

## *Journal of Issues in* **Intercollegiate Athletics**

### **National Association of Collegiate Directors of Athletics Directors' Cup Standings: Predictors of Success**

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*The purpose of this research was to investigate variables that predict success in the National Association of Collegiate Directors of Athletics (NACDA) Directors' Cup. The NACDA Directors' Cup awards points to institutions based on national place finish in a variety of sports. Point totals from the 2006-07 NACDA Directors' Cup, along with Equity in Athletics Disclosure Act (EADA) data were collected for statistical analysis. Results indicated differences among variables predicting success among all NCAA divisions as well as the NAIA. University presidents and athletic directors can use this data when making tough decisions about resource allocation.*

### **Introduction**

**I**ntercollegiate athletics are inherently competitive in nature. Competitions not only take place inside athletic facilities, but also are exhibited on a different platform outside sports venues. The National Association of Collegiate Directors of Athletics (NACDA) started the "Directors' Cup" competition in 1993-94 for National Collegiate Athletic Association (NCAA) Division I institutions (NACDA, n.d.a.). The Directors' Cup awards points to institutions based on national place finish in a variety of sports for men's and women's programs (NACDA, n.d.a.). NCAA Divisions II and III and National Association of Intercollegiate Athletics (NAIA) schools were added to the competition in 1995-96 (NACDA, n.d.a.). With scores determined by competitive success alone, the Directors' Cup provides one measurement of overall athletic program success.

Funding levels, availability and quality of coaches, availability and quality of facilities, and scholarship availability are generally considered important factors for athletic success (Won, 2004). A study conducted by Lawrence and Li (2007) revealed that significant relationships exist

between institutional success in the Directors' Cup and expenses per male athlete and overall operating expenses. Other than the aforementioned studies, and beyond anecdotal evidence, little is known about how to best position an institution for success in the Directors' Cup. This study was, therefore, primarily designed to identify measurable expense variables that contribute to a high Directors' Cup finish for each division. A secondary goal of the study was to examine if there are differences in the identified predictors of Directors' Cup finish between Division I Football Bowl Subdivision (FBS) institutions, Division I Football Championship Subdivision (FCS) institutions, and Division I without football institutions.

The findings from this investigation will assist university presidents and athletic directors as they make important decisions about athletics within their institutions. There is a growing collection of scholarly research available on NCAA member institutions, but the body of knowledge is lacking for NAIA athletics. This study therefore also helps to advance the information available on intercollegiate athletics within the NAIA.

## Review of Related Literature

### *The NACDA Directors' Cup*

NACDA is considered a leading professional organization in intercollegiate athletics and provides "educational opportunities and serves as a vehicle for networking and the exchange of information to others in the profession" (NACDA, n.d.b., ¶4). Beyond service to its members, NACDA also administers the annual Directors' Cup competition. NACDA's goal in promoting this competition is to recognize

institutions maintaining a broad-based program, achieving success in many sports, both men's and women's, in which all sports that the NCAA or NAIA offers a championship, along with Division I-A football, and all student-athletes that compete in those sports, are treated equally (NACDA, n.d.a., ¶ 2).

The Directors' Cup includes competition in NCAA Division I, II, and III, as well as a combined competition for NAIA Divisions I and II, for a total of four distinct competitions. NACDA occasionally alters their scoring structure, but the 2006-07 scoring structure was used throughout this study to match the data collected. The sports that are included in the point calculation vary between divisions, except in the NAIA where divisions are combined. For NCAA Division I, 20 sports (the top 10 for men and top 10 for women) are applied toward each institution's Directors' Cup point total (NACDA, n.d.a.). This same scoring structure is used for NCAA Division II (top seven for men and top seven for women), NCAA Division III (top nine for men and top nine for women), and NAIA (top six for men and top six for women) (NACDA, n.d.a.). Those institutions with more than the allotted number of teams eligible for points in their category can select their highest finishing teams to count toward their Directors' Cup point total (NACDA, n.d.a.).

Historically, success in intercollegiate athletics has been defined as winning in the sports of football and men's basketball. Institutions have invested heavily in achieving success in these sports because they believe that winning results in increased revenue, media attention, donor contributions, sponsorships, and fan affinity. However, researchers have rendered conflicting results on the relationship between spending in those areas and wins in those sports (e.g.,

Humphreys & Mondello, 2007; Litan, Orszag, & Orszag, 2003; Shulman & Bowen, 2001; Stinson & Howard, 2004, 2007, 2008; Tucker, 2004).

