

2001 AIR DISSERTATION GRANT PROPOSAL

**Moving Forward Or Standing Still?
Progress in Achieving Wage Equity for Women Faculty in the 1990s**

Databases: NSOPF 1993, 1999

Grant Amount Requested: \$14,000

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**LETTER OF RECOMMENDATION
FROM FACULTY DISSERTATION DIRECTOR**

January 8, 2001

AIR Dissertation Support Grant Committee:

It is my pleasure to recommend Christine Keller-Wolff to receive the AIR Dissertation Support Grant. I have no doubt that Christine is the student you had in mind when you created such a grant, in that she possesses excellent research skills, an exceptional understanding of higher education policy issues, and is planning a study, utilizing a national data base, that will have important policy implications for the field. Christine's proposed dissertation will utilize NSOPF 1993 and 1999 to examine patterns of wage disparities as they pertain to gender, human capital theory, and structural theory. Her proposed dissertation is methodologically sophisticated and builds appropriately upon the existing literature in the field. Of particular note, Christine's dissertation promises to test existing theories as well as lead to potential national policy implications in the fight for wage equity.

As Christine's dissertation advisor in the higher education Ph.D. program at the University of Kansas (KU), as her instructor in several courses, and her research colleague on a number of projects, I feel confident in recommending Christine for this important award. Christine is one of the best students I have ever had the pleasure of working with. She is quick, bright, and intellectually engaged. Christine came to our program in 1996, having already earned an MBA and an undergraduate degree in marketing research. She attended the program full-time, volunteering her considerable research expertise to the faculty in the program. In particular, she worked on two research projects with me, both which were subsequently published in referred journals. The first project utilized NELS '88 data to make an argument about the importance of disaggregating race and ethnicity when studying academic achievement¹. This project utilized ordinary least squares regression and multivariate techniques. The second project involved assessing the impact of a freshman summer transition program, utilizing both qualitative and quantitative techniques.² Christine played a substantial role in collecting and analyzing the data for this project.

Christine earned all A's in her academic work and was one of the best students in the class. She is an excellent writer, is extremely well organized, and always added a lot to class discussions. Her academic work led to her winning a School of Education graduate scholarship.

¹ Baker, B., Keller-Wolff, C., & Wolf-Wendel, L. E. (2000). Two steps forward, one step back: Race/ethnicity and student achievement in education policy research. *Educational Policy* 14(4), 511-529.

² Wolf-Wendel, L. E., Tuttle, K., & Keller-Wolff, C. (2000). Assessment of a freshman summer transition program in an open-admissions institution. *The Journal of the Freshman Year Experience and Students in Transition*, 11(2), 7-32.

Early on, it was clear that Christine possessed exceptional skill in quantitative analysis. She took more than the required research classes – taking advanced courses in both qualitative research as well as in statistics. In particular, Christine took two courses in multivariate analysis and mastered the content in both. In addition, Christine was accepted to the AIR Fellows program during the summer of 2000 where she was exposed to weighted samples and the use of NCES data sets.

In addition to her research skill abilities, Christine also is keenly aware of higher education policy issues. She took numerous courses in our program related to policy and participated in the Graduate Student Policy Seminars sponsored by the Association for the Study of Higher Education and the American Educational Research Association, Division J. These experiences helped Christine to focus her research interests on an important policy issue – that of wage differences based on gender.

The program was not alone in recognizing Christine’s analytical abilities. Specifically, after working as a student research assistant in KU’s Office of Institutional Research (OIRP), the Director of OIRP, Deb Teeter, created a full-time position for Christine. In her work at OIRP, Christine has continued to hone her statistical and analytical skills and has become a valued employee of the university. Christine’s work in OIRP involves substantial data collection, analysis, and reporting. Among other tasks, Christine is responsible for coordinating the data collection for the university-wide Undergraduate Placement Survey. In addition, she plays a major role in compiling and analyzing data for the Kansas Board of Regents on Academic Program Review. Directly related to her dissertation, Christine also works on KU’s Gender Equity Salary Studies.

I want to underscore how well suited your dissertation grant is for Christine. Christine will defend her dissertation proposal this spring and, assuming the NSOPF 1999 data is available as scheduled, she will be in line to graduate by May 2002. It should be noted that while I possess quantitative skills, another faculty member, Bruce Baker, will also play a major role in working with Christine on the methodological aspects of her dissertation. Dr. Baker’s research focuses on education policy, economics, and quantitative methods. He also has significant experience utilizing national data sets. We are enclosing a biographical sketch of Dr. Baker along with that for Christine and myself.

I have no doubt that Christine will succeed in any endeavor she undertakes. If you have any questions, please do not hesitate to contact me at (785) 864-9722 or by e-mail at lwolf@ukans.edu.

Most Sincerely,

Lisa E. Wolf-Wendel
Associate Professor

PROJECT SUMMARY

This study will explore the extent to which the relative earnings of men and women faculty members have changed since the early 1990s. Using data from two national faculty surveys (NSOPF 1993 and NSOPF 1999), the project will apply multivariate statistical techniques to examine whether or not the wage differential narrowed between men and women full time faculty members between 1993 and 1999, after controlling for human capital attributes such as educational attainment and experience, as well as structural characteristics such as discipline and type of organization. The aggregate level of pay disparity between men and women will be examined, as well as how the level of pay disparity varies with factors such as age, experience, and rank.

Although a considerable body of research examines salary difference between men and women faculty, explanations for the reasons behind a significant portion of the disparity continue to be elusive. It is believed that this study will provide administrators, faculty, and institutional researchers with additional knowledge and tools to continue the work toward salary equity. New insights are particularly important, as the aggregate unexplained wage gap has remained unchanged since the 1970s. The proposed study builds on research (Perna, 2000; Toutkoushian, 1998b) that suggests that disaggregation by age, experience, and rank may provide valuable information on salary patterns within groups, and offers evidence that the status of some women in higher education may be gradually improving.

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PROJECT DESCRIPTION

Statement Of Problem And Variables

This study will explore the extent to which the relative earnings of men and women faculty members have changed since the early 1990s. More specifically, it will examine whether or not the wage differential narrowed between men and women full time faculty members between 1993 and 1999, after controlling for human capital attributes such as educational attainment and experience, as well as structural characteristics such as discipline and type of organization. This study will utilize data from two national faculty surveys conducted by the National Center for Education Statistics in 1993 and 1999 (NSOPF 1993 and NSOPF 1999).

The analysis focuses on both the aggregate level of pay disparity between men and women, as well as how the level of pay disparity varies with factors such as age, experience, and rank. This study builds on previous research by scholars such as Barbezat (1987, 1988, 1991), Bellas (1993, 1994, 1997), and Smart (1991). In particular, this study is substantially influenced by studies conducted by Toutkoushian (1998b, 1999) and Perna (2000), whose findings suggest that disaggregation by age, experience, and rank may provide valuable information on salary patterns within groups, and offer evidence that the status of some women in higher education is gradually improving. Specifically, the proposed research will examine the following questions.

