

* Significant at the 0.05 level (2-tailed).

While this may seem to be a potential answer to the gap in athletic budgets between those who are successful and unsuccessful, results indicate that athletic budgets

as a percentage of their institution's whole are very similar (gross athletic budgets will be discussed in the next section). When considering that the top 25 institutions have athletic department budgets that comprise 4.53% of the institutional budget and the bottom 25 have athletic budgets that are 4.44% of their institutional expenditures, there is no statistically significant difference ($t = 0.091$, $p = .928$). Also, when examining percentage of institutional budget dedicated to athletics rather than gross institutional budget, $r = -0.043$ ($p = .814$), indicating that there is no significant relationship with success in the SDC. In short, institutions in both the top and bottom 25 are proportionately dedicating the same amount of their institutional financial resources to their department of intercollegiate athletics. In turn, this allocation to athletics does not indicate any statistically significant relationship with success in the SDC.

Gross Budget Totals in Intercollegiate Athletics

Intuitively, the more one spends on any given organizational unit the more success it can expect to achieve. There is no difference when applying that theory to expenditures in intercollegiate athletics. In this case, is there a connection between an athletic department's gross expenditures and athletic success in SDC standings? This was addressed in the second research question. As reported on their respective EADA reports, the top 25 departments of intercollegiate athletics have an average gross budget of $42,763,949 while the bottom 25 athletic departments spent an average of $7,452,204 (see Table 5). This differential was statistically significant ($t = 13.740$, $p = .000$).

Table 5

Athletic Budget's Relationship with SDC Performance (Aggregate Point Totals)

	Top 25 AD Budget	Bottom 25 AD Budget	*r* (sig)	*t value*
Gross Athletic Budget	$ 42,763,949	$ 7,452,204	0.801* (.000)	13.740*

* Significant at the 0.05 level (2-tailed).

Since there is a significant difference between what the top and bottom finishers in the SDC spend on athletics, it begs the question of impact on their respective success. Results show that there is a statistically significant positive relationship between the gross amount spent on intercollegiate athletics and success in the SDC ($r = 0.801$, $p = .000$). This signifies a 0.868 increase in SDC success with every unit of increase in intercollegiate athletic expenditures. Statistically, this means that as an athletic department increases its overall budget, it will see a return in terms of success in the SDC, supporting intuitive reasoning.

Allocation of Budgets in Intercollegiate Athletics

The previous sections reported total financial support of an institution's department of intercollegiate athletics in terms of gross institutional budget, gross athletic department budget, and the athletic budget as a percentage of gross institutional expenditures. There is, however, an indication that a strategic allocation of expenditures in an intercollegiate athletic department budget may have a relationship with that department's success as measured by SDC standings. This issue was outlined in the third research question. As reported in the EADA report, an athletic department budget may be broken into six distinct variables; all representing various expenditures (see Table 6). Institution's of higher education supporting an intercollegiate athletic department must not only submit the EADA report to the United States Department of Education and NCAA by October 15 of the following year, but also issue reporting tables to the public upon request. These tables list only five of the six variables, excluding expenses due to capital projects and debt service. Capital expenditures are included in the institutional worksheets, which are not for public review. This is a recognizable contributing variable

to an intercollegiate athletic department budget and has been acquired through a separate request for this study (see Appendix J).

Table 6

Allocation Variables of Athletic Budgets as Reported on EADA Reports

Budget Allocation Variable	Table	Expenses Included in Variable
Recruiting Expenditures	5	Transportation, lodging, and meals for both recruits and institutional personnel engaged in men's and women's recruiting; expenditures for official and unofficial visits; and all other major expenses logically related to recruiting.
Student Aid Expenditures	6	Aid awarded a student that requires the student to participate in an intercollegiate athletics program.
Coaches' Salaries	8 & 9	Annual institutional salary of the head and assistant coaches of the men's and women's teams. Volunteer coaches and others whose salaries are paid by entities other than this institution are excluded from this calculation.
Team Operational Expenses	4	Total expense an institution incurs attributable to home, away, and neutral-site intercollegiate athletic contests including team travel, lodging, and meals; uniforms and equipment; and officials.
Administrative Operational Expenses	10	All other expenses not allocated by gender, including contract services, fund-raising activities, operating expenses, promotional activities, salaries and benefits, supplies, travel, and any other expenses attributable to intercollegiate activities.
Capital Expenditures	-	Expenses paid for capital projects and debt service.

Note. All variables and explanations taken from Equity in Athletics Disclosure Act Report.

This section examines each variable's contribution to the overall budget and how that variable, as well as the allocation of variables, relates to overall success in the SDC. Reported earlier in this chapter, there are statistically significant differences between the top and bottom 25 in terms of gross institutional budget and athletic budgets. Recall that the athletic budget reflected as a percentage of institutional budgets revealed no significantly statistical difference. Knowing that empirical evidence shows that more financial resources dedicated towards an athletic budget translates to increased success in the SDC, and that there is a significant difference in gross budget totals between those

who are successful and those who are not, an inspection of the contributing financial variables to an athletic budget could reveal interesting relationships. Table 7 presents the gross mean, high, and low amounts for athletic budget expenditures in the top and bottom 25 institutions.

Table 7

Reported Budget Averages, Highs and Lows of Responding Subjects

	Top 25 (n = 23)			Bottom 25 (n = 13)		
	M	High	Low	*M*	High	Low
Institutional Budget	$ 1,295,050,066	$ 3,533,503,000	$ 432,199,478	$ 244,528,457	$ 371,766,996	$ 64,663,000
AD Budget	$ 42,763,949	$ 69,687,828	$ 20,311,906	$ 7,452,204	$ 10,617,707	$ 4,403,538
Recruiting Expenditures	$ 762,983	$ 1,282,381	$ 455,493	$ 180,913	$ 406,954	$ 57,956
Student Aid Expenditures	$ 5,144,640	$ 10,425,329	$ 2,131,547	$ 2,138,406	$ 3,721,133	$ 1,337,764
Coaches' Salaries	$ 4,735,063	$ 8,310,489	$ 2,462,890	$ 1,229,945	$ 1,926,057	$ 628,758
Team Operation Expenses	$ 3,827,045	$ 5,203,683	$ 2,528,842	$ 998,132	$ 1,587,457	$ 586,834
Admin Operation Expenses	$ 13,408,052	$ 28,899,970	$ 1,232,321	$ 1,958,858	$ 2,733,843	$ 889,876
Capital Expenditures	$ 7,361,064	$ 24,273,618	$ -	$ 174,217	$ 398,778	$ -

Note. All numbers are aggregate over operating years 1999-2000, 2000-2001, and 2001-2002.

Intuitively, when comparing the gross budget totals between those who are successful and those who are not show a significant difference (t = 13.831, p = .000), one would assume that the individual variables comprising that total would also be significantly different. Table 8 illustrates that not only are the gross institutional budgets and athletic department budgets significantly different, as reported earlier, but so too are each of the allocation variables that contribute to the overall athletic budget. In fact, every variable has a *t-value* of at least 4.491 (p = .000), indicating a highly significant difference between the top and bottom gross amount allocation variables.

Table 8

t-test on Gross Budget Variables Top vs. Bottom

	SDC Standings	*N*	*M*	*SD*	*t value*
Institutional Budget	Bottom 25	11	244528457.5	157669976.3	5.991*
	Top 25	21	1295050066	773466476.6	
Athletic Department Budget	Bottom 25	12	7452203.556	2033374.522	13.831*
	Top 25	23	42763948.54	11999447.47	
Recruiting Expenditures	Bottom 25	12	180912.7778	99089.93895	11.982*
	Top 25	23	762982.8841	188309.4265	
Student Aid Expenditures	Bottom 25	12	2138405.611	664177.9183	6.300*
	Top 25	23	5144640.174	2095650.222	
Coaches' Salaries	Bottom 25	12	1229945.139	437008.3817	9.828*
	Top 25	23	4735062.565	1599830.767	
Team Operation Expenses	Bottom 25	12	998132.4722	323629.1978	14.332*
	Top 25	23	3827044.507	833908.1285	
Administration Operation Expenses	Bottom 25	12	1958858.111	603477.1154	8.639*
	Top 25	23	13408051.68	6300560.862	
Capital Expenditures	Bottom 25	10	174217.2	167613.9573	4.491*
	Top 25	17	7361064.157	6594117.572	

* t-test significant at the 0.05 level (2-tailed)

As we have seen, comparison of gross totals can often times be misleading. It was statistically proven that although there is a significant difference in gross institutional

and athletic department budgets between those who are successful and those who are not, inspection of that athletic department's expenditures as a percentage of institutional budgets show no statistical difference. The same approach can be taken with allocation variables of the athletic budget. Table 9 presents budget allocation variables as a percentage of overall athletic budgets for those who are successful and unsuccessful in the SDC. In spite of the fact that the gross totals are dramatically different, when calculated as percentage of overall budget the outlook is somewhat different.

Table 9

M Budget Variables as % of Overall Budget

	Top 25		Bottom 25	
	Gross Amount	% of AD Budget	Gross Amount	% of AD Budget
AD Budget	$ 42,763,949	100%	$ 7,452,204	100%
Recruiting Expenditures	$ 762,983	1.88%	$ 180,913	2.43%
Student Aid Expenditures	$ 5,144,640	13.01%	$ 2,138,406	29.51%
Coaches' Salaries	$ 4,735,063	11.36%	$ 1,229,945	16.40%
Team Operation Expenses	$ 3,827,045	9.55%	$ 998,132	13.51%
Admin Operation Expenses	$ 13,408,052	31.32%	$ 1,958,858	26.26%
Capital Expenditures	$ 7,361,064	14.01%	$ 174,217	2.25%

A closer examination of those budget allocation variables reveals significant differences in only four of the six contributing expenses when analyzed as percentages of overall budget. Student aid (t = -6.472, p = .000), coaches' salaries (t = -4.263, p = .000), team operation expenses (t = -3.656, p = .001), and capital expenditures (t = 4.309, p = .000) all showed statistically significant differences between the top and bottom 25 (see

Table 10). Expenditures dedicated to recruiting (t = -1.98, p = .139) and administrative operational expenses (t = 1.409, p = .168), however, were not significantly different.

Table 10

t-test on % of Budget Variables Top vs. Bottom

	SDC Standings	*N*	*M*	*SD*	*t value*
AD Budget % of Institutional Budget	Bottom 25	11	0.044424642	0.026363203	0.258
	Top 25	21	0.045310502	0.025854004	
Recruiting % of AD Budget	Bottom 25	12	0.024314322	0.011551161	-1.980
	Top 25	23	0.018826684	0.004909602	
Student Aid % of AD Budget	Bottom 25	12	0.295056795	0.07313246	-6.472*
	Top 25	23	0.130077352	0.068526202	
Coaches' Salaries % of AD Budget	Bottom 25	12	0.164002639	0.034075698	-4.263*
	Top 25	23	0.113576392	0.03150458	
Team/Ops % of AD Budget	Bottom 25	12	0.135104016	0.031140037	-3.613*
	Top 25	23	0.095521345	0.030032276	
Admin/Ops % of AD Budget	Bottom 25	12	0.26257996	0.055042726	1.409
	Top 25	23	0.313239918	0.117288678	
Capital Expenditures % of AD Budget	Bottom 25	10	0.022480609	0.024817529	4.309*
	Top 25	17	0.140091483	0.107783955	

* t-test significant at the 0.05 level (2-tailed)

Now that differences in allocation variables between those who endure success in the SDC and those who do not have been established, it is important to determine the nature of the relationship between those allocation variables and overall success in the SDC. Correlation coefficients run for the allocation variables on success in the SDC will determine which variables have a significant relationship. Since it has been determined that variables expressed as percentages of the overall budget, rather than gross amounts, most accurately reflect each department's allocation of overall resources, percentage of budget variables were used for calculation of the correlation coefficients. Most interesting is whether there is a significant relationship for each independent variable

(budget allocation variables) on the dependent variable (SDC three-year aggregate point accumulations) as well as the direction of that relationship. This indicates which variables should see a greater allocation of financial resources and which variable should receive less distribution if athletic departments wish to be successful in the SDC.

Table 11 provides correlation coefficients for each of the allocation variables, calculated as a percentage of the overall athletic budget, on performance in the SDC. The coefficients of interest are those running along the bottom of the table, or those that indicate the nature of the relationship with SDC. Student aid (r = -0.609), coaches' salaries (r = -0.457), team operational expenses (r = -0.470), and capital expenditures (r = 0.489) all reveal significant relationships with success in the SDC.

Just as important to consider as the suggestion of a significant relationship of allocation variables with the SDC is the positive or negative nature of that relationship (see Figure 1). Student aid, coaches' salaries, and team operational expenses all show negative relationships with the SDC, indicating that as success in SDC increases allocation to those respective variables decrease. Conversely, capital expenditures have a positive correlation with SDC success.

Figure 1: Negative Correlation of Allocation Variables

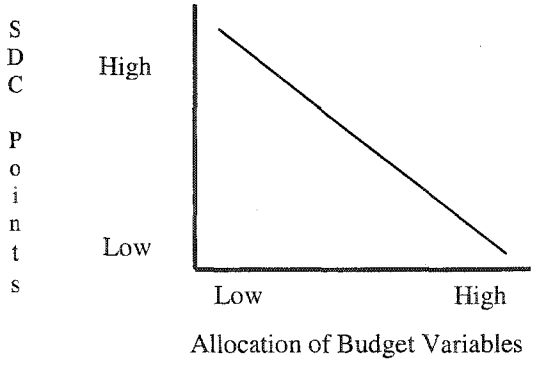


Figure 1. Success in the SDC was measured 3-year aggregate point totals

Table 11

Correlations for % of Budget and SDC Point Totals

	AD Budget % of Institutional Budget	Recruiting % of AD Budget	Student Aid % of AD Budget	Coaches' Salaries % of AD Budget	Team/Ops % of AD Budget	Admin/Ops % of AD Budget	Capital Expenditures % of AD Budget	SDC Success
AD Budget % of Institutional Budget	1.000							
Recruiting % of AD Budget	0.464*	1.000						
Student Aid % of AD Budget	-0.192	0.347*	1.000					
Coaches' Salaries % of AD Budget	-0.226	0.065	0.509*	1.000				
Team/Ops % of AD Budget	0.073	0.321	0.397*	0.613*	1.000			
Admin/Ops % of AD Budget	-0.001	-0.287	-0.349*	-0.378*	-0.251	1.000		
Capital Expenditures % of AD Budget	-0.059	-0.382*	-0.589*	-0.625*	-0.739*	-0.179	1.000	
SDC Success	0.043	-0.280	-0.609*	-0.457*	-0.470*	0.122	0.489*	1.000

* Correlation is significant at the 0.05 level (2-tailed).

