

Faculty salaries in higher education among business and other fields of study

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ABSTRACT

Discussion and comparison of faculty salaries in academia is an ongoing research interest for all stakeholders in higher education. The intention of this research is to understand the differences in faculty salaries within five business classifications and across other academic subject areas. Various authors have examined different aspects of faculty salaries using different sources of data. Using data from the College and University Professional Association for Human Resources (CUPA-HR), this study employs a series of one-way analysis of variance (ANOVA) quantitative tests to examine differences in faculty salaries across various academic disciplines and ranks. Significant differences were located among several of the five business-related classifications identified for this study (accounting, economics, finance, management, and marketing). Additionally, faculty salaries in the business field were found to be significantly higher than all other fields in all ranks of faculty classified as full-time. The results of this research will enhance the understanding of compensation for higher education faculty, leading to enhanced decision making for public policy and cost structures.

Keywords: Business faculty, CUPA, academic rank, salary, faculty.

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INTRODUCTION

Faculty salary comparisons are an ongoing topic of interest for higher education faculty and administrators. Understanding the trends and differences in faculty pay can inform and drive better decisions during recruitment, retention, and budgeting. New faculty members can negotiate fair wages based on their skills and experience when they are aware of the salary range in their profession and job market. College and university administrators who regularly benchmark salaries to local and national averages will have up to date information to compete for the most qualified people or to make salary adjustments for current faculty. In addition, tracking compensation metrics can lead to more informed decisions by revealing salary trends and unintended pay gaps. Evaluating compensation policies and procedures can lead to consistency and objectivity by basing earnings on those policies set up by the organization such as such as education, experience, and job performance (El-Ramly, 2019). Higher education employers will have guidance for better decision-making during recruitment and retention of faculty members as they strive to be competitive with new hires while concurrently rewarding the intellectual capital of existing faculty with fair compensation (Glandon & Glandon, 2001).

In addition to understanding the trends and differences in faculty pay, budgetary constraints at higher education institutions may restrict their ability to pay market salaries without sacrificing in other areas such as decreases in the number of faculty positions or changes to the composition of the faculty in terms of rank. Cheslock and Callie's (2015) analysis of private and public business faculty salaries from 1999 - 2006 utilized survey details from the Association to Advance Collegiate Schools of Business (AACSB) and found faculty earnings remained competitive, but public institutions experienced an overall decrease in faculty positions. The overall composition of faculty rank also changed with fewer full professors and an increase in assistant professors, instructors, and adjuncts.

Additionally, higher education institutions compete with the private business sector for faculty which can drive differences in faculty salaries across various academic disciplines based on market conditions such as supply and demand in particular fields. Academic disciplines in the field of business have experienced a strong demand for faculty since the 1980s with these faculty earning higher salaries when compared to the faculty in non-business fields such as education or liberal arts. The high demand for business faculty and the private sector competition for new hires has led to cases of salary inversion. Salary inversion occurs when the salary of a lower rank is more than that of a higher rank. A new hire at prevailing market wages may command a larger salary than a current faculty member at a higher rank. Another concern is salary compression which occurs when the salary of a lower rank is very close to that of a higher rank. The theory of specific human capital suggests that seniority confers higher pay yet the effects of seniority on salary may decrease when organizations use limited funds to attract new hires rather than provide salary raises to current faculty (Graves & Kapla, 2018).

Although budgetary and market constraints exist, understanding trends and differences in faculty salaries is critical to higher education institutions. In this paper, we examine salaries among business faculty in select disciplines using yearly survey results from The College and University Professional Association for Human Resources (CUPA-HR). First, we look at differences in faculty salaries within each of the five business disciplines separately for each rank (e.g., professor, associate professor, and assistant professor). Then, we look at differences in faculty salaries across all academic disciplines.

REVIEW OF RELATED LITERATURE

The College and University Personnel Association (CUPA) began in 1946 when 28 higher education institutions came together with the goal of collaborating on administrative issues involving personnel. Within three years, the association expanded and did its first survey on operating policies and practices. In the late 1960's the Administrative Compensation Survey began and CUPA quickly became a source of reliable, higher education data (CUPA-HR, 2020).

