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Intercollegiate Athletics and Institutional Fundraising: A Meta-Analysis

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Abstract

After nearly 30 years of research, the disparate findings of studies examining the influence of intercollegiate athletics on private, individual giving to higher education institutions have failed to generate generalizable knowledge. The current study examined all available empirical studies conducted between 1976 and 2008 on this topic. Meta-analysis results indicate that intercollegiate athletics does have a small, but statistically significant, effect on giving. Follow-up analysis revealed four significant moderators on the strength of the intercollegiate athletic-private giving relationship: the gift target (i.e., athletic vs. academic programs), the alumni status of the donor, the level of NCAA membership, and whether or not the institution competes in football. Implications of the results and directions for future research are discussed.

Since the late 1970's, numerous academic studies have purported to examine the effects of intercollegiate athletics on fundraising. Still, nearly 30 years later, disparate research designs and conflicting results have left researchers lacking the ability to confidently comment on how athletic programs influence donors to higher education. The goals of this meta-analysis are to clarify the common knowledge developed through previous research and to provide direction for continued research of how sports programs affect fundraising at colleges and universities.

Many of the weaknesses of this research stream lie in the various research designs employed. While most studies use fundraising, in one way or another, as the dependent variable, the calculation of fundraising varies dramatically. Some studies use aggregated institutional giving as the dependent variable (e.g., Gaski & Etzel, 1984; McCormick & Tinsley, 1990; Humphreys & Mondello, 2007; Stinson & Howard, 2007), while other studies examine individual donor behavior (e.g., Stinson & Howard 2004). Some studies include only alumni donors (e.g., Baade & Sundberg, 1996; Grimes

& Chressanthis, 1994), while other studies include both alumni and non-alumni donors (e.g., Stinson & Howard, 2004; Humphreys & Mondello, 2007). Further, several studies have focused only on fundraising for intercollegiate athletics programs (e.g., Mahony, Gladden & Funk, 2003; Gladden, Mahony & Apostolopoulou, 2005; McEvoy, 2005), while other studies have included academic fundraising or general institutional support (e.g., Cunningham & Conchificano, 2002; Grimes & Chressanthis, 1994). Some studies have focused entirely on private schools (e.g., Shulman & Bowen, 2001; Turner, Meserve & Bowen, 2001), other studies have examined only public schools (e.g., Grimes & Chressanthis, 1994; Stinson & Howard 2004), while yet other studies have included both public and private schools in the sample (e.g., Rhoads & Gerking, 2000; Humphreys & Mondello, 2007). Finally, many studies have essentially been case studies of a single institution (e.g., McCormick & Tinsley, 1990; Grimes & Chressanthis, 1994; Stinson & Howard 2004), while other studies have examined panel data for multiple institutions (e.g., Baade & Sundberg, 1996;

Tucker, 2004; Stinson & Howard, 2007; Humphreys & Mondello, 2007). The end result of the inconsistency in research design is a set of confusing, often conflicting results.

The conclusions of these previous studies can essentially be classified into three categories: studies concluding there is little or no relationship between athletics and fundraising, studies concluding that intercollegiate athletics programs have a positive influence on fundraising (either for athletics and/or institutional support), and studies concluding that athletics programs have a negative effect on institutional fundraising (i.e., crowding-out effects). Several early studies concluded that intercollegiate athletics programs have little or no influence on fundraising. Notably, Gaski and Etzel (1984) constructed over 100 regressions on giving at multiple institutions and concluded that athletics programs had little influence on giving. More recently, Shulman and Bowen (2001) asserted in their study of academically elite, private schools that there was not a strong relationship between intercollegiate athletics and fundraising. In a literature review, Frank (2004) also concluded that the lack of consistent results across the research stream was suggestive of the lack of a strong relationship between athletics and giving.

Equally as many studies have concluded that there is a positive relationship between intercollegiate athletics and institutional fundraising. Sigelman and Carter (1979) were among the first authors to identify a positive effect of intercollegiate athletics on alumni giving. McEvoy (2005) also linked athletic performance positively to athletic fundraising. McCormick & Tinsley (1990) not only concluded that athletics had a positive relationship with athletic fundraising, but also with academic support. These authors noted that at Clemson University, a ten percent increase in athletic support was associated with a five percent increase in academic support. Similarly, Stinson and Howard (2008) concluded that athletic success enhanced both athletic and academic giving for NCAA Division I-AA and I-AAA institutions. Daughtry and Stotlar (2000) identified a positive effect of a NCAA Division II football national championship on institutional fundraising. Other authors have found that when included with other institutional variables and factors, intercollegiate athletics has a significant positive influence on fundraising, though other institutional factors, such as measures of academic quality may be more important determinants of giving (i.e., Rhoads & Gerking 2000, Cunningham & Conchi-Ficano 2002).