Lastly, once it has been established that budgets are different between those who endure success in the SDC and those who do not, as well as the fact that certain allocation variables have significant relationships with success, it led to questioning whether or not success can be predicted. Multiple regression analysis provides an equation to predict the dependent variable on the basis of the set of independent variables (Howell, 1997). In this case, performance in the SDC (three-year aggregate point accumulations) served as the outcome measure while recruiting expenditures, student aid expenditures, coaches' salaries, team operating expenses, administrative operating expenses, and capital expenditures acted as predictors. A regression analysis will first indicate if the predictors as a whole show a prediction relationship with success and which variable, if any, is a significant predictor of success. Table 12 presents the multiple regression beta results of allocation variables on SDC success.

Table 12

Regression Analysis for Variables Predicting SDC Performance (Aggregate point totals)

Variable	β	*Sig.*
Recruiting Expenditures	0.470*	0.001
Student Aid Expenditures	-0.098	0.356
Coaches' Salaries	-0.299	0.098
Team Operation Expenses	0.718*	0.000
Administrative Operation Expenses	0.212	0.230
Capital Expenditures	-0.024	0.787

Note. Adjusted $R^2 = 0.906$.

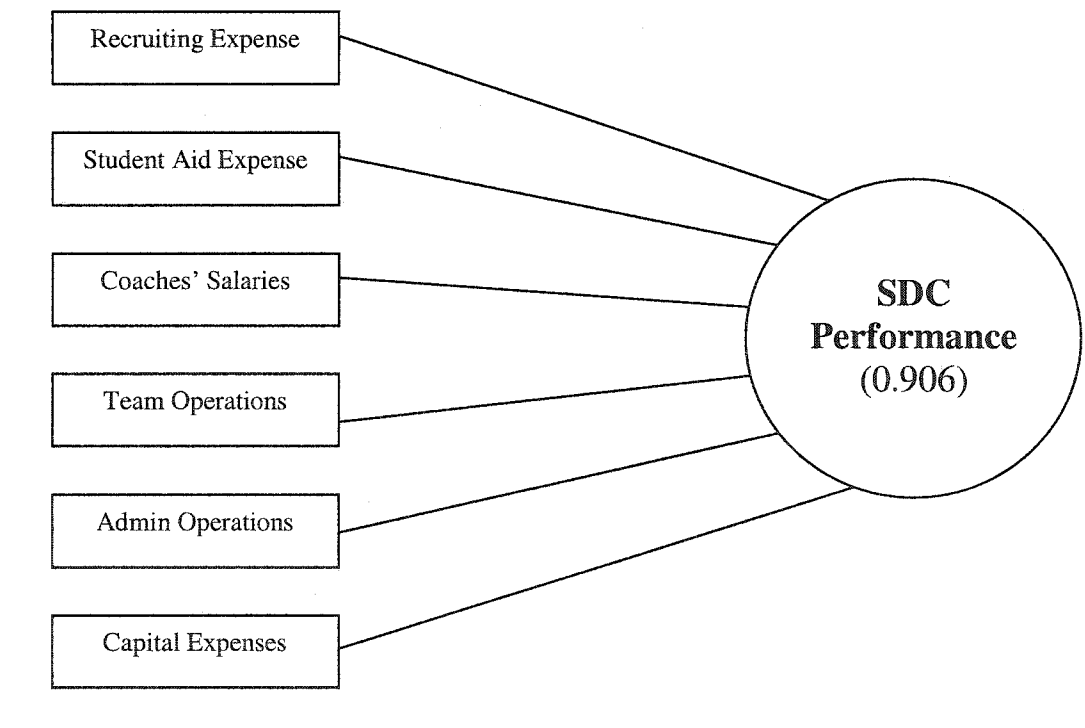
Predictors: Recruiting Expenditures, Student Aid Expenditures, Coaches Salaries, Team Operation Expenses, Administrative Operation Expenses, and Capital Expenditures.

* β significant at the 0.05 level (2-tailed).

It is first important to report F in the AVOVA calculation of the regression model. In this case $F = 42.626$ ($p = 0.000$), indicating that this set of six variables significantly

predicts the outcome, or performance in the SDC (see Appendix 0). It is then prudent to analyze the predictive nature of each of the independent variables, which in this case are the allocation variables. The reported regression coefficient, β, which is a post hoc analysis of the predictor variables, indicates the amount of variance accounted for in the SDC (dependent variable) by each single independent variable, when not controlling for all other variables (Howell, 1997). Those predictors that are statistically significant are recruiting expenditures ($\beta = 0.470$, $p = .001$) and team operation expenses ($\beta = .718$, $p = .000$). This indicates that success in the SDC can be accounted for by relative increases in recruiting expenditures and team operation expenses. In other words, recruiting expenditures and team operation expenses are significant predictor variables of SDC performance (see Figure 2).

Figure 2: *Multiple regression of allocation variables on SDC Success*



When applying the regression formula to the intended population, adjusted R^2 is a critical factor to consider. Rather than simply using the R^2 coefficient, which factors only the sample, the adjusted R^2 provides a population estimate for the multiple regression analysis. Here $R^2 = .906$, indicating that over 90% of the variance in SDC success can be accounted for by the six allocation variables. Figure 2 provides a visual of the categorical expenditures and their relationship with success. It is important to note that, although we have been comparing successful athletic programs to those who have been defined as unsuccessful, regression analyses require a continuous dependent variable. Therefore, rather than simply defining the dependent variable as either successful or unsuccessful in the SDC, three-year aggregate point totals were utilized. Also, although it has been demonstrated that it is statistically more accurate to analyze percentages of overall athletic budgets rather than gross amounts, gross numbers were analyzed in order to meet the assumption of independence.

CHAPTER V

Discussion, Conclusions, and Recommendations

This chapter will present the results of this study by discussing their significance in the current literature as well as application to intercollegiate athletics. In addition, major conclusions will be presented along with recommendations for future research, in large part based on either limitations or observations noted throughout the course of this study. After briefly restating the purpose, this chapter will be divided into four sections. The first will discuss the results of this study in terms of the research questions with practical implications. Secondly, this chapter will present the major findings of this study and how they will contribute to current literature in intercollegiate athletics. Third will be a discussion of the limitations and challenges presented to the researcher, followed lastly by recommendations for future research.

Overview of the Study

The primary purpose of this study was to determine the nature of the relationship between an institution's financial support of its intercollegiate athletic department and that department's success on the playing field. Specifically, this research attempted to determine if athletic departments can rely on a systematic approach to budget allocation rather than simply or primarily relying on revenue generation, with departmental outcome success measured by the former national Sears Directors' Cup (SDC) standings. By studying the relationship between athletic success measured by the SDC and the financial resource allocation in respective athletic departments, this study provided a methodical analysis of capital management within intercollegiate athletics at the Division I level.

Discussion

NCAA Division I Member Institutions – Response Explanation

Although it has been documented that mail surveys are of the most difficult to ensure a high rate of response (Aaker, Kumar, & Day, 2001), this study reports a 69% rate of return. Although this may seem high, a few observations must be noted. First, the sample was stratified in nature, seeking responses from 26 institutions in the group designated as successful and 26 in that designated unsuccessful. Closer inspection notices that the successful group responded at a rate higher than did those who are unsuccessful (88% and 73% respectively). Recall that the EADA reports are prepared for public review and must be submitted upon request by order of the Department of Education. Therefore, one may be inclined to expect a 100% response rate when inquiring about EADA reports. It was the researcher's experience that compliance with request for this document is not directed by the same university unit throughout academia. Also, distribution method for the EADA varies per university as well. While the majority of institutions simply mail the documents upon request, others refer requests to web sites or ask for email addresses for electronic distribution. Even further, it seemed as if the lower half of the subjects placed less emphasis on compliance with this report as it was stated a number of times that it is an unusual request. These inconsistencies led to difficulty in acquiring the reports and provide explanation for the gap in the rate of response.

Another interesting finding was the lack of NCAA Division I diversity in the top 25. This can be only intuitively explained, as analysis was not performed by this study nor has it been reported in the existing literature. Division IA institutions support

intercollegiate football at its most gross level, demanding high levels of ticket sales, large stadium capacities, and a strict scheduling and minimum attendance policy. Division IAA, while supporting football, does not have the stricter requirements of Division IA, allowing lower ticket sales totals, smaller stadiums and no minimum attendance policy. Division IAAA institutions do not support football as an intercollegiate varsity sport (NCAA, 2003). A purely intuitive explanation sides with those who argue that an "arms race" is driving college athletics ("Big Ten faculties", 2001; Rolnick, 1998; Suggs, 2001a; Suggs, 2001c), stating that universities are paying higher salaries to football coaches, building bigger stadiums, and not allowing smaller schools to achieve success and share in the wealth. Further discussion of these observations will follow.

Lastly, it is interesting to note that while only six (17%) of those institutions that were included in the sample were private colleges or universities; none of those six returned the capital expenditures report form requested for analysis. While the EADA report contains a public and university document, capital expenditures and debt service payments are not included on the report provided for public review. In this study the private schools chose to remain so in terms of new facility expenditures and existing facility debt. In order to make future research in intercollegiate financial resource allocation more reliable and accessible, institutions must provide easier public access and consistent reporting procedures.

Institutional Support of Intercollegiate Athletics

Conventional wisdom suggests that institutions financially supporting intercollegiate athletics at a higher level will see a return on that investment via success

on the playing field. This logical conclusion also suggests that there must then be a significant difference between the level of financial support between those who are successful and those who are not. Unfortunately, there is very little empirical evidence in the literature to support this claim. Contrary to popular suggestion, this study indicates there is something beyond mere institutional support that accounts for athletic success.

Reported in prior research to be roughly 3.5% of an institution's overall budget, not only are athletic budgets a small percentage of the larger institutional expenditures, intercollegiate athletics are supported at the same level across NCAA Division I institutions (Litan, Orszag, & Orszag, 2003). This study confirms earlier research findings indicating that there is not a significant difference in athletic budgets as reflected as a percentage of the institutional budgets between successful and unsuccessful athletic programs. The findings from this study revealed that athletic department budgets represent 4.53% and 4.44% of the overall broader institutional budget in the top and bottom 25 institutions respectively; such a finding provides verification to a relatively unexplored body of literature.

Going one step further, this study also investigated the relationship between institutional support as measured by percentage of the broader institutional budget dedicated to intercollegiate athletics and success in the SDC. It has been argued, although never statistically proven, that universities are dedicating more money to athletics than ever before and that increased support is reflected in increased athletic success (Barlow, 2001b; Barlow, 2001c; Sperber, 2000; Suggs, 2002d). This study indicates that there is no statistically significant relationship between an athletic budget reflected as a percentage of an institution's financial support and success in the SDC,

dismissing claims that institutional support is linked to success. Notwithstanding the results underlying this study's second research question, these significant findings fly in the face of those arguing that an "arms race" is emerging in intercollegiate athletics.

Gross Budget Totals in Intercollegiate Athletics

Without a doubt, one of the largest growing concerns in intercollegiate athletics is the "arms race", which is measured as increased spending in one athletic program leading to increases in other athletic programs (Litan, Orszag, & Orszag, 2003). There have been warnings that this "arms race" is distancing those with larger budgets from those who cannot afford added expenditures, subsequently leading to two tiers in intercollegiate athletics, successful and unsuccessful, or the rich versus the poor athletic departments (Atwell, 2001; Barlow, 2001a; "Big Ten faculties", 2001; NCAA, 2000; Rolnick, 1998; Suggs, 2001a; Suggs, 2001c). Once again, without a significant body of literature to validate popular opinion, popular sport literature (e.g. *ESPN Magazine, Sports Illustrated, Street & Smith's SportsBusiness Journal*) suggests a financial difference between successful and unsuccessful athletic programs.

As reported in this study, not only is there a significant difference between gross athletic budget totals, but there is indication of a positive relationship between intercollegiate athletic expenditures and success in SDC standings. At first glance this maintains practical thinking that increased expenditures will lead to increased success. As expected, a very significantly high correlation between athletic expenditures and SDC success support scholars and practitioners who claim that the more spent on intercollegiate athletics the more success that department will experience in national championship competition. There are a number of factors, however, that affected this

difference and a non critical observation obscures a more nuanced approach. Without further examination of the two groups, it would be easy to confirm popular opinion that intercollegiate athletic results are a function of financial commitment. Investigation of tables 13 and 14 reveal additional explanations of the gap between the two groups.

Table 13

Level of Participation and Financial Support of Top 25 Institutions

Top 25 Subject Institution	Division I Level (IA, IAA, IAAA)	Conference Affiliation	% of Institutional Budget in Athletics	Gross Athletic Budget
Stanford University	Division IA	PAC 10	1.65%	$ 30,263,273
University of California, Los Angeles	Division IA	PAC 10	NA	$ 44,638,890
University of Michigan	Division IA	Big Ten	1.33%	$ 46,818,422
University of Florida	Division IA	SEC	4.84%	$ 64,397,050
University of Arizona	Division IA	PAC 10	3.60%	$ 32,129,176
University of Georgia	Division IA	SEC	4.31%	$ 42,943,338
University of North Carolina	Division IA	ACC	2.65%	$ 36,959,604
University of Texas	Division IA	Big 12	4.46%	$ 52,262,548
The Ohio State University	Division IA	Big Ten	3.21%	$ 69,687,828
Arizona State University	Division IA	PAC 10	3.89%	$ 30,638,316
University of Southern California	Division IA	PAC 10	3.29%	$ 43,598,389
University of Nebraska	Division IA	Big 12	7.10%	$ 44,104,917
Louisiana State University	Division IA	SEC	7.79%	$ 37,576,499
University of Notre Dame	Division IA	Independent	8.36%	$ 37,158,085
University of California, Berkeley	Division IA	PAC 10	2.54%	$ 31,995,768
University of Minnesota	Division IA	Big Ten	2.69%	$ 53,733,681
University of Tennessee	Division IA	SEC	10.55%	$ 45,298,706
Brigham Young University	Division IA	Mountain West	NA	$ 20,311,906
University of Oklahoma	Division IA	Big 12	9.25%	$ 41,779,695
University of Washington	Division IA	PAC 10	2.59%	$ 61,901,951
University of Virginia	Division IA	ACC	5.13%	$ 38,009,219
Duke University	Division IA	ACC	2.71%	$ 29,097,411
University of Wisconsin	Division IA	Big Ten	3.19%	$ 48,266,144

Note. UCLA and BYU did not report institutional budget information.