1. Since the early 1990s, how have the characteristics of women faculty changed as compared with the characteristics of men faculty? In particular, have women achieved more parity with men in the areas of educational attainment, academic experience, academic rank, research productivity, and institution type?
2. How do the salaries of women faculty compare with the salaries of men faculty after taking into account differences in human capital investment, productivity, and structural characteristics? Has the aggregate pay disparity between men's and women's salaries narrowed since the early 1990s?
3. How do gender differences in salaries vary by academic rank, level of experience, and age? In particular, does the level of pay disparity between men and women faculty differ between younger faculty and older faculty members? How does the level of pay disparity differ based on the interaction between experience and academic rank?

Proposal of Work

Connection to Present State of Knowledge

Since the passage of legislation designed to ensure the equal treatment of workers in the 1960s and 1970s, numerous studies from both the private sector and academic labor markets have shown that women earn lower wages than men, even after controlling for human capital characteristics such as education, experience and training (see Barbezat, 1988, 1991; Bellas, 1993; Jusenius & Scheffler, 1981; Toutkoushian, 1998a; Rhee, 1997; Smart, 1991).

Studies of the private sector show that during the 1980s, progress was made in reducing the level of pay disparity between men and women in the general labor market (Smith & Ward, 1989; Murphy & Welch, 1993; Gunderson, 1989). While in the academic labor market, the results of studies examining wage differences between men and women have been inconsistent. Recent studies of single institutions or for particular disciplines across several institutions report small or no pay disparities between men and women (see Balzer et al., 1996). In contrast, national studies of faculty salaries have consistently shown that, on average, women are paid less than men with similar characteristics. Further, the level of pay disparity has not changed significantly since the 1970s, despite greater proportions of women employed at higher education institutions, more women entering doctoral programs, and efforts by institutions to design more equitable promotion and salary structures (Barbezat, 1991; Toutkoushian, 1998b).

Using data from several national studies and controlling for standard variables, Barbezat (1991) found that women in 1989 earned about seven percent less than men; this differential had not substantially changed since the 1970s. Barbezat concluded that although affirmative action in higher education had played an important role in reducing faculty salary gender differences between 1968 and 1977, the impact on had become diluted over time, especially between 1977

and 1984. More recent studies by Toutkoushian (1998b) and Perna (2000) applied Barbezat's model to the 1993 NSOPF data and found that the unexplained wage gap between men and women faculty remained steady at 7 to 10 percent.

Due to space constraints, the remainder of this overview concentrates on the findings of three studies that most directly influence the design of this research project: Toutkoushian (1998b), Toutkoushian, (1999) and Perna (2000). However, it should be noted that many other scholars have made significant contributions to the current knowledge on the relationship between faculty salaries and gender.

Toutkoushian (1999) examined the status of women in the academic labor market, and documented the progress that had been made in achieving equity over the last 30 years. Based on an extensive review of the extant literature and his own empirical analyses, Toutkoushian concluded that although women have made substantial strides in entering the academic labor market, there remains an unexplained gap between men and women in terms of their earnings and career progression.

Toutkoushian (1999) found evidence that once women and men became faculty members, they engage in the different activities and are not rewarded in the same manner despite similar qualifications. Toutkoushian noted from his own and other research (Bellas & Toutkoushian, 1999) that men appear to spend more time than women in their job as faculty members and devote more of that time to research. It is not surprising, therefore, that the preponderance of the studies that Toutkoushian examined concluded that men seem to have a greater research output than women. As issues of promotion and tenure are closely tied to issues of research productivity and time allocation, Toutkoushian (1999) used data from NSOPF 1993 to estimate several models explaining faculty rank/tenure status as a function of commonly used

human capital and structural factors such as highest degree, experience, institution type, and journal articles. However, after taking into account such factors, he found that women were still less likely than men to be among the tenured faculty, especially in the full professor rank. Interesting, he found no evidence of gender disparity at the associate professor rank.

These results appear to indicate that women faculty still lag behind men faculty in regard to many of the factors that directly impact wages and promotion; however, a separate study by Toutkoushian (1998b) using the 1993 NSOPF data provides a more positive outlook. Toutkoushian (1998b) hypothesized that the level of pay disparity could vary among particular groups of faculty and disaggregated the data based on type of institution, the field of study, and age. Results indicated that the unexplained wage gap between men and women faculty did not appear to be driven by pay disparities in a particular institution type or in a particular field of study. However, Toutkoushian's analysis revealed that the unexplained wage gap for younger women faculty was much lower than for older women faculty members – the wage differential for younger women was about one-third of that faced by older women faculty members. Further, he found no compelling evidence to suggest that the level of pay disparity for the younger women faculty would increase with age (Toutkoushian, 1998b). Toutkoushian (1998b) concluded that such results suggest that some progress is being made in narrowing the pay disparity between men and women faculty members, even though the disparity at the aggregate level has not significantly changed since the 1970s. This implies that as faculty progress through the system, the unexplained wage gap between men and women may eventually decrease.

Perna (2000) also found differences in the level of pay disparity between women and men faculty by disaggregating the data by rank and experience. Using the NSOFP 1993 data, Perna found the smallest wage differential among assistant professors with 1 to 2 years of experience,

and the largest wage differential among associate professors with 13 to 20 years of experience (Perna, 2000). Further, her results revealed a pattern of gender differences in faculty salaries. Among the faculty with the least experience at each rank, the lower salaries for women appeared to be attributable to differences between men and women faculty in levels of human capital, research productivity, and by the segregation of women in institutions and disciplines with lower prestige. However, among the faculty with greater years of experience at each rank, the salary differences were only partially explained by these variables.

Taken together, the studies by Toutkoushian and Perna suggest that the wage disparities between men and women faculty are more dynamic and complex than the seemingly stagnant 7 to 10 percent aggregate wage gap would indicate. What type of interaction is taking place between age, academic rank, and experience among men and women faculty members, and how does that interaction impact wages and salaries? Is the explanation as simple as younger women faculty members are receiving more equitable treatment than their older counterparts? Or, do the current institutional reward structures put women faculty members at a disadvantage as they progress within rank? With the availability of new faculty data from NSOPF 1999, this study seeks to gain new insights into the relationship between age, academic rank, and experience and provide new information to answer such questions.

Theoretical Framework

Two theories have commonly been used to explain differences in faculty salaries – human capital theory and structural theory. Human capital theory focuses on the characteristics of individual workers, while structural theory focuses on the attributes of the organizations in which individuals are employed.

Economic theory of human capital

According to the economic theory of human capital, employment status is determined by a combination of an individual's productivity, and the supply of and demand for workers with similar levels and types of training and expertise (Perna, 2000). Individuals who invest in such things as education and job training can expect greater returns on their investment in the form of higher earnings. An individual's investment in human capital increases one's value to an employer on the assumption that greater human capital yields higher productivity (Moore, 1993). Further, differences in productivity are expected to reflect differences in the investments that individuals have made in their personal development, such as the quality and quantity of their education, the amount of their on-the-job training, their geographic mobility, and their emotional and physical health (Becker, 1962; Schultz 1961 as cited in Perna, 2000).

From a human capital perspective, faculty salaries, tenure, and rank should be determined by an individual's qualifications, such as level of educational attainment, length of service and experience, scholarly productivity, amount of administrative responsibilities, and teaching performance (Perna, 2000). Faculty salaries, particularly within a discipline, should reflect faculty productivity, or the quantity and quality of research, teaching, service, and administrative activities. Disparities in the wages among faculty across disciplines should be attributable to differences in the supply of and demand for faculty trained in each discipline.

