

**Proposal cover page**

**2008 AIR DISSERTATION FELLOWSHIP PROPOSAL**

Analysis of Faculty Salaries at Historically Black Colleges and Universities

Datasets of interest  
National Study of Postsecondary Faculty (NSOPF): 2004  
and  
Integrated Postsecondary Education Data System ( IPEDS)

Grant Amount Requested: \$20,000

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## 2. Project Summary

The average of faculty salaries at Historically Black Colleges and Universities (HBCUs) is about 80% of those at all institutions (NCES, 2004). According to human capital theory, earnings should be a function of the skills and ability possessed by workers. Most observers of higher education agree that faculty salaries should be a function of training, experience, quantity and quality of scholarly productivity and teaching load. The purpose of this study is to determine the factors that might explain the salary gap between faculty at HBCUs and other types of institutions. The lower level of financial resources at HBCUs could also be a factor for the lower salaries of faculties at HBCUs. It is hypothesized that salary inequalities exist for faculty at HBCUs compared to other institutions, controlling for their qualifications and other relevant factors. This research study will use the National Study of Post Secondary Faculty (NSOPF): 2004 restricted data set and merge institutional financial variables from the Integrated Postsecondary Education Data System (IPEDS) Finance Survey to study the differences in faculty salaries between HBCUs and research, doctoral, comprehensive, and liberal arts institutions

HBCUs have existed for over 100 years without being serious subjects for academic research. Research regarding HBCUs is limited and there is a significant gap in the literature. Because of the void in the literature, neither educators and policy makers nor higher education institutional researchers have been able to cite fresh academic thinking about the practices, successes, and /or challenges of Black colleges. There is a need for a contemporary body of literature which addresses issues of HBCUs (Brown & Freeman, 2002). This study provides a much needed contribution to current literature on HBCUs.

Research on the productivity of faculty at HBCUs is limited. Researchers have speculated that African American faculty may have lower publication rates than White faculty because they tend to work in Historically Black Colleges and Universities, institutions that generally have fewer resources to support faculty research and higher teaching and advising loads (Blackburn, Wenzel & Bieber, 1994; Blackburn & Lawrence, 1995). This study will compare the productivity of faculty at HBCUs and other institutions.

Although it is well known that the average faculty salary at HBCUs is lower than that of faculty at other institutions, there is no study that identifies the factors contributing to this salary discrepancy. All studies that indicate the lower salary level at HBCUs are based on institutional level data. This study will use individual level National Study of Postsecondary Faculty (NSOPF):2004 data to identify the factors

contributing to this salary discrepancy. This study using the Blinder-Oaxaca decomposition technique will identify the differences in salary between faculty at HBCUs and other types of institutions due to such variables as gender, ethnicity, job rank, primary teaching field, highest qualification, tenure status, experience, and career articles- refereed journals.

The National Study of Postsecondary Faculty (NSOPF) data set has not been used to analyze faculty salaries in HBCUs. Institutions are coded by Carnegie type in the NSOPF survey. Since there is no code for HBCUs in the NSOPF survey, the HBCU identifier in the Integrated Postsecondary Education Data System (IPEDS) will be used to identify the HBCU institutions in the NSOPF dataset. This study will also merge the financial variables from the IPEDS to the NSOPF dataset. The salary differences between HBCUs and other types of institutions will be calculated based on the NSOPF and IPEDS variables.

Only full-time faculty at four year institutions with rank of assistant professor, associate professor, or professor with teaching, research, or administrative duties on 9/10 month contract or 11/12 month contract are included in this study. Two year institutions are not included in this study since the mission of these institutions is different from four year institutions. Lecturers and Instructors are not included since they may not have significant research contributions. The weighted sample size for this study comprises of 11,780 faculty at HBCUs, 143,760 faculty at research institutions, 64,030 faculty at doctoral institutions, 105,550 faculty at comprehensive institutions, and 35,320 faculty at liberal arts institutions.

Institutions award salaries on a highly discretionary basis. This study can provide some structure to the salary setting process and give faculty at HBCUs the feeling of a direct connection between qualification and salary. The institution can raise important policy questions about what qualifications are valued by the institution and how much they are rewarded (Moore, 1993) Administrators at HBCUs can use the results of this study in their own institutional salary studies and ultimately to recommend salary structures that will assist their institutions in the recruitment of the most qualified faculty available. Faculty at HBCUs can use this study to compare their productivity with faculty at other institutions and get a revised salary schedule through a bargaining group. HBCUs administrators can use the results of the study to lobby for more equitable government funding and in fund raising for endowed faculty chairs.

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## 4. Project Description

### a. Statement of Problem

The average of faculty salaries at Historically Black Colleges and Universities (HBCUs) is about 80% of those at all institutions (NCES, 2004). According to human capital theory, earnings should be a function of the skills and ability possessed by workers. Most observers of higher education agree that faculty salaries should be a function of training, experience, quantity and quality of scholarly productivity and teaching load. The purpose of this study is to investigate the salary gap between faculty at HBCUs and other types of institutions. It is hypothesized that salary inequalities exist for faculty at HBCUs compared to other institutions, controlling for their qualifications and other relevant factors.

The dependent variable in this study will be the National Study of Postsecondary Faculty (NSOPF) variable “Amount of income from basic salary from institution”. The independent variables are grouped as:

- 1) demographic variables (Gender, Ethnicity, Citizenship status),
- 2) education variables (Highest degree, Years since receiving highest degree),
- 3) employment variables (Principal activity, Years held current job, Job Rank, Years since rank achieved, Union status, Tenure status, Length of contract, Years since began first faculty or instructional staff job, Teaching or research field),
- 4) productivity variables (Average total hours per week worked, Percent time spent on undergraduate instruction, Percent time spent on graduate/first professional instruction, Scholarly activity if funded, Percentage time spent on research activities, Career articles- refereed journals, Career articles-non refereed journals, Career book reviews/chapters/creative works, Career books/textbooks/reports, Career presentations, Career exhibitions/performances, Career patents/computer software, Recent articles refereed journals, Recent articles non refereed journals, Recent book reviews/chapters/creative works, Recent books/textbooks/reports, Recent presentations, Recent exhibitions/performances, Recent patents/computer software), and
- 5) institution variables ( Region where located, Institution control, Endowment per student, Percentage of students receiving any financial aid, Percentage of students receiving institutional grant, Average amount of institutional grant aid, Debt Ratio).