Table 14

Level of Participation and Financial Support of Bottom 25 Institutions

Bottom 25 Subject Institution	Division I Level (IA, IAA, IAAA)	Conference Affiliation	% of Institutional Budget in Athletics	Gross Athletic Budget
Xavier University	Division IAAA	Atlantic 10	7.43%	$ 7,961,253
Middle Tennessee State University	Division IA	Sun Belt	4.84%	$ 8,351,227
University of Maryland-Baltimore County	Division IAAA	America East/ECAC	2.43%	$ 5,613,431
George Washington University	Division IAAA	Atlantic 10	1.71%	$ 10,358,350
Cal State-Northridge	Division IAA	Big West	2.56%	$ 7,977,069
Manhattan College	Division IAAA	Metro Atlantic	8.04%	$ 5,200,394
East Tennessee State University	Division IAA	Southern	2.62%	$ 5,305,693
University of Wisconsin-Milwaukee	Division IAAA	Horizon League	1.37%	$ 5,109,559
University of Akron	Division IA	Mid-American	3.08%	$ 9,008,559
Arkansas State University	Division IA	Sun Belt	4.83%	$ 7,491,188
Drake University	Division IAA	Missouri Valley	8.95%	$ 7,334,167
Ball State University	Division IA	Mid-American	3.62%	$ 10,617,707
Tennessee Tech University	Division IAA	Ohio Valley	NA	$ 4,403,538

Note. Tennessee Tech did not report institutional budget information.

It has been widely printed that there are six distinct conferences that experience more financial success than others in NCAA Division I athletics. These "Big 6" conferences are the Atlantic Coast Conference (ACC), Big East, Big Ten, Big 12, Pac Ten, and the Southeast Conference (SEC). Members of these conferences all compete at the Division IA level, supporting football at its highest level. All other Division IA conferences are considered mid-majors and those who compete at the Division IAA and IAAA levels are not even considered. Popular press reports that the "Big 6" conferences are more financially supported because of football bowl placements and conference revenue sharing. Since 1998, the 63 schools in the "Big 6" conferences have received

$450 million in bowl payouts, compared to just $17 million for the other 54 universities in Division IA (Gehrke, 2003). This argument supports the notion of an "arms race" between those who are on top (Big 6) and those who are not (mid majors and others) and exhibits how the rich get richer and the poor continually lose money; a self-perpetuating cycle.

After review of Tables 13 and 14, there are a few observations that are important for discussion. First, all institutions in the top 25 are Division IA and all but one are from one of the "Big 6" conferences. Of those institutions that placed in the bottom 25 only four compete at the Division IA level and they do not enjoy the comfort (not to mention the riches) of membership in one of the more popular conferences. In fact, there are just as many Division IAA programs represented in the bottom 25 as there are Division IA (four) and more programs without football (Division IAAA) than any other (five).

It is also this researcher's observation that although there is no empirical proof that the broader institutional support between the top and bottom 25 is any different, there appears to be some interesting and more important trends going on *within* groups versus *between* groups. In those groups that finished in the top 25, institutional support ranges from 1.33% to 10.55%, while the lower 25 range is 1.27% to 8.95%. Such a difference in distribution calls for further examination in future research. Additionally, it is questioned whether the two groups are even similar enough to compare as the gross athletic department budget totals differ tremendously. For example, there is a $10 million difference between the smallest budget in the top 25 and the largest in the bottom, and the budgets in general range from $4,403,538 to $69,687,828; spanning more than a $65

million difference. The old adage, "apples to apples or apples to oranges" is illustrated here. Further investigation *within* the two groups is prudent.

These findings are also very significant as they support the practicality of the "arms race" argument, suggesting a symbiotic relationship between financial resources and athletic success. While intuition has been regarded as fact in popular press, for the first time in research literature empirical evidence has revealed that the gross amount of athletic budgets *does* significantly correlate with success. Just as important, however, is the indication that athletic success is more complicated than gross athletic budgets alone. Other factors (e.g. NCAA Division I level and conference affiliation) seem to dictate success as much as does an athletic department's gross budget amount. This implies that as long as conference revenue sharing and the bowl bidding process remains the same, so too will the distribution of power in Division I athletics.

Allocation of Budgets in Intercollegiate Athletics

It has been convincingly argued that there is no conceivable way for the bottom 25 to equal the budgets of their top 25 counterparts without major structural changes in Division I athletics. With empirical evidence indicating that there is a significant relationship between an athletic budget and success in the SDC and that there are significant differences in gross budgets between those who are successful and those who are not, it is important to attempt to level the playing field. One key finding of this study suggests that resource allocation rather than resource acquisition may be an alternative indication of success in the SDC.

While the economy continues to follow a downward cycle, a reexamination of spending initiatives has lead to project resizing, better capital management, and

reallocation of resources (Nelson, 2002). In a time when athletic departments are counting on support from central administration, decreasing state appropriations leave athletic administrators justifying their share. Reacting to the negative implications of the "arms race", intercollegiate athletics needs to follow suggestions found in finance, economic, and higher education literature and consider additional capital management strategies. Financial experts have moved away from support of uniform resource acquisition and shifted towards ideals in capital management and fiscal efficiency (Haddock, 2001; Mintz, 2002; Nelson, 2002; Peacock & Copper, 2000; Pratt, 2002; Sissen, 1999; Zolkos, 2000). Higher education economists are also recommending dedication to resource allocation as a result of decreased state appropriations (Gaither, 2002; Layzell & Caruthers, 2002; Middaugh, 2002; Robst, 2001). Although there have been an overwhelming number of studies dedicated to resource acquisition through means such as merchandising, licensing, athletic development, sponsorship sales, television and radio contracts, naming rights, suite sales, endorsement contracts, and ticket revenue (Amis, Pant & Slack, 1997; Atwell, 2001; Byers, 1998; Bynum, 2002; Covell, 2001; Furst & Schmidt, 2001; Howard, 1999; Howard & Crompton, 1995; Kellogg, 2002; Mahony & Pastore, 1998; Padilla & Baumer, 1994; Plinske, 1999; Rolnick, 1998; Sperber, 1990; Sperber, 2000; Stotlar, 2002; Suggs, 2002d; Weiner, 2002; Zimbalist, 2001), nothing has yet to be offered in terms of resource management in intercollegiate athletics.

This study adopts the theory of the Resource-Based View (RBV) of the firm, that endured competitive advantage may be sustained through allocation of resources rather than their acquisition (Amis, Pant & Slack, 1997; Mahoney, 1995; Mahoney & Pandian,

1992; Smart & Wolfe, 2000). An athletic department's budget, as reported in the EADA report, can be allocated into six distinct variables: recruiting expenditures, student aid expenditures, coaches' salaries, team operational expenses, administrative operational expenses, and capital expenditures. Under the RBV theory, appropriate attention paid to the most significant variable could lead to a sustained competitive advantage, or success in the SDC.

The first major finding with regard to these six allocation variables is that they account for almost 94% of the variance in success as measured by SDC standings. Another way to consider this is that only 6% of the variance is a result of factors other than these six allocation variables. This means that these six variables are very significant predictors of success in the SDC and the allocation of these variables is a statistical factor in outcome. This is important because it suggests that analysis of total athletic budget is inadequate since budget can be further categorically defined. It has been shown that although broader institutional support has no outcome on the SDC, a further examination of its athletic department's budget proves prudent. Holding true, this study provides a schema for future researchers and practitioners when athletic budget analysis is employed.

Next, it was important to determine if there are significant differences in allocated budget variables between those who are successful and those who are not. If there was no difference then it would seem that allocation of these variables does not matter, but rather overall budget is the main predictor of success. Analysis of difference in gross budget variables shows a significant difference in each variable between the top and bottom 25, which seemingly supports the previous section's dialogue that the more

resources present the more success endured. It has been discussed, however, that analysis of gross amounts may be misleading, and perhaps examination of percentage of overall budget is more appropriate. Student aid, coaches' salaries, team operation expenses, and capital expenditures all showed significant differences between the top and bottom 25 institutions under examination.

Once again, logical reasoning can explain a few of these differences. There are few constants in intercollegiate athletics, but those constants reveal themselves in this analysis. Regardless of budget size, in order to support an athletic program at the NCAA Division I level, an athletic department must support the tuition of its student-athletes in the form of scholarship dollars. As we have seen a significant difference in the gross athletic department budgets between the top and bottom 25, these universities must dedicate the same amount of financial resources to student aid, leaving a significant difference in percentage of resource to overall budget. The same argument can be made for coaches' salaries. If sport programs want to keep successful coaches they must pay the market rate for their salaries. This supports the previous demonstration of an omnipresent "arms race", as the lesser successful programs try to compete with the larger conferences and must continue to pay higher coaches' salaries. Once again, this resource is a constant and understandably should differ when analyzed as a percentage of overall budgets. In addition, team operation expenses in Division IA institutions logically would be higher on the gross level, given the nature of their NCAA competition level. These expenses include travel, lodging, uniforms, and equipment, all naturally inflated due to the characteristics of more strict membership policy when compared to those in Division IAA and Division IAAA and their "mid-major" conferences.

Capital expenditures are not a constant but rather a luxury endured by those institutions who can most afford them. While much further investigation of capital expenditures is necessary, it seems to reason once again that those athletic programs with a larger gross budget can dedicate more resources to these ventures, yet again supporting the "success breads success" approach. This leaves recruiting and administrative expenditures as variable figures, and explains the proportionate allocation when compared between the top and bottom 25 institutions.

Since it has been discovered that significant differences exist in four allocation variables between those who are successful and unsuccessful in the SDC, it is important to determine the nature of the relationship of those variables on SDC success. Prediction of success in intercollegiate athletics has been under examined throughout the literature. Segas et al. (2002) used SDC points as an incentive to compliance with Title IX in Pac Ten universities. *U.S. News and World Report* (2002), *The Sporting News* (2000), and *Sports Illustrated* (2002) all used a combination of variables including compliance with Title IX, graduation rates, win/loss records, and NCAA violations to rank the top university athletic programs. None, however, have considered the relationship of resource allocation variables and success.

Once again utilizing allocation variables as a percentage of the gross athletic budget, results show significantly strong correlations between four allocation variables and success in the SDC. These four, not so coincidentally, are the same as those that showed significant differences between the top and bottom 25 institutions. The negative relationships that student aid, coaches' salaries, and team operational expenses have on SDC success is explained with the same logic as the difference scores. Since it has been

statistically indicated that gross overall budget has a strong correlation with success in the SDC; and student aid, coaches' salaries, and team operational expenses are a constant expense across all NCAA Division I athletic departments, it is logical that the relationship would be negative. As athletic department budgets increase and success in the SDC is high, these constant variables remain unchanged in gross amounts, which lead to a negative correlation. These results indicate that as the allocation of these resources decrease percentage-wise in an athletic budget, success in the SDC will increase. Conversely, capital expenditures have a positive correlation with SDC success. This relationship suggests that as allocation of financial resources to capital expenditures increase so too does success in the SDC. Once again the reader should recall aforementioned arguments of a self perpetuating relationship; that those who have money are in place to keep it and those that do not have financial resources are left allocating their small share elsewhere.

Finally, a multiple regression analysis of the allocation variables acting as predictors teased out their relationship with SDC performance as well as which indicator(s) is a significant predictor of success. In the analysis of budget allocation differences and correlation with SDC success it was prudent to use percentages of gross overall budget. In this case, however, percentages cannot be used as it violates a critical assumption in regression, that of independence. If one were to use percentages, each variable would be dependent upon the other in order for the allocation to total 100%. By using raw budget amounts one can meet the assumption of independence and perform the multiple regression analysis.

It should again be stated that over 90% of the variance in SDC success can be accounted for by the set of six allocation variables, a significantly important outcome of this study. Also, this set of predictor variables, or allocation variables, significantly predict performance in the SDC. Knowing this, it is important to determine which of the six variables most relate with the outcome of success in the SDC. Those predictors that showed a significant relationship were recruiting expenditures and team operation expenses.

Once again, team operation expenditures are presented as significant factors on the outcome measure, SDC performance. The regression formula, unlike the correlation coefficients, reveals that recruiting expenditures also have a positive significant relationship with success, one which has shown no association in previous analysis. Simply reacting to the multiple regression would lead one to believe that emphasis should be placed on allocation in those that have proven as significant predictors. This reasoning, however, would be far too presumptuous, however, after considering our previous analyses.

Working backwards, it was interesting to find that one variable in particular, team operational expenditures, was significant variables in all three analyses. Recall that it has been established that in order to appropriately determine which budget allocation variables have a strong relationship with success, percentages of overall budgets rather than actual amounts need to be analyzed when comparing the top 25 institutions to the bottom 25 institutions, thus attempting to "level the playing field". In order to meet the assumption of independence, the regression analysis used gross totals in allocation variables to determine significant predictors of performance in the SDC. Comparing

those to the correlation coefficients run with variables reflected as percentages of budget on SDC success we extract the one that is present in both; team operational expenditures. Further comparison with t-test results reveals that team operational expenditures are significantly different between those who have been designated as successful and those who are unsuccessful. It can then be implied that there is a significant difference between how those who are successful and unsuccessful allocate their budgets, with special emphasis placed on team operation expenses.

The significance of these findings may be of interest to scholars and administrators alike. First, and perhaps most importantly, future research can rely on the schema of athletic budget allocation presented by this research. Secondly, while evidence supports the notion that increased expenditures in athletics has some relationship with success, so too does allocation of resources. There are differences in how successful and unsuccessful athletic programs allocate their budgets, and while it may be a result of the inconsistencies in revenue acquisition across conferences, athletic administrators can refer to the allocation model of the top 25 for comparison (see Table 15). Thirdly, team operational expenditures are most closely tied with performance in the SDC and should be considered when athletic budgets are allocated. Lastly, not all Division I athletic departments operate the same. There is a distinct financial difference between the top and bottom programs in the SDC and as long as current revenue distribution among those programs remains the same there will be a noticeable gap. Allocation of financial resources does matter, but at this juncture in intercollegiate athletics it seems that total resource acquisition matters more.

