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STUDENT GOVERNMENT BUDGETS:
A CAUSATIVE ANALYSIS

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Abstract

This thesis details and analyses the effects of student activity fee changes, structural makeups, and psychological tendencies on changes in student government budgets. The data used to substantiate these findings was collected from University and Collegiate student governments throughout the United States. Before performing the analysis, I review the origins and evolutions of student governments, the economic reasoning for taxation and selection, and the general compositions of branches and positions within the government. This analysis draws conclusions that quantitative factors play at least some part in the increases and decreases of student government budgets. Furthermore, I draw conclusions that changes in the student activity fee, the structural differences in the governments, and the outlooks of the student leaders are correlated with percent changes in the amount of money under the control of the student government.

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1. Introduction

This thesis examines possible relationships, if any, amongst university fees, student populations, the structures of student governments, and their respective budgets. Through this comparison, I am attempting to discover if some student governments have structures that are more efficient than others in a search for empirical regularities within the data. I am attempting to survey public and private universities throughout the country. It can be observed that many student governments attempt to model the US government to some extent. To that end, I made sure to select only institutions of higher learning within the United States.

As the Speaker of the legislative house of student government at Penn State University, I have developed relationships with many members of student governments throughout the country. I have been a member of my student government throughout my entire time at Penn State, serving in multiple leadership capacities. I have attended multiple conferences discussing issues related to student governance, and I have worked with employees on all levels of student affairs. Through these relationships, I have learned a great deal about the developments of such governance. I believe that many student governments develop for reasons similar to many actual representative governments: a need to create a single, formal voice to represent a larger group of people.

Before performing my research, I spent a significant amount of time meeting with university vice presidents and directors in student affairs departments to gain an even better understanding of the development of student government. Most structures were developed and redeveloped throughout the years by the students themselves. When students felt they were no longer being served appropriately, they changed it as necessary. Not surprisingly, the actual amount of money budgeted to the student government is also widely decided by students. Many

institutions allow for a student activity fee or for a certain portion of tuition or fees to go to student organizations in general. Students, often elected students, decide where that money should go.

Often, researchers attempt to compare the effectiveness of student governments in political science or student affairs, but I attempt to draw conclusions using econometrics. I am not interested in the individual projects completed by the members of the student government or how well students feel their leaders are doing their jobs. Rather, I hope to understand how money comes into the hands of students, specifically through student government. I imagine there are intangible and unmeasureable influencing factors, such as the administrative styles of student affairs employees; however, I hope to measure as much as possible. The tests I will perform could be used both to support further research into what helps a student government function and to analyze how well it does its job. I believe population sizes at individual institutions directly influence the results, so I plan to look specifically at larger, research institutions and account for size in my evaluations.

Furthermore, I believe this information is beneficial to students and their student government leaders. As a strong student advocate at Penn State, I know that every little bit of additional information helps us to develop and serve our constituents better. I will share my findings with all of the student government leaders who help me compile my data by submitting their school's information. I hope to look at the institution's fees, as well as the student government's number of branches, number of members, and specific positions in a search for correlations between them and the budget.

It is certainly plausible that I will not find a strong positive correlation between structure and budget. I do not consider that a failure though. I believe it is useful to know that perhaps

nothing seems statistically significant enough to influence budgets. Knowing that, in itself, can be useful. Either way, I have had an interest in student government and economic analysis for many years, so it is very plausible for me to search for an answer to serve my own constituents better while completing my honors requirements. I hope that, if nothing else, I can provide a basis for others to conduct further research.

2. Literature Review

While there has been no literature specifically written on the application of economic influences and statistics to student government, many university administrators have written on student affairs and student government in broader terms. In fact, most of the literature available on student governments comes from the student affairs perspective with clear biases. Often, modern literature on the subject describes new ways "to handle" student leaders, with few mentions the budgeting process. Often, student government is seen in literature as something that makes an administrators job more difficult, but infrequently is something written on the efficiencies of a student government. Even more infrequently is something published with the goal of strengthening and supporting a strong student government.

Essentially, the distribution of student activity fees mirrors the distribution of taxes. Students pay fees for services provided by their academic institution through administrators. Researchers divide over the involvement of administrators after that point. Some believe administrators know where to spend the money best, and others believe that students should decide how much money to levy and how to spend it. Of course, in the perspective of taxes, multiple issues arise with the economics of levying and spending the fee money. At the very least, the majority rule has the most likely chance to find a compromise (Young 1997).