When NACDA tallies scores each year, those institutions that achieve success across many sports are rewarded with higher point totals. According to the athletic director at 11-time Directors' Cup champion Williams College (NCAA Division III), "an institution can't win it or even be competitive without a broad-based program" (Steinbach, 2006, p. 46). For example, during 2007, the University of Florida became the only institution to win the NCAA National Championship in men's basketball and the Bowl Championship Series (BCS) National Championship in football in the same calendar year (University of Florida, n.d.). However, Florida finished sixth in the Directors' Cup competition, trailing champion Stanford University by a large margin (NACDA, 2007). In 2006-07, Stanford's men's basketball team contributed only 25 points and the football team did not earn any of the University's 1,429-point total (NACDA, 2007). Conversely, the University of Florida finished with 1,064.25 points after winning the national championships in football and men's basketball, which earned it 100 points each (NACDA, 2007). Traditionally, schools that are top 10 in the Directors' Cup have allocated their resources throughout the athletics department to both men's and women's programs (Steinbach, 2006). As a result, when both genders do well in competition, the school does well too (Steinbach, 2006).

Becoming Directors' Cup champion gives the winning institution bragging rights, a beautiful trophy, and national recognition as the best overall athletic program in the country. The importance of success in the Directors' Cup varies by institution, but even those institutions not fighting for the title have used it as a measure of athletic progress. In 2010-11 the University of New Hampshire finished ranked 76 in Division I which was the highest finish from their conference (University of New Hampshire Athletics, 2011). The athletic director, Marty Scarano reported that a goal is to finish in the top 100 programs and that, "in many ways our placing of 76th is every bit as important to us as the various championships and NCAA post season play" (University of New Hampshire Athletics, 2011, ¶4). Similarly, Southwest Baptist University finished number 67 in the NCAA Division II Directors' Cup in 2007-08 and athletic director Brent Good was quoted as saying, "We've never broken into the top 100 before. That was a goal we set and we feel good about it. That's a big, big boost for us" (White, 2008, ¶16). Whether the institution is 17-time defending Division I Directors' Cup champion Stanford University or number 67 Division II Southwest Baptist University, achieving success in the Directors' Cup is important to overall athletic program operations at many institutions. The complexity of the point system can be intimidating, but to date, it is the best measurement of overall athletic success available to fans and institutions alike.

Research directly related to the Directors' Cup is minimal; however one study used Directors' Cup data to explore other variables. Lawrence and Li (2007) conducted an exploratory study using Equity in Athletics Disclosure Act (EADA) data to determine if specific athletics expenditures were correlated with NCAA Division I Director's Cup standings. EADA data consists of institutionally reported athletic participation, expenditures, revenues, and staffing information that is submitted annually to the U.S. Department of Education (DOE) (Equity in Athletics Disclosure Act, P.L. § 103-382, 1999). Their findings revealed significant relationships between institutional success in the Directors' Cup and expenses per male athlete and overall operating expenses (Lawrence & Li). These results were the impetus for the current study, which expanded upon their research.

## *The NCAA*

The NCAA was founded in 1906 to gain control of college football, which was then experiencing spectator violence, player injury and death, recruiting abuses, and financial irregularities (Crowley, 2006). Since then, the NCAA has evolved in structure and overall philosophy to become the most powerful organization in college sport.

The 1,066 institutions that comprise the NCAA are sorted into Divisions I, II, and III (NCAA, n.d.a.). Regulations dictate specific criteria (e.g. competition scheduling requirements, scholarship allowances, limits, philosophy) for each division; the assumption is that institutions within the same division will have commonalities in purpose related to athletics participation, competition, and the role of athletics within the institution. Each division has an operating philosophy that sets the tone for the organization as a whole and for its member institutions. NCAA Division I (340 members) is generally considered to be the most competitive (NCAA, n.d.a.). Those Division I institutions that sponsor football are split into two categories: the Football Bowl Subdivision (FBS), in which 120 institutions compete in the Bowl Championship Series, and the Football Championship Subdivision (FCS), in which 122 institutions compete in a playoff structure championship. There are also an additional 98 Division I institutions that do not sponsor football (NCAA, n.d.a.). Institutions that sponsor FBS football invest more money in the sport and generally have more competitive programs than FCS institutions.

The Division I philosophy is lengthy, but some focal points are a) high academic standards, b) regional and national prominence, c) the role of athletics serving both the participant and the general public, d) the offering of extensive opportunities for participation in varsity sports, e) a high level of spectator-orientated, income-producing football and basketball teams, and f) maintaining institutional control over all funds supporting athletics (NCAA, 2008a, Bylaw 20.9). Even though all NCAA Division I student-athletes must be certified as amateurs, a high level of competition, benefit to spectators, revenue, and the sports of football and basketball are keys to the operations and decision making in Division I. At many NCAA Division I institutions, financial issues are significant. Coaches' salaries, recruiting expenses, scholarship expenses, and facility requirements all are far outpacing new revenue generation. In 2008, only 25 Division I institutions (all from the FBS subdivision) reported positive net generated revenues (excluding institutional contributions) for intercollegiate athletics (Fulks, 2009). By 2010, similar results were reported with 22 FBS institutions having positive net generated revenues (Fulks, 2011). However, the financial gap between programs with positive net generated revenues and those with negative net generated revenues has increased steadily during this time (Fulks, 2011).