In 1982, CUPA and Appalachian State University conducted the first national faculty salary survey by discipline and rank (Howe, 1982). This survey supplied more detailed and comparative data for budgetary planning and salary negotiations. CUPA later expanded the survey to include more disciplines and other variables such as the size of the institution. The goal was to be a continuing source of salary data for faculty and administrators. These annual national faculty salary surveys for public and private colleges and universities also provided data for various salary trend studies over the years. For example, Howe (1995) summarized and compared average salary increases by rank and discipline for public and private educational institutions and added the rank of new assistant professor and faculty mix percentage to the study. Additional comparisons in this study used the Consumer Price Index to examine whether the salary increases kept pace with inflation.

In 2000, to better reflect the profession, CUPA became the College and University Professional Association for Human Resources (CUPA-HR). Presently CUPA-HR provides human resource professionals in the higher education field with not only research data for salary analysis but a variety of resources for decision-making. Using survey data from over 1,300 institutions, the association now has salaries, demographics, and benefits on over 270,000 full-time faculty by rank and discipline and over 500,000 staff and administrators. The salary survey data is highly confidential and requires the institution to have a subscription to access it (CUPA-HR, 2021). Human resource professionals nationwide use this database (CUPA) to benchmark salary offers for new employees in addition to implementing market adjustments for current employees. Comparison group statistics aid in making each respective institution competitive with all peer institutions in various academic disciplines.

CUPA and other salary survey data such as American Association of University Professors (AAUP) and Association to Advance Collegiate Schools of Business (AACSB) have been used in various ways to examine trends and differences in faculty salaries. Specifically, Colby and Fowler (2020) found that full-time faculty salaries for all academic disciplines and ranks averaged \$100,800 for the period 2019-2020. This was an average 2.8 percent increase when compared to the prior year according to the American Association of University Professors (AAUP) survey data. They noted that budget constraints have limited salary increases. State-based funding for higher education has only recently returned to pre-recession levels. To increase salaries, universities have made reductions in other areas such as hiring freezes, more reliance on adjunct faculty, and unfilled vacant positions. The full-time faculty members have adjusted to a changing faculty mix and an increased workload perhaps negating any real wage growth. The COVID-19 pandemic of 2020 added financial challenges for universities and increased the amount of work for many faculty members due to new online class formats and fewer faculty due to downsizing (Colby and Fowler, 2020).

Additionally, business faculty salaries averaged \$130,700 according to the AACSB 2019-2020 compensation survey (AACSB, 2020). This was an increase of less than 2 percent when compared to the prior year's survey data. Full professors in the classification of organizational behavior were noted to have the largest average annual salary at \$205,050, followed by finance

(\$197,670), strategic management (\$184,950), and accounting (\$183,220). Business classifications such as finance, accounting, and management will command higher salaries than classifications within other academic fields due to private sector competition. For example, both the public and private sectors of the economy actively compete for Certified Public Accountants (CPAs). The leaders among faculty pay are law and legal studies, business, and management, according to a study using faculty salary data from the National Center for Education Statistics (NCES), CUPA, and the Office of Institutional Research at Oklahoma State University (OSU). These higher salaries are due to higher education institutions competing with corporate employers for employees with a business background. Potential employees may have outside connections to the business community which increases this external competition (Clery, 2012; Lin, 2010).

For example, in the late 1990's the supply of finance PhDs had markedly decreased. Hobbs et al. (2005) further examined finance faculty salaries with a questionnaire sent to AACSB accredited colleges of business administration in the United States. The survey explored finance faculty vacancies and the additional compensation needed to bring the existing salary for the vacant position up to the market amount. Regardless of enrollment size, all schools, both public and private, paid an average premium of \$9,653 to fill a vacant finance faculty position. In addition, salary compression occurred as most new hires were for the assistant professor rank lessening the salary difference between full and assistant professors in the finance field.