Economically, fees can be spent on the most preferred services though voting assuming that everyone votes and has a fair voice, essential services are separable, and the distribution of services allows necessary public services to continue (Bowen 1943). Governments with both strong executives and active legislatures find the most efficient budgets, eliminating marginally costly services and keeping marginally beneficial ones (Baqir 2002).

As long as elected officials are selected by the same majority vote, they can find this median position just as well as everyone voting on each spending item through referendum (Shepsle 1979). It is not practical to believe that every student that pays a fee will want to make these decisions, but it is plausible that they want it spent a specific way. Through this, student governments set up through majority rule have often found themselves involved in this process.

However, all this assumes that college administrators will decide to give this power to the students paying the fees in the first place. While few would disagree that tuition and fees offer a considerable factor to the selection of an institution for any given student, rational students would only be likely to pay higher fees for marginally greater services. In local government economics, citizens decide to pay for public services through the purchase of land in that area, knowing the levels of property tax rates (Rubinfeld 1987). In colleges and universities, students choose to pay for the services they are looking for in the institution; therefore, it stands to reason that students should be allowed to maintain and allocate the resources they utilize.

Some states have actually passed laws regarding the collection and distribution of student fees. Wisconsin State Statute 36.09(5) states "[students]… shall have the responsibility for the disposition of those student fees which constitute substantial support for campus student activities." The governing boards of most universities allow students to organize themselves as they democratically determine. Penn State's Board of Trustees has issued Standing Order IX, which allows students to voice concerns through a student government they elect.

Often administrators in modern universities realize that significant student involvement is merited in fee-setting and review processes (Levy 1995). Practically, these student activity fees must become more "user-friendly", Stanley Levy, a former University of Illinois vice chancellor

of student affairs, points out. Since students pay the fee and directly benefit from the services it purchases, there is little reason to believe they should not actively govern it.

Generally, active students want a large role in their own education, and many students want to improve their own education experiences. Arguably, students want to make as many decisions regarding the functioning of the university as possible. In fact, students often react adversely to administrative involvement in many parts of campus governance. However, administrators vary from confrontational to completely accepting regarding the transfer of power to students. In 1988, Sarah Boatman, the Nebraska vice-president for student affairs, wrote "Strong Student Governments… and their Advisement". She urged for heavy administrative advisement in student government. However, Max Wise, a professor of higher education at Columbia University, wrote in 1973 that student government must separate itself from the administration to operate effectively. Realistically, with all of the legal ramifications of fairness and equity in today's society, neither group alone can efficiently handle the governing of student fees.

3. Basis and Theory

3.1 Branches and Positions

Student governance is a topic of great debate in the fields of higher education and student affairs. Many institutions claim to have “invented” student government at their institutions (Klopf, 1960). Often, American student governments resemble the structure and styles of the United States federal government. In a paper he wrote in 2010 on the History of Student Governance in Higher Education, Walter May discusses the evolutions of student governance dating back to the 1700s. He specifically uses Freidson and Shuchman's (1955) definition of student self-governance throughout his work. Freidson and Shuchman defined student self-governance as “a type of organization which by virtue of its composition and constitution is entitled to represent the student community as a whole". He goes on to explain that student governance evolved through many stages ultimately becoming the modern student associations of today.

Generally, researchers and university administrators agree that student governments attempt to mimic the same three branches of the United States government: Executive, Legislative, and Judicial. The executive branch of student government is typically the elected student body president, possibly a vice president elected on the same ticket, and other executors of the student body’s agenda (Coates & Coates, 1985). Over time, the role of the student body president evolved into a powerful position within the university (Somers 2003). In some student governments, the president is the leader of the student assembly, and in others, the president presides over a separate branch of the student government (Eller, 1949).

The legislative branch of student government serves as the elected or selected representative voice for the student body. The legislators generally serve to represent a specific

constituency, write rules and legislation, and voice opinions to other students, community members, and administrators (Eller, 1949). Although the president is often considered the voice of the student body and the point-of-contact for the administration to students, the legislative branch serves to represent the majority voice of the student body. The legislative branch proves to be the most effective way to make sure that all voices are heard in what is often a very diverse group of people (Godson et al, 1993).