Table 15

Budget Allocation Totals for Top and Bottom 25 SDC Point Accumulators

	Expenditures as a % of Overall AD Budget						
	Recruiting[c]	Student Aid[ab]	Coaches Salaries[ab]	Team Operations[abc]	Admin Operations	Capital[ab]	Total
Top 25	1.88%	13.01%	11.36%	9.55%	31.32%	14.01%	81.13%
Bottom 25	2.43%	29.51%	16.40%	13.51%	26.26%	2.25%	90.35%

Note. All numbers are aggregate over operating years 1999-2000, 2000-2001, and 2001-2002.
a. t-test identifies significant difference
b. significant correlation with SDC SDC performance as measured by aggregate point totals
c. significant predictor of SDC performance as measured by aggregate point totals

Conclusions

While experts in the fields of finance, economics, organizational management, and higher education are flooding literature with cost containment tactics and suggestions, intercollegiate athletics continues to overwhelmingly rely on one single formula: increase revenues. Although common-sense intuition and empirical data support the notion of resource acquisition, a fluctuating economy suggests paying closer attention to resource allocation and fiscal efficiency as additional or alternative strategies. As the impending "arms race" heightens and continues to threaten the integrity of intercollegiate athletics, so too does the need for athletic administrators to search for additional capital management strategies.

Another important theme in intercollegiate athletics is performance. While some studies offer their definition of success based on various factors within athletics, few offer predictive variables, especially with consideration to financial allocation of the budget. This study attempted to link the two, considering the relationship of allocation of financial resources in intercollegiate athletics on success in the former Sears Directors'

Cup. Not only do the results show a relationship between the two, but it also confirms intuitive theory that more money in athletics corresponds with success, and further suggests that two particular allocation variables, coaches' salaries and team operational expenses, are significant indicators of success in the SDC.

Throughout the discussion of results many significant conclusions were drawn. Prior research was supported as this study indicated very little financial support from the broader institution and advanced that percentage of institutional support dedicated to intercollegiate athletics has no relationship with success in athletics. This dispels popular opinion that an institution's investment in its department of intercollegiate athletics returns success and supplements the very sparse literature in this area. Also, this study supported conventional wisdom that gross dollar investments in athletics yields success and that there is an ever increasing gap between the successful and unsuccessful. Just as important was the observation that in addition to gross budget, there are additional factors (e.g. NCAA Division I level and conference affiliation) that impact an athletic department's on-field success. If the so called Division I "playing field" were to be leveled these issues need to be considered. In addition, this study offers a schema of expenditure distribution in the suggested six allocation variables. These six variables account for 90% of the variance in SDC success and offer a categorical analysis of budget allocation. Future research now can rely on empirical data to further analyze the financial situation in intercollegiate athletics. These major findings contribute to the body of literature in sport management, intercollegiate athletics, success measures, resource management, and finance in higher education. Also, this study may be used by athletic administrators as a model for financial allocation. Comparison of individual

athletic budgets to this report may reveal inconsistencies or deficiencies in their respective budgets.

All told, the major conclusion of this research reveals that money does indeed matter in intercollegiate athletics. This study has empirically validated concerns of a gap in Division I universities, suggesting one group, members of the "Big 6" conferences, has a distinct financial advantage over all others, regardless of financial resource allocation. Because of a lack of literature in this field, this research has served as an exploratory study and poses as many questions as has answered. Most importantly, this report should act as a catalyst for further research in the field of resource allocation in intercollegiate athletics.

Limitations

While this study positively contributes to a lacking thematic discussion of fiscal efficiency in intercollegiate athletics, throughout the course of this study the researcher found several limitations and obstacles to data collection and analysis. As these limitations did not completely impair the procedures and analysis, it is important for these to be addressed for future considerations.

One intention of this study was to determine if budget allocation variables had a relationship with SDC success. One variable in particular, capital expenditures is not listed on the EADA report. In order to collect this data on this variable a separate letter of request (see Appendix K) was sent to appropriate athletic administrators. This piece of information, while mandated for public review, experienced a lesser rate of return than did the EADA report. In addition, reporting inconsistencies in this area need to be addressed as each institution reports and defines capital expenditures differently. It is the

recommendation of this researcher that future EADA reports include a consistent method for recording capital expenditures in intercollegiate athletics.

Although the EADA report is a document intended for public distribution when requested, retrieval and reporting discrepancies exist. First, there is not one single unit in a university that consistently handles EADA requests. This makes acquisition of these reports more difficult than necessary. Also, reporting methods on the report itself are not consistent across institutions. One example of this is exhibited in head and assistant coaches' salaries. In some cases, wages and salaries are the only figures reported, while other universities include bonuses and incentives. Again, the integrity of future research relies on the dependability, consistency, and accuracy of reporting methods and this variation needs attention.

An important aspect of this study was the use of aggregate dollar amounts over the fiscal years of 2000, 2001, and 2002. This was done in an attempt to soften unusual expenditures across athletic departments and allocation variables. An example of this occurred when one subjected shifted the management and fiscal responsibility of its multipurpose facility from athletics to student affairs. The effect of this change is felt in administrative and facility expenditures as its budget was half that of the total athletic budget. In order to more accurately predict relationships and differences, a larger span of years should be used in this longitudinal analysis. Trends do not occur in years, but rather decades and a more broad scope of years may help to capture these tendencies.

It must be acknowledged that the range in the outcome variable was initially very limited, with success reported as a "2" and lack of success as a "1". This dichotomy would impact correlation and multiple regression analyses, disallowing core assumptions

to be met. In order to accommodate these underlying assumptions, three-year aggregate point totals were used as the outcome measure in correlation and regression analyses, offering a continuous dependent variable.

Lastly, throughout the course of this research it was discovered that Division I athletics are not the same across all membership levels. Division IA institutions are much different in their financial support than are Division IAA and IAAA, which assuredly contribute to success or lack thereof. Comparing the top and bottom 25 in the SDC is not a leveraged comparison and further analysis of differences within those groups may yield additional interesting and significant results.

Recommendations for Future Research

A result not captured in the data analysis is the fact that this study presents opportunity for future research with similar themes and applications. The lack of substantive research in this area is at once discouraging, but at the same time promising and hopeful. The following are recommendations for future research:

1. Replicate this study analyzing only the top 25, dividing them into two groups to determine differences among those who are successful. This will ensure comparison of like athletic departments and possibly uncover allocation tendencies that account for success.
2. Replicate this study using alternative non-financial variables as predictors of success. Other possibilities could include Title IX compliance, graduation rates, number of sports offered, or number of student-athletes. This would either dispel or support the notion that financial support is the sole indicator of success.

3. Replicate this study with alternative outcome measures. Other potential measures could be conference or championships and graduation rates. If athletic administrators have alternative success priorities this study could serve as a model for those wishing to find indicators of success, regardless of definition.
4. Investigate the percentage of an institution's overall budget to areas other than intercollegiate athletics, such as Chemistry, Student Affairs, or University Development. This will indicate whether or not athletics receives disproportionate financial support when compared to other university units.
5. Replicate this study within NCAA Division II and III programs to compare results across membership divisions. It has been discussed that Division I member institutions are not all similar and experience extreme variance in level of financial support. Division II and III programs place far less emphasis on revenue acquisition and analysis of their allocation tendencies would be much less biased.
6. This study analyzed broader institutional financial support in terms of percentage of overall institutional budget reflected in its athletics budget. Gross amount of financial support offered from central administration to athletics varies among universities and could account for some success variance. Investigation of the relationship between gross amount of central administrative financial support to athletics and athletic success could reveal much different results.
7. Replicate this study teasing out the differences between public and private institutions rather than the top and bottom 25 in the SDC. Suggesting that central administrative gross financial support may be an indicator of athletic success,

there could be distinct differences between those who receive state appropriations and those who do not.

Once again, because of a lack of literature in this field, this research has served as an exploratory study and has revealed as many questions as it answered. Future research needs to refine the data and more closely investigate allocation tendencies in intercollegiate athletics. There is a need for additional research in this area and it is the hope of this researcher that this study will serve as a benchmark for future endeavors. For now, however, we can rest assured that success does bread success. In other words, money matters.

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Appendix A

Team Sports Points Bracket

Effective in the 2001-2002 athletic season, standings for the Sears Directors' Cup will be based upon the size of the championship bracket. First place for all brackets and all sports is 100 points.

Place	65	64	48	32	16	12	8	4
1	100	100	100	100	100	100	100	100
2	90	90	90	90	90	90	80	70
3-4	75	75	75	75	75	75	55	20
5-8	60	60	60	50	40	40	20	
9-16	50	50	50	30	20	20		
17 -32	30	30	30	20				
33-64	25	20	20					
65	20							

Retrieved February 12, 2002, from NACDA Web site:
http://nacda.fansonly.com/searsdirectorscup/nacda-searsdirectorscup.html

Appenedix B

Individual Sports Points Bracket

There is a separate scoring structure for individual sports, or those in which teams are not placed into brackets. Although similar in structure to that of team sports, the scoring per bracket will not be based on ranges of place but rather awarded points based on each individual finish. First place will receive 100 points, while the last place in each bracket will receive 20 points.

64-Team		48-Team		32-Team		16-Team		12-Team		8-Team	
Place	**Points**	**Place**	**Points**	**Place**	**Points**	**Place**	**Points**	**Place**	**Points**	**Place**	**Points**
1	100	1	100	1	100	1	100	1	100	1	100
2	90	2	90	2	90	2	90	2	90	2	80
3	83	3	80	3	80	3	80	3	80	3	70
4	80	4	75	4	75	4	75	4	70	4	60
5	79	5	73	5	71	5	70	5	60	5	50
6	78	6	71	6	68	6	65	6	50	6	40
7	77	7	69	7	65	7	60	7	45	7	30
8	76	8	67	8	62	8	55	8	40	8	20
9	75	9	65	9	59	9	50	9	35		
10	74	10	63	10	56	10	45	10	30		
11	73	11	61	11	53	11	40	11	25		
12	72	12	59	12	50	12	36	12	20		
13	71	13	57	13	47	13	32				
14	70	14	55	14	44	14	28				
15	69	15	54	15	41	15	24				
16	68	16	52	16	38	16	20				
17	67	17	51	17	35						
18	66	18	50	18	34						
19	65	19	49	19	33						
20	64	20	48	20	32						
21	63	21	47	21	31						
22	62	22	46	22	30						
23	61	23	45	23	29						
24	60	24	44	24	28						
25	59	25	43	25	27						
26	58	26	42	26	26						
27	57	27	41	27	25						
28	56	28	40	28	24						
29	55	29	39	29	23						
30	54	30	38	30	22						
31	53	31	37	31	21						
32	52	32	36	32	20						
33	51	33	35								
34	50	34	34								
35	49	35	33								

Appendix B continued

64-Team		48-Team	
Place	Points	Place	Points
36	48	36	32
37	47	37	31
38	46	38	30
39	45	39	29
40	44	40	28
41	43	41	27
42	42	42	26
43	41	43	25
44	40	44	24
45	39	45	23
46	38	46	22
47	37	47	21
48	36	48	20
49	35		
50	34		
51	33		
52	32		
53	31		
54	30		
55	29		
56	28		
57	27		
58	26		
59	25		
60	24		
61	23		
62	22		
63	21		
64	20		

Retrieved February 12, 2002, from NACDA Web site:
http://nacda.fansonly.com/searsdirectorscup/nacda-searsdirectorscup.html

Division I Sears Directors' Cup Final Standings: Top 25
In order of points
Longitudinal Analysis: 3 Year Review

In order of Points

	1999-2000		2000-2001		2001-2002				
Team	**Place**	**Points**	**Place**	**Points**	**Place**	**Points**	**Top 25 Finishes**	**Average Place**	**Average Point Total**
Stanford	1	1359.5	1	1359	1	1499	5	1.00	1405.83
UCLA	2	1153.5	2	1138	5	1026	5	3.00	1105.83
Florida	7	842	7	847	3	1078	5	5.67	922.33
Michigan	3	965	4	864.5	6	917	5	4.33	915.50
North Carolina	5	908.5	15	729.5	4	1065.5	5	8.00	901.17
Texas	9	801	19	672	2	1110.5	5	10.00	861.17
Arizona	8	837.5	5	863	9	852	5	7.33	850.83
Georgia	12	728.5	3	890.5	8	865	5	7.67	828.00
Nebraska	6	906	13	753	22	721.5	5	13.67	793.50
Penn State	4	909	10	775.5	24	676.5	5	12.67	787.00
Ohio State	14	682	6	862	14	778.5	5	11.33	774.17
Arizona St.	11	733	9	801	15	767.5	5	11.67	767.17
LSU	10	764	22	653.5	10	842.5	5	14.00	753.33
USC	16	666.5	8	817.5	15	767.5	5	13.00	750.50
California	15	669.5	12	761	20	738	5	15.67	722.83
Notre Dame	21	594.5	11	764.5	13	806.5	4	15.00	721.83
Minnesota	19	627	23	639	7	886.5	5	16.33	717.50
Tennessee	20	621	21	661.5	12	821	5	17.67	701.17
BYU	18	657.5	17	708	23	685	5	19.33	683.50
Oklahoma	25	563.5	18	698.5	17	760.5	3	20.00	674.17
Wisconsin	17	661.5	20	671.5	33	575	3	23.33	636.00
Duke	24	566	16	722	30	600	3	23.33	629.33
Washington	30	482	14	748	25	639.5	4	23.00	623.17
South Carolina	32	465	25	539	11	828.5	2	22.67	610.83
Virginia	13	698.5	30	487.5	27	626.5	3	23.33	604.17
Auburn	23	572	28	497	19	738.5	4	23.33	602.50

Appendix C cont.

Team	1999-2000		2000-2001		2001-2002		Top 25 Finishes	Average Place	Average Point Total
	Place	Points	Place	Points	Place	Points			
Princeton	33	460.5	24	569.5	21	736	3	26.00	588.67
Michigan State	22	587	39	446.5	29	613.5	1	30.00	549.00
Colorado	44	370	27	500	18	751.5	2	29.67	540.50
Arkansas	26	538.5	36	454	35	540	2	32.33	510.83
Clemson	38	397	34	472	26	630.5	1	32.67	499.83
Maryland	45	366.5	40	426.5	44	423.5	2	43.00	405.50
Oklahoma State	49	340.5	38	450	45	411	1	44.00	400.50

Division I Sears Directors' Cup Final Standings: Top 25
In order of place
Longitudinal Analysis: 3 Year Review

In order of place

	1999-2000		2000-2001		2001-2002				
Team	**Place**	**Points**	**Place**	**Points**	**Place**	**Points**	**Top 25 Finishes**	**Average Place**	**Average Point Total**
Stanford	1	1359.5	1	1359	1	1499	5	1.00	1405.83
UCLA	2	1153.5	2	1138	5	1026	5	3.00	1105.83
Michigan	3	965	4	864.5	6	917	5	4.33	915.50
Florida	7	842	7	847	3	1078	5	5.67	922.33
Arizona	8	837.5	5	863	9	852	5	7.33	850.83
Georgia	12	728.5	3	890.5	8	865	5	7.67	828.00
North Carolina	5	908.5	15	729.5	4	1065.5	5	8.00	901.17
Texas	9	801	19	672	2	1110.5	5	10.00	861.17
Ohio State	14	682	6	862	14	778.5	5	11.33	774.17
Arizona St.	11	733	9	801	15	767.5	5	11.67	767.17
Penn State	4	909	10	775.5	24	676.5	5	12.67	787.00
USC	16	666.5	8	817.5	15	767.5	5	13.00	750.50
Nebraska	6	906	13	753	22	721.5	5	13.67	793.50
LSU	10	764	22	653.5	10	842.5	5	14.00	753.33
Notre Dame	21	594.5	11	764.5	13	806.5	4	15.00	721.83
California	15	669.5	12	761	20	738	5	15.67	722.83
Minnesota	19	627	23	639	7	886.5	5	16.33	717.50
Tennessee	20	621	21	661.5	12	821	5	17.67	701.17
BYU	18	657.5	17	708	23	685	5	19.33	683.50
Oklahoma	25	563.5	18	698.5	17	760.5	3	20.00	674.17
South Carolina	32	465	25	539	11	828.5	2	22.67	610.83
Washington	30	482	14	748	25	639.5	4	23.00	623.17
Virginia	13	698.5	30	487.5	27	626.5	3	23.33	604.17
Duke	24	566	16	722	30	600	3	23.33	629.33
Auburn	23	572	28	497	19	738.5	4	23.33	602.50
Wisconsin	17	661.5	20	671.5	33	575	3	23.33	636.00

Appendix D cont.