With no mention of spectators or revenue, Division II (290 members) emphasizes the growth of the student-athlete (NCAA, n.d.a; NCAA, n.d.b.). The Division II philosophy statement highlights a) academic success (graduation rates of student-athletes at least equal to that of students generally); b) athletics to benefit the educational experience of student-athletes; c) offering sport opportunities consistent with institutional mission and philosophy; d) striving for equitable participation, competitive excellence, and sportsmanship and ethical conduct and enhancing diversity; e) preparing student-athletes to be good citizens; and f) presidential involvement and commitment as a core belief (NCAA, n.d.c.). Consistent with that philosophy, Division II student-athletes have the best access ratio to national championships of any NCAA division — 9:1 for Division III, 6:1 for Division II, and 7:1 for Division I (NCAA, n.d.b.). In 2005, Division II redefined its key attributes and aspirations to focus on enhanced regional awareness and local engagement of Division II members and the constituencies they serve

(NCAA, n.d.c). The branding of these institutions gives them an identity on a local and regional level.

Division III (436 members) places equal importance on all internal constituencies: student-athletes, students, alumni, and institutional personnel (NCAA, n.d.a.; NCAA, n.d.d.). Specifically, the Division III philosophy emphasizes a) the importance of the impact of athletics on participants, b) no athletically related financial aid, c) sportsmanship development, d) maximum opportunities for students to participate, and e) treating athletics participants the same as other members of the student body (NCAA, n.d.d.).

As the largest of the divisions, Division III faces challenges related to its size. With over 400 institutions, there are significant differences in institutional mission and athletics philosophy within Division III, making it difficult to meet the needs of all members (Copeland, 2008). There has been much discussion in Division III about restructuring to better manage the number of members and better meet their needs. However, in a February 2008 NCAA survey on the issue, over 80% of Division III respondents supported the current Division III structure (NCAA, 2008b).

### *The NAIA*

The NAIA, comprising institutions in the United States and Canada, is less well known than the NCAA and varies considerably from it in many respects. With a focus on academics and character development, NAIA institutions generally are not in the media spotlight like some NCAA institutions. However, each year over 45,000 student-athletes from over 300 institutions are afforded the opportunity to play their sport and receive an education at NAIA member schools (NAIA, n.d.a.; NAIA, n.d.b.).

In 1937, the National Association of Intercollegiate Basketball, which would eventually become the NAIA in 1952, began hosting championships (NAIA, n.d.c.). The organization was the first to include black colleges and students in championships, the first to include women in championships, and the first to develop a substantial student-athlete character development initiative (NAIA, n.d.a.; NAIA, n.d.c.). The NAIA mission statement is simple: "The NAIA exists to advance character-driven intercollegiate athletics" (NAIA, n.d.c., ¶ 1). Their unprecedented character-building program, Champions of Character, began in 2000 with a goal of creating an environment in which every student-athlete, coach, official, and spectator is committed to the true spirit of competition through five tenets: respect, integrity, responsibility, servant leadership, and sportsmanship (NAIA, n.d.a.).

The NAIA is divided into two competitive divisions for basketball (Division I and II based on scholarship limitations), but all other sports compete in one division (M. Manning, pers. communication, November 7, 2008). As in the NCAA, there are differences in institutional mission among the NAIA membership, but the overall philosophy of the role of athletics within higher education is shared.

### *Financial Challenges*

Financial pressures are part of daily life for intercollegiate athletics administrators. Coaches' salaries are escalating (particularly in Division I football and men's basketball), scholarship costs are increasing, facilities costs and the demand for new facilities are at an all-time high, and recruiting student-athletes is costly. These challenges are most substantial at the

Division I level of the NCAA, but certainly are common across most divisions of the NCAA and NAIA. Administrators are constantly looking to generate new revenue by increasing student fees, securing more corporate dollars, conducting alumni donation campaigns, increasing ticket sales, and hosting special events (Yiamouyiannis, Lawrence, Hums, & Ridpath, 2010). The other option, of course, is to reduce expenses.