In many cases, the legislative body subdivides into committees or smaller bodies. The student assemblies as a whole may select a speaker (in the cases of representative-type bodies) or an additional president (in the cases of senate-type bodies). Additionally, the smaller committees may have a leadership structure. This division process varies greatly to serve the needs of the student body and the powers granted by the administration.

The judicial branch of student government probably varies more from school to school than any other branch. This branch is often entrusted with the role of adjudicating all matters of fairness and equity in the student government. In some situations, they have significant powers over the entire student body. Over the evolution of the student government, the judicial branch has seen its prevalence increase. Essentially, the legislative branch was both making and enforcing the honor and discipline processes of the student body. This process was becoming unfeasible, leading to the formal establishment of the judicial branch (Eller, 1949). Often, legislators select the members of the judicial branch, and these members serve to handle cases of misconduct or academic dishonesty (Otten, 1970). Often, a chief justice leads this branch unless every decision is made by majority vote.

4. Data Collection

4.1 Beginning Steps

After deciding to conduct my research on student government budgets, I realized that I would need to collect a data set unique to my investigations. This is a unique study of student governments, which has not been conducted in the past. I decided that I needed to compile a group of survey questions to acquire data from other student government leaders, but I had to make sure to ask for only critical data. Student leaders are often very busy, and I do not want to inundate them with questions I could easily answer from other sources.

I started developing my survey through discussions with Penn State Student Affairs Associate Vice President Philip Burlingame and Assistant Vice President Andrea Dowhower. Dr. Burlingame had some interesting perspective to make the survey very specific concerning the individual positions of the student government and less about the actual accomplishments of the organization. Dr. Dowhower's work at Penn State specifically relates to student affairs research and assessment, so we were able to work on the logistics of the survey. She helped me organize my questions into "select from the list" type questions instead of essay questions, which would make the information much more difficult to interpret.

After working with administrators, I realized that I could use some input from the student leaders around me. I decided to reach out to a former committee chair for Penn State's student government, Samuel Loewner, current Penn State student trustee, Rodney Hughes, and current Penn State student body president, Christian Ragland. First, I corrected the survey questions to fit national trends best. There was no sense in including student government structures that were unique to just one school with no significant relation to the government's overall flow. In essence, does the government operate significantly different depending on whether it has one,

two or three vice presidents? We also worked to understand the fee-setting structure for individual institutions. For example, how does the money end up under student government control? Second, I fine-tuned my survey based upon its reception to students, specifically looking at other surveys through Penn State's higher education department. Finally, I gathered the contact information for 130 student body presidents. Having additional student input was important because I wanted to guarantee the highest response rate possible.

Before sending the survey, I decided to ask for approval from Penn State's Internal Review Board. I underwent a series of testing to verify my knowledge of surveying other students, and I submitted the final draft of my survey. Within about one week, I received permission to email my survey.

I wrote an email explaining the nature of my work and a link to an online document containing my survey. I also offered to share the results with my findings with all those who answer the survey. Finally, I sent the survey to my 130 contacts. I waited for two weeks and sent out a reminder email. As a last attempt, I personally messaged several student leaders with whom I have previously spoken. In the end, I had collected 73 usable data points, which gave me a sample size of ~56%. I decided this sufficient to begin my analysis considering the nature of the recipients. The frequent turnover and inconsistencies of student government leaders make it difficult to reach out to everyone. Furthermore, I sent out the survey within a timeframe that lends itself to a break in some academic calendars. I did not expect to receive answers from every institution based upon individual circumstances. From my experiences, the 73 data points represent the overall population closely enough that extrapolation to all universities originally surveyed was reaonsable.

4.2 The Survey Questions

The following will serve as an analysis and justification, as necessary, for the collection of questions asked on the survey:

1) What is the name of your school?

2) How many students are part of your student government?

I chose to ask for the number of students in the student government and not the institution as a whole. It is a false generalization to state that overall institution size relates to the structure and budget of the student government. I plan to compare the number of students active in their student government to the quantity of money it controls.

3) Which branches are included in your student government? Given the following choices: Executive, Bicameral Legislative, Only a House of Representatives, Only a Senate, Allocation Body, Judiciary, or Others.

This is the second of the three questions referring to the structure of the student government. This question asks about the branches of the student government.

4) Which positions are included in your student government? Given the following choices: President, Vice President, Chief of Staff, Speaker, Chief Justice, Committee Chairs, Representatives, Senators, Executive Cabinet Members, or Justices.