The economic literature tends to group the determinants of the wage gap between men and women into two broad categories (Terrell, 1992). One includes the differences in the attributes of men and women, or the amount of human capital possessed (i.e., education, training, experience) by an individual. The second determinant is overt labor market discrimination, which can be defined as "different payment rules for men and women with the same productivity

characteristics” or “valuation in the labor market of personal and characteristics of the workers that are unrelated to productivity” (Ehrenberg and Smith 1991 as cited in Terrell, 1992, p. 2).

Applying these definitions, discrimination occurs when the salary of women is less than the salary she would have earned if human capital were valued the same for men and women (Moore, 1993). There are two different salary structures – one for men and one for women – and each salary structure rewards human capital investments differently. If there were no discrimination, then the wage structure for men would also apply to women and vice versa.

Human capital theory can be criticized on several grounds. For colleges and universities, private sector theories of supply and demand might be too simplistic because of the overlapping markets that operate in educational systems – i.e., an individual’s prospects may depend on the behavior of participants in related labor markets outside of one’s discipline, institution, or academia itself (Moore & Amey, 1993).

Sociologists challenge human capital theory for ignoring institutional structures and occupation. Although individual ability, skill, and personal characteristics are important in determining one’s success or failure in an organization, cultures and philosophies vary among organizational settings, and institutional structures of occupation and work may contribute to the persistence of inequality among workers (Youn, 1988). Further, human capital theory does not adequately explain the lower returns to human capital investments for women and minorities (Breneman & Youn, 1988).

Structural view of labor markets

As opposed to the individualistic view of human capital theory, a structural view of the labor market emphasizes the attributes of the organizations with which individuals are connected. Structural approaches to the academic labor market focus on the characteristics of

the colleges and universities in which faculty train and work, including financial resources, student enrollment, the tenure system, and collective bargaining agreements, as well as the academic field they studied (Perna, 2000). Given that salaries, tenure, and rank are influenced by variables such as type of institution and academic field, faculty who work in the same field across similar types of institutions with comparable human capital factors should receive equal pay (Perna, 2000).

From a structural perspective, labor market inequalities can be explained by organizational attributes, including the tendency of organizations to structure positions, sort employees, and institutionalize rewards (Youn, 1988). Youn (1992) identified three forms of segmentation in the academic labor market: (1) segmentation by academic discipline, (2) segmentation by institutionalized job task (primarily research or primarily teaching), and (3) segmentation by job status (full or part time). Movement across each of these segments is restricted. As a result, competition among faculty in different segments is limited, allowing inequities to persist among faculty in different segments. For example, the same pool of faculty does not compete for a tenured research position in the engineering department as well as a part time adjunct position in the art history department. Therefore, there is no pressure to equalize salary levels between engineering and art history.

Structural theorists expect that gender differences in employment outcomes are primarily due to the segregation of women in institutions, academic disciplines, and work roles that are perceived to have lower prestige or value (Smart, 1991). In fact, the average salaries of faculty at institutions and in disciplines with higher proportions of women have been found to be lower than the average salaries of faculty in institutions and disciplines with smaller proportions of women (Barbezat, 1988; Smart, 1991; Bellas, 1994, 1997).

Structural theory can be criticized for not taking into account individual characteristics, attributes, and skills. However, as explained in the following methods and procedures section, structural theory and human capital theory can be used together to provide a more complete picture of individual workers and the context in which they operate.

Analysis Methods and Procedures

The exact methods and procedures that will be utilized in this study are still being examined, developed, and refined. The selection of the variables, the construction of the model, and the choice of statistical methods are tightly linked to both the reliability and validity of the findings, as well as the ultimate practical value of the research. The model (or models) used in this study should be consistent with models from previous research so that current knowledge can be built upon and enhanced. At the same time, new techniques with the potential to provide additional insights should be examined. Below is an outline of the methods and procedures currently under consideration.

Data Source

The 1993 and 1999 National Studies of Postsecondary Faculty (NSOPF 1993, 1999) are well suited to address the research questions in this study. Advantages of using the NSOPF data include a high response rate and a large, nationally representative sample. One limitation is that the survey data are cross-sectional rather than longitudinal, so it is not possible to track individual faculty members over time. The expected sample for this study will be individuals at four-year institutions with faculty status, employed full time with regular appointments and some instructional duties, and whose principal activity is teaching, research, or administration.

Method of Analysis

Descriptive statistics. Analysis of variance and cross tabulations will be used to compare the characteristics of men and women faculty members and differences in average salaries.

Multiple regression analyses. The most frequently used technique in salary studies is multiple regression analysis. The advantage of using regression is the ability to study the effect of gender on salary independent of other factors such as work experience or institutional type. Regression has been used in national research studies, at individual institutions, and to provide evidence in court cases regarding employment discrimination. In addition, the studies by Perna (2000) and Toutkoushian (1998b) utilize multiple regression techniques.

Multilevel structural equation modeling. One of the assumptions of traditional statistical techniques such as multiple regression is that the data are obtained from independent observations, so the errors are independent. With nested designs, such as the NSOPF data, this assumption is typically violated and a researcher may underestimate the sample variance, resulting in a greater chance of inappropriately rejecting the null hypothesis. A technique called multilevel structural equation modeling can be used to address the issue of multilevel data, but is rarely utilized in research on faculty wage equity. “The literature does not indicate the use of this method in higher education contexts. Even the more well-established techniques such as hierarchical linear modeling are rarely found in research on colleges and universities” (Stapleton & Hancock, 2000, p. 2). One exception is a study of gender equity in promotion and salary by Smart (1991), who utilized causal modeling and structural equation modeling

The use of structural equation models may provide additional insight into the relationship between gender and salary. As noted by Moore (1993), using multiple techniques can increase the researcher’s confidence in the results when the findings are confirmed by more than one

method, or may provide new insights when results differ. For instance, Smart's (1991) model allowed him to isolate the indirect, as well as the direct, effects of gender on salary. He concluded that the magnitude of gender disparities in salaries could be greater than previously assumed due to the indirect effects of gender that were often not considered in salary models.

Model and Variables

According to Toutkoushian (2000) a universally accepted model specification for explaining faculty salaries does not exist. Fortunately, as Moore (1993) points out, a perfect model is it not necessary to gain insight into the salary decision process. However, Moore (1993) cautions that a model should be supported by an underlying rationale or the outcome might become a confusing array of conflicting results. To minimize the chances of such an outcome, the independent variables in this study will be grouped into blocks based on the tenets of human capital theory and structural theory, as well as their importance in helping explain gender salary differences documented in the literature (see especially Hagedorn, 1998; Smart, 1991; Perna, 2000; Toutkoushian, 1998b; Toutkoushian, 1998c). The natural logarithm of salary will be used as the dependent variable. As suggested Pedhazur (1997), blocks of more controversial factors can be added one at a time to isolate their impact on other variables (i.e., issues of suppression and multicollinearity) and the overall model (i.e, how do the coefficients for gender change? How much of variation in salary is explained by a particular model?). In addition to the aggregate model, separate analyses will be conducted for the data broken out by age, experience, and academic rank. The proposed variable blocks are listed below with examples of potential variables to be included within each block.

- **Demographic block:** gender, race, marital status, age, US citizenship, parental status.

