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The Makeup and Utilization of University Student Unions: A Comparative Analysis

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The Makeup and Utilization of University Student Unions

A Comparative Analysis

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Capstone in Public Administration
The Martin School of Public Policy and Administration
The University of Kentucky

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I. Executive Summary

The University of Kentucky's Top 20 Business Plan established a list of goals the university must meet in order to become a top 20 research institution by the year 2020. The University of Kentucky Student Center houses student programming and facilities that impact student involvement and retention, both of which are mandated to increase in order to reach the Top 20 goal.

I conducted this research in order to determine how the University of Kentucky Student Center is utilized by the campus and how, if at all, it could improve to better serve the student body and campus. Survey data were collected during the summer of 2009 from student unions at twenty-four universities in one of three categories: schools from the Southeastern Conference (SEC), universities in the state of Kentucky, and the University of Kentucky benchmark institutions. A series of tests were conducted to determine how the University of Kentucky Student Center compares to the other observations, particularly the benchmark unions. The major questions I address are the following:

- What are the purposes and functions of university student unions and how are they utilized by their campus communities?
- How does the University of Kentucky Student Center compare to others in the areas of facility makeup and building utilization by campus groups?
- Are there any underlying patterns (building makeup, student body size, etc.) among groups of student unions and if so, are they meaningful to the University of Kentucky Student Center?

In general, I find that the University of Kentucky Student Center does display several differences from its benchmark unions. Some of the major findings include:

- The UK Student Center has more meeting rooms compared to the overall average; however, those spaces are utilized less. Each room holds approximately 116 fewer reservations annually than the average.
- The UK Student Center is primarily financed by student fees whereas its benchmarks are funded chiefly through facility operations.
- UK benchmark unions have more square footage, higher annual building traffic, and more annual reservations, even when accounting for the difference in enrollment numbers.
- A greater percentage of the UK Student Center's annual reservations are contributed by faculty/staff/departmental groups while the average union houses more student group reservations.

Based on the findings, I make the following recommendations:

- An exploration of renovation or rebuild should be done to determine whether or not the existing facility is adequate to help recruit better students and retain the current student body.

- The University of Kentucky should seek ways to maximize the usage of Student Center space considering meeting space vs. square footage dedicated to other things such as dining, recreational, lounge, etc. space.
- The UK Student Center should focus on increasing annual reservations by student groups.
- The UK Student Center should boost the amount of annual building traffic.

The results of this research should be able to assist in determining the relationship of the University of Kentucky Student Center to its benchmarks. This, in turn, should help the University of Kentucky get one step closer to its goal of becoming a top 20 research institution.

II. Introduction

The University of Kentucky has adopted the Top 20 Business Plan which states that UK must become a top 20 research institution by 2020. This plan highlights the importance of student retention. According to the plan the university must: “Improve programs and services that have an impact on the undergraduate experience and improve retention and graduation rates.” The University of Kentucky Student Center is one facility that houses student programming and services geared towards enhancing the student experience on campus. The mission statement of the UK Student Center reflects its interest in the involvement and improvement of the student body. The following is an excerpt from this statement as it appears in the UK Student Center employee handbook: “The University of Kentucky Student Center strives to serve as a ‘living room’ for the campus through providing facilities, services, conveniences and programs for the University community which enhance their daily lives on campus and afford them the opportunity to learn, know, and understand one another through informal association outside the formal classroom. The student is central to this mission.”

With the Top 20 plan in motion, it is important for the University of Kentucky decision makers to be educated on those facilities which will help foster student retention and development. Understanding the makeup and utilization (number of rooms, square footage, room usage by user groups, annual traffic, etc.) of the UK Student Center as compared to others will help gain an understanding of the areas, if any, in which the facility could improve to help UK meet its Top 20 goal.

III. Literature Review

A Brief History of Student Unions

The history and evolution of university student unions is significant to understanding the purpose and functions of student unions, as it is a way to see why they came about and who they serve. A student union can go by many names such as college union, campus center, or student center; however they all embody the same purpose and were born from the same history (CAS 152). The first college union organized in the United States was at Harvard in 1832. The first building erected specifically as a union facility was at the University of Pennsylvania in 1896. This union, named Houston Hall, housed lounges, dining rooms, game rooms, offices, and other recreational and educational space. The first construction boom for union buildings began following World War II as college enrollments rapidly increased. The second construction boom occurred in the 1990s and 2000s as existing facilities were in need of renovations or replacement (CAS 152). Since the construction of Houston Hall before the twentieth century, the practice of providing a gathering place for campus communities has emerged into a necessity for most universities today.

Apart from the physical building is the idea and purpose of the union. The union is traditionally described as the “living room” of the campus and “optimally the union is a centrally-located building where members of the campus community come together, formally and informally” (CAS 152). In the beginning, popular student activities included vaudeville, mixers, and smokers all of which took place in early union facilities (Rullman and Kennedy 27). Times changed, however, and the recreation and educational activities of unions reflected those changes. Today, college unions include many of the same

components (dining, study lounges, meeting space) as their predecessors but also include banks, post offices, bookstores, computer labs, and other services on which the modern campus relies (CAS 152). According to the Association of College Unions International (ACUI) the union of today is the “organization offering a variety of programs, activities, services, and facilities that, when taken together, represent a well-considered plan for the community life of the college” (Role, ACUI 2009).

