

Faculty Member Perceptions of Facilities and Administrative Costs for Sponsored Research at Historically Black Colleges and Universities in Louisiana

Ashley J. Alexander
American University

ABSTRACT

There has been great concern about the relationship between the federal government and universities with regard to improving funding for research and scholarly activity. Faculty members at Historically Black Colleges and Universities (HBCUs) have been instrumental in advancing research and development on behalf of society. The purpose of this study was to examine faculty members' perceptions of institutional research environments using primary data on satisfaction with recovered facilities and administrative costs returned to colleges, departments, and faculty members. This study's findings may enable administrators and government entities to adopt policies that will be mutually beneficial to all HBCUs, government entities, and the public at large, thus reaffirming better intergovernmental relations. This study showed that among faculty, professors and assistant professors are most dissatisfied with recovered F&A costs returned to colleges and departments. In addition, there are differences among academic ranks relating to perceptions of F&A returned to faculty members.

BACKGROUND

Research at colleges and universities has contributed greatly to society. Cutting-edge technology and policy changes are made possible by institutional research. The success of institutional sponsored research is “defined by the growth of monetary resources as well as the intellectual contributions resulting from research efforts” (Hatfield, 2012, p. 1).

To meet the fiscal issues faced by institutions, recovered facilities and administrative (F&A) costs are often used as a means to an end. However, concern has been expressed about the wide variation in how indirect costs are recovered (Massy & Olson, 1994). What remains to be discovered are the effects of the “dissonance between faculty members and research administrators, associated with the various uses of recovered F&A costs . . . upon the success of the academic research enterprise” (Hatfield, 2012, p. 2).

Although scholarly research has benefits, it is important to note one disadvantage: the ways in which indirect costs are calculated and allocated vary among institutions. Some institutions have a negotiated rate of indirect costs based upon salaries and wages, while others use

modified total direct costs (MTDC) as a base. Furthermore, indirect costs may be allocated in ways that may be critical to departments within institutions. Policies and procedures relating to allocations may act to inhibit PIs from applying for future funding. University department resources may become scarce, and budget shortfalls may evolve. Disparities in indirect cost allocation may make it difficult for all parties involved in scholarly research to achieve their goals in an efficient manner.

The effects of this disparity may be felt throughout the HBCUs. More importantly, public HBCUs rely on state funding as well as student attendance for revenue. As state and federal appropriations dwindle, HBCUs confront the financial burden of the ever-increasing costs of staying afloat. Faced with budget cuts, layoffs, raising tuition to cover costs, and financial exigency, the HBCUs encourage their faculty to develop and submit proposals to funding agencies. If the funds are awarded, the indirect costs go to the respective institution. Since there are different plans for indirect cost allocation, some departments may still suffer even though they play a part in institutional research.

Purpose

The purpose of this study was to examine faculty members' perceptions of F&A in institutional research environments. The literature review was devised to identify differences in academic rank regarding satisfaction with F&A funds returned to the college, department, and themselves. Available studies relating to recovered F&A costs and faculty member perceptions are limited to a single institution or to other states (Hatfield, 2012). Moreover, only one study had explored the relationship between the perceptions of faculty members and the way in which recovered F&A funds were being utilized at the state level. No regional or national studies are available on this research topic. Furthermore, no study has specified the type of institution. Based upon studies of faculty perceptions of sponsored research enterprises, the present study of employed faculty members who engage in scholarly research at HBCUs aimed to delineate what is known about faculty members' perceptions of engagement in sponsored research activity.

Faculty Members' Reaction to Institutional Use of Recovered F&A Costs

According to the research literature, the consensus is that researchers are not pleased with the F&A costs that their respective institutions receive based on

their sponsored research. Faculty members complain that when they submit proposals, their supervisors first ask when they will submit the next proposal because the institutions may receive an additional 40 to 80% in F&A costs (Kroll, 2013). In addition, some faculty members feel that institutions do not use F&A costs appropriately. For example, if the faculty member receives external funding, the institution could replenish funds that had been mismanaged. A good analogy is that university faculty feel about indirect costs the way that political candidates feel about taxation (Canizares, 2008).

Faculty Members' Reaction to Minimal or Nonexistent Return of Recovered F&A Costs

Faculty members have a negative perception of F&A costs. Most feel that they do not benefit from F&A recovery. The University of California came into conflict with faculty members on the issue of indirect cost recovery. Faculty members saw no benefit from the indirect costs they generated. In light of the "inadequate or nonexistent return of indirect cost monies to the originating unit," faculty members considered leaving the University of California system because of the "illegal, immoral, and unacceptable" policy regarding indirect costs (Mitteneß & Becker, 1997, p. 18).