Team	1999-2000		2000-2001		2001-2002		Top 25 Finishes	Average Place	Average Point Total
	Place	Points	Place	Points	Place	Points			
Princeton	33	460.5	24	569.5	21	736	3	26.00	588.67
Colorado	44	370	27	500	18	751.5	2	29.67	540.50
Michigan State	22	587	39	446.5	29	613.5	1	30.00	549.00
Arkansas	26	538.5	36	454	35	540	2	32.33	510.83
Clemson	38	397	34	472	26	630.5	1	32.67	499.83
Maryland	45	366.5	40	426.5	44	423.5	2	43.00	405.50
Oklahoma State	49	340.5	38	450	45	411	1	44.00	400.50

Division I Sears Directors' Cup Final Standings: Bottom 25
In order of points
Longitudinal Analysis: 3 Year Review

In order of points

Team	1999-2000		2000-2001		2001-2002		Average Place	Average Point Total
	Place	Points	Place	Points	Place	Points		
Xavier	128	110	84	201	130	130	114.0	147.0
Cornell	140	95.5	122	121.5	72	243	111.3	153.3
Alabama-Birmingham	95	164	146	91	143	107	128.0	120.7
Liberty	174	60	158	78	82	217.5	138.0	118.5
Appalachian State	166	75	109	144.5	153	96	142.7	105.2
U.S. Military Academy	122	115	137	100.5	152	97	137.0	104.2
Middle Tennessee State	105	149	162	73.5	156	89.5	141.0	104.0
Maryland-Baltimore County	156	80	149	86.5	119	140.5	141.3	102.3
Maine	141	95	212	40	115	150	156.0	95.0
Cal State-Northridge	131	106.5	125	115.5	239	20	165.0	80.7
George Washington	151	83	149	86.5	175	66.5	158.3	78.7
Florida A&M	89	173.5	236	20	206	40	177.0	77.8
Manhattan	146	88	223	33	142	109	170.3	76.7
Coastal Carolina	185	52	137	100.5	167	73.5	163.0	75.3
Toledo	262	0	151	85.5	128	133.5	180.3	73.0
Loyola Marymount	186	50	212	40	132	120	176.7	70.0
Eastern Illinois	229	26	204	45	137	117	190.0	62.7
Southern Mississippi	117	122	174	62	262	0	184.3	61.3
Iona	162	79	169	66	226	27.5	185.7	57.5
East Tennessee State	168	67.5	159	75	239	20	188.7	54.2
Akron	181	58.5	155	82.5	239	20	191.7	53.7
Wisconsin-Milwaukee	233	20	175	60	161	80	189.7	53.3
Arkansas State	134	102.5	180	57	262	0	192.0	53.2
Drake	150	84.5	236	20	194	50	193.3	51.5
Ball State	143	94.5	236	20	206	40	195.0	51.5
Indiana State	262	0	122	121.5	219	30	201.0	50.5

Division I Sears Directors' Cup Final Standings: Bottom 25
In order of final points

	1999-2000		2000-2001		2001-2002			
Team	Place	Points	Place	Points	Place	Points	Average Place	Average Point Total
Charleston	262	0	134	105	197	45	197.7	50.0
Southwest Texas State	233	20	191	50	173	77	199.0	49.0
Fairleigh Dickinson	227	29	180	57	182	60	196.3	48.7
Tennessee Tech	233	20	170	65	182	60	195.0	48.3
Campbell	173	62	188	54	228	25	196.3	47.0
Louisiana Tech	174	60	175	60	239	20	196.0	46.7
Bethune-Cookman	174	60	175	60	239	20	196.0	46.7
Arkansas-Little Rock	186	50	154	83	262	0	200.7	44.3
Central Connecticut State	171	64	236	22.5	197	45	201.3	43.8
St. Louis	186	50	236	20	182	60	201.3	43.3
Youngstwon State	128	110	236	20	262	0	208.7	43.3
North Carolina-Wilmington	233	20	261	0	145	104	213.0	41.3
Monmouth	262	0	204	45	165	75.5	210.3	40.2
Marist	199	40	212	40	206	40	205.7	40.0
Alcorn State	174	60	212	40	239	20	208.3	40.0
Wisconsin-Green Bay	171	64	224	32	239	20	211.3	38.7
Holy Cross	233	20	170	65	228	25	210.3	36.7
North Carolina-Greensboro	212	35	183	55	239	20	211.3	36.7
Charleston Southern	233	20	168	68	239	20	213.3	36.0
Jackson State	199	40	206	44	236	22	213.7	35.3
Lamar	233	20	226	30.5	191	53.5	216.7	34.7
Cal State-Sacramento	233	20	212	40	206	40	217.0	33.3
Prarie View A&M	193	47	200	48.5	262	0	218.3	31.8
San Francisco	262	0	220	37	189	58	223.7	31.7
Southeast Missouri State	199	40	227	30	239	20	221.7	30.0
McNeese State	233	20	236	20	197	45	222.0	28.3
Hampton	233	20	261	0	177	65	223.7	28.3
Texas-San Antonio	262	0	236	20	180	63	226.0	27.7
Austin Peay	262	0	189	53	239	20	230.0	24.3
Virginia Military Institute	229	26	261	0	203	44.5	231.0	23.5
Miami (Ohio)	233	20	236	20	219	30	229.3	23.3

	1999-2000		2000-2001		2001-2002			
Team	Place	Points	Place	Points	Place	Points	Average Place	Average Point Total
Drexel	262	0	261	0	172	69.5	231.7	23.2
Davidson	233	20	236	20	228	25	232.3	21.7
New Orleans	233	20	206	44	262	0	233.7	21.3
Wright State	198	42	236	20	262	0	232.0	20.7
St. Francis	233	20	261	0	204	42	232.7	20.7
Norfolk State	262	0	210	41	239	20	237.0	20.3
Troy State	199	40	236	20	262	0	232.3	20.0
Lafayette (Penn)	199	40	261	0	239	20	233.0	20.0
Niagara	199	40	261	0	239	20	233.0	20.0
Western Illinois	233	20	212	40	262	0	235.7	20.0
Western Michigan	233	20	212	40	262	0	235.7	20.0
St. Mary's	262	0	227	30	219	30	236.0	20.0
St. Peter's	233	20	236	20	239	20	236.0	20.0
Robert Morris	233	20	236	20	239	20	236.0	20.0
California-Irvine	262	0	183	55	262	0	235.7	18.3
Buffalo	262	0	222	34.5	239	20	241.0	18.2
Eastern Washington	233	20	261	0	219	30	237.7	16.7
Missouri-Kansas City	233	20	261	0	219	30	237.7	16.7
Canisius	220	30	261	0	239	20	240.0	16.7
Stetson	262	0	227	30	239	20	242.7	16.7
Morgan State	262	0	203	46.5	262	0	242.3	15.5
Texas Southern	262	0	261	0	197	45	240.0	15.0
Valparaiso	233	20	261	0	228	25	240.7	15.0
Siena	262	0	236	20	228	25	242.0	15.0
Bradley	262	0	236	20	228	25	242.0	15.0
Howard	262	0	236	20	237	21.5	245.0	13.8
Northeastern	262	0	261	0	206	40	243.0	13.3
Long Island	233	20	236	20	262	0	243.7	13.3
Loyola (Ill)	233	20	236	20	262	0	243.7	13.3
St. Bonaventure	233	20	236	20	262	0	243.7	13.3
Elon	233	20	261	0	239	20	244.3	13.3

	1999-2000		2000-2001		2001-2002			
Team	Place	Points	Place	Points	Place	Points	Average Place	Average Point Total
Alabama A&M	262	0	236	20	239	20	245.7	13.3
Quinnipiac	262	0	236	20	239	20	245.7	13.3
SUNY-Buffalo	218	30.5	261	0	262	0	247.0	10.2
Samford	233	20	261	0	262	0	252.0	6.7
South Carolina State	233	20	261	0	262	0	252.0	6.7
Tennessee State	233	20	261	0	262	0	252.0	6.7
Wagner	233	20	261	0	262	0	252.0	6.7
Citadel	262	0	236	20	262	0	253.3	6.7
Radford	262	0	236	20	262	0	253.3	6.7
Indiana/Purdue-Indianapolis	262	0	236	20	262	0	253.3	6.7
Mercer	262	0	261	0	239	20	254.0	6.7
SUNY-Stonybrook	262	0	261	0	239	20	254.0	6.7

Division I Sears Directors' Cup Final Standings: Bottom 25

In order of place

Longitudinal Analysis: 3 Year Review

In order of Place

	1999-2000		2000-2001		2001-2002			
Team	**Place**	**Points**	**Place**	**Points**	**Place**	**Points**	**Average Place**	**Average Point Total**
Xavier	128	110	84	201	130	130	114.0	147.0
Cornell	140	95.5	122	121.5	72	243	111.3	153.3
Alabama-Birmingham	95	164	146	91	143	107	128.0	120.7
U.S. Military Academy	122	115	137	100.5	152	97	137.0	104.2
Liberty	174	60	158	78	82	217.5	138.0	118.5
Middle Tennessee State	105	149	162	73.5	156	89.5	141.0	104.0
Maryland-Baltimore County	156	80	149	86.5	119	140.5	141.3	102.3
Appalachian State	166	75	109	144.5	153	96	142.7	105.2
Maine	141	95	212	40	115	150	156.0	95.0
George Washington	151	83	149	86.5	175	66.5	158.3	78.7
Coastal Carolina	185	52	137	100.5	167	73.5	163.0	75.3
Cal State-Northridge	131	106.5	125	115.5	239	20	165.0	80.7
Manhattan	146	88	223	33	142	109	170.3	76.7
Loyola Marymount	186	50	212	40	132	120	176.7	70.0
Florida A&M	89	173.5	236	20	206	40	177.0	77.8
Toledo	262	0	151	85.5	128	133.5	180.3	73.0
Southern Mississippi	117	122	174	62	262	0	184.3	61.3
Iona	162	79	169	66	226	27.5	185.7	57.5
East Tennessee State	168	67.5	159	75	239	20	188.7	54.2
Wisconsin-Milwaukee	233	20	175	60	161	80	189.7	53.3
Eastern Illinois	229	26	204	45	137	117	190.0	62.7
Akron	181	58.5	155	82.5	239	20	191.7	53.7
Arkansas State	134	102.5	180	57	262	0	192.0	53.2
Drake	150	84.5	236	20	194	50	193.3	51.5
Ball State	143	94.5	236	20	206	40	195.0	51.5
Tennessee Tech	233	20	170	65	182	60	195.0	48.3

	1999-2000		2000-2001		2001-2002			
Team	Place	Points	Place	Points	Place	Points	Average Place	Average Point Total
Louisiana Tech	174	60	175	60	239	20	196.0	46.7
Bethune-Cookman	174	60	175	60	239	20	196.0	46.7
Fairleigh Dickinson	227	29	180	57	182	60	196.3	48.7
Campbell	173	62	188	54	228	25	196.3	47.0
Charleston	262	0	134	105	197	45	197.7	50.0
Southwest Texas State	233	20	191	50	173	77	199.0	49.0
Arkansas-Little Rock	186	50	154	83	262	0	200.7	44.3
Indiana State	262	0	122	121.5	219	30	201.0	50.5
Central Connecticut State	171	64	236	22.5	197	45	201.3	43.8
St. Louis	186	50	236	20	182	60	201.3	43.3
Marist	199	40	212	40	206	40	205.7	40.0
Alcorn State	174	60	212	40	239	20	208.3	40.0
Youngstwon State	128	110	236	20	262	0	208.7	43.3
Monmouth	262	0	204	45	165	75.5	210.3	40.2
Holy Cross	233	20	170	65	228	25	210.3	36.7
Wisconsin-Green Bay	171	64	224	32	239	20	211.3	38.7
North Carolina-Greensboro	212	35	183	55	239	20	211.3	36.7
North Carolina-Wilmington	233	20	261	0	145	104	213.0	41.3
Charleston Southern	233	20	168	68	239	20	213.3	36.0
Jackson State	199	40	206	44	236	22	213.7	35.3
Lamar	233	20	226	30.5	191	53.5	216.7	34.7
Cal State-Sacramento	233	20	212	40	206	40	217.0	33.3
Prarie View A&M	193	47	200	48.5	262	0	218.3	31.8
Southeast Missouri State	199	40	227	30	239	20	221.7	30.0
McNeese State	233	20	236	20	197	45	222.0	28.3
San Francisco	262	0	220	37	189	58	223.7	31.7
Hampton	233	20	261	0	177	65	223.7	28.3
Texas-San Antonio	262	0	236	20	180	63	226.0	27.7
Miami (Ohio)	233	20	236	20	219	30	229.3	23.3
Austin Peay	262	0	189	53	239	20	230.0	24.3
Virginia Military Institute	229	26	261	0	203	44.5	231.0	23.5