Salary compression and salary inversion have been examined in multiple studies using various data sets. Arnold's et al. (2012) comparison of relative salaries between ranks and disciplines at business schools accredited by the AACSB noted salary inversion between associate and assistant professors of finance, economic, and accounting at public institutions and between finance and accounting at private institutions. The salary inversions and differences were small and discipline specific. A more recent study also found regular salary compression in the business disciplines of finance, economics, and accounting (McDonald & Sorensen, 2017). Similarly, Barbezat's (2004) analysis of National Studies of Postsecondary faculty data from 1993 and 1999 found no salary compression by academic discipline overall. However, they noted evidence of salary gaps among senior faculty members in the disciplines of economics and business. Using CUPA data, Wang and Dagher (2016) found that faculty salary compression and inversion were present during the years 2005-2014. They also used the same CUPA data to test their Model of Graded Salary Increase in comparison to the traditional straight salary increase model. They found that their model was successful in solving the problems of salary inversion and compression under most conditions.

Lin's (2010) analysis suggests significant differences in salaries across the business disciplines. This study contributes to the discussion of academic faculty salaries in higher education by examining differences in business faculty salaries by rank using CUPA-HR data.

METHODOLOGY AND DATA COLLECTION

For this study, faculty salary data was collected from CUPA-HR. Specifically, a subscription-based software system known as Data-on-Demand was queried to generate a report of the raw data utilized for this study. As this was a nationwide study comprising all states, institution sizes, and classifications, no filter restrictions were set in data collection. Overall, a total of 353 higher education institutions remitted faculty salary data to CUPA-HR. Within this institutional data remitted, a total of 11,838 individual data points were created to represent

faculty salaries. While no restrictions were set limiting the data collection by geographic area, institution size, or institution type, limiters were set for faculty classification. This faculty classification was restricted to tenure or tenure-track faculty positions, specifically professor, associate professor, and assistant professor. At the time of data collection for this paper, the 2020-21 academic year was the most current faculty salary data available from CUPA-HR.

RESULTS OF STUDY

A series of one-way analysis of variance (ANOVA) tests were conducted to explore any possible differences in faculty salaries across various fields of study. Specifically, the following relationships were examined:

1. Differences in faculty salaries within each of the five business fields for professors.
2. Differences in faculty salaries within each of the five business fields for associate professors.
3. Differences in faculty salaries within each of the five business fields for assistant professors.
4. Differences in faculty salaries across all academic disciplines.

The initial analysis of variance (ANOVA) model was created by testing the means of individual faculty salaries of professors across the following five business concentrations identified for this study: Management, Accounting, Economics, Finance, and Marketing. The results indicated the model was robust and significant; $F(1724) = 30.33$, $p < .01$. when tested at an alpha level of .05. A similar ANOVA model was performed for faculty classified as Associate Professor and Assistant Professor. Significant differences in faculty salaries were identified for Associate Professor [$F(1774) = 53.95$, $p < .01$] and Assistant Professor [$F(1633) = 79.96$, $p < .01$] when compared across the five concentration areas in business. A summary of these results is presented in Table 1 (Appendix).

A post-hoc test (Tukey's HSD) was used to determine the nature of the differences. Each faculty classification yielded 10 possible pairwise outcomes, with the majority displaying significant differences in faculty salaries. Further examination of the results reveals eighty percent of pairs in full professors and associate professors were found when tested at a significance level of .05. An even higher rate of significant combinations (90%) was observed in faculty classified as assistant professors.

The final analysis of variance (ANOVA) model was created to analyze means of individual faculty salaries in five business concentrations while providing a benchmark against other academic disciplines. While significant differences were located within many combinations of the five business concentrations, a benchmark was needed to analyze how business faculty salaries compare with other non-business academic disciplines. When looking at the rank of full professors, the results indicated the model was robust and significant; $F(6122) = 185.17$, $p < .01$. when tested at an alpha level of .05. A similar ANOVA model was performed for faculty classified as Associate Professor and Assistant Professor. Significant differences in faculty salaries were identified for Associate Professor [$F(5631) = 210.19$, $p < .01$] and Assistant Professor [$F(5018) = 228.19$, $p < .01$] when compared across all academic disciplines. A summary of these results is presented in Table 2 (Appendix).

In an analysis similar to earlier tests utilizing business faculty salaries, a post-hoc (Tukey's HSD) test was used to determine the nature of the differences. When examining pairwise combinations that benchmarked business-related fields against all academic disciplines, an interesting trend developed. The only business discipline found to be insignificant when compared across all fields was Economics. Each of the other four business classifications (Management, Accounting, Finance, and Marketing) were found to be significant when tested at a significance level of .05.

DISCUSSION

In most of the past related literature, it was suggested that college faculty in the academic discipline of business can expect increased salary levels over most other fields of study. Even within the five business classifications examined for this study, significant differences were identified, and interesting trends were noted. The initial ANOVA analysis compared mean salary levels across each of the five concentration areas in business. Full professors in the category of finance were found to have the largest average annual salary at \$171, 782, followed by accounting (\$156, 938), marketing (\$151, 459), and management (\$135, 534). Faculty within the business classification of economics were found to have the lowest mean salary at \$125, 551.

The second ANOVA highlighted differences in mean faculty salaries when all academic disciplines outside of the business field are added to the analysis. It is noteworthy that even though full professors in economics were found to have the lowest salaries among the five business-related classifications outlined for this research study, this salary was larger than the mean salary of all other academic fields of study. Considering that the mean salary across all disciplines was found to be \$115, 882, economics salaries were almost \$10,000 greater than all other fields on average. While overall salary means were not as pronounced in other academic ranks of faculty in economics (associate professor, assistant professor, and instructor) increased means were still observed when compared to academic disciplines in business. Economics is the only business category of the five tested found not to be significantly higher than all other academic disciplines. Statistically speaking, economics is the business faculty category more likely to command an annual salary closer to the mean of all academic disciplines.

CONCLUSIONS

Various sources of data have been used in research on faculty salaries each with its own emphasis. Research suggests that business faculty salaries are higher on average than other academic disciplines due to high demand and competition with the private sector. Hobbs et al. (2005) found supply and demand affect the compensation needed to attract and keep faculty. Specifically, to fill a vacant faculty finance position a university must offer increased compensation due to competition with the private sector for qualified candidates. This study found significant differences within the five business disciplines examined, in addition to significant differences when the business field is compared to other academic disciplines.

This study found economics faculty have the lowest mean salary across the business disciplines and economics was the only business category not significantly higher than all other academic disciplines. Barbezat (2004) noted some presence of salary compression in the economics discipline with senior faculty being underpaid but not at the level of statistical

significance. However, McDonald and Sorenson (2017) found evidence of consistent, increasing salary compression in the economics category. Arnold's study (2012) found decreasing salary inversion in the field of economics suggesting lower ranks are not receiving more pay than those in higher ranks. These trends were specifically captured and analyzed utilizing CUPA-HR as a data resource and the methodology of any future studies would be strengthened when using these proprietary survey results.



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APPENDIX

Table 1: ANOVA Results (Within 5 Business Fields)

Classification	Degrees of Freedom (DF)	F-Ratio	<i>p</i> -value
Full professor	1724	30.33	<i>p</i> < .01*
Associate Professor	1774	53.95	<i>p</i> < .01*
Assistant Professor	1633	79.96	<i>p</i> < .01*

*significant at $\alpha = .05$

Table 2: ANOVA Results (Across All Academic Disciplines)

Classification	Degrees of Freedom (DF)	F-Ratio	<i>p</i> -value
Professor	6122	185.17	<i>p</i> < .01*
Associate Professor	5631	210.19	<i>p</i> < .01*
Assistant Professor	5018	228.19	<i>p</i> < .01*

*significant at $\alpha = .05$

