An Analysis Of The Determinants Of MIS Faculty Salary Offers

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ABSTRACT

Much research has been published related to compensation in academic fields such as finance, accounting and economics; however, little attention has been paid to Management Information Systems (MIS). Conspicuously absent from the literature are in-depth studies of faculty compensation and its relationship to research productivity for MIS faculty. This study examines compensation, rank, and publication data collected from the Association for Information Systems (AIS) 2003-2004, 2004-2005 and 2005-2006 MIS Salary Surveys. MIS faculty who were newly employed or changed positions filled out the online survey at the AIS Web site on a self-selected basis. The relationships between compensation and its possible determinants such as research productivity and institutional teaching load are reported as well as analyzed. We find that compensation is significantly correlated with professors' profiles as well as with the school profile at which the professor received a job offer.

INTRODUCTION

In a free-market private enterprise system, income should be distributed according to productivity [Ferber, 1974]. Moreover, business schools should apply the basic tenet that academics should be rewarded based on merit. This study examines academic compensation and its relationship to related variables, including productivity and other variables. Some determinants of academic salaries in the field of management information systems are suggested.

The Association to Advance Collegiate Schools of Business [AACSB 2003] reports faculty salaries annually in many discipline areas such as finance, accounting, marketing, economics, and management. Unfortunately, little is published about the process of evaluating and compensating Management Information Systems (MIS) professors. The determinants of a faculty salary offer are not clear cut. Salary increases and faculty promotion are generally addressed by university guidelines, though recent evidence [Dennis et al., 2006] suggests that the promotion and tenure evaluation process in MIS may need to be reconsidered. However, it is possible that additional factors may be important in the determination of the initial salary.

This study examines compensation, rank, and publication data collected from individuals who completed the 2003-2004, 2004-2005 MIS and 2005-2006 salary surveys at the Association for Information Systems [AIS, 2004] Web site. The relationships among rank, compensation, and research productivity gleaned from this data could supply valuable insight during promotion, tenure, and compensation decisions. The results of this study could also benefit professors who teach and research in the area of MIS. In addition, information related to institutional attributes such as accreditation, location, and teaching load are also included in the analysis.

LITERATURE REVIEW AND CONTRIBUTIONS OF THIS STUDY

Literature Review

Research focusing on MIS-related academic issues has mainly revolved around three themes: The ranking of journals, the ranking of faculty and the ranking of programs. Whereas a number of studies have emerged in relation to

journal and faculty rankings, research related to the determinants of salary offers are lacking both in the MIS field and in other fields.

Many studies have been conducted that attempt to rank faculty and programs on various factors [Guimaraes, 1998; Im, Kim et al., 1998a; Im, Kim et al., 1998b; Lemann, 1998; U.S. News and World Report, 2006]. While faculty members are expected to spend time in a multitude of ways [Shelton, Skaggs et al. 1996], ranking of their performance is frequently based on publication patterns alone [Guimaraes, 1998; Im, Kim et al., 1998a; Im, Kim et al., 1998b]. Probably because of the difficulty of determining an objective, universally applicable measure for productivity that is not based on publication patterns [Im, Kim et al., 1998b], publication productivity remains the primary measure of faculty ranking. However, does it follow that publication productivity will determine the salaries that are offered to faculty as they start their careers in academia or embark upon a job change?

Journal rankings in MIS, often an important precursor for ranking of faculty members and programs, have been studied many times over the last several years. The rankings of journals are typically based on surveys of academics in the field as well as citation counts of the articles published [Gillenson and Stutz, 1991; Holsapple, Johnson et al., 1994; Hardgrave and Walstrom, 1997; A. Walstrom, C.Hardgrave et al., 1995; Tribunella, 2005]. The journals Communications of the ACM, Decision Sciences, Information Systems Research, Journal of Management Information Systems, MIS Quarterly, and Management Science[1] are consistently the top ranked journals, and as such have a larger impact on the rating of individual productivity than do most other journals, though Dennis et al. [2006] suggest that the *Journal of the Association for Information Systems* may become another top-ranked journal in the field.