	1999-2000		2000-2001		2001-2002			
Team	Place	Points	Place	Points	Place	Points	Average Place	Average Point Total
Drexel	262	0	261	0	172	69.5	231.7	23.2
Wright State	198	42	236	20	262	0	232.0	20.7
Davidson	233	20	236	20	228	25	232.3	21.7
Troy State	199	40	236	20	262	0	232.3	20.0
St. Francis	233	20	261	0	204	42	232.7	20.7
Lafayette (Penn)	199	40	261	0	239	20	233.0	20.0
Niagara	199	40	261	0	239	20	233.0	20.0
New Orleans	233	20	206	44	262	0	233.7	21.3
Western Illinois	233	20	212	40	262	0	235.7	20.0
Western Michigan	233	20	212	40	262	0	235.7	20.0
California-Irvine	262	0	183	55	262	0	235.7	18.3
St. Mary's	262	0	227	30	219	30	236.0	20.0
St. Peter's	233	20	236	20	239	20	236.0	20.0
Robert Morris	233	20	236	20	239	20	236.0	20.0
Norfolk State	262	0	210	41	239	20	237.0	20.3
Eastern Washington	233	20	261	0	219	30	237.7	16.7
Missouri-Kansas City	233	20	261	0	219	30	237.7	16.7
Canisius	220	30	261	0	239	20	240.0	16.7
Texas Southern	262	0	261	0	197	45	240.0	15.0
Valparaiso	233	20	261	0	228	25	240.7	15.0
Buffalo	262	0	222	34.5	239	20	241.0	18.2
Siena	262	0	236	20	228	25	242.0	15.0
Bradley	262	0	236	20	228	25	242.0	15.0
Morgan State	262	0	203	46.5	262	0	242.3	15.5
Stetson	262	0	227	30	239	20	242.7	16.7
Northeastern	262	0	261	0	206	40	243.0	13.3
Long Island	233	20	236	20	262	0	243.7	13.3
Loyola (Ill)	233	20	236	20	262	0	243.7	13.3
St. Bonaventure	233	20	236	20	262	0	243.7	13.3
Elon	233	20	261	0	239	20	244.3	13.3
Howard	262	0	236	20	237	21.5	245.0	13.8

	1999-2000		2000-2001		2001-2002			
Team	Place	Points	Place	Points	Place	Points	Average Place	Average Point Total
Alabama A&M	262	0	236	20	239	20	245.7	13.3
Quinnipiac	262	0	236	20	239	20	245.7	13.3
SUNY-Buffalo	218	30.5	261	0	262	0	247.0	10.2
Samford	233	20	261	0	262	0	252.0	6.7
South Carolina State	233	20	261	0	262	0	252.0	6.7
Tennessee State	233	20	261	0	262	0	252.0	6.7
Wagner	233	20	261	0	262	0	252.0	6.7
Citadel	262	0	236	20	262	0	253.3	6.7
Radford	262	0	236	20	262	0	253.3	6.7
Indiana/Purdue-Indianapolis	262	0	236	20	262	0	253.3	6.7
Mercer	262	0	261	0	239	20	254.0	6.7
SUNY-Stonybrook	262	0	261	0	239	20	254.0	6.7

Appendix G

U.S. News and World Report: America's Best College Sports Programs

Final Top Twenty Rankings

Boston College
Brown University
Cornell University
Dartmouth College
Duke University
Georgetown University
Harvard University
Lehigh University
Pennsylvania State University- University Park
Princeton University
Stanford University
University of Connecticut
University of Hawaii - Manoa
University of Illinois - Champaign
University of Maryland - College Park
University of Massachusetts - Amherst
University of Michigan - Ann Arbor
University of New Hampshire
University of Utah
Villanova University

* Schools are listed as presented by U.S. News and World Report, in alphabetical order, not order of most success.

("America's best college sports programs", 2002)

Appendix H

The Sporting News: The Sporting News' Best College Athletic Program for 2000

Final Top Twenty-five

1 Stanford
2 Michigan State
3 North Carolina
4 Notre Dame
5 Purdue
6 Washington
7 Iowa State
8 Duke
9 North Carolina State
10 Wisconsin
11 Oregon
12 Penn State
13 Florida
14 Virginia
15 Michigan
16 Syracuse
17 Auburn
18 Illinois
19 Texas
20 Indiana
21 South Carolina
22 Northwestern
23 UCLA
24 Virginia Tech
25 Arizona

(Gietschier, 2001)

Appendix I

Sports Illustrated: America's Best Sports Colleges

Final Top Twenty-Five Rankings

1 Texas
2 Stanford
3 Oklahoma
4 Florida
5 South Carolina
6 Louisiana State
7 Minnesota
8 North Carolina
9 Tennessee
10 Michigan
11 UCLA
12 Ohio State
13 Georgia
14 Colorado
15 Notre Dame
16 Miami
17 Nebraska
18 Arizona
19 Duke
20 Oregon
21 Southern California
22 Illinois
23 Indiana
24 Maryland
25 Arizona State

(Taylor, 2002)

Appendix J

Letter of Request

March 28, 2003

Dear Colleague,

As experts warn intercollegiate athletics administrators of over-commercialization and the inevitability of budget crisis due to increasing costs associated with Title IX compliance, the current arms race, and decreased state financial support of public universities, it is imperative that research offers suggestion for alternative solutions in financial crisis. Rather than proposing a solution through resource acquisition, this endeavor will emphasize resource allocation and capital management resolutions for those in budget deficit.

The primary purpose of this study is to determine the nature of the relationship between an intercollegiate athletic department's budget allocation and that respective program's success. Success will be measured by the formerly named Sears Directors' Cup standings over the last three years. By studying the relationship between athletic success measured by Sears Directors' Cup final standings and the financial resource allocation in respective athletic departments, this study will offer a methodical approach to capital management in intercollegiate athletics.

Your athletic department has been chosen as a subject for this study because you have finished in the top 25 in NCAA Division I Sears Directors' Cup standings aggregate over the last three years. Your financial variables will be computed with the other top 25 institutions and compared against the financial information from the bottom 25 finishers.

In order to determine institutional support measured on a financial platform, Equity in Athletics Disclosure Act (EADA) reports will be utilized. **Please forward your EADA report tables from athletic seasons 1999-2000, 2000-2001, and 2001-2002.** I have enclosed a self-addressed postage-paid envelope for your convenience. Also, **please use the enclosed form to report your facility expenditures from those same years.** This information is vital to the integrity of this study and will be held in complete confidence by the principal investigators.

The results of this research will be made available to all interested constituents. If you would like a copy of the results please indicate your interest on the enclosed form. Should have any questions or concerns please do not hesitate to contact us at (612) 964-9390 or via email.
Thank you for your time and consideration.

Phil Esten, Ph.D. Candidate
Principal Investigator
esten003@umn.edu

Dr. Mary Jo Kane
Ph.D. Academic Advisor
maryjo@umn.edu

Appendix K

Facility Expenditure Reporting Form

The Relationship Between an Institution's Intercollegiate Financial Support and Success in Intercollegiate Athletics

Facility Expenditure Reporting Form

The information provided on this form will be held in **complete confidence** by the principal investigators of this study. At **NO POINT** will this information be named in direct association with your institution. Thank you for your cooperation.

Please simply fill in the total amount spent on athletic facility expenditures at your institution during the respective years of operation. This may include, but is not limited to: general maintenance, facility upgrades or renovations, facility construction, equipment upgrades or acquisition, feasibility report costs, and all other operational costs associated with your athletic facilities. Also, please provide additional comments if necessary.

Facility Expenditures for operating years:

1999-2000: _____

2000-2001: _____

2001-2002: _____

The results of this research will be made available to all interested constituents. Please indicate your preference below and include a forwarding name, address, and telephone number for results distribution.

_____ Yes, please forward a copy of the final results from this research

_____ No, it is not necessary to forward a copy of the final results from this research

Once again, **THANK YOU** for your cooperation and participation.

Appendix L

Follow-up Email Contact I

Subject: EADA/Facility Expenditure Request
Date: Thu, 03 Apr 2003 10:11:10 -0600
From: PJ Esten <esten003@umn.edu>
To: esten003@umn.edu

Good Morning,

Last week I mailed to you a letter requesting financial information from your intercollegiate department of athletics over the last three years. EADA reports from 1999-2000, 2000-2001, and 2001-2002 athletic seasons as well as capital or facility expenditures from those same years will be used to determine if resource allocation, rather than acquisition, can be linked to success as measured by the Sears Directors' Cup standings. You have been chosen as a subject for this study because your intercollegiate department of athletics has finished in the top 25 in Division I Sears Cup standings over the last three years. You can be assured that this information will be held in complete confidence and reviewed only by the principal investigators. Any mention or reporting of this information will not name individual subjects of this study.

If you are not the appropriate representative to fulfill this request please forward it on to the proper individual. Also, if it is easier for you to simply reply to this email, attaching the requested information and indication of your interest in the final results, please feel free to do so. If you should have any questions please contact me at your leisure.

I thank you once again for your cooperation and participation in this study.

Phil Esten, Ph.D. Candidate
University of Minnesota
Sport Management
(612) 964-9390
esten003@umn.edu

Appendix M

Follow-up Email Contact II

Subject: EADA/Facility Expenditure Request
Date: Wed, 13 Aug 2003 14:54:47 -0500
From: PJ Esten <esten003@umn.edu>
To: esten003@umn.edu

Good Afternoon,

In March of this year I mailed to you a letter requesting financial information from your intercollegiate department of athletics over the last three years. EADA reports from 1999-2000, 2000-2001, and 2001-2002 athletic seasons as well as capital or facility expenditures from those same years will be used to determine if resource allocation, rather than acquisition, can be linked to success as measured by the Sears Directors' Cup standings. You have been chosen as a subject for this study because your intercollegiate department of athletics has finished in the top 25 in Division I Sears Cup standings aggregate over the last three years. You can be assured that this information will be held in complete confidence and reviewed only by the principal investigators. Any mention or reporting of this information will not name individual subjects of this study.

I am emailing you at this time because I have yet to receive a response to my initial letter or follow up email. There was a good response to the initial request at over 75%, but I am still trying to collect as much data as possible. If you are not the appropriate representative to fulfill this request please forward to me the name of the person to whom this request should be directed. I have attached both the original letter of request as well as the facility expenditure report form for your convenience. Please forward all information to me either via email at esten003@umn.edu or by mail to:

Phil Esten
2405 Humboldt Ave S
Minneapolis, MN 55405

If you could please respond to this email with your intent to cooperate it would significantly help with the data collection process. I thank you once again for your cooperation and participation in this study.

Phil Esten, Ph.D. Candidate
University of Minnesota
Sport Management
(612) 964-9390
esten003@umn.edu

Appendix N

Raw Financial Data: Fiscal Years 2000 – 2002

sch_id	sdc	ncaadiv	istbu00	athbu00	recex00	stuaid00	salary00	tm_op00	ad_op00	cap00
1	1	1	1,685,000,000	31,070,818	584,059	9,285,359	5,642,666	3,251,261	954,798	.
2	1	1	.	37,448,190	532,785	4,307,405	3,372,123	4,559,765	10,605,468	5,129,500
3	1	1	3,170,061,000	43,917,593	775,750	8,504,512	4,658,337	4,256,829	19,623,718	3,423,000
4	1	1	1,380,577,000	52,073,615	952,081	3,122,706	6,328,710	3,875,841	16,654,234	3,230,426
5	1	1	798,206,000	31,128,669	817,195	3,823,829	3,750,707	3,059,744	10,101,958	1,270,000
6	1	1	954,924,985	41,442,750	999,430	3,239,927	3,112,731	2,497,916	13,683,193	12,414,997
7	1	1	1,269,676,898	33,587,265	596,686	4,825,534	3,385,406	3,269,814	14,104,267	2,240,443
8	1	1	1,071,617,429	51,822,584	805,443	3,682,062	6,663,058	4,631,522	17,694,026	9,610,112
9	1	1	2,023,796,196	77,606,749	607,934	6,626,746	7,556,681	3,967,656	45,178,119	5,561,820
10	1	1	736,226,000	28,358,690	565,932	3,677,333	4,037,109	2,339,849	8,080,740	.
11	1	1	.	.	.	.	.	.	.	.
12	1	1	1,182,180,000	36,259,938	690,213	6,312,075	3,820,454	4,781,622	11,477,694	1,332,000
13	1	1	598,338,000	44,509,324	886,669	4,365,873	3,576,378	3,667,805	20,580,388	3,303,123
14	1	1	428,391,001	28,163,870	592,614	2,644,646	3,018,497	2,928,461	14,408,890	.
15	1	1	405,660,000	34,259,034	788,128	7,291,960	3,304,019	4,335,494	10,996,000	.
16	1	1	1,224,577,000	28,848,064	417,621	3,928,370	3,536,020	3,429,629	12,307,421	543,635
17	1	1	1,733,180,000	45,735,309	928,545	4,718,494	4,379,373	3,365,479	4,484,763	14,500,000
18	1	1	465,553,043	39,003,754	1,105,220	3,099,756	6,037,134	4,703,534	749,166	.
19	1	1	.	20,376,534	471,436	2,014,964	2,394,558	3,100,321	2,345,549	0
20	1	1	469,443,000	29,824,882	621,516	2,652,777	2,816,790	2,690,473	11,213,936	2,361,200
21	1	1	.	.	.	.	.	.	.	.
22	1	1	2,262,000,000	62,022,618	808,990	4,095,726	3,355,955	3,200,778	2,733,846	27,424,517
23	1	1	707,358,000	30,254,537	740,212	5,216,376	2,970,008	3,157,516	9,057,896	3,426,152
24	1	1	622,073,364	26,431,542	611,872	6,805,720	2,972,946	2,266,316	10,094,147	.
25	1	1	.	.	.	.	.	.	.	.
26	1	1	1,406,440,162	44,549,627	657,962	4,658,470	4,684,041	3,890,233	18,773,467	5,137,602
27	2	3	95,442,217	6,567,063	385,303	1,828,289	766,291	956,718	1,825,752	0
28	2	.	.	.	.	.	.	.	.	.
29	2	.	.	.	.	.	.	.	.	.
30	2	.	.	.	.	.	.	.	.	.
31	2	.	.	.	.	.	.	.	.	.
32	2	1	144,684,296	6,982,470	189,682	2,104,347	1,185,118	1,045,563	1,394,779	0
33	2	3	210,032,915	5,140,710	47,661	1,969,296	897,286	540,195	1,546,217	.
34	2	.	.	.	.	.	.	.	.	.
35	2	.	.	.	.	.	.	.	.	.
36	2	3	651,967,000	9,460,531	316,356	3,403,300	1,475,016	853,225	2,270,399	198,000
37	2	.	.	.	.	.	.	.	.	.
38	2	2	307,913,000	7,544,522	113,724	1,547,173	1,590,431	1,219,896	2,443,569	105,000

Appendix N cont.