This is the third of the three questions referring to the structure of the student government. This question asks about specific leadership positions in the student government. This is important because branches and positions are not synonymous. For example, some have a president as part of senate, but not as a separate executive.

5) How much money does your student government control in total?

6) How much of that previous amount is allocated to other clubs and organizations?

7) What amount of money is allocated specifically for student government-created activities?

This will equal #5 minus #6.

8) Please compare who has more control over the student activity fee. Scale: 1-5, administration-students.

While it is subjective and not scientific to ask a student leader to compare an amount of control over student fees in an ordinal measure, I plan to use this information exactly as it is given. I see this number as the perception of power students have as compared to that held by administrators.

9) Please elaborate further on how money is given to the student government.

In order to understand the functionality of so many institutions, I will use this as additional information as I need it.

4.3 Additional Information

In an effort to both limit the size of the survey and guarantee the most up-to-date information, I gathered some data from the schools' websites after the student leaders returned their complete surveys.

First, I found the total number of fee-paying students attending the institution. This number usually includes only undergraduates, however, in some cases, a single student government encompasses undergraduate and graduate students. Due to this infrequent overlap, I

specifically found the number of students who pay the student activity fee, or similar fee, from which the student government receives its budget.

Second, I found the most recent student activity fee, or equivalent, paid each year by the student body. Generally, this is a clear and separate fee included within tuition bill, however, again in some cases, additional research was necessary to find this amount. I chose to use the annual fee paid instead of the semesterly or quarterly fee because the student government budgets run on an annual basis.

Finally, I collected information on whether the institution is public or private as well as whether it has a BCS football program. Since I collected data from colleges and universities throughout the United States, I wanted to make sure I considered that some might have more available resources to allocate to student governance. Also, some institutions may have a greater need for stronger governments. I included the data on the BCS football programs because personal experience shows me that BCS programs tend to lead to greater revenue streams to the university. This may not affect student governments directly, but it is not something that should be ignored.

5. Data Analysis

5.1 The Final Numbers

Of the 130 survey recipients, 73 replied with complete and usable data. This is a response rate of 56.2%. Considering the survey was conducted on extremely active student leaders, I believe this is a solid response rate to conduct the analysis. It is also difficult to maintain contact information for the leaders of student governments because they have such a great turnover.

5.2 Regressions

I ran nine regressions related to the data I collected from student leaders. The first two regressions are unrelated, yet interesting correlations concerning the efficiencies of student governments. The third through the ninth regressions show the correlations being tested by this thesis. I will talk about the results of the first two regressions in this section, but I will do a more in-depth analysis for the remainder of the regressions in the results section.

The first test is a regression between university student population sizes (univstud) and student government population size (sgstud) to find a significant correlation. Table 1 shows the results from a Stata output.

Table 1

Variable	model1
univstud	.00255893
_cons	48.208622

Estimation results of effects of potential inputs to the student government population.

This regression shows a strong and positive correlation between the number of student at the university and the number of students involved in the student government. The coefficient of .0025589 shows that for about every 390 students at the university, one of them is a member of the student government. The r-squared, which shows the "goodness of fit" for the regression, is only .1989. This means that much more than simply the size of the university population contributes to student government participation. Logically, this regression makes sense. For a representative student government, greater populations should lead to a necessity for more representatives.

Table 2 displays the results from the second through ninth tests. I will conduct a more thorough analysis of these statistics in the next section and breakdown these results in the final section.

Table 2

Variable	model2	model3	model4	model5	model6	model7	model8	model9
sgstud	.00318726							
lntotfee		.25618838		.23808551	.27563332	.284375	.21283081	.25973517
powerequal5			.56670089					.43926054
public				-.27143124				
bcs				.4570807				
exec					-.6157907			-.46392272
judiciary					.62064124			.62207676
senate					.28047417			
house					.42760832			
vp					-.3841324			
alloatall						1.8732015		1.1473718
allomoreth~f							1.0150418	.74518334
_cons	12.845499	9.4695684	12.808113	9.7190729	9.3058941	7.3454309	9.4666844	7.6391225

Estimation results of effects of potential inputs to the student government budget.

Model2 is a regression between the natural log of student government budget (lntotmoney) and student government population size (sgstud) to find a significant correlation.