Overall spending in NCAA Division I programs is far outpacing opportunities for new revenue generation. Across all segments of Division I, spending increased 20% between 2001 and 2003 (Orszag & Orszag, 2005). More recently, between 2005 and 2009, FBS spending increased 50%, FCS spending increased 42%, and Division I spending increased 31% (Knight Commission on Intercollegiate Athletics, 2011). Over \$4.2 billion was spent in 2005-06 to support the operations of the then 119 NCAA Division I FBS programs (Lawrence & Li, 2007). As early as 2001, the Knight Commission on Intercollegiate Athletics (an intercollegiate athletics watchdog group) noted that a “frantic, money-oriented modus operandi that defies responsibility dominated the structure of big-time football and basketball” (p. 17). Spending in Divisions II and III is more controlled, with Division II institutions spending 36% of what is spent by FCS schools (NCAA, n.d.b.). Division III does not permit athletics scholarships, which helps control costs. In Division III athletic programs are financially supported much like any other unit on campus.

Advocates for increased spending claim that those increases will produce multiple benefits to the institution, such as greater exposure for the institution, increased athletic and academic donations, increased quality of applicants, and greater marketing and recruiting potential (Suggs, 2003). However, research indicates that there is no relationship between operational spending on football and basketball and increases in winning, operating net revenue, academic quality, or alumni giving (Litan et al., 2003). Interestingly, the evidence suggests a net zero impact on revenue from football and basketball expenditures in the FBS, meaning that \$1 of football or men's basketball expenditure generates an additional \$1 of operating revenue (Litan et al.).

**Coaching salaries.** Coaches' salaries have increased rapidly in recent years, particularly in football. The average pay for NCAA Division I coaches has increased from \$950,000 in 2006 to \$1.4 million in 2011 with one coach even earning more than \$5 million in 2011 (Brady, Upton, & Berkowitz, 2011). To put the spending on coaches in perspective, in 2007-08 the average salary of a full professor was \$104,523 and the average base salary of a head football coach was \$1,040,863 (American Association of University Professors, 2008). Even former NCAA President Myles Brand has questioned football coaches' exorbitant salaries, saying, “Is this a proper approach within an academic context?” (Weiberg & Upton, 2007, ¶14).

**Tuition and scholarships.** For those institutions that award athletics scholarships, tuition increases can have a significant impact on an athletics department. Between 2001 and 2006, college tuition increased 35% (after adjusting for inflation) and thus the cost of athletic scholarships also increased (College Board, 2006). In 2002-03 male student-athletes at FBS schools received an average of \$2.65 million in scholarship dollars per institution, while female student-athletes received \$1.96 million (Fulks, 2005). Seven years later, in 2009-10, the median scholarship expenditures for male student-athletes at FBS schools was \$3.83 million, while female student-athletes received \$2.91 million (Fulks, 2011). At the FCS level, \$1.3 million was spent on men's athletic scholarships and \$1 million was spent on women in 2002-03 with the numbers increasing to \$1.88 million for men and \$1.52 million for women in 2009-10 (Fulks, 2005; 2011). The 5.5% increase for out-of-state tuition at public four-year institutions between

2006-07 and 2007-08 directly affects athletics budgets, but those increases are not in the control of the athletics department (College Board, 2007). Increases in tuition, and the subsequent increase in athletics scholarships, affect the availability of funding for other operational items within the athletics department.

*Facilities.* In an effort to attract prospective student-athletes and afford current student-athletes great facilities, many institutions have embarked on expensive capital projects for new/renovated athletic facilities and major equipment purchases in recent years. This has been especially true for Division I where projects offer not only new stadiums and practice facilities, but also other amenities for student-athletes. Across all divisions, spending on facilities increased 250% between 1994 and 2001 (Knight Commission, 2001) and totaled \$15.2 billion between 1995 and 2005 (Knight Commission, n.d.). At one FBS institution, the 120 lockers in the football locker room each cost \$26,667 and feature a personal ventilation system, outlets for video games and Internet access, and a security system (KRT Campus, 2003). Another major FBS institution recently spent \$15 million on an academic center for student-athletes (Louisiana State University, 2007).

*Gender equity.* In 2012, Title IX will celebrate its 40th anniversary, yet some of the same challenges that institutions faced in 1972 when the law was passed remain. Title IX was intended to provide for equality in education (Suggs, 2005). As it relates to athletics, the regulations require athletics programs to provide equitable sport participation opportunities (as measured by a three-part compliance test), equitable scholarship dollars, and equitable treatment of male and female athletes in the provision of locker rooms, equipment and supplies, practice and competitive facilities, etc. (Carpenter & Acosta, 2005). However, the philosophy of gender equity goes beyond the legal requirements of Title IX and relates to an athletic environment where participants in the men's and women's athletic programs would be satisfied switching resources with one another (National Association of Collegiate Women Athletics Administrators, 1992).