## **Literature Review**

According to a report by the Education Trust, the leading public flagship universities are disproportionately serving a Whiter and wealthier study body than in the past. The report, "Engines of Inequality: Diminishing Equity in the Nation's Premier Public Universities," shows how students in entering and graduating classes at institutions such as Pennsylvania State University or the University of South Carolina took less and less like the state populations those universities were created to serve. Between 1995 and 2003, flagship and other public research universities decreased grant aid by 13% for students from families with an annual income of \$20,000 or less. Aid to students whose families make more than \$100,000 a year skyrocketed 406%. College presidents argue that graduates of low quality urban public high schools often lack the academic background to justify awarding them significant financial aid packages, the report adds (Banerji, 2006). So African American students who are predominantly first generation students, and in the lower socioeconomic status have no option but to pursue higher education at Historically Black Colleges and Universities (HBCUs) that welcome these students.

Although HBCUs are relatively small institutions, have limited resources and serve a high number of disadvantaged students, they have performed remarkably well throughout their existence. By the early 1990s they had educated almost 40% of America's black college graduates. Further, 80% of black federal judges, 85% of all black doctors, 75% of all black Ph.D.s, 50% of black engineers, and 46% of all black business professionals received their undergraduate training at HBCUs (Jackson, 2002).

In 2001-02, average salaries of full-time instructional faculty on 9-month contracts at HBCUs were only 81% of what they were in all institutions. Since 1976-77, the average salaries at HBCUs have been approximately 80% of those at all institutions, ranging from 79% to 84%. Of the 14,100 full-time faculty at HBCUs in 2001, 72% were members of minority groups. Blacks constituted 60% of the full-time faculty at HBCUs (NCES, 2004). A study based on 1999-2000 American Association of University Professors data indicated that only one Historically Black College or University had an average salary for a full professor that equaled the national average (Vital Signs, 2000).

One of the largest expenditures for colleges and universities is salaries, and HBCUs are no exception. However, keeping salaries of faculty comparable to those in other institutions has been a serious problem. Buck (1999, p.1) wrote that "many top HBCU administrators' salaries are keeping pace with or

surpassing those of their counterparts at other institutions”. Evans, Evans, Evans (2002) also argue that HBCUs should raise the salaries of faculty, if they are serious about recruiting and keeping excellent faculty scholars, as they have little problem raising the salaries of their top administrators to those of administrators at comparable institutions.

Retaining faculty at HBCUs by offering better salaries is all the more important considering the limited supply of black faculty in the academic labor market. There are very few African Americans receiving Ph.D.s annually. According to a National Science Foundation survey of earned doctorates in 2000, African Americans accounted for only 1,656 or 6% of the 27,888 Ph.D.s awarded. Most of the blacks or 680 received doctorates in education, many of whom work for K-12 school systems instead of colleges and universities. Further a number of older black faculty who have spent their entire careers at HBCUs are now approaching retirement and these positions also need to be filled (Jackson, 2002).

Faculty salaries make up the single largest item in most university and college annual budgets (Hearn, 1999). There is no one-size-fits all approach to salary setting and salary structure. Many characteristics drive faculty salary differences, including such variables as gender, ethnicity, education, rank, and experience. Comparing average salaries is simple, but factors such as academic discipline and years of service may be responsible for part of the observed difference in average salaries. It is not known if faculty at HBCUs are equally qualified and equally productive. Even a small gap in salaries may be due to differences in training, experience, academic discipline, research productivity, and teaching load.

According to human capital theory, earnings should be a function of the skills and ability (“human capital”) possessed by workers. As a result, earnings for faculty (as well as workers in other employment sectors) depend on their labor market experience, educational achievement and other variables. A worker’s human capital is therefore expected to rise with educational attainment and labor market experience (Toutkoushian, Conley, 2005). According to some researchers, since the human capital theory focuses solely on individual attributes, this theory does not explain the complexities of social structures and labor markets (Perna, 2003; Rosenbaum, 1986). This study includes institutional variables to explain faculty salaries in HBCUs and other types of institutions.

Theories of faculty pay categorize pay as either a function of market competition or institutional forces (Hansen, 1986, pp.87-88; Twigg, Valentine, and Elias, 2002). Market models attribute changes in

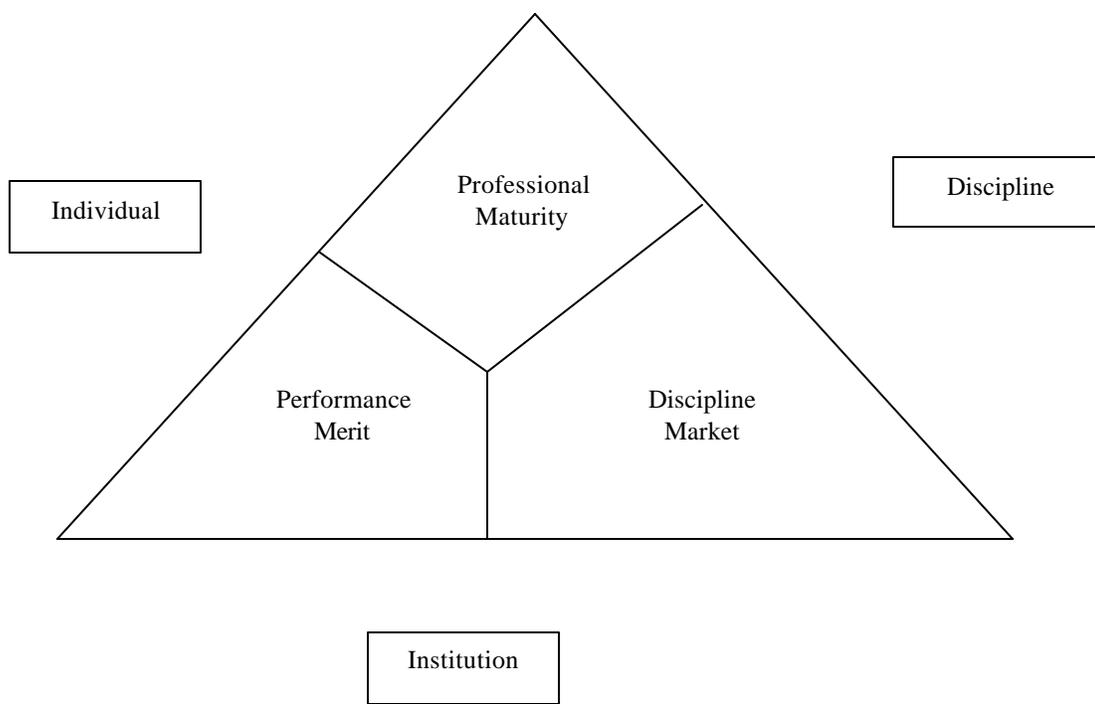
faculty salaries at least in part to supply and demand (Bowen, Sosa, 1989, pp. 145-149). Two schools of thought drive the market model. One school emphasizes an emerging national labor market based principally on research and scholarly prestige (Winston, 1994). Institutions of all types value prospective and current faculty who show research promise or who produce high levels of scholarship. On the other hand, the market segmentation school holds that teaching-oriented institutions pay their most productive and highest quality teachers more than they pay faculty members who publish and obtain external funding. Research universities pay their faculty in line with research productivity (Fairweather, 2005).