These results show a positive correlation between an increase in the student government and an increase in the number of students participating in the student government. The t-value of only 1.51 is not even significant in a 90% confidence interval (t-value of 1.65), let alone a 95% confidence interval (t-value of 1.96). Also, the r-squared of .0312 and an adjusted r-squared of about half of that shows that this regression does not accurately reflect the causes of changes in the student government's budget. It is difficult to determine if there is any true effect at all on the budget from increasing the number of students participating in the student government.

Model3 is a regression between the natural log of student government budget (lntotmoney) and the natural log of the individual fee amount multiplied by the number of students who pay the fee (lntotfee). Model4 is a regression between the natural log of student government budget (lntotmoney) and student governments who believe that they have most of the power over their fee money (powerequal5). Model5 is the third test with the inclusion of whether it is a public university (isitpublic) and whether it is in a BCS conference (bcs). Model6 is the third test with the inclusion of relevant student government branches and positions. Model7 is the third test with the addition of whether it allocates money at all to other student organizations (alloatall). Model8 is the third test with whether it allocates more than half of its money to other student organizations (allomorethanhalf). Model9 is a regression of all the significant variables from the third test through the eighth.

6. Statistical Results

Before discussing the results of the regressions, it is important to explain the effects of the coefficients. When running a regression where the dependent variable is a natural logarithm, the coefficients of any binomial variable do not equal the actual effect of the variable. Robert Halvorsen and Raymond Palmquist explain in their paper "The Interpretation of Dummy Variables in Semilogarithmic Equations" that dummy variables (binomial variables) measure discontinuous effects on the independent variable. They solve the equation created by running a regression with a binomial variable to prove that the actual effect of a dummy variable is exp^(coefficient) – 1, where exp is Euler's number (approximately 2.71).

The bulk of this analysis focuses on finding the causes of increases and decreases in the student government's budget. The third through the ninth regressions search for these possible factors. The ninth regression is a culmination of the third through the eighth, using all of the relevant variables. In these regressions, it is difficult to find every reason for these increases and decreases. It is very likely there are institution-specific reasons for budgetary changes; therefore, I do not expect very high r-squared results on many of the findings. As with most socioeconomic research, everything needs to be put into perspective to determine its significance.

The dependent variable throughout these tests is called lntotmoney. This variable is created by taking the natural log of the student government budget, and it acts as a variable that changes by percentages instead of single monetary amounts. Using a natural log is important due to the vast difference in budgetary amounts from school to school. Representing data as monetary, and not percentage, increases and decreases would not accurately reflect institutions with outlying, either very high or very low, student population sizes.

The independent variable in third regression is the basis upon which addition of most of the others is possible. This independent variable is called lntotfee. Lntotfee is created by multiplying the annual amount of individual student activity fee, or equivalent, by the number of students paying that fee and then taking the natural log. Lntotfee represents a variable whose coefficient directly affects the percentage change of the student government budget. The coefficient is .2561884, which means that increasing the student activity fee by 1% will increase the student government budget by approximately .25%. The t-value of 2.13 would be accepted as statistically significant at the 95% confidence level. The r-squared value is only .0602, which is very low and means that this fee change does not account for a large part of the budgetary change.

The fourth test attempts to look for a psychological basis for increases or decreases in the student government budget. In the survey, one of the questions asked participants to scale from 1 to 5 the amount of power they believed they had over their student activity fees. An answer of 5 signified that the student government had total power over fee levying, distribution, etc. An answer of 1 meant that the administration had all of this power. More importantly, this answer does not necessarily accurately reflect the actual power over the fee, only the students' feelings on the issue. After performing multiple regressions, the data showed that using the scale 1 to 5 did not accurately reflect changes; therefore, I test individual powers as binomial variables. The only variable with a significant t-value, even at the 90% confidence level, was for the answer 5, called powerequal5. In this regression, the r-squared is only .0490, and the t-value is only 1.91. Given this data, powerequal5 will most likely be significant when added to the third regression, but alone is not a solid justification.