The third category of findings centers on potential crowding-out effects, where athletics programs may have a negative effect on institutional support.

Crowding out effects in this context would typically be caused by donors increasing their giving to athletic programs and simultaneously decreasing their support of academic programs. Sperber (1990, 2000) asserted that crowding-out effects are responsible for a lack of academic support at some institutions, though he did not offer any empirical support. A case study at the University of Oregon (Stinson & Howard, 2004) concluded that crowding-out effects were possibly occurring amongst donors making annual gifts of over \$1,000. A 2007 multi-institutional study extended these results, concluding that at most schools athletics fundraising was growing more quickly than academic fundraising and that crowding-out effects were most likely to occur at schools falling outside the top tier of academically ranked schools (Stinson & Howard, 2007).

As this brief review of research indicates, it is quite difficult to confidently draw any generalizable conclusions as to the effect intercollegiate athletics programs have on institutional giving. Given the number of studies conducted, and the over 30 years of research available, a meta-analysis is appropriate. There are four primary advantages to pursuing a meta-analytical approach in summarizing this research stream (Wilson, 2001): meta-analysis is a structured research technique that allows formal review of previous empirical work; meta-analysis is more sophisticated than traditional qualitative review studies; effect sizes across the studies may identify relationships that would otherwise be missed; and, meta-analysis allows for the coordination and management of the various findings from each of the included studies. Successful meta-analysis will be useful in identifying the common effects across the research stream and for providing strong direction for future research.

The purpose of this study is to perform a meta-analytical review of the available scholarly research on the relationship between intercollegiate athletic success and institutional giving.

Methodology

Data Sources

The initial search for studies relevant to this meta-analytical review was conducted utilizing a selection of available Internet-based research databases including: ABI/INFORM Complete, Academic Search Premier, Dissertations and Theses Full-text from Proquest, EBSCO Electronic Journal Service, ERIC (Educational Resource Information Center), General OneFile, JSTOR, Management & Organization Studies: A SAGE Full-Text Collection, OmniFile Full-text Mega Edition, Social Sciences Full-text and Web of Science. Among the key search terms included were combinations of

Table 1.
Summary of Included Studies

Study	Independent Variables	Dependent Variables	Findings
Baade & Sundberg (1996)	Records for men's football and basketball teams, post-season appearances	Alumni giving	Bowl appearances, NCAA BB tournament appearances associated with significant increases in alumni giving at doctorate institutions.
Budig (1976)	Football and men's basketball records	Alumni giving at 79 public institutions	No relationship between team records and giving.
Coughlin & Ereksen (1984)	Football and men's basketball records, post-season appearances	Contributions to the athletic department	Football success (record and bowl appearance), and basketball winning percentage significantly related to athletic department contributions.
Daughtrey & Stotlar (2000)	Football championships in NCAA I-AA, II and III	Alumni donation amount and number of alumni donors	Positive impact of championship season on athletic department donations and number of athletic donors at DII and III institutions. Also, significant increases in institutional contributions at DIII schools, and increase in number of total donors at I-AA institutions.
Grimes & Chressanthis (1994)	Winning percentage, television appearances, and post-season appearances by football, men's basketball and baseball teams	Alumni contributions to the Mississippi State University Foundation	Overall winning percentage of all three sports positively associated with alumni contributions.
Litan, Orzag & Orzag (2005)	Athletic operating expenditures, football winning percentages	Alumni giving	No relationship between football success and alumni giving.
Rhoads & Gerking (2000)	Post-season success of football and men's basketball teams, athletic probation, athletic tradition	Total and alumni giving from 87 NCAA Division I institutions	Alumni contributions increase with bowl win; decrease if team placed on probation.
Sigelman & Bookheimer (1983)	Football records	Institutional giving	Winning football teams correlate with increased athletic, but not institutional, donations.

athletic success, philanthropy, fundraising, institutional giving and development. Articles published from 1975 through 2008 were included in this selection process. According to the literature, 1976 was the first year a

peer-reviewed publication featured an article quantitatively investigating the relationship between intercollegiate athletic success and philanthropic giving (Budig, 1976). Additionally, manual ancestor searches and

Table 1. continued
Summary of Included Studies

Study	Independent Variables	Dependent Variables	Findings
Sigelman & Carter (1979)	Football and men's basketball records, change in football and men's basketball records	Change in alumni giving	Neither record nor change in record of football or men's basketball teams significant predictors of changes in alumni giving.
Stinson & Howard (2007)	Football records, post-season appearance, post-season success, tradition	Academic and athletic giving to NCAA I-A institutions	Total giving to top-ranked academic institutions less susceptible to influence of athletic success. Increasing percentage of donations at all schools allocated toward athletics.
Stinson & Howard (2008)	Men's basketball records, post-season appearance, post-season success, tradition	Academic and athletic giving to NCAA I-AA/AAA institutions	Successful basketball teams positively influence the number of donors making gifts and the average size of those gifts, both for academic and athletic programs.
Tucker (2004)	Football and men's basketball records	Alumni giving	Football success positively influences alumni giving; basketball success is not a statistically significant influence on alumni giving.
Turner, Meserve & Bowen (2001)	Football won-loss records	Individual donor giving data from <i>College and Beyond</i> dataset	Football won-loss records not significantly related to either athletic or general giving rates/amounts.