Union Importance for Today’s Campus

According to Dr. Michael Lewis, a professor of American architecture and chairman of the art department at Williams College, the time when traditional campus facilities, such as classroom buildings and administration buildings, and academics were the main way to impress incoming students has come and gone. Now is the age of the union, as its modern essence can be used as a recruitment tool. Lewis writes that “directors of admissions note that a quick meal in the student center conveys more information about life at a college, and with more credibility, than the lengthiest formal presentation” (Lewis 8). Perhaps this is because the process by which students select a college increasingly is based on what they can physically see as they shop between competing campuses (Lewis 9). It is important for university staff to recognize the need for creating marketable and desirable facilities if they want to attract the brightest and best incoming class.

The need for attractive university unions does not stop at engaging incoming freshman however. According to Jeffrey Turner, Abby Fifer, and Bart Hall, vice president, analyst, and senior project manager for Brailsford & Dunlavey facility planners, campuses are competing more and more for students and student dollars, therefore, “colleges and universities are working to build memorable first impressions for prospective students and

cultivate positive experiences for current students” (Turner, Fifer, and Hall 27). One objective for unions today is to help produce greater numbers for incoming classes and retention of those classes.

Unions achieve this goal through the use of thirteen components commonly found within them: food service, bookstore facilities, ballroom facilities, student organizations, administrative offices, conference/meeting rooms, theatre/auditorium space, additional retail services, recreation/entertainment, lounge space, special/miscellaneous components, academic space, and multicultural centers (Brailsford and Dunlavey & WTW). These components together shed light on three trends among unions. First, components are built for flexibility. Second, components increasingly cater to student feedback and trends. Third, components create a union that is student-friendly (Turner, Fifer, and Hall 31). The thirteen components and three trends reveal an increase in opportunities for the involvement of students of campus.

Dr. Vincent Tinto, Distinguished University Professor in the School of Education at Syracuse University, argues that involvement is highly important for student retention as “the more students are academically and socially involved, the more likely are they to persist and graduate” (Tinto 3). Several factors affect student retention, and the social involvement experience is one of them. Dr. Liz Thomas, Director of the Institute for Access Studies at Staffordshire University, discusses student social networks as an experience “fundamental to the decision of students whether or not to stay at the university” (Thomas 435). She goes on to state that, based on student commentary, a union is a primary way in which an institution can promote the development of social networks (Thomas 437). This

is due to the abundance of academic, recreational, and cultural resources commonly found within union buildings.

In a study aimed at evaluating a campus through the eyes of various student groups by Mitchell, Sergent, and Sedlacek, it was found that unions are highly utilized by students. Data collection for this study was done in two phases. First, survey data were collected from first-year students gathering information on their general perception of the campus and the areas with which they are most familiar. Second, the students then described how they felt about different campus locations using twenty semantic differential paired objectives such as friendly-hostile or pleasant-unpleasant (Mitchell, Sergent, and Sedlacek 21). Their examination yielded the following results in relation to this paper topic: 26% of white students and 23% of African American students named the student union as a location they would use the most and 14% of total respondents spent most of their time between classes in the student union (Mitchell, Sergent, and Sedlacek 26). Furthermore, Webster and Sedlacek, also found positive feedback from students in a survey of student opinions towards the Maryland Student Union (MSU). In their research, a questionnaire concerning MSU was sent to 706 members of the University of Maryland, College Park community. These members were classified into one of seven sub-groups: (1) employees, (2) graduate students and five undergraduate groups, (3) Asian-Americans, (4) Black students, (5) Hispanics, (6) international students, and (7) white students (Webster and Sedlacek 49). Their research suggested that generally, students possess a favorable attitude towards MSU and individuals who spend most of their time between classes at the union spend their time with friends, studying, and eating (Webster and Sedlacek 49-50). The findings by these two studies suggest the importance of the social and academic

environment of student unions, which is argued to be very important to student recruitment and retention.

In the current age of university unions, it is important for campuses to market a facility that provides plenty of opportunities for student involvement, both socially and academically. The union should be a marketing tool for incoming freshman as well as a resource for increasing student retention. A facility so highly regarded by student communities should be at the forefront in providing new services and opportunities for students. In an article by Dr. Peter Magolda, professor in the Department of Educational Leadership at Miami University, the significance of the union for students is reflected in his recount of a campus tour. To summarize, he writes: “As we stroll through the campus center...Long lines form near the bookstore and around the food court on the floor below. Greek letters are proudly tattooed on the T-shirts of students who are lounging in the numerous reception areas...Downstairs, students conversing and snacking fill the narrow corridors” (Magolda 30.) The union is a place for socializing, interacting, studying, eating, and relaxing, all of which are ways to attract new students and keep current students involved and enrolled.