An examination of requirements for hiring in the field, as well as the determinants for salaries offers, reveals that the literature is sparse. However, outside the field of MIS, a number of articles address the area of faculty compensation and productivity. Determinants of faculty salaries [Bertin and Zivney, 1992; Tribunella and Yeh, 2005] and rank [Katz, 1973] as well as the value of journal articles published [Tuckman and Leahey, 1975; Tribunella and Tribunella, 2006] and citations [Diamond, 1986] have been the subject of analysis. For example, Swidler and Goldreuer [1998] reported that a professor's first published article in a top finance journal has a net present value between $19,493 and $33,754. In another example, Diamond [1986] concluded that the marginal compensation value of a citation ranges between $50 and $1,300. Delorme, Hill, and Wood [1979] took this line of research one step further by conducting a study to analyze quantitative methods of determining faculty salaries. In addition, the earnings and promotion of female faculty has been studied [Johnson and Stafford, 1974].

Much research has been published related to compensation in major academic fields such as finance [Swidler and Goldreyer, 1998], education, and economics [Tuckman and Hagemann, 1976]. Factors which are difficult to control such as congeniality, teaching quality, service to the institution, and journal quality will enter the promotion and compensation process and complicate the analysis [Tuckman and Leahey, 1975]. Moreover, some studies have included teaching performance in their analyses [Koch and Chizwar, 1973]. It is unclear whether the factors discussed in these articles are relevant for predicting salaries for newly minted PhD's or for those individuals who are making a job switch in academia.

While the current study is interested in the relationship between starting salaries and the factors that predict these salaries, it is interesting to note that Tuckman and Leahey [1975] reported that publications provide diminishing returns and this may explain why many senior faculty members experience a reduction in their research productivity. Furthermore, knowledge of an individual's past publication record is an unreliable predictor of future productivity [Zivney and Bertin, 1992]. This may explain why only a small percentage of faculty members remain productive consistently throughout the entire course of their career.

[1] In no particular order

Contributions Of This Study

Even though much research has been published related to compensation in major academic fields such as finance, accounting and economics, little attention has been given to the area of MIS. Although Frolick (2005) has studied the supply and demand of IS professors, as well as investigated the average salary changes over time, he did not look at its relationship to determinants such as research productivity and university attributes.

Since this is the first study of the determinants of MIS professor compensation, it will help administrators, such as department chairs and deans, allocate scarce resources to faculty. Awareness of these determinants is crucial to ensure that faculty members are being compensated at market rates. Administrators can also benchmark how they compensate their faculty in relation to peer schools. It will aid decision processes related to evaluating MIS faculty member salaries by reporting market-based determinants. In addition, it may supply information to faculty to help them understand the market forces that determine salary offers. Comprehending these forces is important for selecting one's career path. Accordingly, if a faculty member seeks employment at a teaching school in the mid-west, they could approximate the potential salary offer.

It is not our intention to imply that everyone wants to maximize their salary by working at a research oriented school and pursuing a high powered research agenda. We recognize that there are many who choose to focus on the teaching aspects of this career. Based on earlier findings (Galleta) the salaries at teaching schools tend to be lower than salaries at research schools. Finally, the results may make a contribution to finding a compensation model that is generalizable to other academic fields.

METHODS

Sample Selection

The sample used in this study is meant to be representative of the population of MIS professors on the job market. The data used is taken from the results of the 2003-2004, 2004-2005 and 2005-2006 salary surveys at the AIS Web site. This survey was administered online and only new faculty members or faculty members who changed jobs in the 2003-2006 academic years participated in the study. Evidence from parallel studies shows that online and traditional research methods yield similar results [Yoffie, 1998].

The respondents self-selected to participate in the survey. When survey questions ask for personal and sensitive information, non-respondents may differ in important ways from respondents [Judd, et al., 1991]. This is why researchers usually ask about income at the end of the survey, after some rapport has been established [Glassman and Glassman, 1998]. Therefore, a possible weakness of this study is self-selection bias. Those who chose to participate in the survey may not be representative of the population about which we wish to make inferences. In addition, the respondents may have given false or misleading information. To mitigate this problem we compare our results with the literature to check for reasonableness. We also compare the survey average salary with average salaries reported by the AACSB (Association to Advance Collegiate Schools of Business). Since the majority of survey respondents (62% see Table 5) were assistant professors, we compared the AACSB 2004-2005 Salary Survey Executive Summary [AACSB 2005] to the data used in this study. The AACSB reported a mean new hire, assistant professor of MIS, at a salary of $87,000 and a new doctorate of MIS at $91,900. This is comparable with the survey results of $91,481 for assistant professors (see Table 7). In addition, the reliability of the data is increased since 47% of the respondents revealed their identities.