electronic descendent searches were conducted to compile additional studies, including relevant unpublished doctoral dissertations. This initial search resulted in more than 75 publications in the initial pool of studies. While the initial pool included more than 75 possible studies, a narrowing process was applied to determine a more targeted list of eligible studies for inclusion in the meta-analysis (i.e., quantitative exploration, comparable variables, etc.). The narrowing process focused on compiling a list studies that met the criteria to conduct what DeCoster (2004) suggests is a "reasonable target for synthesis" (p. 6). For example, initial searches may include a study that highlights the relationship between athletic success and the benefits to a university. However, after further evaluation of that study, the relationship may make a mention of increases in institutional giving as a possible benefit,

although no actual quantitative examination took place for that specific relationship. Following this process, a total of 26 publications remained from which the final dataset was taken. Although more than 65 percent of the initial pool was delimited, this is not uncommon in meta-analytic reviews (DeCoster, 2004). Further classification of the remaining 26 studies was completed as well, and that process is outlined in the following study selection process.

Study Selections

The collection of 26 studies was narrowed further based on whether or not the following criteria were included in the study: 1) measures of athletic success (win percentage, postseason appearances and rankings); 2) a related outcome measure of philanthropic giving; 3) and designations of school type (public/pri-

vate), sports of interest (football, basketball, etc.), level of athletic competition (NCAA divisions), pertinent giving targets (university, athletics or academics), and giving bases (all donors or alumni donors only). Studies without appropriate statistical measures (i.e., regression weights) reported were excluded, as were studies that lacked the applicable data of interest. For example, a study which focused on the selected variables of interest may have been removed for only reporting the significant p-values of the relationship and not for including corresponding regression weights or correlations. Thus, the final sample consisted of 14 studies published between 1979 and 2008. A brief summary of included studies appears in Table 1.

Data Extraction

In concordance with the meta-analysis procedures outlined by DeCoster (2004), studies were then coded with pertinent study identifiers and select moderator variables extracted from the overall pool. Moderating variables included: 1) school type (public, private or other); 2) giving targets (university, athletics, or academics); 3) giving base (all donors or alumni donors only); 4) NCAA classification (Division I, Division I-AA, or other); and 5) sports of interest (football, basketball, or other)

Data Analysis

As previously mentioned, meta-analytic techniques for research synthesis are made stronger because of the added statistical evaluation used to aggregate the results of the included studies. Research indicates that the strength of any meta-analysis is the concept of effect size (DeCoster, 2004; Lipsey & Wilson, 2001). Effect size is the measure by which we can compare the varying degrees of relationships or “effects” between variables as reported in different studies. In the case of the current inquiry, the relationship explored in each study is essentially based on the effect of athletic success on fundraising. Although the included studies each operationalize athletic success in different ways (i.e.; winning percentage, bowl appearances, etc.), evaluation of the overall relationship between athletic success and fundraising can be achieved using the meta-analytic techniques, which standardize the reported effects into one succinct metric of evaluation, effect size (Lipsey & Wilson, 2001).

Effect Size:

For each of the selected studies, effect sizes were determined utilizing the product-moment correlation effect size (ES_r) as outlined by Lipsey and Wilson (2001). Included studies reported relationships in three different ways: correlations (e.g., Sigelman & Carter 1979),

t-ratios (e.g., Grimes & Chressanthis, 1994), and F-ratios (e.g., Daughtrey & Stotlar, 2000). Therefore, studies reporting values as either t-ratios or F-ratios were converted to correlations using the following formulas suggested by Lipsey and Wilson (2001, p.201).