From this review of literature it is quite clear that student unions serve many different functions and are important for the recruitment and retention of students. What is unclear is the extent to which union facilities are utilized by students when competing for space with two other community groups: faculty/staff/departmental groups and off-campus groups. The study that follows is aimed at determining the capacity by which three different groups of users utilize modern day student unions. This will then help determine

how the University of Kentucky Student Center falls in relation to student unions across the country and whether or not there is room for improvement.

IV. Research Questions

There are three major research questions I address in this paper. (1) What are the purposes and functions of university student unions and how are they utilized by their campus communities? (2) How does the University of Kentucky Student Center compare to others in the areas of facility makeup and building utilization by campus groups? (3) Are there any underlying patterns among groups of student unions and if so, are they meaningful to the University of Kentucky Student Center?

V. Research Design

This research is focused on determining how the University of Kentucky Student Center compares to its benchmark institutions. According to the UK Institutional Research, Planning, & Effectiveness website, the “University of Kentucky has 19 Benchmark Institutions, selected in collaboration with the Council on Postsecondary Education (CPE). Each institution has a land-grant mission or a medical school or both. Comparisons of benchmark institutions are used to assess UK’s standing in such areas as tuition, student recruitment, faculty salaries, diversity, and employee health benefits. Analysis of benchmark institutions informs decision-making to promote program change and enhancements” (Benchmark Comparisons 2010). These benchmark institutions were included in this research because they can help draw comparisons for ways in which the UK Student Center can promote change and enhancements. Prior to the 2009-2010 school

year, UK used CPE benchmarks for comparative analysis. Beginning in 2009-2010, UK began using the Top 20 Business Plan institutions for standard comparison. The survey for this research was done prior to the 2009-2010 school year and thus focuses on the nineteen CPE institutions. Twelve of the nineteen CPE institutions are also featured on the Top 20 Business Plan institution list. In addition, this research includes union data from Kentucky institutions of higher education as well as those in the Southeastern Conference (SEC). These three categories provide a well rounded comparison for the University of Kentucky Student Center.

The primary source of data for this project is the results of a comprehensive survey I designed and administered to professional staff members of student unions at thirty-three universities during the summer of 2009. The survey focused on the facility and operations of each of the student unions. Twenty-four respondents returned surveys—a 72.7% response rate. Of the nine non-responders, six (67%) were benchmark institutions which indicates that they are slightly more likely to not respond, compared to their proportion in the sample (57%). I found no statistical difference between responders and non-responders for Fall 2008 undergraduate enrollment—the one measure I have for all observations.¹ Appendix A provides a list of the universities surveyed, an indication of their response, and Fall 2008 undergraduate enrollment. Of the three unions that did not participate, one opted not to while the other two never responded to initial contact and therefore, never received a survey.

The survey was broken into three sections. Section one obtained general contact information from the facility and the staff person filling out the survey. The second section

¹ T-test of the difference yielded a p-value of 0.4309

gathered common building information such as square footage, annual traffic, primary sources of revenue, and total annual reservations made. Section three focused on gathering specific reservation information for three types of facility clients. These client groups are student organizations, faculty/staff /department groups, and off-campus groups. Data were collected regarding the number of reservations each group made, the percentage of total annual reservations each group utilized, and whether or not the groups were charged fees for using the facility and its resources (AV equipment, extra staffing, and reservation fees). Appendix B is a full copy of the survey administered. Apart from the survey data, I will also be including the Fall 2008 undergraduate enrollment for each campus.

The data collected were used to draw a comparative analysis on the makeup and utilization of university student unions. This was done through a series of statistical tests, including difference-of-means and regression. Special attention is paid to annual traffic counts, square footage, undergraduate enrollment, annual reservation counts, and the percentage each client group utilizes the facility. It is important to see where the UK Student Center is in comparison to the benchmark institutions as they were chosen as targets for improvement. From this analysis I hope to understand ways in which the UK Student Center relates to comparable institutions and if there is a need for enhancements in any area.

Limitations

One limitation of this study is the sample size. There are hundreds of university student unions across the country and surveys for this research were only sent to thirty-three schools. This should not be a huge problem, however, since this research is really aimed at comparing the University of Kentucky Student Center to other institutional

unions, particularly the university's benchmark institutions. Another limitation could be survey response error. Error in the survey responses could have skewed the data and results. This, however, is a typical concern for most surveys. On top of this, some respondents did not fill out the survey completely which may have a slight (if any) impact on the analysis. Non-response bias could also affect the results, as is the case for many surveys, but I found no statistically significant difference for Fall 2008 undergraduate enrollment between responders and non-responders. Given the rather technical nature of the survey questions, it seems unlikely to find dramatically different answers simply due to small differences between responders and non-responders. All of the issues associated with survey response error could have a greater impact on this study in particular due to the smaller sample size.