Some economists believe that pay is an expression of institutional norms and values regardless of stated mission (Getz, Siegfried, 1991, pp.265-266; Levin, 1991). From this point of view, “institutions that actually value teaching will pay their productive teachers the most, whereas institutions valuing research will pay their productive researchers the most” (Fairweather, 1997, p.44).

Most observers of higher education tend to agree that salaries should be a function of training (highest degree earned), experience (years of employment as a faculty member or years since the highest degree was earned), quantity and quality of scholarly productivity (publications, grant dollars obtained), quantity and quality of teaching and of service to the institution, and even the demand within higher education for those trained in the individual’s discipline, stemming from enrollment pressure relative to supply of faculty and demand in the external labor market. In addition, salaries are generally set within academic ranks (Loeb, 2003).

The first step in most salary analyses is to develop a conceptual model of what variables or measures should explain faculty salaries. McLaughlin and Howard (2003) suggest the model shown in Figure 1 can be used as the starting point.

**Figure 1**  
**Factors Affecting Salary**



The three primary entities in the model are the individual, the institution, and the discipline. The individual has a set of personal characteristics, abilities, motivations, and experiences. The institution has a purpose and a set of resources to pursue that purpose. The discipline has standards for professional competence and a paradigm for examining the faculty role and level of competence. The entities interact with three primary attributes: merit, professional maturity, and market. Merit reflects the quality and quantity of work of the faculty. Professional maturity includes years of service to the institution and profession. Market is the supply of faculty and the demand for their services (McLaughlin, & Howard, 2003). It is possible that faculty at HBCUs are at a disadvantage in the individual and institution entities, and market attribute.

There is abundant literature on the earnings of men and women in academe including studies by Bayer (1973), Bayer and Astin (1975), Tuckman and Tuckman (1976), Barbezat (1987a, 1987b, 1989, 1991), Smart (1991), Ransom and Megdal (1993), Bellas (1993), Ashraf (1996), Barbezat and Donihue (1998), Toutkoushian (1998, 1999), and Perna (2001, 2002). There are relatively few studies at the

institutional or the national level focusing on academic salary differentials by race or ethnicity. African American faculty members constitute a much higher proportion of faculty at historically black colleges and universities. In light of this fact, the persistence of a substantial salary and compensation gap between faculty at historically black colleges and universities and those at other institutions is also cause for concern (Barbezat, 2002).

Another factor in salary studies is salary compression. Salary compression refers to small salary differential between faculty with different levels of experience. Salary compression occurs when the demand for faculty members changes in external labor markets and institutions adjust their offers to attract new, junior faculty and fail to compensate the salaries of existing senior faculty. Salary compression is a form of discrimination since institutions pay junior and senior faculty differently for the same characteristics (Toutkoushian, 1998). It is possible that there are many faculty at HBCUs who have been working there for many years with low salaries due to salary compression.

Many academic departments seek faculty skilled in teaching, research, public service, and administration. Faculty with such credentials benefit their department with increased student enrollments, outside grant funding, and recognition by the university, local community, and discipline at large. The stock of each faculty skill available in the marketplace is relatively fixed in the short run. If the demand for a skill increases, the price paid to faculty for this skill increases, creating salary differentials among faculty. In the long run, the number of faculty with the desired skill also increases, and narrows the differential among skills (Tuckman, Gapinski, & Hagemann, 1977).

Quality of faculty is identified in literature as another factor influencing salary. One of the predictors of the quality of faculty may be the quality of the institution where they earned their doctoral degree (Johnson & Stafford, 1975). Faculty earning their doctoral degrees from a Carnegie classification of Research I institutions may command a higher salary. It is likely that a majority of faculty at HBCUs may not have graduated from Research I institutions.

#### **b. Proposed Work Plan**

The research questions for this study are:

1) Is there a difference in average salary between faculty at HBCUs and average faculty salary at research institutions, doctoral institutions, comprehensive institutions, and liberal arts institutions?

- 2) Is there a difference in salary levels by deciles between faculty at HBCUs and faculty salary levels at research institutions, doctoral institutions, comprehensive institutions, and liberal arts institutions?
- 3) What are the differences in the mean demographic variables (Gender, Ethnicity, Citizenship status) and Education variables (Highest degree, Years since receiving highest degree) between faculty at HBCUs and research institutions, doctoral institutions, comprehensive institutions, and liberal arts institutions?
- 4) What are the differences in the mean employment variables (Principal activity, Years held current job, Job Rank, Years since rank achieved, Union status, Tenure status, Length of contract, Years since began first faculty or instructional staff job, Teaching or research field) between faculty at HBCUs and faculty at research institutions, doctoral institutions, comprehensive institutions, and liberal arts institutions?
- 5) What are the differences in the mean productivity variables (Average total hours per week worked, Percent time spent on undergraduate instruction, Percent time spent on graduate/first professional instruction, Scholarly activity if funded, Percentage time spent on research activities, Career articles-refereed journals, Career articles-non refereed journals, Career book reviews/chapters/creative works, Career books/textbooks/reports, Career presentations, Career exhibitions/performances, Career patents/computer software, Recent articles refereed journals, Recent articles non refereed journals, Recent book reviews/chapters/creative works, Recent books/textbooks/reports, Recent presentations, Recent exhibitions/performances, Recent patents/computer software) between faculty at HBCUs and research institutions, doctoral institutions, comprehensive institutions, and liberal arts institutions?
- 6) What are the differences in the mean institution variables ( Region where located, Institution control, Endowment per student, Percentage of students receiving any financial aid, Percentage of students receiving institutional grant, Average amount of institutional grant aid, Debt ratio) between HBCUs and research institutions, doctoral institutions, comprehensive institutions, and liberal arts institutions?
- 7.a) If the average salary of faculty at HBCUs is less than the average salary of faculty at any other type of institution, what percentage of the difference in average salary between faculty at HBCUs and other institutions is explained by the differences in the three faculty characteristics and institutional variables in question 3, question 4, question 5, and question 6?
- 7.b) If the average salary of faculty at HBCUs is less than the average salary of faculty at any other type of institution, what percentage of the difference in average salary between faculty at HBCUs and other

institutions which is not explained in question (7.a) is due to employer preferences or discrimination or other unexplained factors?

#### Variables in regression

The dependent variable in this study will be the “Amount of income from basic salary from institution”. The complete list of independent variables is in Appendix I and the multiple regression dummy coding for the variables is in Appendix II.

Years of experience is a reasonable predictor of salary. In this study, years of experience is measured by years since receiving highest degree and the quadratic term which is the square of years since receiving highest degree, and years since began first faculty or instructional job and the quadratic term which is the square of the years since began first faculty or instructional job.