Effect of External Economic Changes

A major source of institutional support is alumni. University alumni support their alma maters financially, assist in the recruitment of prospective students, provide internship and employment opportunities for students, and support the institution politically (Ehrenberg, 2002). Although alumni support is prevalent at some institutions, it is lacking in some institutions that must attract more students, thus cutting costs. At state-operated Black universities, a small number of alumni choose to support their alma maters (The JHBE Foundation, 2001). Very few HBCUs can boast a high rate of financial support by alumni. Some reports have indicated that HBCUs' alumni account for 5–10% of financial support. Although campuses can have from 15,000 to 30,000 known alumni, their financial support accounts for about 3,000 per school (HBCU Digest, 2012). This lack of support certainly accounts for the rise in tuition, which causes university officials to bear increased expenses.

Endowments have also decreased at colleges and universities. At HBCUs, decades of decreases in funding and less wealthy alumni have resulted in smaller endowments and a smaller number of operating funds (Gasman, 2010). Due to smaller endowments and the lack of other financial resources, "some HBCUs are

redefining themselves as 'small, private liberal arts' or 'multicultural, comprehensive' colleges—in addition to their mission serving the Black community—as a means of niche marketing. Others are combating dwindling enrollment and funding shortfalls by recruiting non-African-American students" (Hollis, 2012, p. 2).

DATA COLLECTION

A survey based upon Hatfield's (2012) Faculty Member Reaction to the Use of F&A Costs Survey was used in data collection for this study. This survey was disseminated using Qualtrics®, a popular online survey design, collection, and analyzing tool. The survey, which contained twenty questions, was administered at the same time to the adjusted population. Two open-ended questions were added to collect any qualitative data related to the study. Hatfield's survey was designed "to collect faculty demographic information and measure faculty perceptions by using varying degrees of Likert scales, as well as open-ended questions to collect and qualitative data pertaining to the study" (Hatfield, 2012, p. 63).

The initial population for this study ($N = 1,344$) comprised all faculty members at Louisiana HBCUs. The initial population was adjusted for one of the following reasons: incorrect e-mail address, no

response from the faculty member, or no e-mail address available for the faculty member. An invitation to participate and an electronic link to the study were sent to the adjusted population ($N = 106$). The study sample ($n = 106$) was the same as the adjusted population. Faculty members in Louisiana were selected based upon the approval of institutions to participate in the study as well as the accessibility of study participants.

After all questionnaires were returned, the sample was categorized into groups based on gender, whether faculty members received a declination notice after submitting a grant proposal, and academic rank. Placement in a group was determined by the responses on the survey instrument. If no answer was provided by the faculty member, that questionnaire was not placed in a group. However, all data were analyzed to compare and contrast the groups and their responses to the survey questions. The researcher used Qualtrics® as an added tool to convert the data into a SPSS-readable format. To ensure confidentiality, the information was coded using assigned numbers. The research question was then tested through Kruskal-Wallis H, which is a non-parametric test. All decisions regarding the statistical significance of the findings were made using an alpha level of .05.

Delimitations

In this study, an investigation of all HBCUs was impractical. Therefore, only HBCUs with federally negotiated F&A agreements with principal service areas in Louisiana were examined. The findings for this study were limited to the perceptions of the faculty members who were employed at HBCUs in Louisiana that had federally negotiated F&A agreements. Therefore, results cannot be generalized to represent the perceptions of all faculty members who engage in scholarly research at other types of institutions of higher learning or HBCUs in other states. A study of this sort would likely yield a more comprehensive investigation through access to faculty members and university administrators at all HBCUs.

RESULTS

Table 1 displays the hypothesis test summary of rank and satisfaction with recovered F&A returned to college, departments, and the faculty member. According to study results, professors were generally dissatisfied with the F&A returned to the college and department; however, professors were satisfied with the return to themselves. Associate professors were dissatisfied with all F&A distributions. Assistant and adjunct professors felt indifferent about the return of F&A to college, departments, and themselves. Of

the 106 respondents, 83 faculty members reported having knowledge of F&A

returned to the college, department or themselves.