V. Presentation and Analysis of Findings

The University of Kentucky Student Center as compared to other unions in the sample

In general, it is important to compare the makeup of the union building itself to understand how the space within that facility is utilized. At first glance it is quite clear that the University of Kentucky Student Center has many differences when compared to the observations as a whole. Refer to Table A as the results are discussed. Table A is a layout of variables pertaining to the size and composition of a campus union. Furthermore, it provides a general overview of the percentages of the annual reservations made by each of the three user groups of a university union. All of these components are beneficial to help place the University of Kentucky on the spectrum of university unions in this study.

TABLE A - Summary of Student Union Characteristics		
Variable	University of Kentucky	Mean of all Observations
Square Footage	212,000	262,532
Number of meeting Rooms	27	25
Annual number of reservations	8,000	9,387
Mean square footage per room	7,852	11,779
Average annual reservations per room	296	412
Annual reservations by student groups	3,335	4,450
Proportion of total reservations by student groups	0.4	0.466
Annual reservations by faculty/staff groups	4,730	4,517
Proportion of total reservations by fac/staff groups	0.57	0.459
Annual reservations by off-campus groups	161	364
Proportion of total reservations by off-campus groups	0.03	0.074
Fall 2008 undergraduate enrollment	18,942	23,957
Year the university was founded	1865	1858

Of the schools surveyed, the average building square footage is 238,486 and the UK Student Center fell at 212,000. Despite this, the Student Center has over the average number of rooms available for reservations. The schools combined have an average of twenty-five rooms while the UK Student Center houses twenty-seven. On average, the schools surveyed have one meeting room for every 11,779 square feet. The UK Student Center has one room for every 7,852 square feet, which is well under the average. This means that the Student Center devotes more of its facility for meeting space than average. This is probably due to the fact that the UK Student Center honors approximately 8,000 annual reservations. Even though the average is over 9,000 reservations, a few of the schools surveyed have over 17,000 reservations which drives the average up. Most schools are in the 5,000-7,000 range.

Using a ratio of number of annual reservations made to number of meeting rooms available, on average among the schools surveyed, each individual meeting room holds approximately 412 reservations annually. UK holds 296. Although the UK Student Center

has more meeting rooms than average, each room houses fewer reservations annually. Regarding the observations, student unions with fewer meeting rooms book more reservations in the rooms they do have.

Looking more closely we can determine which patron group is utilizing the facilities the most. For all observations, the percentage of reservations made by student groups is 46.6% for faculty/staff/departmental groups is 45.9% and for off-campus groups is 7.4%. The numbers for the UK Student Center are 40%, 57%, and 3% for each of the three patron categories. Based on these results, the UK Student Center provides more annual reservations to faculty/staff/departmental groups despite the average reflecting more reservations for student groups.

Finally, it is worth noting that the mean figure for Fall 2008 undergraduate enrollment is 23,957 while the University of Kentucky undergraduate enrollment for that period was well below that number at 18,942. Smaller enrollment could explain why the annual percentage of reservations made by student groups is lower than average, however, a regression accounting for Fall 2008 undergraduate enrollment proved this argument insignificant. The regression is discussed in depth later in the analysis.

These general findings highlight some important differences between the University of Kentucky Student Center and the mean of all observations in the survey, however, the next few sections will delve further and hopefully determine more distinct similarities and differences.

University union differences by Non-Benchmark or Benchmark schools

This section focuses on comparing the University of Kentucky Student Center to other schools based on specific measures. The findings were broken down into three

categories: non-benchmarks (SEC & Kentucky schools), benchmarks, and the percent of all observations. This was done to focus on the University of Kentucky as compared to its benchmarks, the institutions that it uses to assess its standings. Refer to Tables B through G for as a reference to this discussion.

TABLE B - Primary Source of Revenue			
Category	SEC & KY	Benchmarks	Percent of all observations
Student fees	54.55%*	30.77%	41.67%*
State funding	0.00%	0.00%	0.00%
Facility operations	9.09%	46.15%	29.17%
Combination of sources	18.18%	23.08%	20.83%
Other/not given	18.18%	0.00%	8.33%
N = 24 Fisher's Exact=0.104 *UK in this category			

Table B tells us the primary source of student union revenues. Revenue sources are important in determining the scope of a union’s wealth and what major factor influences that wealth. A facility that is more reliant on student fees may provide more space for those students whereas a union that is more reliant on operations may provide more retail or recreational space.

When factoring in all observations, the majority of revenues come from student fees. This also holds true for strictly non-benchmark schools. This does not hold true for benchmark institutions, as their greatest share of revenues come from facility operations (retail sales, dining, etc). Student fees are the second major source of revenue for the benchmark schools. This is an interesting finding considering the undergraduate enrollment for benchmark institutions is much higher than the other categories. However, a good explanation for higher operation revenues could be explained by the sheer size of

benchmark unions and the fact that less of their union space is utilized by meeting rooms. The difference in remaining square footage could explain higher returns for facility operation revenues as such unions could have more space devoted to retail, dining, or other revenue generating space. The University of Kentucky Student Center’s primary revenue sources is student fees.