Salary compression is accounted for by years held current job and the quadratic term which is the square of the years held current job, and years since rank achieved and the quadratic term which is the square of the years since rank achieved.

Since there is abundant literature on the salary difference between men and women, gender is included as one of the variables. Ethnicity has white, black, Asian, and other race categories collapsed into “Other” category by the researcher. Education is measured by the highest degree earned doctorate, first professional and masters. Tenure status is identified by tenured or not tenured. Citizenship status is categorized as citizen and non citizen. Union status is categorized as union member and not a union member. As in most faculty salary studies, only full-time faculty in four year institutions in the ranks of Professor, Associate Professor, and Assistant Professor are included. Two year institutions are not included in this study since the mission of these institutions is different from four year institutions. Lecturers and Instructors are not included since they may not have significant research contributions.

To measure quality of faculty, the highest degree earned institution is grouped as Research I, Research II, and all other institutions. The productivity measures included in this study are Average total hours per week worked, Percent time spent on undergraduate instruction, Percent time spent on graduate/first professional instruction, Scholarly activity if funded, Percentage time spent on research activities, Career articles- refereed journals, Career articles-non refereed journals, Career book reviews/chapters/creative works, Career books/textbooks/reports, Career presentations, Career

exhibitions/performances, Career patents/computer software, Recent articles refereed journals, Recent articles non refereed journals, Recent book reviews/chapters/creative works, Recent books/textbooks/reports, Recent presentations, Recent exhibitions/performances, and Recent patents/computer software.

Institutional characteristics variables are location, level of control, percentage of students receiving any financial aid, percentage of students receiving institutional grant aid, average amount of institutional grant aid, debt ratio, and endowment/student. Financial variables are included to measure the effect of the difference between resource rich and resource poor institutions.

An issue in multiple regression is multicollinearity. Multicollinearity is a problem when there is a moderate to high intercorrelations among predictor variables in a regression analysis. Muticollinearity should be addressed by the researcher prior to the execution of the regression analysis. The easiest method for diagnosing multicollinearity is to examine the correlation matrix for the predictor variables, looking for moderate to high intercorrelations. The variance inflation factor (VIF) for a given predictor indicates whether there is a strong linear association between it and all remaining predictors. Although there is no steadfast rule of thumb, values of VIF that are greater than 10 are generally cause for concern (Stevens, 1992). There are several methods for combating multicollinearity in a regression analysis. The simplest method is to delete the problematic variable from the analysis (Sprinthall, 2000). If the information in one variable is being captured by another, no real information is lost by deleting one of them. Redundant variables will be eliminated using the variance inflation factor.

The National Study of Postsecondary Faculty (NSOPF): 2004 employed a two-stage sampling methodology for selection of eligible faculty and instructional staff. At the first stage, the institution frame included 3,380 Title IV participating post-secondary institutions that were two year and four year, public and private not-for-profit, and located in the 50 states and District of Columbia. At the second stage the faculty frame included all faculty and instructional staff in those institutions totaling approximately 1.1 million individuals (NCES, 2006).

A sample of 1,070 post-secondary institutions were selected for participation based on a probability proportional to size selection methodology. Each institution was requested to provide the complete list of full-and part-time faculty and instructional staff that were employed at the institution

during the fall 2003 term. A total of 980 institutions submitted a list suitable for sampling. Equal probability stratified systematic sampling was used to select faculty and instructional staff from the list, from each institution sample faculty were chosen within each faculty stratum defined by race/ethnicity, gender, and employment status with academic field serving as an implicit sort variable. A total of 34,330 eligible sample faculty members, 29,820 (87%) were contacted and 26,110 completed the survey with a 76% response rate. A total of 920 institutions, representing 84% of eligible institutions, completed the institution questionnaire (NCES, 2006).

The Integrated Postsecondary Education Data System (IPEDS) collects institution-level data from postsecondary institutions in the United States and other jurisdictions, such as Puerto Rico. A postsecondary institution is any organization open to the public and has provision of postsecondary education as its primary mission. Participation in the IPEDS is a requirement for the 6,700 institutions participating in Title IV federal student aid programs such as Pell Grants or Stafford Loans. Data collected from the institutions are in the areas of enrollments, program completions, graduation rates, faculty, staff, finances, institutional prices, and student financial aid.

The NSOPF: 2004 restricted data set will be used in this study. Institutions are coded by Carnegie type in the NSOPF survey. Since there is no code for HBCUs in the NSOPF survey, the HBCU identifier in Integrated Postsecondary Education Data System (IPEDS) will be used to identify the HBCU institutions in the NSOPF dataset for this study. The percentage of students receiving any financial aid, percentage receiving institutional grant aid, average amount of institutional grant aid received, total liabilities, total assets, and endowment assets of all the institutions in this study will be merged into the NSOPF: 2004 dataset from the IPEDS dataset.

Blinder (1973) and Oaxaca (1973) developed the widely used econometric framework for measuring the effects of wage discrimination. Their model is used to statistically separate wage gaps due to actual differences between two populations and differences due to employer preferences. While this model has been widely used to study gender and racial discrimination, it can also be used to look at different preferences between two groups of employers (Harris, 2003).

The Blinder-Oaxaca wage decomposition method will be used to explain the salary gap between faculty at Historically Black Colleges and Universities and other types of institutions.

For each type of institution, the equation is the standard multiple regression model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_j X_j + e \quad (1)$$

Using the standard multiple regression assumption of  $E(e) = 0$ , the expected value of  $y$  is given by:

$$E(y) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_j X_j \quad (2)$$

In the Blinder-Oaxaca decomposition, the faculty at HBCU and other institutions equation (2) is defined as:

$$(W) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_j X_j \quad (3)$$

where  $(W)$  is wages,  $\beta_0$  is the intercept,  $\beta_j$  is the coefficient of the  $j^{\text{th}}$  variable, and  $X_j$  is the mean of the  $j^{\text{th}}$  variable. The means are calculated from the dataset under analysis in the normal way, so that a mean is also produced for any indicator variable.