- **Human capital block:** years in higher education, seniority, highest degree, experience and experience squared or an experience factor, (composite of age, number of years since highest degree, number of years in current position, number of years in current rank).
- **Institution and discipline segregation factors:** Biglan's (Biglan, 1973) classification of disciplines, Carnegie classification of institutions, institutional control, percent of men (or women) in field, geographic region.
- **Work role segregation factors:** formal classroom instruction, teaching preparation, research and/or comparable scholarly activities, administrative service, consulting hours, number of professional writings published over a two year period, career patents.
- **Academic status block:** rank

Dissemination Plan and Project Timeline

The proposer is currently working with the dissertation director and methodologist toward completion of the dissertation proposal. The objective is to have the dissertation proposal, which includes first three chapters of the dissertation (introduction, review of the literature, methodology), defended and approved by May 2001. The AIR dissertation support grant would allow the proposer to reduce her work hours to half time in order to complete the preponderance of the data analyses during the summer of 2001.

This timeline gives the proposer the opportunity to participate in one of two higher education conferences in late fall of 2001 or early spring of 2002. Participation in the Association for the Study of Higher Education conference in November, or the American Educational Research Association conference in April, would be the first step in the dissemination plan. The chosen format would be a roundtable discussion in which researchers have the opportunity to present preliminary research findings for discussion and review. Such a session would allow the proposer to communicate initial findings to an audience of higher education scholars, as well as receive feedback to assist in the completion of the study by late spring of 2002. As required by the grant, the findings would also be presented to the institutional research community at the Association for Institutional Research Conference in June of 2002. A

final project report will be submitted the AIR office thirty days of the expiration of the grant, or approximately June 30, 2002.

After the dissertation has been defended and approved by the higher education faculty at the University of Kansas, the manuscript would be prepared for submission to an appropriate refereed journal such as the *Journal of Higher Education*, *Research in Higher Education*, or the *Economics of Education Review*. The planned completion date for the research is summer of 2002, and with the submission to an appropriate journal occurring during fall of 2002.

Plans for further dissemination include submitting proposal to present the finding at the regional institutional research organization (MidAir) in fall of 2002. Other dissemination ideas include sending summaries of the research findings to scholars interested in salary equity, and posting the paper on a personal website and negotiating links with appropriate higher education associations or organizations.

Note that the timeline outlined above is necessarily dependent on the timely release of the NSOPF 1999 in Spring 2001. As of the writing of this proposal, the NCES staff could not be more specific than the Spring 2001 scheduled release date.

Description Of Policy Relevance

A recent newsletter from the Association of American Colleges and Universities, describes salary-related issues as one of the “most vexing aspects of working life.” The opening article commented further, “Fair compensation does not happen automatically. It occurs because people work hard to ensure it. We must continue to investigate why salary inequities persist. We can’t sit back and assume time will even the score” (On Campus With Women, 1999). Issues of fair compensation are particularly relevant at a time when demographic predictions suggest that the US workforce will become increasingly diverse. (Aguirre Jr., 2000)

It is believed that this study will provide both administrators and faculty with additional knowledge and tools to continue the work toward salary equity. New insights are particularly important, as the aggregate unexplained wage gap has remained unchanged since the 1970s. For instance, confirming that younger faculty women experience less of a wage gap than their older colleagues, and that this small wage gap continues to be present as the women move up in rank, would indicate that current efforts to create “woman-friendly” hiring policies, fair compensation systems, and equitable promotion and tenure procedures are having the desired effect. On the other hand, identifying patterns of wage discrepancies among different groups of faculty members would also be valuable. If the differences in pay between men and women faculty become greater the longer a faculty member is in rank, it may indicate that appropriate hiring procedures are in place, but promotion and merit systems need additional scrutiny.

Why are issues of salary equity important? From a faculty perspective, inequities in salaries that persist over the course of women faculty members’ careers not only have an impact on current wages and standards of living, but they also have cumulative effects that influence the size of the faculty members’ retirement annuity. In terms of the workplace environment and culture, Aguirre Jr. (2000) found that women faculty are less satisfied than their male colleagues because women faculty perceive themselves to be the victims of a biased reward system that questions their legitimacy as academics and limits their access to institutional rewards and resources. From a liability standpoint, wage anomalies that cannot be explained are increasingly view as unacceptable by both faculty and courts (Carlin & Rooney, 2000). As some universities are discovering, employment discrimination suits are both costly and time-consuming.

Innovative Concepts Of Project

A considerable body of research examines salary difference between men and women faculty. However, explanations for the reasons behind the disparity continue to be elusive, and the aggregate unexplained wage gap between men and women faculty remains stagnant at 7 to 10 percent. The proposed study builds on research (Perna, 2000; Toutkoushian, 1998b) that lays the foundation for new insights into an old puzzle. Certainly, the new survey data from NSOPF 1999 will supply additional information. The disaggregation of the data by age, rank, and experience to systematically look for wage patterns within particular groups has the potential to provide additional details in the search for an explanation. The use of structural equation modeling, a statistical procedure seldom applied to the study of wage disparities, may delineate relationships between variables never before considered.

Audience For Project

As alluded to in the section on policy relevance, the audience for this study includes both scholars and practitioners in higher education. More specifically, administrators and faculty involved in hiring and promotion situations may find the results pertinent to future salary decisions at their particular institution. Institutional researchers who conduct salary studies may be able to use the model specifications to better explain wage patterns at their institution, or use the results to put their institution's data into a national context. Finally, it is hoped that scholars who study equity issues from higher education, economics, or sociology will be able to utilize the results to inform their own research and continue to advance the knowledge in the field.

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- Jusenius, C. L., & Scheffler, R. M. (1981). Earnings differential among academic economists: empirical evidence on race and sex. *Journal of Economics and Business*, 33(2), 88-96.
- Moore, K. M., & Amey, M. J. (1993). *Making sense of the dollars: The costs and uses of faculty compensation* (ASHE-ERIC Higher Education Report 5). Washington DC: The George Washington University, School of Education and Human Development.
- Moore, N. (1993). Faculty salary equity: Issues in regression model selection. *Research in Higher Education*, 34(1), 107-126.
- Murphy, K. M., & Welch, F. (1993). Inequality and relative wage. *The American Economic Review*, 83(2), 104-109.
- Pedhazur, E. J. (1997). *Multiple Regression in Behavioral Research*. (3rd ed.). New York: Holt, Rinehard, and Winston.

- Perna, L. W. (2000, April). *Sex differences in faculty salaries: A cohort analysis*. Paper presented at the American Educational Research Association, New Orleans, LA.
- Rhee, B. S. (1997). *Faculty salary revisited: Discrimination by sex and race*. Paper presented at the Association for the Study of Higher Education, Albuquerque, NM.
- Smart, J. C. (1991). Gender equity in academic rank and salary. *Review of Higher Education*, 14(4), 511-526.
- Smith, J. P., & Ward, M. (1989). Women in the labor market and in the family. *The Journal of Economic Perspectives*, 3(1), 9-23.
- Stapleton, L. M., & Hancock, G. R. (2000, April 26). *Using multilevel structural equation modeling with faculty data*. Paper presented at the American Educational Research Association, New Orleans, LA.
- Terrell, K. (1992). Female-male earnings differentials and occupational structure. *International Labour Review*, 131(4,5), 387-404.
- Toutkoushian, R. (1999). The status of academic women in the 1990s no longer outsiders, but not yet equals. *The Quarterly Review of Economics and Finance*, 39, 679-698.
- Toutkoushian, R. K. (1998a). Racial and marital status differences in faculty pay. *Journal of Higher Education*, 69(5), 513-541.
- Toutkoushian, R. K. (1998b). Sex matters less for younger faculty: Evidence of disaggregate pay disparities from the 1988 and 1993 NCES surveys. *Economics of Education Review*, 17(1), 55-71.
- Toutkoushian, R. K. (1998c). Using regression analysis to determine if faculty salaries are overly compressed. *Research in Higher Education*, 39(1), 87-100.
- Toutkoushian, R. K. (2000). A Beginner's Guide to Conducting Faculty Salary Studies (pp.1-51).