TABLE C - Annual Traffic Count			
Category	SEC & KY	Benchmarks	Percent of all observations
0-1,999,999	9.09%*	15.38%	12.5%*
2,000,000-2,999,999	0.00%	7.69%	4.17%
3,000,000-3,999,999	18.18%	30.77%	25.00%
4,000,000-4,999,999	0.00%	15.38%	8.33%
5,000,000-5,999,999	9.09%	7.69%	8.33%
6,000,000-6,999,999	0.00%	7.69%	4.17%
7,000,000-7,999,999	0.00%	7.69%	4.17%
8,000,000-8,999,999	18.18%	0.00%	8.33%
Unknown/not given	45.45%	7.69%	25.00%
N = 24 Fisher's Exact=0.204 *UK in this category			

TABLE D - Annual Number of Reservation Bookings			
Category	SEC & KY	Benchmarks	Percent of all observations
0-2,500	9.09%	0.00%	4.17%
2,501-5,000	18.18%	7.69%	12.50%
5,001-7,500	54.55%	0.00%	25.00%
7,501-10,000	18.18%*	30.77%	25.00%*
10,001-12,500	0.00%	30.77%	16.67%
12,501-15,000	0.00%	0.00%	0.00%
15,001-17,500	0.00%	15.38%	8.33%
17,501-20,000	0.00%	7.69%	4.17%
>20,000	0.00%	7.69%	4.17%
Unknown/not given	0.00%	0.00%	0.00%
N = 24 Fisher's Exact=0.004 *UK in this category			

Tables C and D can also help explain the difference in revenue sources provided in Table B. These tables lay out the annual traffic count and annual reservations booked for the three classifications. Per year, it is evident that the benchmark union annual traffic boasts greater numbers than non-benchmarks.² The data tell us that benchmark unions also have a higher number of annual reservations. Higher building traffic and reservations can be interpreted as more “customers” to the facility which means greater revenue returns on operations and more reservations.

The University of Kentucky Student Center numbers are not surprising for these two variables. It appears that the UK Student Center has a lower than average amount of annual building traffic while still maintaining a decent count for annual reservations—even above average when compared all non-benchmark unions. As noted earlier, the UK Student Center does not rely on facility operation revenues and devotes larger amounts of its space to meeting rooms. The fewer patrons of the building are spending more time, than the average overall count, in meeting rooms which leads to its higher reservation count.

² It is worth noting that 45.45% of the SEC and Kentucky respondents did not report annual traffic counts.

TABLE E - Room Reservation Fee			
Charge a Fee	SEC & KY	Benchmarks	Percent of all observations
Student Groups			
No	72.73%*	50.00%	60.87%*
Yes	27.27%	50.00%	39.13%
Fisher's Exact = 0.400			
Faculty/Staff/Departmental Groups			
No	63.64%*	33.33%	47.83%*
Yes	36.36%	66.67%	52.17%
Fisher's Exact = 0.220			
Off-campus Groups			
No	0.00%	16.67%	8.70%
Yes	100.00%*	83.33%	91.30%*
Fisher's Exact = 0.478			
N = 23 *UK in this category			

TABLE F - Equipment Rental Fee			
Charge a Fee	SEC & KY	Benchmarks	Percent of all observations
Student Groups			
No	27.27%	0.00%	13.04%
Yes	72.73%*	100.00%	86.96%*
Fisher's Exact = 0.093			
Faculty/Staff/Departmental Groups			
No	9.09%	0.00%	4.35%
Yes	90.91%*	100.00%	95.65%*
Fisher's Exact = 0.478			
Off-campus Groups			
No	9.09%	0.00%	4.35%
Yes	90.91%*	100.00%	95.65%*
Fisher's Exact = 0.478			
N = 23 *UK in this category			

TABLE G - Extra Staffing Fee			
Charge a Fee	SEC & KY	Benchmarks	Percent of all observations
Student Groups			
No	10.00%	0.00%	4.35%
Yes	90.00%*	100.00%	95.65%*
Fisher's Exact = 0.478			
Faculty/Staff/Departmental Groups			
No	10.00%	0.00%	4.35%
Yes	90.00%*	100.00%	95.65%*
Fisher's Exact = 0.478			
Off-campus Groups			
No	0.00%	0.00%	0.00%
Yes	100.00%*	100.00%	100.00%*
Fisher's Exact = 1			
N = 23 *UK in this category			

Tables E, F, and G are provided to show information pertaining to the types of fees that are common for a university union to charge patrons. Fees may explain lower reservation numbers, as it can be a deterrent for certain users. The results for these variables, however, were not surprising as there were little differences in how all of the responders run their fee schedules.

The only difference between the University of Kentucky Student Center and other institutions is the room reservation fee for faculty/staff/departmental groups. For the non-benchmark schools, 63.64% do not charge a fee for this user group, including the University of Kentucky; however, nearly 67% the benchmark unions do. This revenue could help explain the extra facility operation revenue generated by the benchmark institution unions, although one would expect decreased building usage by this group.