There have been notable increases in women's participation in athletics since the passage of Title IX. Between 1991-92 and 2005-06, Division I women's participation rose from 31% to 45% (FBS 29% to 42%, FCS 30% to 42%, and Division I without football 36% to 50%) (NCAA, 2008c). In Division II, women's participation rose from 32% to 41%; in Division III, participation increased from 35% to 42% (NCAA, 2008c). Despite these improvements, NCAA (2008d) data indicates that there are more male student-athletes (57.2%) across all divisions than female student-athletes (42.8%). Although these numbers indicate progress in women's participation in NCAA athletics, opportunities to participate are still lacking (National Women's Law Center, 2007). Additionally, in Division I, females receive 37% of the money spent on athletics, 32% of the recruiting dollars, and 45% of the scholarship funds (National Women's Law Center, 2007). As institutions make tough decisions about resource allocation and sport sponsorship, Title IX and gender equity are important considerations.

## Methodology

Funding levels, availability and quality of coaches, availability and quality of facilities, and scholarship limitations are generally considered important factors for athletic success (Won, 2004). Beyond anecdotal evidence, however, little is known about how to best position an institution for success in the Directors' Cup. Financial resources were the main area under

investigation in this study, which sought to identify measurable variables that contribute to a high Directors' Cup point total.

Specifically, the study sought to answer three research questions:

- a) Is there a relationship between overall spending on athletics and Directors' Cup finish?
- b) Is there a relationship between any specific areas of spending (i.e. coaching salaries, overall athletic budgets, women's athletics budgets, etc.) and Directors' Cup finish?
- c) Do differences exist among NCAA Division I, II, and III and NAIA with respect to predictors of Directors' Cup finish?

The answers to these questions will assist university presidents and athletic directors as they make important decisions about athletics within their institutions. There is abundant scholarly research available on NCAA member institutions, but the body of knowledge is nonexistent for NAIA athletics. This study therefore also helps to advance the information available on intercollegiate athletics within the NAIA.

### *The Data*

To address the research questions for this study, secondary data were collected from the DOE Web site. To comply with EADA, the DOE,

requires coeducational institutions of postsecondary education that participate in a Title IV, federal student financial assistance program, and have an intercollegiate athletic program, to prepare an annual report to the Department of Education on athletic participation, staffing, and revenues and expenses, by men's and women's teams (U.S. Department of Education, n.d., ¶1).

The EADA data are one way to analyze athletic spending overall and by gender. It was determined that the EADA data were the best available source of information to explore the relationship between the variables under analysis and Directors' Cup finish. Although the EADA data are a far from perfect source, it is the only public information available on intercollegiate athletics spending.

The data were downloaded from the EADA Web site into an Excel spreadsheet, resulting in a data set of 1,978 institutions of higher education. Next, data from the Directors' Cup standings were obtained from the NACDA Web site and manually added to the spreadsheet. Institutions not placing in the top 100 were automatically eliminated from the population, resulting in a sample set of approximately 400 institutions (100 from each category). Information was not available or not applicable for 4 schools in NCAA Division III and 11 schools in the NAIA that placed in the top 100, as many of these schools were transitioning from one division into another during the 2006-2007 academic year. Other institutions submitted incomplete information and therefore were not included in the sample to be analyzed.

The process generated 100 NCAA Division I institutions, 100 NCAA Division II institutions, 96 NCAA Division III institutions, and 89 NAIA institutions, with a total of 385 institutions included in sample. Additionally, Division I was coded into those institutions that are members of the Football Bowl Subdivision or FBS ( $n = 75$ ), those that are Football Championship Subdivision or FCS institutions ( $n = 14$ ), and Division I without football ( $n = 11$ )



for comparative purposes. The data set allowed for analysis of each division as well as among the different classifications of Division I institutions. Institutions ranged from some of the largest public universities in the United States to some of the smallest.

### *Variables*

The NACDA Directors' Cup point total of each of the identified top 100 institutions was used as dependent variable. Using point total as opposed to ranking allowed for a more accurate analysis of those variables contributing to points earned. As mentioned previously, one of the objectives of this study was to identify the predictors of the Directors' Cup standing among various athletic spending-related variables. Nineteen spending-related variables gathered from the EADA report were included as independent variables in this study. Examples of such variables included the total expenses per team for women of all sports (except football and basketball) combined, total expenses per team for men and women of all sports (except football and basketball) combined, total operating expenses per team for men, and total operating expenses per participant for women.

### *Data Analysis*

Instead of generating predictors for all the NCAA and NAIA institutions, stepwise regression analysis was conducted to identify the significant predictors of Director's Cup points in each NCAA division and NAIA institutions as a whole. This procedure was selected based upon the fact that each NCAA division has its own unique operating philosophy. The operating philosophy of NAIA institutions are also quite different from those embraced by NCAA divisions. All nineteen independent variables were used in the analysis. The VIF and tolerance statistics of each of the four regression analysis models was assessed to determine whether or not multicollinearity existed in the data. The results of the assessments revealed that collinearity was not a problem for all four models. In addition, ANOVA was also employed to determine if there were differences among the identified significant predictors among the three classifications in Division I.