The salary gap is represented by:

$$\begin{aligned} (W^{\text{non-HBCU}}) - (W^{\text{HBCU}}) = & (\beta_0^{\text{non-HBCU}} - \beta_0^{\text{HBCU}}) + (\beta_1^{\text{non-HBCU}} X_1^{\text{non-HBCU}} - \beta_1^{\text{HBCU}} X_1^{\text{HBCU}}) + \\ & (\beta_2^{\text{non-HBCU}} X_2^{\text{non-HBCU}} - \beta_2^{\text{HBCU}} X_2^{\text{HBCU}}) \dots + \\ & (\beta_j^{\text{non-HBCU}} X_j^{\text{non-HBCU}} - \beta_j^{\text{HBCU}} X_j^{\text{HBCU}}) \end{aligned} \quad (4)$$

The model can be summarized as:

$$\begin{aligned} (W^{\text{non-HBCU}}) - (W^{\text{HBCU}}) = & [(X_{ij}^{\text{non-HBCU}} - X_{ij}^{\text{HBCU}}) \beta_{ij}^{\text{non-HBCU}}] + \\ & [(\beta_0^{\text{non-HBCU}} - \beta_0^{\text{HBCU}}) + (\beta_{ij}^{\text{non-HBCU}} - \beta_{ij}^{\text{HBCU}}) X_{ij}^{\text{HBCU}}] \end{aligned} \quad (5)$$

where  $X$  is a vector of measured characteristics of the workers such as highest degree earned, and experience as well as control variables like race, ethnicity, and location. The vector of regression coefficients  $\beta$ , is the return that the market yields to a unit change in endowments such as education and experience. The first term is the salary difference attributed to differences in the human capital characteristics like job rank, gender, ethnicity, and education  $(X_{ij}^{\text{non-HBCU}} - X_{ij}^{\text{HBCU}})$  evaluated at the rate of return on investment for faculty at non-HBCU institutions. The second term is the difference between the rates of return on investment  $(\beta_{ij}^{\text{non-HBCU}} - \beta_{ij}^{\text{HBCU}})$  for faculty at HBCU and non-HBCU institutions for the same human capital characteristics  $X_{ij}^{\text{HBCU}}$ . The second term is the measure of wage discrimination.

In equation (5) it is assumed that everyone is treated as faculty in non-HBCU institutions by getting the same rate of return of  $\beta_{ij}^{\text{non-HBCU}}$  and the discrimination was the difference in the  $\beta$  coefficients.

The salary gap in equation (5) is due to two functions:

- the actual difference in the variables (e.g, degree earned, age, experience), as shown by the difference in mean values between faculty at HBCU institutions and other institutions (the “earnings power” function, which shows the level of the variable); and
- the difference in the effects of these variables, as shown by the differences in the coefficients for faculty at HBCU and non-HBCU institutions (the “discrimination” function or unexplained residual). This function contains the difference in the intercept terms from the faculty at HBCU and non-HBCU institutions equations.

The existence of an unexplained residual is undesirable for two main reasons, both of which are concerned with model misspecification:

- A large residual could mean that important factors have been omitted from the model under consideration.
- One or more variables in the model may not be a valid proxy. The greater the number of proxy variables used, and the more error associated with each proxy, the larger the unexplained residual.

Equation (5) can also be written as

$$(W^{\text{non-HBCU}}) - (W^{\text{HBCU}}) = [(X_{ij}^{\text{non-HBCU}} - X_{ij}^{\text{HBCU}}) \beta_{ij}^{\text{HBCU}}] + [(\beta_0^{\text{non-HBCU}} - \beta_0^{\text{HBCU}}) + (\beta_{ij}^{\text{non-HBCU}} - \beta_{ij}^{\text{HBCU}}) X_{ij}^{\text{non-HBCU}}] \quad (6)$$

In equation (6) it is assumed that everyone is treated as faculty in HBCU institutions by getting the same rate of return of  $\beta_{ij}^{\text{HBCU}}$ . Either method can be used to decompose the salary, although the explained and unexplained components will be different in both the methods. This creates an index number problem since the decomposition varies based on the reference group. In this study, decomposition will be done based on equation (5). The results of the decomposition based on equation (6) will be available with the researcher for the interested reader.

### **c. Dissemination plan**

This study is the main focus of the researcher's dissertation. The researcher plans to present the findings of this study in the Association for Institutional Research (AIR) conference and the Association for Study of Higher Education (ASHE) conference in 2008. The researcher plans to publish the study results and will submit articles to quality journals in the field of higher education such as Review of Higher Education, Journal of Higher Education, Journal of Human Resources, Peabody Journal of Education, and Economics of Education Review. A copy of the study will also be submitted to the Association for Institutional Research.

### **d. Description of policy relevance**

About one-third of the professors at HBCUs come from developing areas, mainly Africa and India. Though highly qualified, many say they are overworked, underpaid, underappreciated and face discrimination from African-American professors, students and staff. As more developing nations embrace democratic governance and implement free-market policies, migration to the United States could slow. HBCUs in particular could be hit hard, as talented foreign scholars choose to remain in their native lands. Smaller schools could close down or face a major recruiting crises of qualified instructors (Ngwainmbi, 2006). This is especially important since HBCUs are beginning to focus more on mathematics and sciences. The availability of federal grants to increase minorities' participation in the sciences and mathematics has prompted the hiring of more faculty in these areas. Increasingly, those faculty are Asian (Thurgood Marshall, 2006). It is important to revise faculty salaries at HBCUs to retain quality faculty.

Institutions award salaries on a highly discretionary basis. This study can provide some structure to the salary setting process and give faculty at HBCUs the feeling of a direct connection between qualification and salary. The institution can raise important policy questions about what qualifications are valued by the institution and how much they are rewarded (Moore, 1993) Administrators at HBCUs can use the results of this study in their own institutional salary studies and ultimately to recommend salary structures that will assist their institutions in the recruitment of the most qualified faculty available. Faculty at HBCUs can use this study to compare their productivity with faculty at other institutions and get a revised salary schedule through a bargaining group. HBCUs administrators can use the results of the study to lobby for more equitable government funding and in fund raising for endowed faculty chairs. Other

agencies like the United Negro College Fund that are involved in fund raising on behalf of HBCUs can also use this study in their fundraising efforts. Think tanks involved with issues on African American education like the Frederick Patterson Research Institute will also find this study relevant for further analysis.

There is evidence in literature that there is a higher probability that African American students will graduate from HBCUs compared to traditional institutions because they have African American faculty as mentors. HBCUs used to be the primary place of employment for most African American faculty many years back. But now HBCUs have to compete with other institutions for African American faculty. It is important that HBCUs offer African American faculty better salaries to attract and retain them.

If African American faculty are offered better salaries at non-HBCU institutions, minority students are more likely to enroll in predominantly white institutions and not in HBCUs. After graduation, these African American students are more likely to look for better opportunities and work in larger predominantly white institutions than work in HBCUs for a lower salary. This will affect the enrollment trends at HBCUs in the future and HBCUs are more likely to face financial difficulties.

#### **e. Innovative aspects of project**

The National Study of Postsecondary Faculty (NSOPF) data set has not been used to analyze faculty salaries in HBCUs. Institutions are coded by Carnegie type in the NSOPF survey. Since there is no code for HBCUs in the NSOPF survey, the HBCU identifier in the Integrated Postsecondary Education Data System (IPEDS) will be used to identify the HBCU institutions in the NSOPF dataset. This study will also merge the financial variables from the IPEDS to the NSOPF dataset. The salary differences between HBCUs and other types of institutions will be calculated based on the NSOPF and IPEDS variables.