sch_id	sdc	ncaadiv	istbu00	athbu00	recex00	stuaid00	salary00	tm_op00	ad_op00	cap00
39	2	3	61,150,000	4,895,075	207,583	2,033,522	583,973	598,820	824,580	303,723
40	2	.	.	.	.	.	.	.	.	.
41	2	.	.	.	.	.	.	.	.	.
42	2	.	.	.	.	.	.	.	.	.
43	2	.	.	.	.	.	.	.	.	.
44	2	.	.	.	.	.	.	.	.	.
45	2	2	.	.	.	.	.	.	.	.
46	2	3	340,055,774	4,615,917	49,339	1,458,437	724,174	539,146	1,509,189	0
47	2	.	.	.	.	.	.	.	.	.
48	2	1	276,000,000	8,382,354	178,581	2,219,854	1,397,849	1,037,945	1,997,594	390,505
49	2	1	141,325,752	6,813,057	116,835	1,210,871	1,586,624	1,397,361	1,946,104	.
50	2	2	80,040,966	7,108,296	157,957	1,849,518	874,990	776,464	2,556,039	251,000
51	2	1	292,395,700	9,594,087	157,056	2,533,302	1,793,373	1,064,702	2,622,151	300,000
52	2	2	.	3,730,857	124,358	1,534,991	517,125	574,522	649,916	0
Total		Total	27,196,286,698	979,530,895	18,602,728	132,593,520	108,765,951	91,832,415	307,489,973	102,456,755
		Averages	849,883,959	27,986,597	531,507	3,788,386	3,107,599	2,623,783	8,785,428	3,794,695
Top 25		Total	24,595,279,078	898,695,956	16,558,293	108,900,620	95,373,701	81,227,858	285,903,684	100,908,527
		Averages	1,171,203,766	39,073,737	719,926	4,734,810	4,146,683	3,531,646	12,430,595	5,935,796
Bottom 25		Total	2,601,007,620	80,834,939	2,044,435	23,692,900	13,392,250	10,604,557	21,586,289	1,548,228
		Averages	236,455,238	6,736,245	170,370	1,974,408	1,116,021	883,713	1,798,857	154,823
Aggregate										
Total		Total	30,021,005,732	1,076,534,388	19,778,808	145,193,448	124,439,658	100,356,308	332,734,194	129,033,212
Top 25		Total	27,196,051,391	983,570,816	17,548,606	118,326,724	108,906,439	88,022,024	308,385,189	127,291,040
Bottom 25		Total	2,824,954,340	92,963,571	2,230,201	26,866,724	15,533,219	12,334,284	24,349,005	1,742,172
Total		Averages	918,312,133	30,162,868	554,333	4,068,229	3,485,431	2,811,970	9,323,963	4,590,160
Top 25		Averages	1,295,050,066	42,763,949	762,983	5,144,640	4,735,063	3,827,045	13,408,052	7,033,057
Bottom 25		Averages	241,981,063	7,323,768	175,922	2,117,297	1,223,479	971,450	1,919,125	174,217

	Total
Total	24,834,085
Top 25	34,910,839
Bottom 25	6,581,491

Appendix N cont.

sch_id	ad.ins00	rec.ad00	stu.ad00	sal.ad00	to.ad00	ao.ad00	cap.ad00	istbu01	athbu01	recex01	stuaid01
1	1.84%	1.88%	29.88%	18.16%	10.46%	3.07%		1,785,000,000	26,874,014	696,818	10,350,230
2		1.42%	11.50%	9.00%	12.18%	28.32%	13.70%		46,587,219	520,574	4,794,662
3	1.39%	1.77%	19.36%	10.61%	9.69%	44.68%	7.79%	3,585,842,000	46,074,963	678,724	8,867,939
4	3.77%	1.83%	6.00%	12.15%	7.44%	31.98%	6.20%	1,363,871,000	63,696,820	971,017	3,300,871
5	3.90%	2.63%	12.28%	12.05%	9.83%	32.45%	4.08%	845,564,000	32,343,664	814,351	4,043,886
6	4.34%	2.41%	7.82%	7.51%	6.03%	33.02%	29.96%	994,441,681	39,183,142	847,507	3,328,191
7	2.65%	1.78%	14.37%	10.08%	9.74%	41.99%	6.67%	1,395,274,000	37,849,796	741,619	5,054,485
8	4.84%	1.55%	7.11%	12.86%	8.94%	34.14%	18.54%	1,173,092,275	50,372,875	959,011	4,076,554
9	3.83%	0.78%	8.54%	9.74%	5.11%	58.21%	7.17%	2,213,489,571	57,237,373	704,285	7,264,264
10	3.85%	2.00%	12.97%	14.24%	8.25%	28.49%		787,863,000	33,289,784	613,382	4,327,281
11											
12	3.07%	1.90%	17.41%	10.54%	13.19%	31.65%	3.67%	1,368,321,000	46,210,484	666,726	6,888,333
13	7.44%	1.99%	9.81%	8.04%	8.24%	46.24%	7.42%	649,033,000	40,681,407	1,002,906	4,470,770
14	6.57%	2.10%	9.39%	10.72%	10.40%	51.16%		476,488,900	39,671,460	784,479	3,063,967
15	8.45%	2.30%	21.28%	9.64%	12.66%	32.10%		444,145,000	38,666,287	928,364	7,569,022
16	2.36%	1.45%	13.62%	12.26%	11.89%	42.66%	1.88%	1,315,386,000	29,950,702	459,586	4,136,095
17	2.64%	2.03%	10.32%	9.58%	7.36%	9.81%	31.70%	2,257,314,000	53,858,692	835,320	5,110,068
18	8.38%	2.83%	7.95%	15.48%	12.06%	1.92%		396,395,509	43,563,227	1,322,552	3,967,249
19		2.31%	9.89%	11.75%	15.22%	11.51%	0.00%		20,778,796	556,825	2,112,593
20	6.35%	2.08%	8.89%	9.44%	9.02%	37.60%	7.92%	425,806,000	47,945,715	718,148	2,783,733
21											
22	2.74%	1.30%	6.60%	5.41%	5.16%	4.41%	44.22%	2,498,251,000	72,824,553	856,228	4,280,166
23	4.28%	2.45%	17.24%	9.82%	10.44%	29.94%	11.32%	752,327,000	36,978,374	715,823	5,863,378
24	4.25%	2.31%	25.75%	11.25%	8.57%	38.19%		2,360,291,000	28,726,845	552,714	7,997,941
25											
26	3.17%	1.48%	10.46%	10.51%	8.73%	42.14%	11.53%	1,511,681,813	47,970,231	648,615	5,097,025
27	6.88%	5.87%	27.84%	11.67%	14.57%	27.80%	0.00%	109,084,349	8,865,931	448,369	2,136,355
28											
29											
30											
31											
32	4.83%	2.72%	30.14%	16.97%	14.97%	19.98%	0.00%	179,922,046	8,545,551	243,458	2,433,956
33	2.45%	0.93%	38.31%	17.45%	10.51%	30.08%		235,439,257	5,574,555	73,659	2,174,053
34											
35											
36	1.45%	3.34%	35.97%	15.59%	9.02%	24.00%	2.09%	564,000,000	10,373,356	317,183	3,768,100
37											
38	2.45%	1.51%	20.51%	21.08%	16.17%	32.39%	1.39%	319,003,000	8,016,793	139,585	1,614,322

sch_id	ad.ins00	rec.ad00	stu.ad00	sal.ad00	to.ad00	ao.ad00	cap.ad00	istbu01	athbu01	recex01	stuaid01
39	8.01%	4.24%	41.54%	11.93%	12.23%	16.85%	6.20%	64,139,000	5,199,461	190,561	2,085,024
40							.	.	.	.	
41							.	.	.	.	
42							.	.	.	.	
43							.	.	.	.	
44							.	.	.	.	
45								206,122,210	5,161,103	92,615	1,742,561
46	1.36%	1.07%	31.60%	15.69%	11.68%	32.70%	0.00%	389,350,827	5,227,722	79,788	1,529,833
47							.	.	.	.	
48	3.04%	2.13%	26.48%	16.68%	12.38%	23.83%	4.66%	292,000,000	8,856,369	189,643	2,313,020
49	4.82%	1.71%	17.77%	23.29%	20.51%	28.56%		166,273,466	7,307,377	153,885	1,267,117
50	8.88%	2.22%	26.02%	12.31%	10.92%	35.96%	3.53%	81,404,746	7,513,780	169,808	1,882,018
51	3.28%	1.64%	26.40%	18.69%	11.10%	27.33%	3.13%	305,869,435	10,582,286	148,511	2,898,993
52		3.33%	41.14%	13.86%	15.40%	17.42%	0.00%	.	4,171,356	116,599	1,646,054
Total	137.53%	75.31%	662.16%	446.04%	380.06%	1032.59%	234.79%	31,512,486,085	1,076,732,063	19,959,238	146,240,109
	4.30%	2.15%	18.92%	12.74%	10.86%	29.50%	8.70%	954,923,821	29,909,224	554,423	4,062,225
Top 25	90.10%	44.60%	298.44%	250.83%	220.60%	715.70%	213.79%	28,599,877,749	981,336,423	17,595,574	118,748,703
	4.29%	1.94%	12.98%	10.91%	9.59%	31.12%	12.58%	1,361,898,940	42,666,801	765,025	5,162,987
Bottom 25	47.44%	30.71%	363.73%	195.21%	159.46%	316.89%	21.01%	2,912,608,336	95,395,640	2,363,664	27,491,406
	4.31%	2.56%	30.31%	16.27%	13.29%	26.41%	2.10%	242,717,361	7,338,126	181,820	2,114,724
Aggregate											
Total	145.77%	72.70%	672.58%	469.33%	388.56%	1046.61%	265.47%				
Top 25	95.15%	42.41%	295.79%	257.95%	219.70%	715.64%	242.99%				
Bottom 25	50.61%	30.30%	376.79%	211.38%	168.86%	330.98%	22.48%				
Total	4.46%	2.04%	18.86%	13.15%	10.89%	29.35%	9.46%				
Top 25	4.53%	1.84%	12.86%	11.22%	9.55%	31.11%	13.47%				
Bottom 25	4.34%	2.40%	29.76%	16.68%	13.33%	26.14%	2.25%				
							Total				
						Total	83.76%				
						Top 25	80.05%				
						Bottom 25	90.55%				

sch_id	salary01	tm_op01	ad_op01	cap01	ad.ins01	rec.ad01	stu.ad01	sal.ad01	to.ad01	ao.ad01	cap.ad01
1	6,018,022	3,589,696	1,198,025	.	1.51%	2.59%	38.51%	22.39%	13.36%	4.46%	
2	3,612,300	4,770,654	11,018,020	4,359,000		1.12%	10.29%	7.75%	10.24%	23.65%	9.36%
3	5,486,599	4,599,647	18,215,115	5,207,000	1.28%	1.47%	19.25%	11.91%	9.98%	39.53%	11.30%
4	7,728,582	3,938,250	13,922,122	14,255,613	4.67%	1.52%	5.18%	12.13%	6.18%	21.86%	22.38%
5	4,261,749	3,039,954	11,084,894	872,300	3.83%	2.52%	12.50%	13.18%	9.40%	34.27%	2.70%
6	3,508,146	2,458,450	15,342,671	6,306,314	3.94%	2.16%	8.49%	8.95%	6.27%	39.16%	16.09%
7	3,593,116	3,239,897	14,700,810	2,765,661	2.71%	1.96%	13.35%	9.49%	8.56%	38.84%	7.31%
8	7,109,802	4,614,914	22,242,200	3,018,696	4.29%	1.90%	8.09%	14.11%	9.16%	44.16%	5.99%
9	9,171,611	4,207,007	20,059,749	5,148,288	2.59%	1.23%	12.69%	16.02%	7.35%	35.05%	8.99%
10	7,165,909	2,586,207	8,451,206	.	4.23%	1.84%	13.00%	21.53%	7.77%	25.39%	
11	.	.	.	.							
12	4,460,534	5,270,056	14,691,623	5,915,000	3.38%	1.44%	14.91%	9.65%	11.40%	31.79%	12.80%
13	3,906,968	3,099,906	18,414,317	1,901,831	6.27%	2.47%	10.99%	9.60%	7.62%	45.26%	4.67%
14	3,474,463	4,185,329	18,662,241	2,851,232	8.33%	1.98%	7.72%	8.76%	10.55%	47.04%	7.19%
15	4,104,658	5,173,119	12,883,435	.	8.71%	2.40%	19.58%	10.62%	13.38%	33.32%	
16	3,555,748	4,049,374	12,529,998	319,483	2.28%	1.53%	13.81%	11.87%	13.52%	41.84%	1.07%
17	6,066,567	4,277,198	17,747,076	17,470,000	2.39%	1.55%	9.49%	11.26%	7.94%	32.95%	32.44%
18	6,298,147	5,402,608	852,856	.	10.99%	3.04%	9.11%	14.46%	12.40%	1.96%	
19	2,042,653	3,188,001	3,002,353	0					15.34%		0.00%
20	3,290,859	2,505,406	15,081,149	14,075,205	11.26%	1.50%	5.81%	6.86%	5.23%	31.45%	29.36%
21	.	.	.	.							
22	3,887,045	3,417,103	4,293,533	33,971,464	2.92%	1.18%	5.88%	5.34%	4.69%	5.90%	46.65%
23	3,089,142	3,925,109	11,469,405	5,402,107	4.92%	1.94%	15.86%	8.35%	10.61%	31.02%	14.61%
24	3,127,463	2,368,726	5,718,926	.	1.22%	1.92%	27.84%	10.89%	8.25%	19.91%	
25	.	.	.	.							
26	5,534,443	4,524,733	20,585,212	4,672,674	3.17%	1.35%	10.63%	11.54%	9.43%	42.91%	9.74%
27	987,807	1,181,804	2,923,636	0	8.13%	5.06%	24.10%	11.14%	13.33%	32.98%	0.00%
28	.	.	.	.							
29	.	.	.	.							
30	.	.	.	.							
31	.	.	.	.							
32	1,284,494	1,369,973	2,175,287	0	4.75%	2.85%	28.48%	15.03%	16.03%	25.46%	0.00%
33	917,896	582,409	1,667,199	.	2.37%	1.32%	39.00%	16.47%	10.45%	29.91%	
34	.	.	.	.							
35	.	.	.	.							
36	1,556,937	1,046,624	2,270,607	208,000	1.84%	3.06%	36.32%	15.01%	10.09%	21.89%	2.01%
37	.	.	.	.							
38	1,769,662	1,319,632	2,289,308	210,000	2.51%	1.74%	20.14%	22.07%	16.46%	28.56%	2.62%

Appendix N cont.