## **Results**

### *Stepwise Regression Analyses*

For NCAA Division I institutions, the results of the regression analysis (as shown in Table 1) indicate that three variables, total expenses per team for women of all sports (except football and basketball) combined ( $p=.000$ ), total expenses not allocated by gender/sport (ex. administrative expenses) ( $p=.000$ ), and average annual institutional salary per FTE for men's teams ( $p=.003$ ), explaining 64.7% of the variance,  $F(3, 99) = 61.592$ ,  $p < .001$ , were significant in determining an institution's Directors' Cup point total. The total expenses per team for women of all sports (except football and basketball) was the most statistically significant predictor of the Directors' Cup point, accounted for 58.5% of the variance with the other two significant variables adding 3.3% and 2.9% respectively.

Table 1  
*Stepwise Regression Analysis of Athletic Operations Variables on Director's Cup Standing*

Step	Variables Entered	R <sup>2</sup>	Adjusted R <sup>2</sup>	β	T
Division I					
1	Total expenses per team for women of all sports, except football and basketball	.59	.59	.61	6.54***
2	Total expenses not allocated by gender/sport	.63	.62	.35	3.78***
3	Average annual institutional salary per FTE for men's teams	.66	.65	-.22	-3.03**
Division II					
1	Total expenses per team for women of all sports, except football and basketball	.17	.16	.41	4.48***
Division III					
1	Average annual salary per FTE for women's teams	.11	.10	.26	2.56*
2	Total operating expenses per team for women	.16	.14	.94	3.50**
3	Total operating expenses per participant for women	.23	.20	-.75	-2.81**
NAIA Division I & II					
1	Total operating expenses (men plus women)	.36	.35	.40	4.31***
2	Total expenses per team for men all sports, except football and basketball combined	.41	.39	.47	3.56**
3	Total expenses not allocated by gender/sport	.45	.43	.26	3.10**
4	Athletically related student aid for men's teams.	.48	.46	-.26	-2.19*

\*p<.05; \*\*p<.01; p<.001

In Division II, the only independent variable entered in the model was the same as Division I, total expenses per team for women of all sports (except football and basketball) combined (p=.001). This variable explained 16.2% of the variance,  $F(1, 99) = 20.093$ ,  $p < .001$ , which was much less than the 58.5% in Division I. Given the differing philosophies of Division I and II, it is interesting that the first variable to enter the model was the same. Included in Table 1 are also the results of the multiple regression analysis on Division III. The results indicated that three independent variables entered in the equation, including average institutional salary per FTE for women's teams (p=.012), total operating expenses per team for women (p=.001), and total operating expenses per participant for women (p=.006). The results are all tied to financial support for women's sport programs. Average institutional salary per FTE

for women's teams accounted for 10% of the variance with total operating expenses per team for women adding another 4% and total operating expenses per participant for women adding 6%. Overall, only 20% of the variance,  $F(3, 94) = 8.819$ ,  $p < .001$ , was explained which is just slightly stronger than the Division II results.

The results of the multiple regression analysis for NAIA resulted in the most variables. Overall, four variables entered the model: total operating expenses of men plus women ( $p = .000$ ), total expenses per team for men of all sports (except football and basketball) combined ( $p = .001$ ), total expenses not allocated by gender/sport (ex. Administrative expenses) ( $p = .003$ ), and athletically related student aid for men's teams ( $p = .032$ ). These four variables accounted for nearly half (45.6%) of the variance in Directors' Cup point totals,  $F(4, 88) = 19.424$ ,  $p < .001$ . The total expenses alone explained 34.7% of the variance which is a strong statement as to the importance of financially investing in sports in the NAIA to achieve Directors' Cup Success. As in NCAA Division I, there was a relationship between expenses not allocated by gender/sport such as administrative expenses that seem to play a role in Directors' Cup point totals.

## ANOVA

The multiple regression analysis for NCAA Division I institutions identified three significant predictors of an institution's Directors' Cup point total including total expenses per team for women of all sports (except football and basketball) combined, total expenses not allocated by gender/sport (ex. administrative expenses), and average annual institutional salary per FTE for men's teams. The ANOVA used to determine if there were differences among the identified significant predictors yielded some interesting findings. Table 2 and Table 3 show the results of ANOVA and the Post Hoc Tests.