$$ES_r = \frac{t}{\sqrt{t^2 + n_1 + n_2 - 2}}$$

$$|ES_r| = \frac{\sqrt{F}}{\sqrt{F + n_1 + n_2 - 2}}$$

Furthermore, Lipsey and Wilson (2001) suggest that each of the calculated effect sizes be standardized using Fisher’s Z_r -transform (p. 63) in order to be able to generate proper standard error for each effect size, which is a key component for determining inverse variance weight. While the effect size statistic is the building block in any meta-analysis, the concept of inverse variance weight (w) also is important. The inverse variance weight allows researchers to more accurately compare effect sizes coming from varying sample sizes. Thus, an effect size with a sample size of 10 can easily be compared to an effect size calculated from a sample size of 100 by comparing the inverse weight variance. Accordingly, each effect size for the study was determined using the following equation:

$$ES_{Z_r} = .5 \log_e \left[\frac{1 + r}{1 - r} \right]$$

Once each of the necessary effect sizes and inverse variance weights were calculated, a test of homogeneity (Q) was conducted through SPSS for overall effect size. The test of homogeneity is an important step in the meta-analysis process as it allows researchers to “determine if a grouping of effect sizes from different studies shows more variation than would be expected from sampling error alone” (Lipsey & Wilson, 2001, p. 8). Once the effect sizes are determined to be homogeneous or not, meta-analytic researchers must then determine whether a fixed-effects model or a random-effects model would be evaluated. According to Lipsey and Wilson, when the distribution of effect sizes is homogeneous (i.e.: a non-significant Q value), the effect sizes differ from the population only because of subject-level sampling error (p. 119), prompting the use of the fixed-effects model. However, when the distribution is found to be heterogeneous (i.e.: a significant Q-value), then a random effects model is evaluated, taking into account not only the differing effect size due to sampling error but also because of some other variables, operationalized as moderators. In the latter case, the moderator analyses were to be followed. Using the methods described by Lipsey and

Table 2.
Summary of Effect Sizes

Study	Year	School Type	Ath./Univ.	Alumni	NCAA Class	Sport	Success	N	ES_r
Budig	1976	Combination	University	Alumni	Combo w/DI	FB	Win Pct.	58	0.696
Budig	1976	Combination	University	Alumni	Combo w/DI	BB	Win Pct.	62	0.499
Budig	1976	Combination	University	Alumni	Combo w/DI	BB	Win Pct.	56	0.588
Budig	1976	Combination	University	Total	Combo w/DI	FB	Win Pct.	58	0.336
Budig	1976	Combination	University	Total	Combo w/DI	BB	Win Pct.	58	0.200
Sigelman & Carter	1979	Combination	University	Alumni	Div. 1	FB	Post	100	0.098
Sigelman & Carter	1979	Combination	University	Alumni	Div. 1	FB	Win Pct.	100	0.131
Sigelman & Carter	1979	Combination	University	Alumni	Div. 1	BB	Win Pct.	100	0.001
Brooker & Klastorin	1981	Public	University	Total	Div. I-A	FB	Post	58	0.173
Sigelman & Bookheimer	1983	Combination	Athletics	Alumni	Div. 1	FB	Win Pct.	57	0.335
Sigelman & Bookheimer	1983	Combination	Athletics	Alumni	Div. 1	BB	Win Pct.	57	0.092
Coughlin & Erikson	1984	Combination	Athletics	Total	Div. 1	FB	Post	56	0.290
Coughlin & Erikson	1984	Combination	Athletics	Total	Div. 1	BB	Win Pct.	56	0.202
Grimes & Chressanthis	1994	Public	University	Alumni	Div. 1	FB	Post	30	0.021
Grimes & Chressanthis	1994	Public	University	Alumni	Div. 1	BB	Post	30	0.128
Grimes & Chressanthis	1994	Public	University	Alumni	Div. 1	Other	Post	30	0.028
Grimes & Chressanthis	1994	Public	University	Alumni	Div. 1	Total	Post	30	0.157
Grimes & Chressanthis	1994	Public	University	Alumni	Div. 1	FB	Win Pct.	30	0.022
Grimes & Chressanthis	1994	Public	University	Alumni	Div. 1	BB	Win Pct.	30	0.246
Grimes & Chressanthis	1994	Public	University	Alumni	Div. 1	Other	Win Pct.	30	0.022
Grimes & Chressanthis	1994	Public	University	Alumni	Div. 1	Total	Win Pct.	30	0.172
Baade & Sundberg	1996	Private	University	Alumni	Combo w/DI	FB	Post	575	0.138
Baade & Sundberg	1996	Private	University	Alumni	Combo w/DI	BB	Post	575	-0.027
Baade & Sundberg	1996	Public	University	Alumni	Combo w/DI	FB	Post	1025	0.100
Baade & Sundberg	1996	Public	University	Alumni	Combo w/DI	BB	Post	1025	0.096
Baade & Sundberg	1996	Liberal Arts	University	Alumni	Combo w/DI	FB	Win Pct.	1688	0.040
Baade & Sundberg	1996	Liberal Arts	University	Alumni	Combo w/DI	BB	Win Pct.	1688	-0.016
Daughtrey & Stotlar	2000	Combination	University	Alumni	Combo w/o DI	FB	Post	33	0.231
Daughtrey & Stotlar	2000	Combination	Athletics	Alumni	Combo w/o DI	FB	Post	33	0.428
Rhoads & Gerking	2000	Combination	University	Total	Div. 1	FB	Post	821	0.089
Rhoads & Gerking	2000	Combination	University	Total	Div. 1	BB	Post	821	0.097
Rhoads & Gerking	2000	Combination	University	Alumni	Div. 1	FB	Post	821	0.110
Rhoads & Gerking	2000	Combination	University	Alumni	Div. 1	BB	Post	821	0.089