Youn, T. I. K. (1988). Studies of academic markets and careers: An historical review. In D. W. Breneman & T. I. K. Youn (Eds.), *Academic Labor Markets and Careers* (pp. 8-27). New York: The Falmer Press.

Biographical Sketch: Dissertation Director

Lisa Wolf-Wendel is a tenured associate professor in the Higher Education Program within the Department of Teaching and Leadership at the University of Kansas. She earned her doctorate in 1995 from The Claremont Graduate School and her bachelor's degree from Stanford University in 1987. Her research focuses broadly on equity issues concerning women and people of color in higher education. More specifically, much of her research explores the characteristics of programs, policies, or institutions deemed exemplary in responding to diversity issues in higher education. From a scholarly perspective, she believes it is important to understand the characteristics that are associated with successful programs, policies and institutions rather than focusing on negative examples. From an applied perspective, by focusing on exemplars or models, she hopes to assist higher education constituents struggling with how to best serve the diversity of students in higher education.

Dr. Wolf-Wendel's research is not limited to a single methodological approach. Believing that the research question guides the methodology, she has worked hard to hone both her qualitative and quantitative skills. Indeed, she teaches a graduate level research methodology course and is comfortable with most types of multivariate analyses as well as with qualitative research. Lisa has worked with national data sets on a number of occasions. Specifically, she utilized the HERI data for two studies published in the *Journal of Higher Education*, one on women's colleges and the other comparing college outcomes for men and women. Further, she utilized NELS '88 data for an article published in *Education Policy* that focused on the importance of disaggregating by race and ethnicity when studying academic achievement. Lisa also utilized IPEDS data from NCES and the Survey of Earned Doctorates to conduct research published in both the *Review of Higher Education* and the *Journal of Higher Education*. These

articles focused on the baccalaureate origins of women who earned doctorates. Recently, Dr. Wolf-Wendel was awarded the Emerging Scholar Award from the Association for the Study of Higher Education.

Brief Curriculum Vita:

LISA ELLEN WOLF-WENDEL

432 JR Pearson Hall
Department of Teaching & Leadership
University of Kansas
(785) 864-9722
lwolf@ukans.edu

1016 Ohio Street
Lawrence, KS 66044
(785) 843-3735

HIGHEST ACADEMIC DEGREE

Doctor of Philosophy: Higher Education. The Claremont Graduate School, Claremont, CA.
May, 1995.

CURRENT POSITION

Associate Professor of Higher Education, Department of Teaching and Leadership, University of Kansas, Lawrence, KS. 2000 - present

SELECTED RESEARCH

Wolf-Wendel, L.E., Toma, J. D., & Morpew, C. (in press). There is no “T” in team, and other lessons from intercollegiate athletics. *Review of Higher Education*.

Baker, B., Keller-Wolff, C., & Wolf-Wendel, L. E. (2000). Two steps forward, one step back: Race/ethnicity and student achievement in education policy research. *Educational Policy* 14(4), 511-529.

Wolf-Wendel, L. E., Twombly, S., & Rice, S. (2000). Dual-career couples: Keeping them together. *Journal of Higher Education*, 71(3), 291-321.

Wolf-Wendel, L. E. (2000). Women friendly campuses: What five institutions are doing right. *The Review of Higher Education*, 23(3), 319-345.

- Wolf-Wendel, L. E., Tuttle, K., & Keller-Wolff, C. (2000). Assessment of a freshman summer transition program in an open-admissions institution. *The Journal of the Freshman Year Experience and Students in Transition*, 11(2), 7-32.
- Wolf-Wendel, L. E., Baker, B., & Morpew, C. (2000). Dollars & Sense: Institutional resources and the baccalaureate origins of women doctorates. *Journal of Higher Education*, 71(2), 165-186.
- Ward, K. & Wolf-Wendel, L. E. (2000). Community-centered service learning: Moving from doing for to doing with. Special Thematic Issue of the *American Behavioral Scientist* devoted to Service-Learning Pedagogy as Universities' Response to Troubled Times. 43(5), 767-780.
- Wolf-Wendel, L and Pedigo, S. (1999). Two-year women's colleges: Silenced, fading, and almost forgotten. Chapter in Townsend, B. (Ed.) *Community Colleges for Women and Minorities: Enabling Access to the Baccalaureate*. Westport, CT: Garland Press.
- Wolf-Wendel, L, & Ruel, M. (1999). Developing the whole student: The collegiate ideal. Chapter in D. Toma and A. Kezar (Eds.) *Reconceptualizing the Collegiate Ideal*. San Francisco: Jossey-Bass.
- Wolf-Wendel, L. E. (1998). Models of excellence: The baccalaureate origins of successful European American Women, African American Women and Latinas. *Journal of Higher Education*, 69(2), 144-172.
- Tidball, E., Smith, D., Tidball, C., & Wolf-Wendel, L. E. (1998). *Taking Women Seriously: Lessons and Legacies for Educating the Majority*. Phoenix: AZ: ACE/Oryx Press.
- Smith, D., Wolf-Wendel, L, Busenberg, B., and associates. (1996). *Achieving Faculty Diversity: Debunking the Myths*. Washington D.C: American Association of College and Universities.
- Smith, D., Wolf, L. E., & Levitan, T. (Eds.). (1994). Studying diversity in higher education. *New Directions for Institutional Research*, #81. San Francisco: Jossey-Bass.

Resesarch Grants Received (selected)

- National Association of Student Personnel Administration (NASPA)/Ford Foundation. Granted \$8,000 for research project titled, Diversity in Intercollegiate Athletics: Models of Integration and Interdependence? with Dr. D. Toma (UMKC).
- Office of Educational Research and Improvement's National Institute on Postsecondary Education, Libraries, and Lifelong Learning (PLLI) . Granted \$1000 for FY97 to write commissioned paper on women's colleges.

Ford Foundation and Spencer Foundation. Granted \$100,000 for FY95 to conduct study of academic labor market. Published as Smith, D., Wolf-Wendel, L, Busenberg, B., and associates. (1996). *Achieving Faculty Diversity: Debunking the Myths*. Washington D.C: American Association of College and Universities.

SELECTED SERVICE ACTIVITIES

Professional Association Service:

Hardee Dissertation of the Year committee, NASPA, 1996 – present.
Program chair for roundtables for 2001 ASHE Annual Conference, 2000 – present
Elected AERA, Division J Council member, 1999 - present
Program Co-Chair for AERA, Annual Meeting, Division J, 1997.