If using the benchmark institutions as a guide for the University of Kentucky, it is clear that the UK Student Center has a lot of differences with regards to revenues generated. The UK Student Center obtains most of its revenues through student fees. The

benchmark unions garner an average of just under 31% of their annual revenues from student fees and approximately 46% from facility operations. Several factors can explain this difference and it is important to note this area as one of distinction between the University of Kentucky and its benchmarks.

Hypothesis Testing

It is possible that simply the differences between the benchmark and non-benchmark schools are not particularly meaningful, given the small sample size, and that the differences unveiled are largely due to chance. Accordingly, t-tests were run on several of the variables as a way to determine the significance of specific variables in relation to this study. In this section, the difference between benchmarks and non-benchmarks were tested against a null hypothesis that each difference is actually zero. Since the benchmark institutions were chosen as a way to assess UK's standing in several areas, the t-tests focused on this group. Table H provides a summary of these tests and highlights which variables are found significant when comparing the benchmark institutions to those from the SEC and Kentucky (non-benchmarks), both of which are categories that the University of Kentucky falls in. In addition, Table H also provides the differences in variables when accounting for Fall 2008 undergraduate enrollment. Benchmarks have higher enrollment rates, therefore, Fall 2008 undergraduate enrollment is anticipated to account for a lot of the differences between benchmarks and non-benchmarks.

TABLE H - T-Tests & Regression				
Variable	Mean (95% CI) SEC & KY Schools	Mean (95% CI) Benchmarks	Difference	Benchmark Regression Coefficient [^]
Square footage	213,512 (181,907 245,118)	304,012 (237,571 370,454)	-90,500* (-164,567 -16,433)	6,579 (-107,577 120,735)
Number of rooms	19.2 (15.5 22.9)	30.3 (21.3 39.4)	-11.2* (-20.7 -1.6)	2.9 (-11.9 17.9)
Sq Ft to Rooms	12,329 (8,210 16,447)	11,315 (9,215 13,414)	1,014 (-3,119 5,147)	-885 (-7,800 6,030)
Reservations to Rooms	335.2 (222.8 447.6)	476.5 (325.9 627.2)	-141.4 (-324.8 42.1)	49.7 (-252.6 352.1)
Annual reservations by student groups	2,803 (2,226 3,380)	5,717 (3,717 7,718)	-2,914* (-5,151 -677)	706 (-2,701 4,113)
Proportion of annual reservations by student groups	0.482 (0.348 0.616)	0.453 (0.381 0.525)	0.029 (-0.104 0.162)	-0.011 (-0.228 0.207)
Annual reservations by faculty/staff groups	2,950 (1,736 4,163)	5,723 (3,707 7,740)	-2,774* (-5,185 -363)	1,179 (-2,644 5,001)
Proportion of annual reservations by faculty/staff groups	0.43 (0.287 0.573)	0.481 (.397 .565)	-0.051 (-0.197 0.096)	0.119 (-0.117 0.355)
Annual reservations by off-campus groups	254 (44 464)	449 (239 659)	-195 (-480 89)	219 (-246 683)
Proportion of annual reservations by off-campus groups	0.047 (0.011 0.083)	0.095 (-0.033 0.223)	-0.048 (-0.191 0.095)	0.068 (-0.166 0.302)
Fall 2008 undergraduate enrollment	16,671 (13,904 19,438)	29,325 (26,018 32,633)	-12,654** (-17,023 -8,286)	
**p<0.01 *p<0.05				
[^] This column represents the difference after accounting for Fall 2008 undergraduate enrollment. Each cell represents the Benchmark coefficient in a regression predicting each dependent variable (noted by the first column) as a function of Benchmark status and student enrollment. Because the null hypothesis in a simple difference-of-means test is that (non-Benchmark minus Benchmark) equals zero, negative cells in the "Difference" column indicate an advantage for Benchmarks, while positive cells in the "Benchmark Regression Coefficient" column indicate an advantage for Benchmarks.				

The first considerable finding, which was discussed briefly earlier, is the square footage of the facility. The analysis shows that non-benchmark facilities have 90,500 fewer square feet than benchmark unions which is significant at the .05 level. Furthermore, non-benchmark unions have roughly 11.2 fewer meeting rooms than benchmark unions. It is interesting to note that as discussed earlier in this research (Table A), the University of Kentucky Student Center has a higher than average number of meeting rooms when

compared to all observations; however, it still has an average of 3.3 fewer rooms than the benchmark group.

Perhaps the higher square footage and more abundant meeting space can be explained by enrollment. Benchmark institutions have a Fall 2008 undergraduate enrollment of approximately 12,654 more students than non-benchmark schools. The higher capacity provided by the union would assist in accommodating more students. When accounting for Fall 2008 undergraduate enrollment square footage and meeting room counts are reduced, although benchmarks still have an average of 6,579 more square feet and 2.9 more meeting rooms.³ As for the University of Kentucky Student Center, enrollment numbers are lower than average and the number of meeting rooms is higher.