Table 2. continued
Summary of Effect Sizes

Study	Year	School Type	Ath./Univ.	Alumni	NCAA Class	Sport	Success	N	ES _r
Turner, Meserve & Bowen	2001	Private	University	Alumni	Combo w/DI	FB	Win Pct.	125	0.469
Turner, Meserve & Bowen	2001	Private	Athletics	Alumni	Combo w/DI	FB	Win Pct.	125	0.400
Litan, Orzag & Orzag	2003	Combination	University	Alumni	Div. I-A	FB	Win Pct.	371	0.900
Tucker	2004	Combination	University	Alumni	Div. I-A	FB	Post	78	0.228
Tucker	2004	Combination	University	Alumni	Div. I-A	BB	Post	78	0.002
Tucker	2004	Combination	University	Alumni	Div. I-A	FB	Rank	78	0.204
Tucker	2004	Combination	University	Alumni	Div. I-A	BB	Rank	78	0.006
Tucker	2004	Combination	University	Alumni	Div. I-A	FB	Win Pct.	78	0.268
Tucker	2004	Combination	University	Alumni	Div. I-A	BB	Win Pct.	78	0.015
Stinson & Howard	2007	Combination	University	Total	Div. I	FB	Post	747	0.018
Stinson & Howard	2007	Combination	University	Alumni	Div. I	FB	Post	795	0.035
Stinson & Howard	2007	Combination	Athletics	Total	Div. I	FB	Post	629	0.020
Stinson & Howard	2007	Combination	Academic	Total	Div. I	FB	Post	707	0.028
Stinson & Howard	2007	Combination	University	Total	Div. I	FB	Win Pct.	773	0.028
Stinson & Howard	2007	Combination	University	Alumni	Div. I	FB	Win Pct.	856	0.002
Stinson & Howard	2007	Combination	Athletics	Total	Div. I	FB	Win Pct.	657	0.074
Stinson & Howard	2008	Combination	University	Total	Div. I-AA	FB	Post	232	0.032
Stinson & Howard	2008	Combination	University	Alumni	Div. I-AA	FB	Post	232	0.033
Stinson & Howard	2008	Combination	Athletics	Total	Div. I-AA	FB	Post	631	0.064
Stinson & Howard	2008	Combination	Athletics	Alumni	Div. I-AA	FB	Post	631	0.067
Stinson & Howard	2008	Combination	Academic	Total	Div. I-AA	FB	Post	233	0.034
Stinson & Howard	2008	Combination	Academic	Alumni	Div. I-AA	FB	Post	233	0.034
Stinson & Howard	2008	Combination	University	Total	Div. I-AA	BB	Post	428	0.068
Stinson & Howard	2008	Combination	University	Total	Combined (I-AA, I-AAA)	BB	Post	967	0.027
Stinson & Howard	2008	Combination	Athletics	Total	Div. I-AA	BB	Post	579	0.016
Stinson & Howard	2008	Combination	Athletics	Total	Combined (I-AA, I-AAA)	BB	Post	1219	0.007
Stinson & Howard	2008	Combination	Academic	Total	Div. I-AA	BB	Post	420	0.069
Stinson & Howard	2008	Combination	Academic	Total	Combined (I-AA, I-AAA)	BB	Post	965	0.028
Stinson & Howard	2008	Combination	University	Total	Div. I-AA	FB	Rank	501	0.013
Stinson & Howard	2008	Combination	University	Total	Div. I-AA	BB	Rank	277	0.025