Journal/Publications Review:

ASHE-ERIC Editorial Review Board
Journal of Higher Education,
Review of Higher Education
Journal of College Student Retention: Research, Theory & Practice
Advisory Board, ASHE Reader, *Women in Higher Education, A Feminist Perspective*
Advisory Board, ASHE Reader, *Racial and Ethnic Diversity in Higher Education*, 2nd ed.

SPECIAL RECOGNITION

Promising Scholar / Early Career Achievement Award, Association for the Study of Higher Education, 2000.

Biographical Sketch: Methodologist

Bruce Baker is an assistant professor in the Teaching and Leadership department at the University of Kansas, Lawrence. His specialty areas are school finance policy, economics of education, quantitative analysis of equity and equality of opportunity and most recently, applications of dynamic systems modeling to policy analysis. His research has been published in the *Journal of Education Finance*, *The Economics of Education Review*, *The Journal of Higher Education*, *Educational Policy*, and *Gifted Child Quarterly*. His recent consulting work includes statistical testimony as an expert witness in both state and federal cases involving K-12 public school funding equity in Kansas.

Brief Curriculum Vita:

BRUCE D. BAKER

Department of Teaching and Leadership
437 Joseph R. Pearson Hall
1122 West Campus Road
The University of Kansas
Lawrence, KS 66045
(785) 864-9844
bdbaker@ukans.edu
<http://www.soe.ukans.edu/faculty/baker>

EDUCATION

- 1997 Ed.D. Educational Administration, Teachers College, Columbia University. Area of Concentration: School Finance and Economic Policy. Advisor: Craig E. Richards.
- 1989 MA. Educational Psychology, University of Connecticut. Area of Concentration: Education of the Gifted and Talented. Advisor: Joseph S. Renzulli.
- 1987 BA. Biology, Lafayette College. Area of Concentration: Molecular Biology and Genetics. Advisor: Wayne S. Liebel.

CONSULTANCIES & CONTRACTED RESEARCH

- 2001 (Winter - Present): Expert Witness for plaintiffs in case of *Robinson v. State of Kansas* (U.S. Dist. Ct. Case No. 99-1193-MLB). The federal case charges that the current Kansas school funding formula (a) violates the enactment provisions of Title VI of the Civil Rights

Act of 1964 by creating disparate impact by race, ethnicity or national origin (b) violates the Americans with Disabilities Act by creating disparate impact on students with disabilities and (c) violates equal protection. Attorneys to the plaintiffs: John Robb of Somers, Robb & Robb, Newton, KS and Alan Rupe of Husch & Eppenberger, LLC, Wichita, KS.

2001 (Winter – Present): Expert Witness for plaintiffs in case of *Montoy v. State of Kansas* (No. 99-C-1788 (Shawnee County Dist.Ct.)). The state case charges that the current Kansas school funding formula does not meet the state's constitutional requirement of providing for a "suitable" system of public education. Attorneys to the plaintiffs: John Robb of Somers, Robb & Robb, Newton, KS and Alan Rupe of Husch & Eppenberger, LLC, Wichita, KS.

1999 (Winter): Statistical Consultant, Mayor's Advisory Task Force on the City University of New York. Provided support on statistical analysis of predictors of remedial needs for students moving from NYC k-12 public schools to the City University system for *Bridging the Gap Between School and College: A Report on Remediation in New York City Education*. Commission Chair: Benno Schmidt. Research Project Coordinator: Miriam Cilo. Collaborating Researcher: Bruce S. Cooper, Fordham University.

SELECTED JOURNAL ARTICLES (Refereed)

Baker, B.D. (2001) Balancing Equity for Students and Taxpayers: Evaluating School Finance Reform in Vermont. *Journal of Education Finance*

Baker, B.D. (2001) Measuring the Outcomes of State Policies for Gifted Education: An Equity Analysis of Texas School Districts. *Gifted Child Quarterly*

Baker, B.D. (2001) Can Neural Networks Tell Us Anything New About Educational Productivity? *Economics of Education Review*

Baker, B.D., Keller-Wolf, C., Wolf-Wendel, L. (2000) Two Steps Forward, One Step Back: Race, Ethnicity and Academic Achievement in Education Policy Research. *Educational Policy* 14 (4) 511-529

Wolf-Wendel, L., Baker, B.D., Morphew, C. (2000) Dollars & Sense: Resources and the Baccalaureate Origins of Women Doctorates. *Journal of Higher Education* 71 (2) 165-186

Baker, B.D., Imber, M. (1999) "Rational Educational Explanation" or Politics as Usual? Evaluating the Outcome of Educational Finance Litigation in Kansas. *Journal of Education Finance* 25 (1) 121-139

Baker, B.D., Richards, C.E. (1999) A Comparison of Conventional Linear Regression Methods and Neural Networks for Forecasting Educational Spending. *Economics of Education Review* 18 (4) 405 - 416

Baker, B.D. (1999) Politics of the Production Function: The Influence of Political Bias on the Deductive Process. *Educational Policy* 13 (1&2) 123-135

SELECTED BOOKS AND CHAPTERS (Invited or Contracted)

- Baker, B.D. (2001) New Tools for Strategic Decision-Making: Systems Thinking Applied with ITHINK. In G. Ivory, *Running a School: How Can Computers Help?* Technomics Press
- Baker, B.D. (2001) Back to School: Systems Modeling and the Educational Setting. In G. Ivory, *Running a School: How Can Computers Help?* Technomics Press
- Baker, B.D. (1999) Politics of the Production Function: The Influence of Political Bias on the Deductive Process. In Vance Randall and Bruce Cooper (Eds.), pp. 123-135, *Accuracy or Advocacy: The Politics of Research in Education*. Yearbook of The Politics in Education Association. Thousand Oaks: Corwin Press, Sage Publications.

SELECTED MONOGRAPHS & OTHER MANUSCRIPTS

Reports

- Baker, B.D. (2001) Expert Witness Report. Analysis and Opinions on the Suitability of the School District Finance Act. *Montoy v. State of Kansas*, No. 99-C-1788 (Shawnee County Dist. Ct.)
- Brant, D. (Chair), Baker, B., Ballard, B., Ferguson, L., Jones, D., Vratil, J. (Drafting Team) (2000) Final Report of the Governor's 21st Century Vision Task Force. K-12 Education: Financing for Results. Presented to Governor Bill Graves, December 1, 2000.
- Baker, B.D. (2000) Full State Control Out of Control: School Finance in Kansas in the 1990s. in Brian O. Brent (Ed.) *The Political Economy of Education: the State of the States and Provinces*. Proceedings of the 1999 Annual Meeting of the American Educational Research Association, Fiscal Issues, Policy, and Educational Finance – Special Interest Group. Montreal, QE.

Policy Briefs

- Baker, B.D. (2000) Policy Brief to the Governor's Task Force on Education Finance: School Performance-Based Incentive Funding. Presented to the 21st Century Vision Task Force on Public Education: Financing for Results. State of Kansas. David Brant, Chair.
- Baker, B.D. (2000) Policy Brief to the Governor's Task Force on Education Finance: Estimating and Funding an "Adequate" Education in Kansas. Presented to the 21st Century Vision Task Force on Public Education: Financing for Results. State of Kansas. David Brant, Chair.
- Baker, B.D. (2000) Policy Brief to the Governor's Task Force on Education Finance: At Risk Funding. Presented to the 21st Century Vision Task Force on Public Education: Financing for Results. State of Kansas. David Brant, Chair.
- Baker, B.D. (2000) Policy Brief to the Governor's Task Force on Education Finance: Policy Options for Special Education Funding. Presented to the 21st Century Vision Task Force on Public Education: Financing for Results. State of Kansas. David Brant, Chair.