In the fifth regression, the independent variables isitpublic and bcs were added to the main independent variable, lntotfee. Although the addition of the variables increases the r-squared (by definition) and the adjusted r-squared, the difference in r-squared and the adjusted r-squared also increases. The t-values of these variables are -.82 and 1.45 respectively, making both of them insignificant even at a 90% confidence level. The coefficients seem to indicate that public universities and colleges may have decreases student government budgets when compared to their private counterparts. Considering the sources and quantities of funding, that seems like a probable outcome. By these results, being in a BCS football conference would result in a very high increase of the student government budget. Although an increase is more likely than a decrease, the magnitude of this possible change makes it seem more unlikely.

The sixth regression uses a large quantity of data collected by the survey. This regression adds the variables for branches (executive, senate, judicial, etc) and positions (president, vice president, speaker, etc) When collecting the data it became apparent that every student government shares some of the same positions and branches. For example, every government has a president; therefore, adding a binomial variable for president would not predict anything. Additionally, initial regressions showed that the presence, or lack thereof, of individual positions held no significant bearing on the results. The only position worth noting was the presence of a vice president. Several of the student governments lacked this positions, so it seemed viable to test. The final version of this regression, the one yielding the highest r-squared, had binomial variables for an executive, judicial, senate, house of representatives, and vice president. The r-squared was .1661, but none of the variables, aside from the original lntotfee, had t-values significant at the 95% confidence level. The presence of the judiciary was significant at the 90% confidence level.

The seventh and eight regressions focus on the allocation of money by the student government. At the collegiate level, the allocation of money to other organizations may or may not occur through the student government and may occur to different degrees. At some institutions, such as Penn State University, this allocation occurs outside of the student government. In the seventh regression, a variable called alloatall was created as a binomial for whether the student government allocates any quantity of money to other student organizations. This variable has a t-value of 3.9 and increased the t-value of lntotfee to 2.59. The r-squared increased to .2282 with the single addition of this variable. In the eighth regression, alloatall was removed and replaced with allomorethanhalf. Allomorethanhalf is a binomial variable that represents whether the student government allocates more than half of its budget to other student organizations. For example, this may be the case if the student government runs the programming board for the school. The addition of this variable decreases the t-value of lntotfee to 1.91, which below the 95% confidence level. However, allomorethanhalf has a t-value of 3.7. The r-squared is again significantly increased to .2137. In both regressions, the adjusted r-squared is also increased significantly, and the difference in the r-squared and the adjusted r-squared decreases. When considering a final regression, it is important to note that the addition of these variables together may cause multicollinearity in the results. However, it is also possible that these variables carry significant weight regardless, which can be seen by the very large increases in the adjusted r-squared of both regressions.

The ninth regression is the compilation of the other regressions and the answer to how much can be quantified in the causative analysis on student government budgets. In this regression, the variables lntotfee, exec, judiciary, allomorethanhalf, alloatall, and powerequal5 are left as independent variables. This was determined by the addition and subtraction of all

available variables to find the highest r-squared with the highest proportionate adjusted r-squared. That would display the model with not only the best fit, but also the best explanatory value beyond random chance. The final r-squared is .3885, meaning just under 2/5ths of the student government budget can be explained by this model. The adjusted r-squared of the model is .3329, which is significantly higher than the adjusted r-squared of any other set of variables tested. The variables lntotfee, judiciary, allomorethanhalf, and alloatall all remain statistically significant at the 95% confidence level. The variable powerequal5 remains significant at the 90% confidence level. The variable exec has a t-value that is seems insignificant, but removal of exec decreases both the r-squared and adjusted r-squared enough to merit its inclusion in the final model. Only exec, the binomial variable for having an executive branch, seems to affect the student government budget negatively.

7. Practical Applications and Conclusions

It is difficult, but not impossible, to form hypotheses, or at least logical conclusions, before examining the data. For example, the first regression (model1) shows that there is a significant and positive impact on the number of students who participate in the student government with increasing university population sizes. One could hypothesize for several reasons (resources necessary for an effective representative democracy, an increased number of actively involved students, larger quantities of funds available) that this is to be expected. At a large research university, many students would be necessary to represent multiple colleges, living areas, and other demographics adequately; whereas, a smaller community college would not have as many niche compartments in need of representation. Another example of these logical expectations can be seen in model2 where the number of students participating in the student government is positively correlated with increases in the budget. Although the t-value and r-squared of this regression are statistically low, I believe the weak correlation would grow stronger with the incorporation of more data points.