#### **f. Discussion of audience**

Findings of this study will be of interest to administrators and faculty in HBCUs. Faculty at HBCUs can compare their levels of scholarly productivity and teaching load with those of faculty at other institutions. Administrators at HBCUs can use the information in institutional salary studies and ultimately to recommend salary structures that will assist their institutions in the recruitment of the most qualified faculty available. Think tanks and agencies like UNCF that are involved in fundraising for HBCUs can also use the results of the study.

**g. Appendices**

**Appendix I**

**Variables in the study**

<b>Variable Label</b>	<b>Variable Name</b>	<b>Description</b>
<b>Dependent Variable</b>		
Salary	Q66A	Amount of income from basic salary from institution
<b>Independent Variables</b>		
<b>Demographic Variables</b>		
Gender	Q71	Male, Female
Ethnicity	X03Q74	American Indian/Alaskan Native, Asian/Pacific Islander, Black/African American non-Hispanic, Hispanic White or Hispanic Black, White non Hispanic
Citizenship status	Q81	Not US citizen, US citizen
<b>Education variables</b>		
Highest degree	X01Q17	Doctorate, First-Professional, Master's, Bachelor's, Associates, Less than an associate's degree
Highest degree, years since receiving	X09Q17	
Highest degree, years since receiving, squared		Square of X09Q17
Highest degree granting institution, 1994 Carnegie I/II	X19Q17	Research I, Research II, Other institutions
<b>Employment variables</b>		
Faculty status	Q3	No faculty status, Had faculty status
Employment status	Q5	Full time, Part time
Principal activity	X01Q4	Teaching, Research, Administration, Other
Years held current job	X01Q9	Years held current job
Years held current job, squared		Square of X01Q9
Rank	Q10	Not applicable, Professor, Associate Professor, Assistant Professor, Instructor, Lecturer, Other title
Years since rank achieved	X03Q10	Years since rank achieved
Years since rank achieved, squared		Square of X03Q10

Union status	Q14	Not union member, union member
Tenure status	X01Q12	Tenured, Not tenured
Type of contract, length of unit	Q67	9- or 10- month contract, 11- or 12-month contract, Other
Years since began first faculty or instructional staff job	X02Q23	Years since began first faculty or instructional staff job
Years since began first faculty or instructional staff job, squared		Square of X02Q23
Teaching or research field	X06Q16	No teaching or research field, Agriculture and home economics, Business, Education, Engineering, Fine arts, Health sciences, Humanities, Natural sciences, Social sciences, All other programs
<b>Productivity variables</b>		
Average total hours per week worked	X01Q31	Average total hours per week worked
Percent time spent on instruction, undergraduate	Q32A	Percent time spent on instruction, undergraduate
Percent time spent on instruction, graduate/first-professional	Q32 B	Percent time spent on instruction, graduate/first-professional
Scholarly activity, any funded	Q55	Not funded, Funded
Percent time spent on research activities	Q32C	Percent time spent on research activities
Career articles, refereed journals	Q52AA	Career articles, refereed journals
Career articles, nonrefereed journals	Q52AB	Career articles, nonrefereed journals
Career book reviews, chapters, creative works	Q52AC	Career book reviews, chapters, creative works
Career books, textbooks, reports	Q52AD	Career books, textbooks, reports
Career presentations	Q52AE	Career presentations
Career exhibitions, performances	Q52AF	Career exhibitions, performances
Career patents, computer software	Q52AG	Career patents, computer software
Recent articles, refereed journals	Q52BA	Recent articles, refereed journals
Recent articles, nonrefereed journals	Q52BB	Recent articles, nonrefereed journals
Recent book reviews, chapters, creative works	Q52BC	Recent book reviews, chapters, creative works
Recent books, textbooks, reports	Q52BD	Recent books, textbooks, reports
Recent presentations	Q52BE	Recent presentations
Recent exhibitions, performances	Q52BF	Recent exhibitions, performances
Recent patents, computer software	Q52BG	Recent patents, computer software
<b>Institution variables</b>		
Region where institution located	X37Q0	New England, Mid East, Great Lakes, Plains, Southeast, Southwest, Rocky Mountains, Far West

Institution control	X101Q0	Public, Private not-for-profit
Total enrollment	X23Q0	Total enrollment
Endowment assets	Merged from IPEDS	Endowment assets
Endowment/student	Endowment assets/X23Q0	Endowment/student
Percentage of students receiving any financial aid	Merged from IPEDS	Percentage of students receiving any financial aid
Percentage of students receiving institutional grant aid	Merged from IPEDS	Percentage of students receiving institutional grant aid
Average amount of institutional grant aid	Merged from IPEDS	Average amount of institutional grant aid
Total liabilities	Merged from IPEDS	Total liabilities
Total assets	Merged from IPEDS	Total assets
Debt ratio	Total liabilities/ Total assets	Debt ratio

## Appendix II

Variable	Description
Salary	Amount of income from basic salary from institution
<u>Gender</u>	
Male	A dummy variable indicating Male (1=yes; 0=no)
Female is the reference category	
<u>Ethnicity</u>	
Black	A dummy variable indicating Black (1=yes; 0= no)
Asian	A dummy variable indicating Asian (1=yes; 0= no)
Other race	A dummy variable indicating Other race (1=yes; 0= no)
White is the reference category	
<u>Citizenship status</u>	
Citizen	A dummy variable indicating Citizen (1=yes; 0=no)
Non citizen is the reference category	
<u>Highest degree</u>	
Doctorate degree	A dummy variable indicating Doctorate degree (1=yes; 0= no)
Professional degree	A dummy variable indicating Professional degree (1=yes; 0= no)
Masters degree is the reference category	
<u>Highest degree granting institution</u>	
Research II institution	A dummy variable indicating Research II institution (1=yes; 0= no)
Other institutions	A dummy variable indicating other institutions (1=yes; 0= no)
Research I institution is the reference category	
Highest degree, years since receiving	A continuous variable measuring years since receiving highest degree
Quadratic term	A quadratic term of years since receiving highest degree
<u>Principal activity</u>	
Teaching	A dummy variable indicating teaching as principal activity (1=yes; 0= no)
Research	A dummy variable indicating research as principal activity (1=yes; 0= no)
Administration is the reference category	
Years held current job	A continuous variable measuring years held current job
Quadratic term	A quadratic term of Years held current job
Variable	Description
<u>Rank</u>	
Professor	A dummy variable indicating Professor