SELECTED CONFERENCE PRESENTATIONS

Symposia

Baker, B.D.^(c), Driscoll, L., Salman, R., Huff, B., Picus, L.O. (2001 – Spring) *Unlocking the Potential of Dynamic Systems Modeling*. Annual Meeting of The American Education Finance Association. Cincinnati, OH.

Paper Sessions

Baker, B.D., Richards, C.E. (2001 - Spring) *Unlocking the Potential of Dynamic Systems Modeling in School Finance*. Proposal for a Demonstration/Consultation Session. SIG - Fiscal Issues. Annual Meeting of The American Educational Research Association. Seattle, WA.

Morphew, C.C., Baker, B.D. (2001 - Spring) *The Administrative Lattice and the New Research I Universities*. Division J – Higher Education. Division J. Annual Meeting of The American Educational Research Association. Seattle, WA.

Baker, B.D., Friedman-Nimz (2001 - Spring) *State Policy Influences Governing Equal Opportunity: The Example of Gifted Education*. American Education Finance Association Annual Meeting. Cincinnati, OH.

Baker, B.D., Green, P.C. (2001 - Spring) *Challenging School Finance Policy as Civil Rights Violation: The Application of Title VI to School Finance in Kansas*. American Education Finance Association Annual Meeting. Cincinnati, OH.

Baker, B.D. (2000-Spring) *Challenging Opportunities in Fiscally Challenged Schools?* Annual Meeting of the American Education Finance Association. Austin, TX. *(N)

Baker, B.D. (1999-Spring) *Searching for a "Rational Educational Explanation" for Spending Differences in Kansas Schools*. Annual Meeting of the American Education Finance Association. Seattle, WA. *(N)

Baker, B.D. (1999-Spring) *A Comparison of Linear and Non-linear Models for Testing the Sensitivity of Cost to Different Performance Expectations*. Annual Meeting of the American Education Finance Association. Seattle, WA. *(N)

Baker, B.D. (1999-Spring) *Effort, Burden, What do They Really Mean? Testing the Fairness of Formula Alternatives for Vermont*. Annual Meeting of the American Education Finance Association. Seattle, WA. *(N)

Baker, B.D. (1999-Spring) *Predicting the Cost of High Performance: A Sensitivity Simulation Using GMDH Neural Networks*. Annual Meeting of the American Educational Research Association. Division L. Montreal, Quebec. *(N)

Baker, B. D., Keller-Wolf, C., Wolf-Wendel, L. (1999-Spring) *Dispelling Myths through Disaggregation: The relationship between race/ethnicity and student achievement*. Annual Meeting of the American Educational Research Association. Montreal, Quebec. *(N)

GRANTS & CONTRACTS

Baker, Bruce D.; Hatley, Richard.; Arney, Lynn. (Spring - 1998) *Technology for Effective Educational Leadership*. Regional Consortia Grants. University Council on Educational Administration. (\$1,000)

Baker, B.D., Friedman, R.C. Assessing Resource Equity: Social Status and the Availability of Opportunities for Gifted Children. Graduate Research Fund (Award: \$11,979)

Baker, Bruce D., Pewewardy, Cornel. (Spring - 1998) *Financing Indian Education in an Era of Self Determination*. New Faculty General Research Fund Grants, University of Kansas Center for Research. (\$5,000)

SELECTED SERVICE ACTIVITIES

2000: Governor's (Bill Graves) Vision 21st Century Task Force. Member of the subcommittee on *K-12 Education: Financing for Results*.

2000 - Present: Secretary/Treasurer - AERA Special Interest Group: Charter Schools Research and Evaluation.

2000 - Present: Webmaster - AERA Special Interest Group: Charter Schools Research and Evaluation. <http://www.soe.ukans.edu/faculty/baker/csre/default.htm>

1998 - Present: AERA Special Interest Group: Fiscal Issues

1998 - Present: AERA Special Interest Group: Complexity Theory in Education

1997 - Present: Plenum Representative, University Council on Educational Administration

1996 - Present: Member, American Educational Research Association (Divisions A & L)

1996 - Present: Member, American Educational Finance Association

1999 - Present: Editorial Board, *Leadership and Policy in Schools*

2000 - Present: Reviewer, *Economics of Education Review*

1998 - Present: Reviewer, University Council on Educational Administration Annual Conference

1998 - Present: Reviewer, American Educational Research Association - Division L

Biographical Sketch: Doctoral Student

Christine Keller-Wolff is doctoral candidate in the Higher Education Administration program and a research analyst in the Office of Institutional Research and Planning at the University of Kansas (KU). Her areas of interest include the quantitative analysis of equity issues, the assessment of student learning and development, and the dissemination of institutional data through web-based systems to improve decision-making. Christine became interested in equity issues, especially those regarding women, through her doctoral coursework, participation in graduate policy seminars at national conferences, and by contributing to the development of the model for the salary equity study at KU.

Christine possesses a strong analytical background and significant quantitative skills. Her undergraduate degree is in marketing research, which required substantial coursework in research methodology, statistics, and computer information systems. At the graduate level, she has completed an advanced sequence of statistical coursework including training in multivariate techniques such as logistic regression, structural equation modeling, and factor analysis.

Christine's responsibilities as a research analyst in the office of institutional research involve the manipulation and transformation of large and complex data sets using a variety of data management and analytical tools such SAS, Excel, and Access. As a participant in the NCES database institute in the summer of 2000, Christine had the opportunity to apply her skills to a large national database and to work with weighted sample surveys.

She has contributed to two research projects with department faculty members that resulted in articles published in refereed journals, as well as a project with other doctoral students that resulted in two conference presentations. One project involved assessing the effect of a summer transition program on GPA and retention, using both qualitative and quantitative

methods. A second study used the NELS 88 data to demonstrate the importance of disaggregating race and ethnicity when studying academic achievement. This project utilized ordinary least squares regression and multivariate techniques. With other doctoral students, Christine performed a detailed content analysis of student essays regarding the impact of college courses on the students' lives.

The proposed research project will benefit Christine as a student of higher education and as an institutional research practitioner. From an institutional research perspective, the experience will further development and hone her data analysis and statistical skills, which in turn will allow her to be more proficient in her job as a research analyst. The increased exposure to national databases will provide Christine with a better understanding of the University of Kansas salary issues in a national context, and the ability to share that knowledge with other university constituents. Finally, the experience will afford Christine the opportunity to complete her doctoral studies in an area of both personal interest and national relevance, and to advance the knowledge in the area of salary equity for women faculty.

Brief Curriculum Vita:

CHRISTINE M. KELLER-WOLFF

ckeller@ku.edu

6415 Charlotte
Shawnee KS 66216
913-631-1423

339 Carruth-O'Leary
Institutional Research & Planning
University of Kansas
Lawrence KS 66045
785-864-4412

EDUCATION:

Doctoral Candidate. Teaching and Leadership, Higher Education Administration; Minor: Organizational Studies. University of Kansas. May 1996-present.