Table 1
Hypothesis Test Summary, Rank, and Satisfaction with Recovered F&A Returned to College, Department, and Self

RANK		SAT_FACOLL	SAT_FADEPT	SAT_FASELF
Prof.	Median	2.00	2.00	3.00
	N	31	31	31
Assoc. Prof.	Median	2.50	2.00	2.00
	N	18	18	18
Asst. Prof.	Median	3.00	3.00	3.00
	N	31	31	31
Adj. Prof.	Median	3.00	3.00	3.00
	N	3	3	3
Total	Median	3.00	3.00	3.00
	N	83	83	83

Table 2
Hypothesis Test Summary, Rank, and Satisfaction with Recovered F&A Returned to College, Department, and Self

Null Hypothesis	Test	Sig.	Decision
The distribution of satisfaction with the percentage of the recovered F&A costs from faculty member's sponsored project(s) that is returned to college is the same across categories of academic rank.	Independent-Samples Kruskal-Wallis Test	.014	Reject the null hypothesis.
The distribution of satisfaction with the percentage of the recovered F&A costs from faculty member's sponsored project(s) that is returned to department is the same across categories of academic rank.	Independent-Samples Kruskal-Wallis Test	.028	Reject the null hypothesis.
The distribution of satisfaction with the percentage of the recovered F&A costs from faculty member's sponsored project(s) that is returned to self is the same across categories of academic rank.	Independent-Samples Kruskal-Wallis Test	.145	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

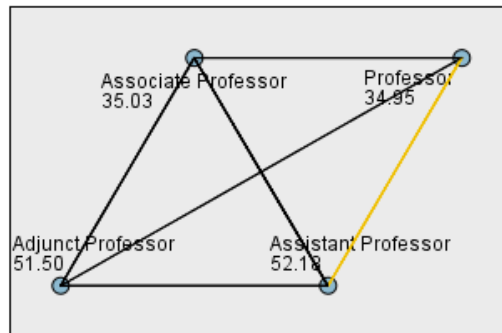
Table 2 displays the medians without a post-hoc test for rank and satisfaction of

returned F&A to college, departments, and faculty members. Regarding satisfaction

with recovered F&A returned to the college, the distributions were statistically significant different between groups, $\chi^2(3)$

= 10.694, $p = .014$. The researcher also ran a post hoc test to determine where the differences lay, as shown in Figure 1.

Pairwise Comparisons of Academic Rank



Each node shows the sample average rank of Academic Rank.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Professor-Associate Professor	-.076	6.959	-.011	.991	1.000
Professor-Adjunct Professor	-16.548	14.198	-1.166	.244	1.000
Professor-Assistant Professor	-17.226	5.964	-2.888	.004	.023
Associate Professor-Adjunct Professor	-16.472	14.644	-1.125	.261	1.000
Associate Professor-Assistant Professor	-17.150	6.959	-2.465	.014	.082
Adjunct Professor-Assistant Professor	.677	14.198	.048	.962	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Figure 1. Pairwise Comparisons of Academic Rank and F&A Returned to College

Pairwise comparisons were performed using Dunn’s (1964) procedure. A Bonferroni correction for multiple comparisons showed a statistical significance of $p < .0083$, which was acceptable. This post-hoc analysis revealed statistically significant differences in satisfaction with the percentage of

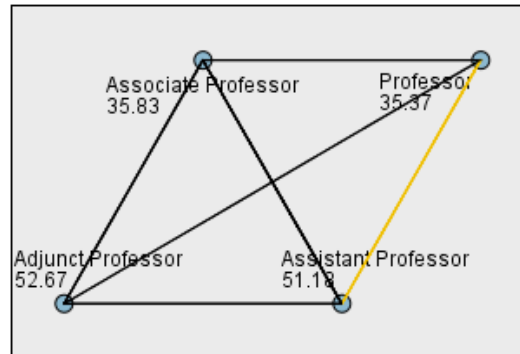
recovered F&A costs returned to the college between professors (mean rank = 34.95) and assistant professors (mean rank = 52.18) ($p = .004$), but not between any other group combination.

Regarding satisfaction with recovered F&A returned to the department, the distributions were statistically significant

different between groups: $\chi^2 (3) = 9.068, p = .028$. The researcher investigated further by

running a post-hoc test to determine where the differences lay, as shown in Figure 2.