Associate Professor	(1=yes; 0=no) A dummy variable indicating Associate Professor
Assistant Professor is the reference category	(1=yes; 0=no)
Years since rank achieved	A continuous variable measuring years since rank achieved
Quadratic term	A quadratic term of Years since rank achieved
<u>Union status</u>	
Union member	A dummy variable indicating union member (1=yes; 0=no)
Non citizen is the reference category	
<u>Tenure status</u>	
Tenured	A dummy variable indicating tenured (1=yes; 0=no)
Not tenured is the reference category	
<u>Type of contract</u>	
9 or 10 month contract	A dummy variable indicating 9/10 month contract (1=yes; 0= no)
11/12 month contract is the reference category	
Years since began first faculty or instructional staff job	A continuous variable measuring Years since began first faculty or instructional staff job
Quadratic term	A quadratic term of years since began first faculty or instructional staff job
<u>Principal field of teaching</u>	
Agriculture	A dummy variable indicating Agriculture
Business	A dummy variable indicating Business
Education	A dummy variable indicating Education
Engineering	A dummy variable indicating Engineering
Fine Arts	A dummy variable indicating Fine Arts
Health Science	A dummy variable indicating Health Science
Natural Sciences	A dummy variable indicating Natural Sciences
Social Sciences	A dummy variable indicating Social Sciences
All other disciplines	A dummy variable indicating All other disciplines
Humanities is the reference category	

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Variable	Description
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Productivity

Average total hrs/week worked

Percent time spent on undergraduate education

Percent time spent on graduate education

Scholarly activity, any funded                      A dummy variable indicating scholarly activity funded (1=yes; 0=no)

Scholarly activity not funded is the reference category

Percent time spent on research activities

Career articles - refereed journals

Career articles-non refereed journals

Career book reviews/chapters/creative works

Career books/textbooks/reports

Career presentations

Career exhibitions/performances

Career patents/computer software

Recent articles refereed journals

Recent articles non refereed journals

Recent book reviews/chapters/creative works

Recent books/textbooks/reports

Recent presentations

Recent exhibitions/performances

Recent patents/computer software

Variable	Description
<u>Region</u>	
New England	A dummy variable indicating New England (1=yes; 0= no)
Mid East	A dummy variable indicating Mid East (1=yes; 0= no)
Great Lakes	A dummy variable indicating Great Lakes (1=yes; 0= no)
Plains	A dummy variable indicating Plains (1=yes; 0= no)
Southwest	A dummy variable indicating Southwest (1=yes; 0= no)
Rocky Mountains	A dummy variable indicating Rocky Mountains (1=yes; 0= no)
Far West	A dummy variable indicating Far West (1=yes; 0= no)
Southeast is the reference category	
<u>Institution control</u>	
Public	A dummy variable indicating public institution (1=yes; 0= no)
Private not-for-profit is the reference category	
Percentage of students receiving any financial aid	

Percentage of students receiving institutional grant aid

Average amount of institutional grant aid

Endowment per student

This variable will be set on 4 categories based on quartiles

Debt ratio

## 5. References

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## **6. Biographical Sketches**

### **Doctoral Candidate: Sri Sitharaman**

Mr. Sitharaman was a fellow at the AIR/NCES/NSF Summer Data Policy Institute in 2007. Mr. Sri Sitharaman has been working at Claflin University as the Director of Testing and Assessment Services since April 2002. He is responsible for planning, developing, implementing and managing a university-wide comprehensive testing and assessment program. Essential functions include evaluating, coordinating and administering existing testing and assessment services and generating relevant analytical reports and data for dissemination as necessary; developing/selecting new testing and assessment materials and instruments and ensuring testing assessment capabilities.

Mr. Sitharaman is in the final stages of completing a Ph.D in Higher Education Administration with a cognate in Educational Research at the University of South Carolina. The statistics courses completed include Nonparametric Statistical Methods, Technical Aspects of Testing and Measurement, Design and Analysis of Experiments, Correlation and Multivariate Methods. He is well versed in SPSS, SAS and has the statistical skills to complete this project.

He has access to the NSOPF:2004 restricted data set at Claflin University obtained from the U.S. Department of Education.

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Director of Testing & Assessment Services  
Claflin University  
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- Education**      **Doctor of Philosophy** Expected date of graduation May/August 2008  
Concentration: Higher Education Administration    Cognate: Educational Research  
University of South Carolina, Columbia, SC.  
**Dissertation title:** Analysis of Faculty Salaries at Historically Black Colleges and Universities
- Masters in Business Administration**  
Concentration: Finance and Operations  
University of South Carolina, Columbia, SC.
- Bachelor of Technology**  
Concentration: Chemical Engineering  
Indian Institute of Technology, Madras, India.
- Statistics**      Technical Aspects of Testing & Measurement      Nonparametric Statistics  
**Classes**      Constructing Cognitive Instruments      Design & Analysis of Experiments  
**Completed**    Design & Analysis of Educational Surveys      Qualitative Research in Education  
                         Correlation & Multivariate Research Methods      Educational Measurement
- Teaching Experience**      Introduction to Social Statistics, SOCI 309 – Fall 2006, Spring 2007, Fall 2007, Spring 2008  
                         Total Quality Management, MGMT 408 – Spring 2008  
                         Survey of Economics, ECON 200 – Spring 2006
- Certificates**      Association for Institutional Research: Overview of IPEDS, August 2007
- Association of Institutional Research/ Institute of Education Sciences/National Center for Education Statistics/National Science Foundation: Summer Data Policy Institute, June 2007.
- U.S. Department of Education/Institute of Education Sciences/National Center for Education Statistics: Institutional Economic Impact Study, December 2002.
- Grants**      Measuring Student Learning Gains (2007). Claflin University, Center for Excellence, Summer Research Grant. Principal Investigator.
- Association for Institutional Research Fellowship for NCES/NSF Summer Data Policy Institute, June 2007.
- Publication**      Reynolds, K. C., and Sitharaman, S. "Business Education in Cohorts: Does Familiarity Breed Learning?" Journal of Business and Training Education 9(Fall 2000): 29-44. (ED 461 738)
- Presentations**      Sitharaman, S. (February 2007). Leadership development at Claflin University. National Association of Student Affairs Professionals. Savannah, GA.
- Reynolds, K. C., and Sitharaman, S. ( February 1997). Motivating factors for freshman classroom participation. Freshman Year Experience Conference, Columbia, SC.

**Membership in  
Professional  
Associations**

Association for Institutional Research

**Work  
Experience**

**Director of Testing & Assessment Services**

Claflin University, Orangeburg, SC.  
April 2002 – Current

Responsible for planning, developing, implementing and managing a university-wide comprehensive testing and assessment program. Essential functions include evaluating, coordinating, and administering existing testing and assessment services and generating relevant analytical reports and data for dissemination as necessary; developing/selecting new testing and assessment materials and instruments and ensuring testing assessment capabilities; controlling test security and ensuring measurement validity; planning and implementing the university Testing and Assessment Center and monitoring its operational procedures to ensure the integrity and accountability of the Center; developing and disseminating materials and resources on testing and assessment services and conducting workshops as necessary.