Master of Business Administration: Marketing and Management. University of Missouri-Columbia. December 1990.

Bachelor of Science: Marketing, emphasis in Research; Minor: Decision Analysis. Southwest Missouri State University - Springfield. Magna Cum Laude. May 1989

PROFESSIONAL EXPERIENCE:

Research Analyst. Institutional Research & Planning, University of Kansas. Lawrence KS (July 1998 -present).

- Responsible for the continued development and maintenance of the Academic Program Review System for KU and the Kansas Board of Regents.
- Re-designed collection system for undergraduate placement survey to increase response rates and improve results. Maintain data set, as well as analyze and report findings to campus leaders and Board of Regents.
- Developed a web-based employment information system through a grant from the Kansas Occupational Information Coordinating Committee (KOICC). Disseminated information on the system through presentations to the Kansas Board of Regents and Kansas Legislative Committee.
- Other projects include assessment of general education, faculty salary equity studies, institutional performance indicators, and senior survey.
- Proficient with a variety of analytical, data management, and web design software including SAS, SPSS, Access, Excel, and Dreamweaver, as well as both Windows and Unix environments.
- Statistical background includes the use of descriptive and multivariate techniques. Experience in manipulation of large and complex data sets including weighted sample surveys.

Associate Dean. Sterling College, Division of Continuing Education. Sterling KS. (June 1993-June 1996).

- Managed undergraduate degree program operations in Kansas City and St. Louis
- Developed and implemented marketing strategies to increase enrollment and program awareness in local markets
- Supervised advising, recruiting, and administrative staff.
- Recruited, hired, evaluated, and counseled adjunct faculty.
- Addressed student concerns regarding scheduling, institutional policies, and quality of instruction.

Academic Dean. Metro Business College, Jefferson City MO. (September 1992-May 1993).

- Supervised and counseled instructors
- Counseled students in academic and personal matters.
- Scheduled approximately 100 students each quarter for appropriate classes.
- Served as school registrar.

Employer Services Coordinator. Private Industry Council, Jefferson City MO. (September 1991-August 1992).

- Promoted and administered employment and training programs in surrounding communities.
- Worked with employers and public officials in developing employment opportunities
- Counseled clients and trainers after job placement or school enrollment.
- Monitored training sites to ensure compliance with federal guidelines.

GRADUATE SCHOOL EXPERIENCE: (June 1996-December 1998)

- Member of the assessment team for the freshman summer transition program (1997-present). Duties include the facilitation of focus groups and analyses of both qualitative and quantitative data.
- Contributed to the development, data collection, and analysis of faculty research projects on spousal/partner hiring accommodations, and diversity and academic achievement.
- Conceptualized and designed an interactive resource database for Kansas teachers.
- Served on the various proposal teams during the application process for federal grants.
- Collaborated with doctoral student colleagues on content analysis of institutional assessment, resulting in two conference presentations.
- Assisted with coordination and administration of the Higher Education, Division J program at the American Education Research Association annual meeting.
- Planned and facilitated small group sessions at educational policy conference.
- As advisor, assisted students in scheduling appropriate classes, selecting majors, and setting academic and career goals.

PRESENTATIONS

Keller-Wolff, C., Eason, B., Hinds, M. (April 2000) *From the Students' Perspective: The Effect of College Courses*. Annual Meeting of the American Educational Research Association. New Orleans, Louisiana.

Baker, B. D., Keller-Wolff, C., Wolf-Wendel, L. (April 1999) *Dispelling Myths through Disaggregation: The relationship between race/ethnicity and student achievement*. Annual Meeting of the American Educational Research Association. Montreal, Quebec.

Keller-Wolff, C., Eason, B., Hinds, M.. (November 1998) *In the Students' Voice: The Impact of College Courses on Students*. Annual Meeting of the Association for the Study of Higher Education. Miami, Florida.

PUBLICATIONS

Baker, B., Keller-Wolff, C., & Wolf-Wendel, L. E. (2000). Two steps forward, one step back: Race/ethnicity and student achievement in education policy research. *Educational Policy* 14(4), 511-529.

Wolf-Wendel, L. E., Tuttle, K., & Keller-Wolff, C. (2000). Assessment of a freshman summer transition program in an open-admissions institution. *The Journal of the Freshman Year Experience and Students in Transition*, 11(2), 7-32.

SEMINARS/WORKSHOPS

NCES Summer Database Institute, June 2000. Sponsored by Association of Institutional Research, Washington, D.C.

Graduate Student Policy Seminar, April 1999. Annual Meeting of the American Educational Research Association. Montreal, Quebec.

Graduate Student Policy Seminar. November, 1998. Annual Meeting of the Association for the Study of Higher Education. Miami, Florida.

BUDGET

Project Title: Moving Forward Or Standing Still? Progress in Achieving Wage Equity for Women Faculty in the 1990s

PROPOSED EXPENDITURES

Personnel

Doctoral Student – 18 weeks @ \$517/week ³	<u>\$9,306</u>
Includes salary of \$404/week and benefits of \$113/week	
Tentatively scheduled for Summer 2001.	

Total Salary and Benefits	\$ 9,306
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Travel

ASHE conference in Richmond VA (November 15-18, 2001)

*OR*⁴

AERA conference in New Orleans LA (April 1-5, 2002)

Plane, Lodging, Meals	\$ 1,800
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AIR conference in Toronto, Ontario (June 2-5, 2002)

Plane, Lodging, Meals	<u>\$ 2,000</u>
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Total Travel	\$ 3,800
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Other Direct Costs

Materials and Supplies	\$ 400
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Publication/Documentation/Dissemination	\$ 244
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Computer Services

Stata Statistical Software through GradPlan	<u>\$ 250</u>
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Total Other Direct Costs	\$ 894
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TOTAL AMOUNT OF AWARD	\$14,000
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³ Funds will be used to buyout half of time in position as Research Analyst in Office of Institutional Research and Planning to work on dissertation research.

⁴ Selection of conference dependent upon release of NSOPF 1999 data and subsequent progress of research.

CURRENT AND PENDING SUPPORT

Not applicable

FACILITIES, EQUIPMENT, AND OTHER RESOURCES

The resources available at the University of Kansas are more than adequate to gather the information, perform the necessary analyses, and document and disseminate the results of the proposed dissertation research. As a research institution, the University of Kansas library system either owns or has access to the publications needed to establish the background for this study. The computing resources in the office of institutional research are kept up-to-date with the latest software and hardware technology. In addition, the security for the computer systems within the institutional research office, will allow for the safe storage of the NSOPF restricted-use data.

The proposal budget includes funds to purchase the statistical analysis program, Stata 7, which has the capability to perform the analyses proposed in this study and, at the same time, is much simpler to use than analysis programs such as SAS or SPSS. Due to an agreement between the University of Kansas and the Stata Corporation, graduate students can purchase the software at a significant discount.

Beyond computing resources, the institutional research office is member of several higher education associations, including AIR, AERA, ASHE. Therefore, the proposer will be able to attend the conferences outlined in the dissemination plan at discounted member rates.

SPECIAL INFORMATION AND SUPPLEMENTARY DOCUMENTATION

Not applicable.