I do expect certain outcomes in the results from this data. Rationally, I expect increases in the student activity fee, from which the student government directly receives its budget, to lead to increases in the size of the budget. As shown in model3, the data proves this expectation correct. Since this money is directly allocated as a portion of the fee, some level of budgetary increase should be expected with an increase in the fee. Model3 shows that raising the fee by 1% will increase the monies apportioned to the student government by around .25%. Since this fee also funds other student organizations, campus programs, gym memberships, some facility improvements, some wages, and other student activities-related ventures, this coefficient seems plausible.

Model4, the regression involving the psychological basis for increases or decreases, has a coefficient of .5667 for the variable powerequal5. I chose a dummy variable because the other power levels (1-4) were extremely insignificant in early tests. Because this is a dummy variable, the actual effect is .7449 (math denoted in section 6). This means that student government whose leaders believe they have complete power over their student activity fee, or equivalent, will have 75% increases in their budgets. It is reasonable to presume that if the student government leaders have control over the money, they will choose to increase their own budgets. This correlation is most likely due to the fact that these leaders believe they know how to spend the money most appropriately.

Model5 is a test on the possible sources of monetary contributions not directly attributed to increases in the student activity fee. I believe that private universities have greater sources of funding, leading to increases in budgetary amounts. I also believe that Bowl Championship Series (BCS) institutions will have increased funding; however, I do not expect a strong correlation because this funding often remains within the academic programs. The data concludes that both of these assumptions could be correct, but there is not nearly enough information to confirm an assumption either way. Notably, public universities could see 31% decreases in budgets, and BCS institutions could see 58% increases. Most likely, these are not correct and cannot be used in a final regression.

Model6 tests the student government structures similarly to urban economics studies. This model tests the significance of the presence the executive and judicial branches, of either a senate or a house, and of the vice presidential position. No other positions from survey questions 3 and 4 proved significant due to heavy overlap (every government has a president) or lack of consistency (only a few governments have legislative committee chairs). This regression shows

that the presence of a judiciary increases the budget by 86%, and the presence of an executive decreases the budget by 46%. No other variable seems significant enough to include in a final regression. The positive correlations from a judiciary can be justified because often the judiciary significantly increases the power of the student government over the student body in multiple facets. The negative effects of having a vice president or executive branch may be related to an unnecessary distribution of power; however, it is not entirely clear why either results in such budget decreases.

Model7 introduces the idea of the student government allocating any quantity of money to other student organizations while model8 changes that to whether the student government allocates more than half of its money. Both of these variables are binomial and have positive effects on the budget of 550% and 176%. This shows that the student government will have greater quantities of money to control if it allocates the money to other student organizations rather than spending all of it on internal projects. I originally hypothesized this would be the result because students would logically be more willing to give the government money if it distributes it with other organizations. The act of allocating money at all significant increases the budget by comparison to most of the other variables being tested. Surprisingly, further testing showed that these two variables were considerably different and were not affected by multicollinearity in regressions together (as seen in model9).

Model9 concludes all of the previous tests by combining all relevant variables into one final regression. I regressed changes in the student government budget on: changes in the student activity fee, the presence of an executive branch, the presence of a judicial branch, whether the government allocates money at all to other student organizations, whether the government allocates more than half of its budget to other student organizations, and whether the student

government leaders believed they had complete control over the fee money. With an r-squared of .3885, I believe this accounts for a significant portion of the quantifiable data available. The effect of having an executive branch is -37%, while the effect of having a judicial branch is 86%. The effect of allocating any quantity of money to other student organizations is 215%, and the additional increase of allocating more than half of the budget to other student organizations is 110%. The effect of the powerequal5 variable is a budgetary increase of 55%. Ultimately, these results are statistically significant, even though the t-value of the exec variable seems lower than the ideal confidence level. Overall, these findings fit appear logical in the realm of student government. The final effect of a 1% increase in the student activity fee would cause a .26% increase in the student government budget. A t-value of 2.47 makes this result very significant.

After analyzing the prior regressions, it is clear that at least part of the changes in student government budgets can be justified through quantitative data. In general, these results confirm logical hypotheses. Increases in fee levels lead to increase in budgets that are derived from those fees. The distribution of money to other organizations leads to increases in the original source of the money, specifically when that money is controlled by a democracy made up of those involved with the other organizations. Not everything can be explained though; some of the final decisions on changes to the student government budget are very arbitrary. In the end, this paper proves that these changes can be tested, and many factors play a role in the determination of a student government budget.

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