sch_id	salary01	tm_op01	ad_op01	cap01	ad.ins01	rec.ad01	stu.ad01	sal.ad01	to.ad01	ao.ad01	cap.ad01
39	608,146	709,801	941,108	368,106	8.11%	3.67%	40.10%	11.70%	13.65%	18.10%	7.08%
40	.	.	.	.	.	.	.	.	.	.	.
41	.	.	.	.	.	.	.	.	.	.	.
42	.	.	.	.	.	.	.	.	.	.	.
43	.	.	.	.	.	.	.	.	.	.	.
44	.	.	.	.	.	.	.	.	.	.	.
45	1,103,143	559,782	1,225,748	.	2.50%	1.79%	33.76%	21.37%	10.85%	23.75%	.
46	825,211	646,388	1,736,002	0	1.34%	1.53%	29.26%	15.79%	12.36%	33.21%	0.00%
47	.	.	.	.	.	.	.	.	.	.	.
48	1,493,247	1,136,316	1,944,933	402,625	3.03%	2.14%	26.12%	16.86%	12.83%	21.96%	4.55%
49	1,574,681	1,624,892	1,578,411	.	4.39%	2.11%	17.34%	21.55%	22.24%	21.60%	.
50	971,233	839,090	2,705,141	286,500	9.23%	2.26%	25.05%	12.93%	11.17%	36.00%	3.81%
51	1,936,247	1,179,979	2,655,509	350,000	3.46%	1.40%	27.39%	18.30%	11.15%	25.09%	3.31%
52	675,902	632,046	789,790	0	.	2.80%	39.46%	16.20%	15.15%	18.93%	0.00%
Total	126,199,132	101,260,080	317,069,615	130,337,099	146.52%	72.34%	679.50%	471.09%	394.40%	1009.14%	266.01%
	3,505,531	2,812,780	8,807,489	4,654,896	4.44%	2.01%	18.88%	13.09%	10.96%	28.03%	9.50%
Top 25	110,494,526	88,431,344	292,166,936	128,511,868	94.85%	40.62%	292.97%	256.68%	218.65%	671.71%	242.64%
	4,804,110	3,844,841	12,702,910	7,139,548	4.52%	1.77%	12.74%	11.16%	9.51%	29.20%	13.48%
Bottom 25	15,704,606	12,828,736	24,902,679	1,825,231	51.67%	31.72%	386.53%	214.41%	175.76%	337.43%	23.37%
	1,208,047	986,826	1,915,591	182,523	4.31%	2.44%	29.73%	16.49%	13.52%	25.96%	2.34%

Aggregate
Total
Top 25
Bottom 25

Total
Top 25
Bottom 25

sch_id	istbu02	athbu02	recex02	stuaid02	salary02	tm_op02	ad_op02	cap02	ad.ins02	rec.ad02
1	2,041,600,000	32,844,988	723,593	11,640,398	6,557,835	4,143,985	1,544,139	.	1.61%	2.20%
2	.	49,881,262	506,977	4,457,347	3,806,666	5,361,071	13,002,937	9,396,000		1.02%
3	3,844,606,000	50,462,711	801,227	9,913,977	6,057,039	4,870,092	20,172,805	6,148,000	1.31%	1.59%
4	1,270,800,632	77,420,715	1,097,287	3,497,005	8,272,956	4,499,908	16,345,339	23,224,898	6.09%	1.42%
5	1,067,476,493	32,915,194	950,983	4,230,432	4,475,579	2,897,552	12,239,715	771,400	3.08%	2.89%
6	1,038,104,664	48,204,122	1,020,040	3,972,220	4,064,316	2,808,893	15,731,065	15,637,849	4.64%	2.12%
7	1,516,915,650	39,441,752	674,001	5,626,055	3,929,015	3,590,792	16,562,282	1,655,754	2.60%	1.71%
8	1,282,529,584	54,592,186	1,047,247	4,509,779	8,179,535	4,400,349	20,098,816	5,184,634	4.26%	1.92%
9	2,303,484,342	74,219,362	691,209	7,887,119	8,203,176	5,191,208	21,462,043	16,339,752	3.22%	0.93%
10	843,121,687	30,266,473	670,055	4,413,077	5,016,705	2,817,990	8,448,483	.	3.59%	2.21%
11	.	.	.	.	.	.	.			
12	1,407,573,000	48,324,744	765,847	7,098,267	4,973,611	5,214,060	14,789,863	5,633,000	3.43%	1.58%
13	620,000,000	47,124,021	925,295	4,454,592	4,045,031	3,028,810	20,136,292	3,721,688	7.60%	1.96%
14	529,987,024	44,894,166	1,050,704	3,468,484	4,364,052	4,456,536	23,220,045	1,600,615	8.47%	2.34%
15	486,281,000	38,548,933	1,014,559	8,471,956	4,723,521	4,841,733	12,128,946	.	7.93%	2.63%
16	1,244,231,000	37,188,538	489,272	4,881,343	3,932,545	4,916,408	14,799,888	224,715	2.99%	1.32%
17	2,028,970,000	61,607,041	732,422	5,145,120	6,325,044	3,692,456	17,791,515	25,500,000	3.04%	1.19%
18	434,649,881	53,329,137	1,419,372	3,613,739	9,108,673	5,504,907	9,363,026	2,007,000	12.27%	2.66%
19	.	19,780,388	574,373	2,267,084	2,951,460	5,202,413	8,804,959	0		2.90%
20	468,947,000	47,568,489	763,947	3,335,227	3,665,254	2,924,173	19,210,155	5,546,550	10.14%	1.61%
21	.	.	.	.	.	.	.			
22	2,392,532,000	50,858,681	750,789	4,455,712	4,327,988	3,331,966	14,096,829	11,424,872	2.13%	1.48%
23	756,510,000	46,794,746	617,910	6,070,545	4,765,994	2,942,847	12,913,789	12,357,472	6.19%	1.32%
24	1,200,000,000	32,133,847	592,493	8,054,174	3,291,086	2,951,484	11,472,442	.	2.68%	1.84%
25	.	.	.	.	.	.	.			
26	1,614,677,390	52,278,574	612,350	5,867,197	5,814,009	4,817,236	22,749,573	6,078,525	3.24%	1.17%
27	116,147,000	8,450,766	387,191	2,203,422	1,020,686	1,139,747	2,099,916	0	7.28%	4.58%
28	.	.	.	.	.	.	.			
29	.	.	.	.	.	.	.			
30	.	.	.	.	.	.	.			
31	.	.	.	.	.	.	.			
32	192,636,530	9,525,661	202,876	2,937,384	1,537,616	1,489,281	2,253,305	0	4.94%	2.13%
33	246,591,883	6,125,027	52,549	2,323,097	983,295	637,899	1,973,811	.	2.48%	0.86%
34	.	.	.	.	.	.	.			
35	.	.	.	.	.	.	.			
36	608,000,000	11,241,163	336,984	3,992,000	1,445,371	1,042,833	2,561,897	225,000	1.85%	3.00%
37	.	.	.	.	.	.	.			
38	306,926,000	8,369,891	154,074	1,633,503	1,921,043	1,351,755	2,559,278	150,000	2.73%	1.84%

Appendix N cont.

sch_id	istbu02	athbu02	recex02	stuaid02	salary02	tm_op02	ad_op02	cap02	ad.ins02	rec.ad02
39	68,700,000	5,506,646	166,755	2,141,851	694,155	666,946	948,755	524,504	8.02%	3.03%
40	.	.	.	.	.	.	.	.	.	.
41	.	.	.	.	.	.	.	.	.	.
42	.	.	.	.	.	.	.	.	.	.
43	.	.	.	.	.	.	.	.	.	.
44	.	.	.	.	.	.	.	.	.	.
45	199,301,715	5,450,283	85,129	1,875,009	1,218,490	510,301	1,302,376	.	2.73%	1.56%
46	385,894,387	5,485,039	75,422	1,492,217	936,300	826,950	1,766,259	0	1.42%	1.38%
47	.	.	.	.	.	.	.	.	.	.
48	310,000,000	9,786,953	208,117	2,597,289	1,618,637	1,125,172	2,439,348	354,053	3.16%	2.13%
49	158,501,371	8,353,131	195,659	1,535,305	1,879,878	1,740,118	1,842,009	.	5.27%	2.34%
50	84,391,849	7,380,426	150,384	1,766,552	1,060,948	987,669	2,657,302	199,500	8.75%	2.04%
51	284,156,330	11,676,749	141,682	3,091,188	2,048,550	1,411,221	2,923,869	400,000	4.11%	1.21%
52	.	5,308,400	125,683	1,827,049	1,137,833	639,667	1,229,923	0		2.37%
Total	31,354,244,412	1,173,340,205	20,774,457	156,746,715	138,353,892	107,976,428	373,642,994	154,305,781	153.24%	70.47%
	950,128,619	32,592,783	577,068	4,354,075	3,843,164	2,999,345	10,378,972	5,320,889	4.64%	1.96%
Top 25	28,392,997,347	1,070,680,070	18,491,952	127,330,849	120,851,090	94,406,869	347,084,946	152,452,724	100.51%	42.01%
	1,352,047,493	46,551,307	803,998	5,536,124	5,254,395	4,104,646	15,090,650	8,023,828	4.79%	1.83%
Bottom 25	2,961,247,065	102,660,135	2,282,505	29,415,866	17,502,802	13,569,559	26,558,048	1,853,057	52.73%	28.46%
	246,770,589	7,896,933	175,577	2,262,759	1,346,369	1,043,812	2,042,927	185,306	4.39%	2.19%
Aggregate										
Total										
Top 25										
Bottom 25										
Total										
Top 25										
Bottom 25										

Appendix N cont.

sch_id	stu.ad02	sal.ad02	to.ad02	ao.ad02	cap.ad02	sdc_points
1	35.44%	19.97%	12.62%	4.70%		1,405.83
2	8.94%	7.63%	10.75%	26.07%	18.84%	1,105.83
3	19.65%	12.00%	9.65%	39.98%	12.18%	915.50
4	4.52%	10.69%	5.81%	21.11%	30.00%	922.33
5	12.85%	13.60%	8.80%	37.19%	2.34%	850.83
6	8.24%	8.43%	5.83%	32.63%	32.44%	828.00
7	14.26%	9.96%	9.10%	41.99%	4.20%	901.17
8	8.26%	14.98%	8.06%	36.82%	9.50%	861.17
9	10.63%	11.05%	6.99%	28.92%	22.02%	774.17
10	14.58%	16.58%	9.31%	27.91%		767.17
11						787.00
12	14.69%	10.29%	10.79%	30.61%	11.66%	750.50
13	9.45%	8.58%	6.43%	42.73%	7.90%	793.50
14	7.73%	9.72%	9.93%	51.72%	3.57%	753.33
15	21.98%	12.25%	12.56%	31.46%		721.83
16	13.13%	10.57%	13.22%	39.80%	0.60%	722.83
17	8.35%	10.27%	5.99%	28.88%	41.39%	717.50
18	6.78%	17.08%	10.32%	17.56%	3.76%	701.17
19	11.46%	14.92%	26.30%	44.51%	0.00%	683.50
20	7.01%	7.71%	6.15%	40.38%	11.66%	674.17
21						610.83
22	8.76%	8.51%	6.55%	27.72%	22.46%	623.17
23	12.97%	10.18%	6.29%	27.60%	26.41%	604.17
24	25.06%	10.24%	9.18%	35.70%		629.33
25						602.50
26	11.22%	11.12%	9.21%	43.52%	11.63%	636.00
27	26.07%	12.08%	13.49%	24.85%	0.00%	147.00
28						153.30
29						120.70
30						104.20
31						118.50
32	30.84%	16.14%	15.63%	23.66%	0.00%	104.00
33	37.93%	16.05%	10.41%	32.23%		102.30
34						105.20
35						95.00
36	35.51%	12.86%	9.28%	22.79%	2.00%	78.70
37						75.30
38	19.52%	22.95%	16.15%	30.58%	1.79%	80.70

Appendix N cont.

sch_id	stu.ad02	sal.ad02	to.ad02	ao.ad02	cap.ad02	sdc_points
39	38.90%	12.61%	12.11%	17.23%	9.52%	76.70
40						70.00
41						77.80
42						73.00
43						61.30
44						57.50
45	34.40%	22.36%	9.36%	23.90%		54.20
46	27.21%	17.07%	15.08%	32.20%	0.00%	53.30
47						62.70
48	26.54%	16.54%	11.50%	24.92%	3.62%	53.70
49	18.38%	22.51%	20.83%	22.05%		53.20
50	23.94%	14.38%	13.38%	36.00%	2.70%	51.50
51	26.47%	17.54%	12.09%	25.04%	3.43%	51.50
52	34.42%	21.43%	12.05%	23.17%	0.00%	48.30
Total	676.07%	490.86%	391.22%	1098.11%	295.62%	
	18.78%	13.63%	10.87%	30.50%	10.19%	
Top 25	295.96%	266.34%	219.86%	759.50%	272.55%	
	12.87%	11.58%	9.56%	33.02%	14.34%	
Bottom 25	380.11%	224.51%	171.36%	338.61%	23.06%	
	29.24%	17.27%	13.18%	26.05%	2.31%	

Aggregate
Total
Top 25
Bottom 25

Total
Top 25
Bottom 25

Appendix O

Regression Tables

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.963(a)	.927	.906	112.25470

a Predictors: (Constant), Capital Expenditures Aggregate, Student Aid Expenditures Aggregate, Recruiting Expenditures Aggregate, Coaches Salaries Aggregate, Team Operation Expenses Aggregate, Administration Operation Expenses Aggregate

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3222810.478	6	537135.080	42.626	.000(a)
	Residual	252022.345	20	12601.117		
	Total	3474832.823	26			

a Predictors: (Constant), Capital Expenditures Aggregate, Student Aid Expenditures Aggregate, Recruiting Expenditures Aggregate, Coaches Salaries Aggregate, Team Operation Expenses Aggregate, Administration Operation Expenses Aggregate
b Dependent Variable: SDC Point Aggregates

Appendix O cont.

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-108.475	61.976		-1.750	.095
	Recruiting Expenditures Aggregate	.001	.000	.470	3.827	.001
	Student Aid Expenditures Aggregate	-1.900E-05	.000	-.098	-.946	.356
	Coaches Salaries Aggregate	-5.060E-05	.000	-.299	-1.734	.098
	Team Operation Expenses Aggregate	.000	.000	.718	5.460	.000
	Administration Operation Expenses Aggregate	9.944E-06	.000	.212	1.237	.230
	Capital Expenditures Aggregate	-1.412E-06	.000	-.024	-.274	.787

a Dependent Variable: SDC Point Aggregates