Another interesting finding lies with annual reservations by user groups. Non-benchmark unions have 2,914 fewer annual reservations made by student groups and 2,774 fewer reservations made by faculty/staff/departmental groups than benchmark unions, both of which are significant findings.⁴ When accounting for Fall 2008 undergraduate enrollment, the numbers are lower, however the results are the same.

What is interesting regarding reservations is the percentage of total annual reservations made by each of these groups, which are not found to be significant. Despite non-benchmarks having fewer student reservations annually, the percentage of their reservations made by student groups is actually 2.9% higher than benchmark unions. Furthermore, non-benchmark unions have 5.1% fewer annual reservations made by faculty/staff/departmental groups, despite the finding that 60% of benchmark facilities

³ It is important to note that none of the variables were found significant when accounting for Fall 2008 undergraduate enrollment; however this may be explained by the small sample size.

⁴ Off-campus group reservations make up a very small percentage of union reservations in this study; therefore, it is not discussed in depth in this analysis.

charge a reservation fee for this user group. Percentages are important in recognizing how building utilization is distributed among user groups. The UK Student Center is below average in booking reservations for its students when compared to both benchmarks and non-benchmarks. Instead, the UK Student Center provides more annual reservations for its faculty/staff/departmental groups as discussed earlier.

It is important to note that the following variables include zero in their t-test confidence interval: reservation to room, percentage of annual reservations by student groups, percentage of annual reservations by faculty/staff groups, annual reservations by off campus groups, and percentage of annual reservations by off-campus groups. For these variables, we cannot reject the possibility that the difference between benchmarks and non-benchmarks is zero; therefore, they are not significant. In addition, most of the regression coefficients are insignificant, but this could be explained by one of two reasons: the differences between benchmarks and non-benchmarks really are due to chance after accounting for Fall 2008 undergraduate enrollment, or simply they are due to the small sample size.

Conclusion

The University of Kentucky Student Center has several distinctions from unions on average as well as from its benchmark institutions. When compared to all observations in this study, the UK Student Center has more rooms provided for reservations and those rooms take up a larger amount of its total square footage leaving less space for other components, such as retail, dining, or recreational space. Despite having more meeting space, the UK Student Center still houses fewer annual reservations than average. This could be explained by the lower Fall 2008 undergraduate enrollment count as well as a few

observations with high reservation counts that drives the overall average up. Regardless, the room to reservation ratio was much lower for the University of Kentucky Student Center, as its meeting rooms receive an average of 116 fewer reservations each.

When compared to just benchmark institutions, whether controlling for Fall 2008 undergraduate enrollment or not, UK's benchmarks yield better results with more square footage, more meeting rooms, and more reservations per room. Lower enrollment does explain, to an extent, these differences, just not on a significant level which means there could be other explanations for the difference.

In addition, the majority of UK Student Center revenues are supplied from student fees, as it does for the majority of non-benchmark schools. The benchmark institutions, although still partially reliant on student fees, garner more revenues from facility operations. Another difference is the fee structure between unions. As a whole, all survey respondents in this study provided similar fee structures. The one major difference was a room reservation fee for faculty/staff/departmental groups. Half of the non-benchmark schools, including the University of Kentucky, do not charge this user group a reservation fee while nearly 67% of the benchmark institutions do. Despite this, non-benchmark unions have 5.1% fewer annual reservations made by faculty/staff/departmental groups than benchmark unions. It seems as though the reservation fee for this user group charged by benchmarks is not detrimental to their overall reservation count.

There are several distinctions which can help the University of Kentucky Student Center understand its relationship to other facilities, particularly its benchmarks. Hopefully these findings have shed light on those important areas and have answered the research questions proposed.

VII. Recommendations

Based on the findings presented in this study, I would like to propose the following recommendations for the University of Kentucky Student Center and administration:

- 1.) As based on the literature, student unions are ways in which a university can market its campus to incoming freshmen. It is important to determine the best way to market the UK Student Center as one which draws better students and retains the current student body. An exploration of renovation or rebuild should be done to determine whether or not the existing facility is adequate for these purposes.
- 2.) UK Student Center staff and partners should seek ways to maximize the usage of facility space. Analysis results told us that in its current state, each meeting room is utilized well under the average rate. This could mean decreasing the number of meeting rooms to adequately reflect user needs or increasing building traffic to fill the voids. Another solution would be dedicating more space to facility operations which could potentially acquire more revenue for the Student Center. This route, although it could prove beneficial, would be a challenge as the administrative structure of offices within the building and the physical layout of the facility itself would not allow for much change in the area of revenue generation.
- 3.) The University of Kentucky Student Center should seek ways to increase student group reservations within the facility. Currently, the UK Student Center hosts more reservations made by faculty/staff/departmental groups despite being a student-fee-run facility. On average, the unions reflected in this study house more reservations for student groups than the other two user groups. When compared to its benchmarks, the University of Kentucky Student Center houses approximately

5.3% fewer annual reservations by student groups. This is particularly important considering the UK Student Center is operated primarily through student fees.