Table 2

*Results of Analysis of Variance on the Three Predictors of Director's Cup Point Total among Institutions with three Division I Football Designations*

		Sum of Squares	df	Mean Square	F
Total Expenses per Team for Women of all Sports, Except Football and Basketball	Between Groups	1.816E14	2	9.079E13	23.52**
	Within Groups	3.745E14	97	3.861E12	
	Total	5.561E14	99		
Total Expenses Not Allocated by Gender/Sport	Between Groups	3.275E15	2	1.638E+15	25.38**
	Within Groups	6.258E15	97	6.452E+13	
	Total	9.533E13	99		
Average Annual Institutional Salary per FTE for Men's Team	Between Groups	9.262E11	2	4.631E+11	15.70**
	Within Groups	2.861E12	97	2.939E+10	
	Total	3.787E12	99		

\*\* $p < .001$

Table 3

*Results of the Post Hoc Tests (Tukey HSD)*

Dependent Variable	Football Designation	Football Designation	Mean Difference	Sig.
Total Expenses per Team for Women of all Sports, Except Football and Basketball Combined	FBS	FCS	2686759.588*	.001
		No Football	3560794.010*	.000
	FCS	FBS	-2686759.59*	.001
		No Football	874034.422	.567
Total Expenses Not Allocated by Gender/Sport	No Football	FBS	-3560794.01*	.000
		FCS	-874034.422	.567
	FBS	FCS	12239206.3*	.000
		No Football	14335306.0*	.000
	FCS	FBS	-12239206.3*	.000
		No Football	2096099.643	.794
	No Football	FBS	-14335306.0*	.000
		FCS	-2096099.64	.794
Average Annual Institutional Salary per FTE for Men's Team	FBS	FCS	236426.43*	.000
		No Football	202243.64*	.001
	FCS	FBS	-236426.43*	.000
		No Football	-34182.79	.874
	No Football	FBS	-202243.64*	.001
	FCS	34193.79	.874	

\* p&lt;.01

The results of the ANOVA revealed that the difference among the FBS institutions, FCS institutions and those institutions that do not play football in each of the three identified predictor is statistically very significant,  $F(2, 99) = 23.52, p = .001$ ;  $F(2, 99) = 25.38, p = .001$ ;  $F(2, 99) = 15.70, p = .001$ . The Post Hoc Tests further revealed that no statistical difference was observed between the FCS schools and institutions that do not have a football program. The difference mainly existed between the FBS institutions and those institutions with other two football designations. The findings imply that the predictors are primarily applicable to the FBS institutions.

## Discussion and Conclusions

It is commonly thought that those institutions that financially invest in their athletic programs will finish higher in the Directors' Cup standings. But, where should schools invest? With limited financial resources, the director of athletics is constantly being pulled between conflicting needs within the athletic department. These results begin to assist decision makers responsible for financial allocation decisions on how to strategically distribute funds to achieve higher point totals in the NACDA Directors' Cup.

The results in Division I suggest that institutions which invest heavily in financial support for women's sports teams will probably see this investment translate into a higher point total in

the Directors' Cup Standings. Given the scoring structure of the Directors' Cup, it is logical that those institutions investing in many sport programs, including women's would see an impact on their point totals.

In Division I, many institutions invest heavily in football and men's basketball because of the potential large financial return when successful. Clearly, investments made in men's sports (especially football and men's basketball), while important, contribute to only a half of the 20 sports eligible to earn points in the Directors' Cup for NCAA Division I institutions. The Directors' Cup awards points equitably, thus giving the same credit for a National Championship in swimming as in football. Institutions that value success in the Directors' Cup may then be able to improve their point totals by investing in women's sport programs. This strategy is also consistent with the overall goal of the Directors' Cup which to recognize "institutions maintaining a broad-based program, achieving success in many sports, both men's and women's. . ." (NACDA, n.d.a., ¶2).

Another significant variable in Division I was total expenses unallocated by gender. Many times indirect sport costs and expenses that benefit all student-athletes are categorized as unallocated by gender (National Association of College and University Business Officers, 2005). As a result, larger and wealthier institutions will generally have more money in this category. Examples of these expenses may be administrative salaries, marketing costs, ticket office costs, athletic training equipment and costs, strength and conditioning expenses, as well as general upkeep and utility costs for facilities. Investments made in these areas contribute to supporting all student-athletes which may explain why this item was significant with respect to Directors' Cup point totals.

Finally, the average institutional salary per FTE for men's teams was negatively related to Directors' Cup points in Division I. At FBS institutions, the average football coach salary is \$1.47 million with nine schools paying their football coach over \$3 million (Brady, Upton, & Berkowitz, 2011). Large salaries such as these will elevate the average institutional salary per FTE for men's teams. Although the implications are unclear, it could be that the institutions that have the ability to invest heavily in salaries for football and men's basketball coaches are not supporting all of their sport teams to the detriment of their overall Directors' Cup point totals.