Table 2. continued
Summary of Effect Sizes

Study	Year	School Type	Ath./Univ.	Alumni	NCAA Class	Sport	Success	N	ES _r
Stinson & Howard	2008	Combination	University	Alumni	Div. I-AA	BB	Rank	277	0.018
Stinson & Howard	2008	Combination	University	Alumni	Div. I-AA	FB	Rank	501	0.046
Stinson & Howard	2008	Combination	University	Alumni	Combined (I-AA, I-AAA)	BB	Rank	1032	0.008
Stinson & Howard	2008	Combination	Athletics	Total	Div. I-AA	FB	Rank	581	0.019
Stinson & Howard	2008	Combination	Athletics	Total	Div. I-AA	BB	Rank	575	0.002
Stinson & Howard	2008	Combination	Athletics	Alumni	Div. I-AA	BB	Rank	575	0.008
Stinson & Howard	2008	Combination	Athletics	Alumni	Div. I-AA	FB	Rank	581	0.004
Stinson & Howard	2008	Combination	Athletics	Alumni	Combined (I-AA, I-AAA)	BB	Rank	1286	0.014
Stinson & Howard	2008	Combination	Academic	Total	Div. I-AA	FB	Rank	499	0.052
Stinson & Howard	2008	Combination	Academic	Total	Div. I-AA	BB	Rank	278	0.024
Stinson & Howard	2008	Combination	Academic	Alumni	Div. I-AA	BB	Rank	278	0.016
Stinson & Howard	2008	Combination	Academic	Alumni	Div. I-AA	FB	Rank	499	0.045
Stinson & Howard	2008	Combination	Academic	Alumni	Combined (I-AA, I-AAA)	BB	Rank	1033	0.010

Note: BB = Basketball, FB = Football, Win Pct. = Winning Percentage, Post = Postseason Appearance, Rank = National Ranking

Wilson (2001), the effect of each moderator variable was examined. This final statistical procedure was calculated through SPSS version 17.0.

Results

Studies Selected

The initial search for applicable studies resulted in 26 empirical studies that focused on the relationship of athletic success and institutional giving in NCAA institutions. Among the 26 articles, 24 were from peer-reviewed journals, while two were unpublished dissertations. Following the inclusion and exclusion process, a final count of 14 studies were found, from which 75 different effect sizes could be calculated (Table 2).

Tests of Homogeneity

Homogeneity analysis ($Q = 932.3$, $df = 74$) was significant ($p < .001$). As a result, the random effects model was selected. The relationship between athletic success and giving resulted in a weighted mean effect size of 0.12 and a 95-percent confidence interval of 0.08 and 0.16. A minimum effect size (ES_r) was -0.027 and a maximum effect size was 1.472, with a weighted standard deviation of 0.169. Athletic success, across the included studies, has a statistically significant, positive effect on giving.

Because of the heterogeneity of effect size distribution, follow-up moderator analysis was conducted.

Moderator Analysis

Moderator analysis for philanthropic giving (see Table 3) was tabulated on five moderators: institution type, giving target, giving base, NCAA classification, and sport of interest. Within meta-analytic studies, the aforementioned Q -statistic is necessary for comparison. While the overall Q -statistic allows researchers to establish the homogeneity of the data, evaluation of the $Q_{between}$ statistic allows researchers to determine how much of the variance can be explained by the moderating variables (DeCoster, 2004). The results indicate that only institution type did not significantly influence the strength of the relationships between athletic success and giving.

Table 3.
Moderator Analysis

Institution Type	Effect Size	Effect Size CI
Public	0.10	0.06 - 0.14
Private	0.09	0.05 - 0.14
Combination	0.06	0.05- 0.07
Giving Target	Effect Size	Effect Size CI
University	0.09	0.07 - 0.10
Athletic	0.04	0.02 - 0.06
Academic	0.03	0.00 - 0.06
Giving Base	Effect Size	Effect Size CI
Total	0.04	0.02 - 0.06
Alumni Only	0.08	0.07 - 0.10
NCAA Classification	Effect Size	Effect Size CI
Division I-A	0.12	0.10 - 0.15
Division I-AA	0.05	0.03 - 0.06
Combination	0.04	0.01 - 0.06
Sport of Interest	Effect Size	Effect Size CI
Football	0.09	0.08 - 0.11
Basketball	0.04	0.02 - 0.05
Other	0.09	-0.09 - 0.29

For giving target, $Q_{between}$ showed a value of 20.91 ($df = 2$) and was significant ($p < .001$). While the effect sizes for all three groups are small ($< .1$), the results indicate that athletic success has a stronger influence on total institutional giving than either athletic or academic giving independently.

The $Q_{between}$ for giving base was 15.10 ($df = 1$) and was significant ($p < .001$). The effect size for alumni giving was twice the effect size for all donors (.08 vs. .04). Alumni donors appear to be more strongly influenced by athletic success than the general population.

$Q_{between}$ for NCAA classification had a value of 45.05 ($df = 2$) and was significant ($p < .001$). As shown in Table 3, the effect size for giving at Division I institutions was substantially higher than I-AA and other levels of NCAA membership. The effect of athletic success on giving is significantly higher at NCAA I-A schools.

Sport of interest had a $Q_{between}$ value of 26.57 ($df = 2$) and was significant ($p < .001$). Consistent with previous research documenting the power of football, football success had an effect size more than twice as large as the effect size for basketball (.09 vs. .04). The strongest effect on giving, at least at schools that compete in football, appears to be the success of the football program.