**Research Assistant**

Division of Student and Alumni Services, University of South Carolina, Columbia, SC.  
June 2000 – March 2002

Analyzed Student Interest survey to improve campus-programming activities.  
Analyzed CIRP Freshman survey results for comparison on a longitudinal study.  
Analyzed Junior and Senior Student Survey about their experiences at USC, their satisfaction with different aspects of their major, and services and programs offered.  
Analyzed Alumni Satisfaction Survey to increase alumni involvement.  
Analyzed Move in Survey to study awareness of modern technology among different student groups and especially Freshman, for the current year and comparison basis for a longitudinal study.  
Analyzed First Year Reading Experience Evaluation Survey of student participants and non-participants, and faculty facilitator.  
Analyzed College-Bound High School Graduates Migration Study Survey for enrollment management.

**Research Assistant**

Office of Assessment, South Carolina Department of Education, Columbia, SC.  
June 1999 – May 2000

Assisted in data analysis to track performance of students in the Metropolitan Achievement Tests, Seventh Edition and Palmetto Achievement Challenge Tests.  
Reviewed South Carolina Palmetto Achievement Challenge Tests mathematics and English Field Test items for gender and ethnicity bias.  
Assisted in sample selection for the statewide testing programs.

**Research Assistant**

Office of Research and Consulting, University of South Carolina, Columbia, SC.  
January 1997 - May 1999

Assisted in the conduct of faculty course evaluations and consultation activities to support research by faculty and doctoral students.  
Provided data analysis support to more than twenty five doctoral students for their dissertation and faculty for research publications.

**Research Assistant**

College of Education, University of South Carolina, Columbia, SC.  
July 1996 - December 1996

Designed a survey to measure differences in learning outcomes between students in cohort and traditional programs. Analyzed the data from students across the country in business administration, public administration, and education masters programs. Designed a survey to measure the motivating factors for freshmen classroom participation. Analyzed the data from students and faculty from different campuses across the country.

**Summer Intern**

South Carolina Commission on Higher Education, Columbia, SC.  
June 1996 - August 1996

Assisted in data analysis to measure the effectiveness of the Higher Education Awareness Program conducted by the Commission in South Carolina high schools.

**Tutor**

Academic Enrichment Center, University of South Carolina, Columbia, SC.  
August 1993 - May 1996

Responsible for tutoring student athletes. Subjects tutored were economics, statistics, algebra, calculus, marketing, and computer programming.

**Consultant**

Cooper Power Tools, Columbia, SC.  
Summer 1991

Analyzed Bill of materials to identify common parts across various models of power tools to reduce inventory.

**Senior Sales Engineer**

Moorco (India) Limited, Madras, India.  
July 1987 - July 1990

Responsible for regional sales of safety relief valves. Supervised sales engineers and service engineers.

**Marketing Engineer**

Moorco (India) Limited, Madras, India.  
July 1983 - June 1987

Responsible for sizing and selecting safety relief valves for different applications. Coordinated with overseas affiliates for technology transfer and imported raw materials. Developed training manuals for sales engineers and made presentations to consultants, and end users.

**References**

Available on request

**Faculty Dissertation Director: Julie Rotholz**

Dr. Julie Neururer Rotholz is a Clinical Assistant Professor at the University of South Carolina. Recipient of the Association for the Study of Higher Education's national Dissertation Award in 1991, Dr. Rotholz has served as the director of 12 doctoral dissertations and two masters theses in her tenure at the University of South Carolina. She has taught research methods at the Pennsylvania State University after completing her doctoral degree in Educational Administration from the University of Kansas in 1991.

## 7. Budget

### Dissertation Fellowship Project Title:

Analysis of Faculty Salaries at Historically Black Colleges and Universities

Personnel		
Doctoral Student: 8 months @ 2,000/month		\$16,000
Travel		\$2,500
AIR 2008 Forum, Seattle, WA		
ASHE 2008 Conference, Jacksonville, FL		
(Hotel, airfare, registration, etc.)		
Other Direct Costs		
Materials & Supplies		\$500
Publication costs/Documentation/Dissemination		\$1,000
<b>TOTAL AMOUNT OF AWARD</b>		<b>\$20,000</b>

### Budget explanation

Personnel expenses are calculated based on working approximately twenty hours per week completing my dissertation and writing articles for publications. The salary is charged to cover the tuition paid at the University of South Carolina. Materials and Supplies include books and journals not available at the library. Publication costs/Documentation/Dissemination include copies of handouts, presentation slides, and materials for publication.

## 8. Current and Pending Support

Mr. Sitharaman does not have any current or pending support for this or other projects.

## 9. Facilities, Equipment and Other Resources

Mr. Sitharaman has access to the restricted NSOPF:2004 data set from the U.S. Department of Education through Claflin University. All hardware to work on this project are available at Claflin University.

## 10. Special Information and Supplementary Documentation

Original letter of recommendation from Faculty Dissertation Director will be faxed separately.

January 11, 2008

To my colleagues at AIR:

I am writing this letter of support for my doctoral student, Mr. Sri Sitharaman, who is completing his studies here in Higher Education Administration in the Department of Educational Leadership and Policies. He is currently conducting his dissertation research; his work is an analysis of the faculty salaries at Historically Black colleges and universities and uses a nation-wide database from which to draw his conclusions. His finding may well provide important insights into salary discrepancies and inform policy makers, scholars, and post-secondary education faculty of the current state of affairs regarding faculties' diverse expectations, working conditions, and compensation.

Mr. Sitharaman is attempting to complete his work during 2008. He has made excellent progress thus far, completing the first three chapters of his dissertation. He is an excellent writer and statistician; he is currently employed at Claflin University as an institutional researcher. Sri deals in large sets often and teaches statistics to students there. Given the significance of his research topic, his writing ability, and his skills in research design and data analysis, I have every confidence that his work will result in publishable results. He is certainly motivated to and capable of making significant contributions to the literature on institutional finance, faculty compensation, and the variety of factors which influence the allocation of institutional budgets to faculty salaries. Most significantly, his work focuses on Historically Black Colleges and Universities, a sorely under-researched sector of American higher education.

I recommend Mr.Sitharaman's project for your serious consideration for financial and organizational support. His work has required significant travel and expenses and any assistance you could provide would be appreciated by both me as his chair and Mr.Sitharaman.

If I can provide additional information or answer any questions you may have, please don't hesitate to let me know. I may be contacted at [jrotholz@gwm.sc.edu](mailto:jrotholz@gwm.sc.edu) or by telephone at (803) 777-2831.

Thanks for your careful attention and assistance.

Julie Rotholz, Ph.D.  
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