Pairwise Comparisons of Academic Rank



Each node shows the sample average rank of Academic Rank.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
Professor-Associate Professor	-.462	6.958	-.066	.947	1.000
Professor-Assistant Professor	-15.806	5.964	-2.650	.008	.048
Professor-Adjunct Professor	-17.296	14.197	-1.218	.223	1.000
Associate Professor-Assistant Professor	-15.344	6.958	-2.205	.027	.165
Associate Professor-Adjunct Professor	-16.833	14.642	-1.150	.250	1.000
Assistant Professor-Adjunct Professor	-1.489	14.197	-.105	.916	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

Figure 2. Pairwise Comparisons of Academic Rank and F&A Returned to Department

Pairwise comparisons were performed using Dunn's (1964) procedure. A Bonferroni correction for multiple comparisons and statistical significance was accepted at $p < .0083$. This post-hoc analysis revealed statistically significant differences

in satisfaction with the percentage of recovered F&A costs returned to the college between professors (mean rank = 35.37) and assistant professors (mean rank = 52.18) ($p = .008$), but not between any other group combination.

Regarding satisfaction with recovered F&A returned to self, professors (Mdn = 4.00) were satisfied with the services provided by the sponsored research office, whereas associate professors, assistant professors, and adjunct professors were neither satisfied nor dissatisfied (Mdn = 3.00), but the differences were not statistically significant, $\chi^2(3) = 5.389$, $p = .145$.

The null hypothesis was accepted regarding F&A returned to faculty member but rejected regarding F&A returned to college and departments. Pairwise comparisons were performed with a Bonferroni correction for multiple comparisons regarding F&A returned to colleges and departments. This post hoc analysis revealed statistically significant differences in satisfaction in F&A returned to colleges between professors (34.95) and assistant professors (52.18) ($p = .008$), but not between any other group combination. Additionally, there are statistically significant differences in satisfaction in F&A returned to departments between professors (35.37) and assistant professors (52.18) ($p = .008$), but not between any other group combination. In other words, regarding F&A returned to colleges and departments, professors and assistant professors share the same dissatisfaction. There are differences among academic

ranks as it relates to returned F&A to themselves. Professors, assistant professors and adjunct professors were indifferent while associate professors were dissatisfied with F&A returned to them.

DISCUSSION AND CONCLUSIONS

The researcher was unable to locate any studies that specifically linked faculty members' perceptions of the sponsored research enterprise with their decision to engage in sponsored research. The findings in the available literature suggested that faculty members were more likely to engage in sponsored research activity. However, faculty members were indifferent to the services provided by sponsored research offices as well as the percentage of F&A returned to the college, department, and themselves. Any substantial effect upon negative perceptions about engaging in sponsored research activity was not confirmed in previous studies reported in the literature.

The findings also showed that academic rank did not influence future sponsored research activity, satisfaction with the services provided by sponsored research offices, or satisfaction with the percentage of F&A returned to colleges, departments, and themselves.

Faculty members did comment on barriers to engagement in sponsored

research activity. The review of the qualitative data highlighted comments on barriers to engagement in sponsored research activity. These pointed to a lack of administrative support, heavy teaching loads, and a lack of time to commit to proposal and research development. This indicates that further research on faculty members' perspective is needed in these areas as well as in other aspects of the academic research enterprise. The comments regarding factors that encourage faculty members to engage in sponsored research activity in the future generally consisted of extra incentives (e.g., pay or release time), fostered collaboration, and more support from sponsored research offices (e.g., identifying funding sources and proposal development). These comments indicated that further research on faculty members' perspectives is needed in these areas as well as in other aspects of the academic research enterprise.

Implications

The most important implication of this study's findings is the lack of positive comments on support from administration

as well as the allocation of indirect costs. While findings were not significant, based upon the qualitative comments, faculty members were not pleased with existing institutional support and incentives for their engagement in sponsored research activity. If these factors are not addressed, faculty members may fail to engage in sponsored research enterprises at HBCUs. Consequently, the interchange of levels of government relating to research and development would diminish. Further research is needed in these areas to determine faculty members' perceptions of this issue.

Recommendations for Further Research

Potential areas for future research include the following:

- Examination of federal policies related to research and development at institutions
- Further study of the PI's knowledge of F&A costs incurred by sponsored research activity
- Further research on increasing the response rate of faculty members

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ABOUT THE AUTHOR

Ashley J. Alexander is the director in the Office of Sponsored Programs at American University. Ashley has eight years of institutional research experience in various positions. In 2015, Ashley received his Ph.D. in public policy from Southern University and A&M College – Baton Rouge, Louisiana.