Institution type was the only non-significant ($p = .072$) moderator in the study with a $Q_{between}$ value of 5.26 ($df = 2$). The results of this meta-analysis suggest that donors at both public and private schools are influenced similarly by the success of athletic programs at those institutions.

Discussion

The primary objective of this study was to provide some conclusion to the seemingly disparate research results reported over the last thirty years regarding the influence intercollegiate athletics programs have on institutional fundraising. Using the differing ranges of correlation effect size (small $ES_r \leq .10$; medium $ES_r = .25$; large $ES_r \geq .40$) as cited by Lipsey & Wilson (2001), the overall results suggest that athletic success ($ES_r = .121$) has a small, but significant relationship with institutional giving ($p < .001$). In the aggregate, the thirty years of studies included in this meta-analysis indicate that intercollegiate athletics are an important influence on donors. However, the small overall effect sizes are indicative of the varying degrees of influence athletics has had in the reported studies. Both institutional heterogeneity and unmeasured influences on giving limit the ability to generalize results across institutions. Thus, further analysis was undertaken to better understand the influence of several potentially important moderating variables. (See Table 4 for a Summary of Results and Implications).

The analysis of moderating variables provides clarification of the circumstances in which intercollegiate athletics are most likely to have the strongest influence on institutional giving. Specifically, this study identified four important moderators: giving target, alumni status of donor, NCAA classification and focal sport of interest.

This study found that the effects of athletic success on giving were strongest when total institutional giving was considered, as opposed to athletic or academic giving specifically. Intuitively this finding makes sense. Studies examining aggregated institutional giving will pick up the positive effects of giving to both athletic and academic programs. This result, and the overall effect size of .121 are consistent with the findings of broader institutional studies that have concluded athletics has a small, but positive relationship with institutional fundraising efforts (Rhoads & Gerking, 2000; Cunningham & Conchi-Ficano, 2002). Specific analysis on the differential impacts of athletic success on athletic versus academic giving reveals that athletic giving is only slightly more impacted by athletic success than academic giving. This finding, perhaps more than anything, underscores the potential value of athletics programs to assist in the growth of academic and institutional

Table 4.
Summary of Results and Implications

Key Finding
<ul style="list-style-type: none"> • Across 30 years of empirical study, intercollegiate athletics has a small, but significant influence on institutional fundraising. • Effects of athletic success are strongest when institutional giving is considered. • Alumni donors are more influenced by athletic success than non-alumni donors. • Football is the primary influence on giving at institutions where football is played. • Public institutions and private schools have nearly identical effect sizes, indicating all schools may be influenced by athletic performance.
Implications for Practice
<ul style="list-style-type: none"> • Institutional fundraisers should invest in understanding the role athletics play in giving and learn to leverage athletic success to benefit institutional fundraising efforts. • Athletic success may be a positive influence on both athletic and academic fundraising. Academic fundraisers should consider the ability of athletic programs to assist in donor development. • Contrary to some popular press, alumni should be targeted with campaigns leveraging the role of athletics in fundraising. In particular, successful athletics programs appear to bring more alumni donors to the institution. Care should be taken to successfully develop and cultivate these new donors. • Fundraisers should pay particular attention to the football team. Positive shaping of expectations and perceptions of success may enhance institutional fundraising. • Both public and private schools appear influenced, and therefore may leverage athletic success in fundraising.

fundraising. While the effect sizes are small, it is clear that athletic success has a significant influence on all types of institutional fundraising. Similar to McCormick and Tinsley's (1990) study at Clemson University, it appears that successful athletic teams potentially benefit more than just athletic programs by spurring growth in fundraising across the campus.

Another significant moderator identified in the meta-analysis was the alumni status of the donor. Studies focusing solely on alumni giving resulted in an effect size nearly double that of studies based on giving from all institutional donors. This finding, while counter to many assertions made in the popular press (e.g., Sperber, 2000), is an important finding that may bear directly on whether athletics help or hurt institutional fundraising. Athletic performance, most notably football success, has been linked to increased numbers of alumni donors making gifts (Daughtrey & Stotlar, 2000; Stinson & Howard, 2008). Increased numbers of donors is indicative of the positive influence athletics can have on institutional fundraising. However, other studies have suggested that these alumni donors may alter their institutional giving patterns, both to athletic and academic programs based on athletic performance. In the extreme, alumni donors may cannibalize their academic giving to support athletics in times of success, potentially harming the institutional fundraising effort (Stinson & Howard, 2004; Stinson & Howard,

2007). Further work should concentrate specifically on the effect of athletics on pro-institutional alumni behaviors, including fundraising.

Not surprisingly, NCAA classification was also identified as an important moderator in the meta-analysis. Institutions competing at the NCAA IA level of competition were more strongly influenced by the success of their respective athletic programs than institutions competing at lower levels. Several plausible explanations exist for this finding, though precise understanding awaits future research. NCAA IA schools receive significantly more media attention, particularly for athletics, than other institutions. The high profile, focused more heavily on athletics, may prompt larger groups of donors (alums and non-alums) to identify specifically with the athletic teams at the institution. Non-alumni in particular, may make gifts to the institution that would not be made in the absence of athletic success. This could potentially explain the larger effects at NCAA IA schools. Also, the fact that the vast majority of studies examining athletic success and giving have been conducted at the NCAA IA level provides a more thorough examination of giving at that level. Still, it is important to note that the effect sizes are significant and positive at all levels of NCAA competition. Stinson and Howard (2008) suggested that, in fact, athletic success at lower levels of competition (I-AAA) was more important to increases in academic

support than athletic success at the IA level. Future research should continue to extend beyond high profile Division IA schools.

Finally, this study identified a moderating role for the primary sport of interest. Football success displayed a much stronger influence on giving (by nearly 60 percent) than basketball or other sports. Previous studies have certainly documented the strong influence of various measures of football performance on giving (i.e., winning percentage, bowl appearances), so this finding is not necessarily surprising (Baade & Sundberg, 1996; Goff, 2000; Humphreys & Mondello, 2007; McCormick & Tinsley, 1990; Rhoads & Gerking, 2000; Stinson & Howard, 2007). Nevertheless, this result is important in that it continues to support the dominant role of football in athletic and institutional fundraising efforts. While not directly tested here, it seems possible that the ability of many football stadia to attract and seat more fans than basketball arenas heavily favors football in its influence. This is particularly true in cases where a university is able to “require” a donation for many or all season tickets in the respective arenas. Even though basketball teams typically play many more games in a season, they are more constrained than football in the number of season tickets that can be sold. This in turn constrains the required giving that can be generated through basketball programs. Thus, efforts to increase seating capacity and donor clubs that are associated with football programs appear to be paying off (Howard & Crompton, 2004). This finding is also consistent with research concluding that when football is not present (NCAA I-AAA institutions), basketball as the focal sport is the primary influence on giving (Stinson & Howard, 2008). The conclusion of this meta-analysis is that the performance of the focal revenue-generating sport on a given campus is a significant influence on institutional fundraising. Researchers, and universities, should continue their efforts to understand how to use these athletic programs to best benefit the entire institutional fundraising effort.

Institution type was not statistically significant as a moderator across the studies included in this meta-analysis. In fact, the effect sizes for public and private schools were virtually identical, suggesting a similar influence of athletic success on giving at both types of institutions. This finding is somewhat surprising in relation to previous research. Many recent studies that have concluded that there is no relationship between intercollegiate athletics and fundraising have included data primarily drawn from academically-elite private institutions (i.e., Shulman & Bowen 2001, Turner, Meserve & Bowen, 2001). On the other hand, many of the recent studies concluding there are significant

effects of athletics on giving include strong or sole representation of public institutions (i.e., Grimes & Chressanthis, 1994; McCormick & Tinsley, 1990; Rhoads & Gerking, 2000; Stinson & Howard, 2004). Possible explanations for this pattern of results may be indicative of other institutional factors as more powerful moderators than public/private status. For example, the level of investment in athletics programs may determine the extent of effects. Or, as Stinson and Howard (2008) reported, academic rankings may be a primary determinant of the influence of athletics on giving. Further research should continue to focus on these potential moderating factors.

Despite a thorough review and inclusion of the available research on the relationship of athletic success and institutional giving, this study is not without certain limitations. Foremost, there is a relatively small amount of quantitative-based research in the field of intercollegiate athletic relationship and giving, including a smaller percentage of studies that examine this relationship in terms of sports other than football and basketball and across differing NCAA classification levels. This fact may very well have led to the insignificant effect sizes for the institution type moderator. Still, the significant meta-analytic findings identified here are critical to understanding the influence of athletics programs on fundraising. The significant effects noted here represent a strong set of findings based on over 30 years of research in this area. As a result, we can be quite confident that intercollegiate athletic programs do have a significant influence on institutional fundraising, though the strength of that relationship is moderated by four important variables: the target of the giving, the alumni status of the donor, the institution's level of NCAA competition and the primary sport of interest. Thus these findings begin to set the conditions for when athletic performance is most likely to influence giving. Future research should continue to seek understanding of the underlying mechanisms causing these relationships, as well as extending itself to a consideration of other variables that may be important in the athletic performance-fundraising relationship. Further, research should be broadened to include other important variables subject to the influence of athletic programs, including institutional image, college choice and/or matriculation (Chressanthis & Grimes, 1993; Mixon, Trevino & Minto, 2004), and academic quality (Goidel & Hamilton, 2006; McCormick & Tinsley, 1987; Mixon & Trevino, 2005).

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