- 4.) The UK Student Center should determine ways to increase annual building traffic. Increased enrollment should lead help to an increase in building traffic. This would be beneficial in many ways including the maximization of the usage of space.

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IX. Appendices

Appendix A			
School	Date Survey Sent	Date Survey Returned	Fall 2008 Ugrad Enrollment
Benchmarks			
Mich State	No participation	Non responder	36,205
NC State	6/4/09	6/5/09	24,741
Ohio State	6/9/09	6/23/09	40,212
Penn State	6/2/09	6/23/09	37,988
Purdue	6/3/09	6/5/09	33,105
Texas A&M	No participation	Non responder	38,430
U Arizona	6/2/09	6/12/09	29,716
UCLA	No participation	Non responder	26,536
U Illinois	6/10/09	Non responder	31,417
U Iowa	6/2/09	6/10/09	20,823
U Maryland	6/2/09	6/26/09	26,475
U Michigan	6/3/09	6/5/09	25,994
U Minnesota	6/2/09	6/11/09	32,557
U North Carolina	6/2/09	Non responder	17,895
U Virginia	6/2/09	Non responder	15,208
U Wash	6/2/09	6/4/09	29,397
U Wisconsin	6/29/09	7/22/09	30,362
SEC			
Auburn	6/23/09	6/23/09	21,011
MS State	6/1/09	6/26/09	13,490
LSU	6/10/09	6/10/09	23,396
Vanderbilt	6/2/09	Non responder	6,637
U Alabama	6/1/09	6/8/09	22,343
U Arkansas	6/2/09	6/2/09	15,426
U Florida*	6/2/09	6/8/09	34,654
U Georgia*	6/2/09	6/24/09	25,467
U Mississippi	6/11/09	Non responder	11,523
U South Carolina	6/1/09	6/26/09	19,765
U Tennessee	6/1/09	6/2/09	21,717
Kentucky			
EKU	6/12/09	Non responder	13,839
NKU	6/2/09	6/3/09	13,003
U Louisville	6/2/09	6/18/09	15,352
U Kentucky	6/2/09	6/3/09	18,942
WKU	6/1/09	6/2/09	16,947
*Denotes a school that is also a benchmark			

Appendix B

The University of Kentucky Student Center - Reservation System Research Project

Please answer the following questions about your facility. The data from your school, as well as others, will be compiled into a report for the University of Kentucky Student Center's use in evaluating its current reservation system and structure.

GENERAL INFORMATION

University Name: _____
Union/Center Name(s): _____
Address/City/State/Zip: _____
Contact Person & Title: _____
Contact Email & Phone: _____

BUILDING INFORMATION

Square footage of facility: _____
Number of rooms available to reserve: _____ (If possible, attach rooms/capacities)
Primary source of revenue for facility (student fees, operations, lease of space, etc.): _____
Assignable software used for reservation system: _____
*Please use your most current data for the following annual-based questions
Method for tracking building traffic: _____
Annual traffic count: _____
Annual number of reservations booked: _____
Annual revenue generated from reservations (if any): _____
Annual revenue generated from equipment use/personal services (if any): _____

RESERVATION INFORMATION

This section is broken up into three groups: student organizations, faculty/staff/departmental groups, and off campus groups. Please answer the questions for each group and attach and rate schedule for fees if available.

Student Organizations:

Number of reservations made annually: _____
Percentage of total reservations made: _____
Does your facility charge a fee for student organizations to make a room reservation? (Y) or (N)
If yes, please explain the fee structure and how much it is:

Does your facility charge student organizations for equipment use? (Y) or (N)
If yes, please explain what types of equipment are being charged and at what rate:

Does your facility charge student orgs for extra staffing? *This can include staffing for late night events, staffing for equipment set ups, or any other type of extra staffing that is needed. (Y) or (N)

If yes, please explain the types of staffing charged for and at what rate:

Faculty/Staff/Departmental Groups:

Number of reservations made annually: _____

Percentage of total reservations made: _____

Does your facility charge a fee for faculty/staff/dept groups to make a room reservation? (Y) or (N)

If yes, please explain the fee structure and how much it is:

Does your facility charge faculty/staff/dept groups for equipment use? (Y) or (N)

If yes, please explain what types of equipment are being charged and at what rate:

Does your facility charge faculty/staff/dept groups for extra staffing? (Y) or (N)

If yes, please explain the types of staffing charged for and at what rate:

Off-Campus Groups:

Number of reservations made annually: _____

Percentage of total reservations made: _____

Does your facility charge a fee for off-campus groups to make a room reservation? (Y) or (N)

If yes, please explain the fee structure and how much it is:

Does your facility charge off-campus groups for equipment use? (Y) or (N)

If yes, please explain what types of equipment are being charged and at what rate:

Does your facility charge off-campus groups for extra staffing? (Y) or (N)

If yes, please explain the types of staffing charged for and at what rate:

ADDITIONAL INFORMATION

Please use the following space to provide any additional information regarding your reservation system and procedures that you feel is necessary:
