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Does Winning Lead to Giving? The Effect of Athletics on Alumni Giving at a Small Liberal Arts School

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Introduction

Collegiate athletics is a cornerstone of the "college experience" for thousands students at countless institutions across the country. Be it the thrills of watching a particular team achieve greatness, or the disappointment that manifests in fans when their team falls short of expectations, it is obvious that athletics have become a part of the college culture. With a variety of possible sports to participate in, and numerous different divisional classifications available, colleges and universities have produced thousands of different teams and individual competitors in countless facets of collegiate athletics. The question then arises, what purpose do these athletic teams serve? In studies done throughout the years there has been an attempt to link the athletic successes of college or university teams to various changes seen at institutions over time. One of the biggest debates is the issue of whether athletic success at the university level leads to greater levels of charitable donations by an institution's alumni. Since nearly all colleges and universities are nonprofit organizations, they rely heavily on donations from their alumni to acquire the necessary funds to operate from year to year. Therefore, it is appropriate to ask whether there is a definite relationship between athletic success and greater levels of alumni giving.

Athletic programs do not come at a low cost to institutions, in fact the costs involved with building facilities, hiring and paying coaches, and maintaining their fields and stadiums can be seen as substantially high barriers to the entry or establishment of athletics programs for many institutions. Yet across the country there are hundreds of universities that field thousands of teams for athletic competition, which raises the question of what benefit these teams actually provide to their college? This paper will

focus specifically on the effect that athletics have at a small liberal arts school, where the emphasis isn't on having strong athletic programs (not that this is the focus at larger institutions), but the focus of the administration is on providing the highest quality education it can to its enrolled students. At these liberal arts schools with smaller enrollment the role of athletics in campus life is stronger in some cases and quite weak in others. The small school atmosphere provides for an interesting case to study on how athletic success impacts the alumni's propensity to donate. The University of Puget Sound is a perfect example of a small liberal arts school, and through looking at the historical data of giving and athletic success in this particular university it will be possible to distinguish whether or not this type of link between athletics and giving is reasonable to expect at other similar institutions.

Review of Literature

The results of previous studies from varying economists have produced vastly different outcomes. Many studies, instead of focusing on athletic success as an indicator for donating, looked at the characteristics of what might accurately predict whether or not a particular alumnus would donate to the institution. An analysis by Shulman and Bowen (2001) showed athletes are less likely to give back to their schools than their non-athlete counterparts. When Shulman and Bowen show statistics of the giving rates of high profile athletes, low profile athletes and students at large (Shulman & Bowen 2001, 208), their statistics show that the giving rate of the "high profile" athletes (football, basketball and hockey players at the Division IA level) had a lower giving rate by 12% than the students at large body they compared them to. Part of their reasoning behind this trend is

that some of the high profile athletes feel that they were "used" by the team or university and that they don't need to give anything back to the institution that took advantage of them and never paid them back. I expect this to differ from my findings for small college athletes because, as they point out, there is a distinction to be made between high profile and low profile sports, but at a school with a small enrollment and a well. There is room for this argument to be made because of the fact that in Division III Athletics a team or school does not "own" an athlete, meaning that the athlete is not given any scholarships based on athletic achievement, but rather academic merit.

It is important to make the distinction between Division I athletes and Division III athletes. These athletes, on average, are different in not only skill level, but also in behaviors and intentions in selecting a school to attend. Liberal arts school student athletes do not generally attend their schools with the intention of joining the professional levels of their respective sports. Of course there are rare cases of D-III athletes joining the professional ranks, but the overall trend shows it is quite unlikely for this to happen. These smaller school athletes are more inclined to take in more of the "college experience" and create stronger ties to the university, its professors and the overall athletic program as a whole. This is because, rather than focusing solely on athletics as many high profile athletes do, D-III athletes are more inclined to spend their free time pursuing alternate interests, thus expanding their network of college friends and experiences outside of athletics. These stronger ties will pay off greatly for the smaller universities in the long run, because the students who feel better connected to their campus and college community will undoubtedly feel more inclined to donate more back.

Lara and Johnson (2008) developed a model to predict whether or not an alumnus would donate to their particular institution, Colorado College, a school somewhat similar to the University of Puget Sound. One variable that they used in their model was whether or not the alumnus played a varsity sport. Their findings showed a significant negative correlation between being a varsity athlete and an individual's likelihood to donate back to Colorado College. Their regression showed that someone who participated in varsity athletics was .00150% less likely to donate to the university at a 5% significance level. This finding contradicts against the argument that an athlete-alumnus of smaller liberal arts schools has stronger ties back to that institution as a whole. However, they did not look at winning as a factor for increasing alumni support or how it plays into one's propensity to donate for a particular year. Lara and Johnson simply focused on what made someone a likely donor.

Holmes, Meditz and Sommers (2008) showed that athletes at "a highly selective liberal arts college" are 22% (pg 545) more likely to give back to the university than their non-athlete counterparts. This study also showed that there is a greater likelihood of a winning season leading to greater levels of alumni giving as well as a more generous gift from the alumni. In their case they showed that a hockey championship led to a 7% increase in alumni donations which proved to be significant at a 1% level.

Baade and Sundberg (1996) found that liberal arts colleges see a statistically significant, albeit small, correlation between winning percentage and alumni giving. They focused mostly on football successes, but showed that there is evidence that can point with statistic significance at the positive relationship between winning and giving.

The problem that I will specifically target that was not addressed here is one of overall success of all sports in an athletic program.

Another study that reassured the possibility of finding a positive relationship between winning and giving was Meer and Rosen (2008). The Meer and Rosen study showed that when a male's former team wins its conference championship his donations both to the athletic program and in general increase by around 7%. They found no significant relationships for women's teams in their research.

I hope that by looking at the data I receive in a similar way, but on a smaller scale I will be able to find what I am looking for with regard to a relationship between winning and giving. I expect that the differences that are evident between small schools and large schools will be able to show with good reason that the alumni of a particular university care about not simply specific team success, but overall success for an institution. I expect to see that the ties back to the university, the size of the university and the effect that these types of factors on the college experience have led alumni of smaller institutions to care more about general success, and that this general success leads to a greater level of warm-glow to be felt through their donations because of the closeness they had with all athletes on campus during their years at school.

The theory of warm glow and impure altruism that I will develop for private donations to nonprofit organizations like the University of Puget sound is similar to the one developed by James Konow (2006). Konow's theory is that people donate because of some "warm glow" effect that they receive from s factors that come from outside the act of simply donating. His paper discusses the reasoning behind why people receive a positive benefit from giving away their money, and this reasoning will be a strong

foundation behind my own economic theory. Konow's explanation for why people receive this positive warm glow effect from donating comes from several factors or feelings that arise as a result of their good deeds, the one that this paper will focus on is his explanation of how people are more likely to behave in an impurely altruistic manner because their donation provides a benefit to a specific target group. To take it further it essentially means that the person donating to a group, or in this case, a university, because said group has a special meaning to you.

Economic Theory

The theory behind this model and its focus on small school collegiate athletics is intended to take a closer look at how impure altruism and the benefits that an individual receive from donating are affected by the successes and failures of the institutions athletics. I assert that at a college or university where there is a high standard of selection for enrollment, leading to a smaller campus, there is an environment which allows students to become a more unified campus and thus stronger ties for an individual to all aspects of campus life. These ties include connections to the athletic program and because of this an individual becomes more likely to have some sort of reaction to the successes and failures of their alma mater's sports teams.

This relationship between the individual student and athletics on a smaller, more selective, campus is much more important in the case of leading alumni to donate than it is on a larger college or university campus. The reason behind this is that there is little separation between athletes and non-athletes on a campus. The athletes of a smaller

campus community are just as much a part of on campus clubs and activities as regular students and thus the community tends to take greater stock in the athletics on campus.

The reason that NCAA Division III athletics presents a unique look into this topic is because Division III athletes aren't allowed to receive scholarships based on their athletic abilities. NCAA Division I and II athletes are given scholarships based on their abilities to perform at a high level in their respective sport, the Division III athlete's scholarships come on based solely on academic merit and financial need. The cost for an athlete at a D-I school for not focusing his or her extra time on their respective sports could mean the loss of their scholarship which, in many cases, pays for their school. With such a competitive market for scholarships across the country the threat of having a scholarship taken away and given to someone else with greater athletic talent will lead some athletes to devote their time focus on athletics and spend more time training for their athletic events. The focus on athletics leads to more athletes at the more "elite" levels of college athletics to devote their time to practice or the weight room, instead of the classroom or involving themselves in on campus clubs. This is a case where clearly the costs outweigh the benefits for a D-I athlete. A D-III athlete is not offered a scholarship based on his/her athletic abilities, but instead their academic achievements are the basis for their financial support from the university. This means that the cost of a D-III athlete not spending their spare time in the weight room or practicing is lower for them, allowing them to have time to explore interests outside of athletics which allows them to expand their network. This time that a student athlete can spend on things other than their individual sport allows them to meet new people, expand their network and

thus the people that they meet in these new activities are more likely to take an interest that athlete's activities as well.

The findings of Holmes et al. show that athletes are more likely to give back to their alma maters. Because the athlete has a greater chance to expand their network and reach out to more social groups draws more attention from students not involved in athletics, and thus the non student-athletes take stock in the sports that the athletes within their network participate in. Meaning that if an athletic team performs well, alumni who were not involved will take more notice in the success and thus feel a greater deal of warm-glow or good feelings, as Konow (2006) describes it, from their donations. This would then in turn lead to the decision by alumni to donate more to their alma mater because of the athletic success they observe.

This paper asserts that if there is a study done that looks at years where the institution experienced athletic success that the warm-glow they receive from giving would increase. This greater warm glow due to athletic success would mean that more alumni overall would choose to give back to the university, assuming they still hold positive associations from their college experience.

Variables

Before performing any regression on the data it is first important to determine the variables that would best allow me to properly explain the relationship between the athletics of the University of Puget Sound and the resulting alumni donations. In order to propose that athletic success from year to year was going to have a significant impact on a graduate's amount of donation it would be necessary to look at the levels of alumni

donations that were given to the university across several years. Through the University of Puget Sound, I was able to use the Higher Education survey for the years that they had available from 1982-2007. Access to this survey gave me numbers broken down for specific donor categories regarding the amount donated to the university. Through this information I was able to attain the amount of donations for "Unrestricted Purposes" that the university received specifically from alumni for a given year. I then converted the numbers using the consumer price index inflation numbers to 2007 dollars so as to ensure that the amounts are consistently observed from year to year. I had to look closely at the data and account for outliers, in doing this there were a two specific years that appeared to be outliers in the donation amounts. In order to assure that the data was not skewed by these outliers, I adjusted my giving amounts to replace the outliers with the average donation amount for the twenty six years that I had access to. Years 1987 and 1998 (See page 22) displayed amounts greater than one million dollars, meaning that there must have been some specific campaigns directed to increase giving in these years, or one large donation from an alumni, causing these years to skew my data as outliers. I replaced the large amounts with the average donation amount for the specified years and the new total for those years that was used for the purpose of this study was $557,395.93. The amount of donations given to the University of Puget Sound for unrestricted purposes was used as my dependant variable, and the regressions used other variables relating to the university's wins and losses in athletics as well as economic indicators as the independent or explanatory variables.

In order to follow through with the model and show that the relationships and networks developed on the smaller campus can link alumni strongly to athletics, and thus

be affected by the wins and losses of the athletic program causing an effect on giving, it was important to have an effective way of measuring athletic success. In order to do this, the regressions used the more "High Profile" or more highly publicized sports from the university. When deciding what sports to use the amount of publicity a sport received and the most highly attended sports seem to be the most likely indicators for alumni attention. These factors, along with historic success and traditions on the campus I selected two sports as the most likely programs to have an effect on giving. The sports that were chosen for the regressions were the Football and Men's Basketball program.

The basketball program has been historically a program that has performed at a high level here on campus and because of this they are able to draw large crowds into the gym which is capable of holding a great deal of spectators. For these reasons, it would make sense that alumni are likely to be influenced by the performance of this team because of the ability to go and watch a competition, or simply hear more about this particular program due to interest from the past and the (more or less) consistent success the program experiences.

Football was chosen for several reasons that would make it logical to expect the wins and losses of this team to have an effect on donations to the university. First, the football team has the biggest stadium available for athletic events at the university, and thus it allows for easy access for alumni to get tickets to football games and to attend. Second, the football game is generally a focal point during Homecoming, an event that always shows a great deal of emphasis on alumni attendance and participation in events during the day's festivities. So, should the football team earn a victory in the Homecoming game, a great deal of alumni will be witness to the victory and thus leave

with stronger feelings toward the university, therefore leading to a possible increase in giving. Another important reason behind selecting the football program is that the team has the largest amount of alumni from athletics just due to the sheer number of players necessary to participate in football at the collegiate level. This would mean that these football alumni feel an especially strong connection to the university through the athletics program, assuming that they had a positive experience with the program. The stronger ties would theoretically lead to an increase in giving if they receive benefit from seeing the team they once played for achieve success.

The other major facet of the regressions is getting an accurate representation of the state of the economy for each given year in the study. Using this type of criteria makes it possible to see the relationship between alumni income levels, economic status and the resulting donations that the university receives. In order to capture this type of data in the regressions census data was used to accurately represent the average alumni income and labor statistics were used to explain the job market. The regressions use the census data giving average income levels based on educational attainment for those with a bachelor's degree from 1982 to 2007. The given census survey values for men and women were averaged and converted into 2007 dollars so as to keep everything in similar values from year to year. This variable is clearly important to the study in that there is a clear relationship between an individual's overall wealth and the amount that they donate to public good (Andreoni 1990). This relationship being that the more income an individual possesses, the more likely they are to have money to donate to nonprofits, like the university. For the purposes of this study we would expect that the higher the average

income for individuals who hold bachelor's degrees, the higher the expected amount of donations.

The other important economic indicator that was used in the regressions was the average annual unemployment rate. By taking the monthly unemployment rates and averaging them across their respective years the regressions are able to capture some of the characteristics of the job market and economy as a whole. This variable explains the economy as a whole, and should hold a negative value in my regressions, meaning that when the unemployment rate is higher donations would be expected to go down all things being held constant.

Using these variables this study should be able to accurately explain the relationship that between alumni donations to the university and athletic achievements, while taking into account economic conditions that directly affect the alumni of the University of Puget Sound.

Regressions

Using the EViews Student Version program for performing least squares regressions I was able to upload my excel file (Page 22) including all of the data for my regressions which includes: Unrestricted Donations (adjusted to remove outliers), Winning Percentages for the Men's Basketball and Football programs for the University of Puget Sound, as well as Census Data for Average Income for individuals with a Bachelor's Degree and the Average Annual Unemployment rates. The regressions that were run are as follows:

Regression 1

Dependent Variable: GIVING
Method: Least Squares
Date: 03/04/09 Time: 11:45
Sample: 1982 2007
Included observations: 26

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	597262.1	462018.5	1.292723	0.2101
FOOTBALL	5327.528	96099.14	0.055438	0.9563
MBBALL	177239.2	147704.9	1.199955	0.2435
INCBACH	6.172829	7.619347	0.810152	0.4269
UNEMP	-7994894.	1959832.	-4.079376	0.0005

R-squared	0.626739	Mean dependent var	557395.9
Adjusted R-squared	0.555641	S.D. dependent var	160434.3
S.E. of regression	106945.9	Akaike info criterion	26.16907
Sum squared resid	2.40E+11	Schwarz criterion	26.41102
Log likelihood	-335.1980	F-statistic	8.815215
Durbin-Watson stat	1.280032	Prob(F-statistic)	0.000243

The resulting equation for this regression is:

GIVING= C + FOOTBALL + MBBALL + INCBACH + UNEMP

Where GIVING is unrestricted giving to the university, FOOTBALL is the winning percentage for the football team, MBBALL represents the Men's Basketball team's winning percentage, INCBACH is the average income according to census data for individuals with a bachelor's degree and UNEMP is the average annual unemployment rate. The given coefficients above are the values that would be placed before the given numbers from the excel files.

The first regression conducted included all of the variables collected for the purposes of this study, unfortunately there were some problems with the results, first and foremost being the potential issues with the Durbin-Watson Statistic, meaning the possibility of autocorrelation issues within the regression. Secondly, the lack of significant variables is troublesome, only the unemployment rate is a significant predictor of donations to the university. In the context of this study, the unemployment rate being

significant means more generally that the state of the economy is a better predictor of donations than the explanatory coefficients yielded by the athletic data.

The Durbin-Watson Statistic of 1.280032 was in the inconclusive range for the critical values of d_L=1.06 and d_u= 1.76. Since the Durbin-Watson value lies in between these two values the test cannot say whether or not autocorrelation exists, however, the statistic could be improved by solving for autocorrelation. Though the only statistically significant variable was the unemployment percentage, all of my variable coefficients were displaying the expected signs and with the need to correct for autocorrelation there was hope that more significant variables would arise. A Wald Coefficient test was run on this regression (as it was on all of the other regressions) to ensure that there was no statistically significant relationship between the variables that were predicting the giving levels. In all cases of the Wald Coefficient test is was shown that there was no significant relationship between the variables, thus eliminating worries of a relationship between the variables that could potentially skew the results. In order correct for the potential autocorrelation, another regression was done.

Regression 2

Dependent Variable: GIVING
Method: Least Squares
Date: 03/04/09 Time: 11:46
Sample(adjusted): 1983 2007
Included observations: 25 after adjusting endpoints
Convergence achieved after 22 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1327975.	687060.5	1.932836	0.0683
FOOTBALL	19447.18	88202.63	0.220483	0.8278
MBBALL	270518.3	160085.6	1.689835	0.1074
INCBACH	-4.714754	10.42864	-0.452097	0.6563
UNEMP	-11499456	3272310.	-3.514171	0.0023
AR(1)	0.350594	0.218711	1.603005	0.1254

R-squared	0.707187	Mean dependent var	563616.7
Adjusted R-squared	0.630131	S.D. dependent var	160510.3
S.E. of regression	97617.37	Akaike info criterion	26.02106
Sum squared resid	1.81E+11	Schwarz criterion	26.31359
Log likelihood	-319.2633	F-statistic	9.177551
Durbin-Watson stat	1.466872	Prob(F-statistic)	0.000143

Inverted AR Roots	.35

In order to correct for autocorrelation the data was lagged by one year, using the AR(1) function of EViews, the correction for autocorrelation increased the Durbin-Watson statistic further into the inconclusive range and closer to proving that there is no autocorrelation evident in the regression but not far enough to disprove autocorrelations existence. Though the lag correction did not completely cure the potential problem with autocorrelation the correction increased the significance of Men's Basketball close to the 10% significance level. The adjustment for autocorrelation also increased the goodness of fit or R-squared from roughly 63% to nearly 71%, showing that the lag variable from the AR(1) function did have a positive impact on the overall ability of the model to properly explain the relationships between athletics and the resulting levels of alumni donations.

The results here are promising, but one problem that arose is the changing of the sign on income levels for those with a bachelor's degree. The coefficient for income levels is now negative, meaning that as the average income for people possessing a bachelor's degree increases they will donate less to the university, which is contrary to the theory that having more wealth makes one more likely to donate to charities or nonprofits, or suggesting that the tastes and preferences of the individuals show they would rather spend more income on private goods, instead of public donation. This result left many questions as to whether or not one of the particular teams are keeping the other from being significant, so separate regressions were run for both Football's winning percentage and its effect on the University of Puget Sound's alumni donations and the same for Men's Basketball.

Upon the original separate regressions both football and basketball showed problems with the Durbin-Watson so the following regressions seen are taking into account a lag variable to help correct for autocorrelation again using the AR(1) function of Eviews.

Regression 3

Dependent Variable: GIVING
Method: Least Squares
Date: 03/03/09 Time: 11:16
Sample(adjusted): 1983 2007
Included observations: 25 after adjusting endpoints
Convergence achieved after 15 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1126431.	695139.8	1.620438	0.1208
FOOTBALL	41225.05	91159.74	0.452229	0.6560
INCBACH	0.143956	10.47906	0.013738	0.9892
UNEMP	-10047103	3211517.	-3.128460	0.0053
AR(1)	0.346948	0.222377	1.560181	0.1344

R-squared	0.661585	Mean dependent var	563616.7
Adjusted R-squared	0.593902	S.D. dependent var	160510.3
S.E. of regression	102286.4	Akaike info criterion	26.08580
Sum squared resid	2.09E+11	Schwarz criterion	26.32957
Log likelihood	-321.0725	F-statistic	9.774774
Durbin-Watson stat	1.521042	Prob(F-statistic)	0.000150

Inverted AR Roots	.35

The football regression, after being adjusted for autocorrelation, shows an increase in the probability of the coefficient being significant, but still no change in the amount of significant variables. The unemployment rate still proves to be significant in the context of this regression, proving even further that the economic state has a strong effect on the amount of donations that alumni give to the university. The goodness of fit in this regression has also been reduced when compared to regression 2, meaning that this variation of the regression shows a decrease in the ability of the model to estimate the amount of giving. The Durbin-Watson statistic is still in the inconclusive range, meaning that with the given regression one cannot prove or disprove the existence of autocorrelation. This appears to show clearly that the football team's wins and losses do not seem to have a significant effect on the level of donations that the University of Puget Sound receives.

Regression 4

Dependent Variable: GIVING
Method: Least Squares
Date: 03/07/09 Time: 22:19
Sample(adjusted): 1983 2007
Included observations: 25 after adjusting endpoints
Convergence achieved after 18 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1297788.	651234.8	1.992811	0.0601
MBBALL	275250.5	153945.2	1.787977	0.0889
INCBACH	-4.263515	9.922742	-0.429671	0.6720
UNEMP	-11326344	3064965.	-3.695423	0.0014
AR(1)	0.346353	0.211372	1.638598	0.1169

R-squared	0.706437	Mean dependent var	563616.7
Adjusted R-squared	0.647725	S.D. dependent var	160510.3
S.E. of regression	95267.32	Akaike info criterion	25.94362
Sum squared resid	1.82E+11	Schwarz criterion	26.18739
Log likelihood	-319.2952	F-statistic	12.03214
Durbin-Watson stat	1.470860	Prob(F-statistic)	0.000038

Inverted AR Roots	.35

The fourth and final regression shows some significant and promising results. By separating and running a separate regression for Men's Basketball and its effect on donations to the University it is shown that the coefficient is statistically significant at the 10% level. This significance means that an increase in the winning percentage of the Men's Basketball team has a positive effect on the alumni donations to the University. In this case the coefficient shows that a 1% increase in winning percentage would yield an increase of $2,752.50 to the amount donated for unrestricted purposes, holding all other things constant. Again in this regression the unemployment rate shows statistical significance, and has the expected sign such that if unemployment were to rise, there would be a decrease in giving to the university. The R-squared value is nearly exactly the same as in Regression 2, and has not decreased by a large amount, as was seen in Regression 3. The major issue in this regression however is the negative sign associated with the average income for bachelor's degree. This negative sign goes against the

assumption that the more income an individual has, the more likely they are to donate to nonprofits or the university, and it is hard to discern what has cause this change in the signs. Also, the Durbin-Watson statistic remains in the inconclusive range, making it impossible to either reject or accept that there is the existence of autocorrelation in this study. However, the separation of the independent variables for football and basketball team's winning percentages has shown that there can be a significant variable pulled out of the available data.

Conclusion

The data has shown that there is some level of significance that can be associated with the wins and losses of an athletic team and the resulting donations that alumni give to a university. However, this data must be looked at critically in order to understand the potential flaws that were not addressed by the regressions performed. Being unable to solve the autocorrelation problem one way or another poses a problem in itself, but there are other fundamental things involved with the study that could change the results had the data been available. First and foremost, had the dependant variable been strictly donations to the athletic funds there is a reason to believe that there may be a stronger relationship somewhere between athletic success and charitable giving. The records that I was given access to did not have specific recorded categories for athletic donations before the 1997 survey. If this data was available for all of the years of my study it is likely that some stronger type of relationship may have been observable. Secondly, I was limited in the amount of years that I was given financial data for from the university. Having more years of observation could have warranted more variables for my study so

as to not adversely affect the results of my regressions by weakening the degrees of freedom and thus the strength of my estimating variables. Another helpful data set would have been alumni specific statistics, such as average alumni income or the percentage of alumni who were involved in athletics during their time here, which would theoretically lead to stronger sentiments towards athletic wins and losses.

The study shows strong signs that economic indicators play a stronger role on alumni donations than do the athletic variables that were used in this particular study. The potential to perform this study across several schools is one that could raise a great deal of interest. Being able to compare the results that the University of Puget Sound shows to other similar universities and even comparing these results to the more publicized athletics of large Division I schools and seeing how success on the national stage can change a university's amount of donations received.

This study has attempted to show the relationship between athletic successes and failures and the resulting amount of donations given to a university at a smaller, more selective institution, that being the University of Puget Sound. The small school atmosphere is one that is intended to give a unique experience to those who attend, and a part of nearly any student's time at college is spent around collegiate athletics. There was some significance shown in the variables that intend to show how the more close-knit networks between students and athletes at smaller universities can have a later effect on an individual's choice to donate. Though parts of the results remain inconclusive, there has proven to be a strong level of significance in the theory posed by this paper. The effect of athletics on an institution can be measured, and done more in depth, there is likely to be stronger evidence as to just how great this effect is.

Regression Data Tables

Year	Mens B Ball	Football	Unrestricted Giving	Adjusted giving
1982	56.67%	70.00%	$401,876.07	$401,876.07
1983	73.33%	90.00%	$246,303.98	$246,303.98
1984	66.67%	50.00%	$324,794.56	$324,794.56
1985	53.33%	77.78%	$368,561.97	$368,561.97
1986	48.15%	66.67%	$440,484.46	$440,484.46
1987	64.29%	66.67%	$1,121,019.35	$557,395.93
1988	53.57%	44.44%	$514,481.58	$514,481.58
1989	60.00%	11.11%	$420,936.03	$420,936.03
1990	60.71%	44.44%	$435,318.26	$435,318.26
1991	42.86%	33.33%	$553,039.88	$553,039.88
1992	60.71%	33.33%	$515,691.92	$515,691.92
1993	63.33%	0.00%	$553,245.85	$553,245.85
1994	44.83%	44.44%	$467,652.75	$467,652.75
1995	42.31%	22.22%	$525,031.03	$525,031.03
1996	36.00%	0.00%	$558,373.72	$558,373.72
1997	43.48%	22.22%	$549,173.38	$549,173.38
1998	25.00%	20.00%	$1,345,411.71	$557,395.93
1999	34.78%	11.11%	$827,066.83	$827,066.83
2000	58.33%	55.56%	$957,598.55	$957,598.55
2001	44.00%	0.00%	$622,805.73	$622,805.73
2002	48.00%	11.11%	$563,276.41	$563,276.41
2003	88.89%	0.00%	$637,897.80	$637,897.80
2004	84.62%	55.56%	$640,465.06	$640,465.06
2005	82.14%	44.44%	$698,788.19	$698,788.19
2006	72.00%	70.00%	$725,019.23	$725,019.23
2007	73.08%	44.44%	$829,619.00	$829,619.00

Average Giving	Adjusted by removing
$557,395.93	outliers in 1987 and 1998 and replacing with avg

Year	Income for Bachelor's Degree (in 2007 Dollars)	Annual Unemployment %
1982	$53,401.00	9.71%
1983	$54,089.00	9.60%
1984	$55,289.00	7.53%
1985	$57,539.50	7.19%
1986	$51,084.00	7.00%
1987	$50,773.00	6.18%
1988	$51,860.00	5.49%
1989	$54,047.00	5.26%
1990	$52,341.50	5.62%
1991	$48,284.50	6.78%
1992	$48,651.50	7.49%
1993	$50,709.50	6.91%
1994	$52,267.50	6.10%
1995	$51,189.00	5.59%
1996	$51,368.50	5.41%
1997	$53,922.50	4.94%
1998	$56,890.50	4.50%
1999	$58,365.00	4.22%
2000	$59,869.50	3.97%
2001	$58,904.50	4.74%
2002	$57,899.50	5.78%
2003	$57,176.50	5.99%
2004	$56,478.50	5.54%
2005	$57,853.50	5.08%
2006	$58,859.50	4.62%
2007	$57,814.00	4.63%

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