When these variables were analyzed for differences between NCAA Division I subdivisions (e.g., FBS, FCS, and Division I without football), it became clear that there are differences between subdivisions. Specifically, there were no differences between FCS and Division I institutions without football for any of these significant variables. FBS institutions were found to be significantly different as compared to both FCS and Division I without football schools for all three variables. This may be explained by the differences in how the subdivisions operate. FCS and Division I without football institutions are similar in that they do not have an opportunity for football bowl game appearances and the associated revenue. Conversely, FBS institutions are known as the largest and most powerful athletic programs in the country and regularly have athletic budgets approaching \$100 million (Fulks, 2009) with football coaches earning millions annually (Brady, Upton, & Berkowitz, 2011; Weiberg & Upton, 2007).

In NCAA Division II, financial investments in the overall women's sport program were shown to lead to success in the Directors' Cup competition. Although significant, the results were not nearly as strong as those in Division I. Given the Division II philosophy referred to earlier (e.g., academic success; athletics to benefit the educational experience of student-athletes; offering sport opportunities consistent with institutional mission and philosophy; striving for equitable participation, competitive excellence, and sportsmanship and ethical conduct and

enhancing diversity; preparing student-athletes to be good citizens; and presidential involvement and commitment as a core belief), these results are difficult to explain. As in Division I, the argument could be made that the spending on women's teams results in Directors' Cup success because it is uncommon for schools to invest heavily in women's programs, so the select group that does invest financially in women's sports outperform the remaining institutions. Thus institutions where women's sports are seen more of an asset rather than a liability are achieving high levels of success in the Directors' Cup competition.

Division III is different from Division I and II in that athletic scholarships are not permitted. As with Division I and II, emphasis on women's sport teams is important and all of the Division III significant variables were directly tied to women's sport investments. Results indicated that the average annual salary per FTE for women's teams was the most significant in predicting Directors' Cup success. In Division III, some institutions hire a majority of their coaches in a full-time capacity, while others have coaches that also teach academic classes or are simply part time at the institutions. This variable may have been significant because schools with higher salaries for head coaches of women's teams may have more full time coaches resulting in a higher level of competitive success. Total operating expenses per team for women and total operating expenses per participant for women both also play a part in earning Directors' Cup points. Even with the vastly differing philosophies between NCAA Division I, Division II, and Division III the positive impact of financial investment in women's programs cannot be overlooked.

The NAIA results showed the strongest relationship between total operating expenses and Directors' Cup success. The NAIA is not as financially solvent as the NCAA and is not able to provide large shares of revenue to its member institutions. This could explain why those institutions with the ability to invest heavily in athletics overall find a much higher level of success in the Directors' Cup. Even with the NAIA philosophy focused on academics and character development, it is clear that having money to invest in programs in the NAIA can have an impact in the success of programs. Four variables entered into the statistical model, but operating expenses was plainly the variable with the most impact. NAIA was different from all of the NCAA results in that none of the variables were specific to spending on women's sports. In fact, two of the significant variables (i.e. total expenses per team for men of all sports except football and basketball and athletically related student said for men's teams) indicated that investment in men's sport programs were important.

Overall, the results demonstrated that each division is distinct from the others with respect to variables predicting Directors' Cup success. Even within Division I, there were significant differences related to the subdivisions. Division I and NAIA had the most clearly defined relationships between the variables and Directors' Cup points. The results of multiple regression analysis suggest that investing in women's sport programs (e.g., total expenses and participants) was the most consistent finding amongst all the NCAA divisions. For NAIA, overall program investment was the most critical financial factor in achieving Directors' Cup success.

Each division has a unique identity defined by the philosophy shared among institutions within a division. These philosophical differences should be taken into account and balanced with striving for Directors' Cup success. Given the current fiscal climate in intercollegiate athletics, presidents and athletic directors are under tremendous pressure to spend wisely. The objective of this study was to provide information for university leaders related to resource

allocation in intercollegiate athletics as it relates to Directors' Cup success and, at least in Division I and NAIA, those results were achieved.

### Limitations and Future Opportunities

A limitation that most research is susceptible to is a change in the environment being studied. For this particular study, several probable changes could vastly affect the importance of this study. For example, if NACDA alters the scoring method used, the study would become irrelevant. The scoring structure was changed slightly in 2008-09 with respect to how bracketed sports are scored. The authors believe the changes are not significant enough to alter the results of this study, but future investigations should be aware of and note the change.

Evaluating the number of sports, and which sports, are sponsored by an institution and how it relates to overall success in the Directors' Cup standings provides another opportunity for further study. While making significant effort to award the program that has the best overall athletics program, NACDA does limit the number of sports that count toward the point totals. This may encourage institutions to sponsor and invest in only 14 or 16 excellent teams as opposed to simply competing with 20 or more teams at a lower financial investment. Future studies could determine the advantages and disadvantages to having a broad-based approach as opposed to a concentrated one.

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