Survey Design

The survey was designed and is maintained by Dennis Galletta at the University of Pennsylvania. Participants could submit data anonymously or non- anonymously. The survey was accompanied by a privacy policy which stated that participate identities will not be revealed. Non-anonymous data was encouraged because some administrators will discount the validity of anonymous data. The respondents were asked to provide compensation

information, experience, publications and faculty rank. Respondents were also asked to supply school and demographic information.

In order to understand the relationship between possible factors and faculty compensation, we first reviewed literature in the area of university faculty compensation. Based on the literature review, we discovered that variables such as rank [Swidler and Goldreyer, 1998; Tribunella and Yeh, 2005], journal publications [Kat,z 1973; Delorme et al., 1979; Tuckman and Leahey, 1975; Swidler and Goldreyer, 1998; Siegfried and White, 1973; Tribunella and Yeh, 2005], books [Katz, 1973; Siegfried and White, 1973], experience [Katz, 1973; DeLorme et al., 1979; Tuckman and Leahey, 1975; Swidler and Goldreyer, 1998; Melicha,r 1965, 1968; Siegfried and White, 1973; Johnson and Stafford, 1974], administrative position [Katz, 1973; Tuckman and Leahey, 1975; Swidler and Goldreye,r 1998; Siegfried and White, 1973], school location [Tuckman and Leahey, 1975; Cohen, 1971], and highest degree earned [Katz, 1973; Tuckman and Leahey, 1975; Melichar, 1965, 1968], could contribute significantly to a faculty member's compensation. Therefore, we were pleased to see questions related to these possible factors in the survey. We also conducted face-to-face interviews with MIS faculty members and department/school administrators to gain an understanding of possible factors in determining MIS faculty salary.

In this study, compensation is measured in terms of cash salary. Accordingly, employee benefits, taxes, union contracts, grants, consulting, extra service, and other variables were not included in the compensation amount.

RESULTS

Descriptive Statistics

After the data was collected, it was coded, entered into SPSS (a statistical software package) and analyzed. As displayed in Table 1, one hundred and seventy-seven faculty members participated in the survey. All international respondents and four outliers were eliminated from the data. Only 9% of the respondents were international. The international respondents reported data that was substantially different than what their US counterparts reported.

Table 1: Sample Size Attributes

Year	Total	US Respondents	International Respondents	Missing Salary	Outliers
2003/04	77	67	4	6	0
2004/05	57	47	5	5	2
2005/06	43	34	7	2	2
Totals	177	144	16	13	4

Table 2 displays the international data, which is much different than the US data In terms of salary, summer support, and course load. Since US and international salary offers are not comparable, we removed the international data.

Table 2: US Versus International Salary Offers

	Salary	Summer Support	Course Load
US	93,272	9,531	5.04
International	45,929	0	13.14

In addition, the data revealed 13 missing salaries and four outliers. The four outliers are displayed in Table 3. The outliers are outside of the realm of reasonableness. For example, respondent three claims he/she needs 50 "A" publications for tenure and respondent 23 reports a teaching load of 18 sections per year! We understand that these outliers might be due to keypunch errors or misinterpretations of the survey questions. Missing salary cases and outliers were also deleted from the data. This left 144 usable cases in the database.

Table 3: Outliers Deleted From Data

Year	ID	Top Tier Pubs.	Other Articles	Salary	Teaching Load	A Pubs. for Tenure	Total Pubs. for Tenure
2004	3	0	1	70,000	?	50	5
2004	17	0	1	90,000	12	3	10
2005	15	1	9	90,000	6	15	85
2005	23	1	42	89,000	18	0	4

Table 4: University Profiles

Accreditation Status:	**Cases**	**Percent**
Not Nationally or Internationally Accredited (such as AACSB)	15	10%
Nationally or Internationally Accredited	125	87%
Missing	4	3%
Total	144	100%
Type of College:	**Cases**	**Percent**
Private College	102	71%
Public College	40	28%
Missing	2	1%
Total	144	100%
Union	20	14%
Not Union	87	60%
Missing	37	26%
Total	144	100%
College Location:	**Cases**	**Percent**
Suburban	57	40%
Rural	34	24%
Urban	49	34%
Missing	4	2%
Total	144	100%
Northeast	33	23%
South	47	33%
Midwest	39	27%
West	21	15%
Missing	4	2%
Total	144	100%
School's Highest Degree:	**Cases**	**Percent**
Associate	1	1%
Bachelor	14	10%
Master	75	52%
Doctorate	48	33%
Missing	6	4
Total		100%

The remaining 144 respondents represented the diversity of the US faculty population in many respects. Descriptive statistics of the schools that made offers to the respondents are displayed below in Table 4.

Table 4 shows that 87% of the respondents received offers from nationally accredited schools, 71% were private universities, and 14% were unionized. The college locations were well distributed with 40% being suburban

and 33% being located in the south. Only one of the respondents received an offer from a school where the highest degree was an associate's degree. Most respondents (52%) received offers from master's degree granting institutions.

Table 5: Respondent Profiles

Faculty Rank:	**Cases**	**Percent**
Visitor/Instructor	7	5%
Assistant	89	62%
Associate	14	10%
Full/Chair	5	4%
Missing	29	19%
Total	144	100%
Highest Degree Earned:	**Cases**	**Percent**
Bachelor	3	2%
Master	7	5%
PhD/ABD	128	89%
Missing	6	4%
Total	144	100%
Identity Revealed	**Cases**	**Percent**
Yes	68	47%
No	76	53%
Total	144	100%
Switching Jobs	**Cases**	**Percent**
Yes	29	20%
No	115	80%
Total	144	100%

As seen in Table 5, 89 percent of the respondents had earned a Ph.D. or were ABD (All But Dissertation) in a doctorial program. Sixty-two percent of the respondents were either new assistant professors or assistant professors who were switching jobs. Ten percent of the faculty held the rank of Associate Professor and four percent were Full Professors or department chairs.

Table 6 displays descriptive statistics related to the respondents that chose to complete the survey. The respondents were relatively inexperienced faculty with a mean of 4.12 and a median of 3 years of full time teaching. The average survey respondent had a mean of .89 top tier journal publications and a mean of 3.76 other journal publications.

Table 6: Respondent Descriptive Statistics

	N	**Min.**	**Max.**	**Mean**	**Median**	**Mode**	**Standard Deviation**
Years teaching	141	0	27	4.12	3	1	4.083
Top tier journal publications	128	0	7	.89	0	0	1.481
Other journal publications	136	0	30	3.76	2	0	5.513
Text books	104	0	4	.18	0	0	.721
Research books	103	0	3	.12	0	0	.471
Other publications	134	0	63	7.30	5	0	8.692

Table 7 displays descriptive statistics related to the job offers that the survey respondents received. Our sample produced an overall mean MIS faculty salary offer of $93,522 with a median offer of $92,000. The mean course load was 4.61 sections per year and the mean summer support was $9,777.

Table 7: Descriptive Statistics Of Job Offers

	N	Min.	Max.	Mean	Median	Standard Deviation
Salary	127	45,000	164,000	93,522.24	92,000	19,678
Summer support	112	0	41,000	9,777.11	8,600	9,113
Research budget	98	0	70,000	3,390.82	2,000	7,442
Moving support	113	0	24,000	4,061.95	4,000	3,411
Course load	143	1	10	4.92	4	1.56
Number of A publications for tenure	124	0	10	1.69	1	1.91
Number of other publications for tenure	122	0	12	4.61	4	2.18
Salary Offers by Rank:						
Instructor or visitor	6	60,000	105,000	74,654	68,963	17,461
Assistant Professor	77	45,000	123,000	91,481	92,000	13,705
Associate Professor	14	62,000	160,000	111,357	104,000	32,923
Full professor or chair	4	82,500	164,000	124,225	125,200	33,521

Table 8: Factors Significantly Correlated With Compensation For All Respondents

Professor Attributes (p):	N	Significance (2-tailed)	Pearson Correlation
Masters Degree	121	.0020	-.2789
Instructor or Visitor Rank	127	.0155	-.2144
PhD. Degree	121	.0169	.2168
Full Professor or Chair	127	.0013	.2825
Associate Professor	127	.0002	.3203
Other Journal Publications	120	.0002	.3351
Years Teaching	124	.0001	.3387
Top Tier + Other Publications	121	.0000	.4344
Textbooks Published	96	.0000	.4485
Top Tier Journal Publications	114	.0000	.6144
School Attributes (s):	**N**	**Significance (2-tailed)**	**Pearson Correlation**
Course Load	126	.0000	-.5171
Bachelors Degree Granting	123	.0001	-.3405
Years of Summer Support	114	.0047	.2631
Number of Total Pubs. for Tenure	110	.0030	.2806
National Accreditation	124	.0002	.3273
Number of A Pubs. for Tenure	110	.0001	.3562
Doctorial Degree Granting	123	.0000	.3756
Tenure Requirements	123	.0000	.4209
Summer Support	108	.0000	.4882
Moving Support	107	.0000	.5731

Regression Models

Many factors included in the survey were suspected to have impacts on faculty compensation. To examine these impacts, a bivariate correlation test was conducted between the compensation and all possible factors. Table 8 shows factors that have significant Pearson's correlations with faculty compensation. Among these factors, we see

that school characteristics such as summer support, moving support, course load, tenure requirements, type of degrees granted, and accreditation correlate significantly to compensation. In addition, professor profile factors which include degrees, publications, rank, and teaching experience also are correlated with compensation.

After inspecting the bivariate relationship of each factor and the faculty compensation, a function listed as Equation 1 was developed. Equation 1 includes the multivariate contribution of these factors towards faculty compensation and is used to analyze the joint impacts of these factors. Those variables were entered into a multivariate regression model following the step-wise sequence. Furthermore, the model residuals were analyzed to examine the fitness of the model.

Equation 1: $Y = \beta_0 + \sum_{i=1}^{m} \beta s_i Xs_i + \sum_{j=1}^{n} \beta p_j Xp_j$,

Where:
Y= Faculty compensation (salary offers)
β_0 = Constant or Y intercept
βs_i = Coefficients for school factors
Xs_i = School factors
βp_j = Coefficients for professor factors
Xp_j = Professor factors

While many factors are tested for entering the model, only factors with significant ($p < .05$) impacts are included. The linear regression model that was considered a best-fit in representing Equation 1 was found via least square estimation. The resulting multiple regression model is displayed below as Equation 2.

Equation 2: $Y = \beta_0 + \beta s_1 Xs_1 + \beta s_2 Xs_2 + \beta s_3 Xs_3 + \beta p_1 Xp_1 + \beta p_2 Xp_2$

Where:
Xs_1 = Rural location
Xs_2 = Number of total publications for tenure
Xs_3 = Mid-west location
Xp_1 = Top tier journal publications
Xp_2 = Doctorial degree
Xp_3 = Associate professor rank

From the regression results summarized in Table 9, we first see that six factors are significant in explaining the variation in faculty compensation. From school-related factors, a rural location has a negative impact on the faculty compensation by about $9,858. However, it is interesting to note that mid-west schools pay a $7,318 premium for their faculty. The reason for this premium could be that there are several large research schools in the mid-west. Accordingly, schools that have tougher tenure requirements in terms of publications pay higher salaries.

Table 9: Regression Factors Explaining Variance In Compensation For All Respondents

Model Summary (a)

R	R Square	Adjusted R Square	Standard Error of the Estimate
.930	.865	.848	7,946

a) Predictors: (Constant), top tier journal pubs, doctorial degree, rural, number of total pubs for tenure, mid-west, associate

ANOVA (b)

	Sum of Squares	df	Mean Square	F	Significance
Regression	19,792,759,583	6	3,298,793,264	52.24	.000
Residual	3,094,079,703	49	63,144,484		
Total	22,886,839,286	55			

b) Dependent Variable: salary

Coefficients (c)

	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	70,493.49	3,439.54		20.495	.000
Top tier journal publications (p1)	7,888.06	877.76	.601	8.987	.000
Doctorial degree (p2)	10,063.81	2,948.26	.232	3.413	.001
Rural (s1)	-9,858.18	2,634.50	-.206	-3.742	.000
Number of total publications for tenure (s2)	1,815.92	484.88	.235	3.745	.000
Mid-west location (S3)	7,317.95	2,294.77	.171	3.189	.002
Associate (p3)	9,986.71	3,737.04	.173	2.672	.010

c) Dependent Variable: salary

Besides the three factors from schools, the remaining significant factors are from professors' profiles. Professors' scholarly outputs play an important role in determining their compensation. According to the regression results, each published top tier journal article increases the author's annual compensation by $7,888 per year. Although this may seem to be a relatively small increment, the accumulated sum over a professor's life-time career can be substantial. Swidler and Goldreuer [1998] have applied this concept in the field of finance by estimating the total net present value of an article in terms of professor compensation. Professors with all ranks are present in our data and we found that rank plays a significant role in the determination of salary. For example, the rank of associate professor yields an increase in salary of $9,987. Finally, earning a doctorial degree contributes $10,064 to one's salary.

Next, we narrowed our focus to those offers that represented agreement between institutions and professors. The number of accepted and rejected offers by rank is displayed in Table 10. Excluding the other offers, we ran a stepwise regression for accepted offers with salary as the dependent variable. Interestingly, the accepted offers yield coefficients that are somewhat different from those found among all offers.

Table 10: Number Of Accepted And Rejected Offers By Rank

	Accepted	Maybe	Rejected	Total
Instructor or visitor	6	1	0	7
Assistant Professor	57	6	24	87
Associate Professor	13	0	1	14
Full professor or chair	5	0	0	5
Total	81	7	25	113

Table 11: Regression Factors Explaining Variance In Compensation For Accepted Offers

Model Summary (a)

R	R Square	Adjusted R Square	Standard Error of the Estimate
.922(b)	.850	.832	8,470

a) Predictors: (Constant), top tier journal pubs, course load, text books, rural

b) Accepted = yes (Selected)

ANOVA (c)

	Sum of Squares	df	Mean Square	F	Significance
Regression	13,050,543,010	4	3,262,635,752	45.48	.000 (d)
Residual	2,295,524,558	32	71,735,142		
Total	15,346,067,568	36			

c) Dependent Variable: salary

d) Selecting only cases for which accepted = yes

Coefficients (e, f)

	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	112,800.42	6,091.38		18.518	.000
Top tier journal publications (p1)	5,968.30	1,872.97	.433	3.187	.003
Course load (s1)	-4,596.73	1,032.96	-.342	-4.450	.000
Textbooks (p2)	7,732.94	2,884.34	.346	2.681	.012
Rural (s2)	-9,008.42	3,636.35	-.173	-2.477	.019

e) Dependent Variable: salary
f) Selecting only cases for which accepted = yes

The results of the stepwise regression, shown below in Table 11, have an adjusted R square value of .832. Predictor variables with a positive relationship to salary include top-tier journal publications and published text books. Predictor variables with a negative relationship to salary were course load and being a rural campus.

We suggest that these findings are largely consistent with what might have been expected. Top-tier journal articles are worth roughly $6,000, while text books are worth $7,733. Both of these are, in part, a function of the length of a professor's career and of that professor's success in the two main areas of our profession: research and teaching. When it comes to making successful deals in the marketplace, evidently, these tangible proofs of excellence in research or pedagogy are the primary means for professors to raise their market value.

It is to be expected that professors accepting offers from the higher-prestige research universities would receive higher salaries. This is reflected in the negative value of classes taught per year. Salaries are roughly $4,600 lower for every course taught. It is notable that course load alone is sufficient to indicate the difference between various levels of university in terms of research output and prestige. One conclusion to be drawn here is that a university seeking to improve its prestige and research quality may get its best results by reducing the number of classes taught per faculty member per year.

Suburban and urban campuses making successful offers pay more than $9,000 more than their rural counterparts (1-1b). This does not seem to be a prestige issue so much as a cost of living one – given the relatively low cost of living in rural areas, professors at these institutions may enjoy a considerably higher standard of living than their more highly-paid urban and suburban counterparts. That rural schools pay $9,000 a year less for their faculty members (as well as enjoying other potential financial advantages) is less likely to be of practical value to institutions than the course load issue, though we recognize that institutions do occasionally relocate.

SUMMARY, CONCLUSIONS, AND FUTURE RESEARCH

Summary And Conclusions

The research took data from a survey of MIS professors and built models for predicting the salaries offered to MIS professor on the market, and for predicting the salaries in offers that were accepted. Major factors which contribute to a professor's potential and actual compensation were found. The models were tested and found to be good predictors with low residuals.

With the AACSB promoting clearer personnel policies we should search for better ways to quantify or measure the productivity of professors. This model could be used to make recommendations to the administration regarding how to compensate MIS faculty. It also provides guidance to MIS faculty regarding career management and how to increase salary. Moreover, it should augment vague qualitative concepts with a quantitative model in salary determination and promotion.

Future Research Questions

Even though this paper provides an initial investigation, further research would extend the analysis and add to the literature. This section reviews a list of questions that could be addressed by future research. First, does the value of publishing drop off at a certain stage of a professor's career or beyond a certain quantity of publications? In other words, are there diminishing returns to publishing? It would be interesting to know if publications received early in one's career have a greater effect on annual compensation than publications in later years.

In addition, we could ask, are employment mobility and compensation associated due to salary compression? Salary compression occurs when faculty pay raises do not keep pace with the job market. Over a period of time, a faculty member who is not mobile may be compensated significantly under market pay rates. Finally, an interesting question to consider is whether this compensation model, which is built for all ranks of professors, can also be applied within each rank.

Questions related to faculty compensation are important. The answers will provide valuable insights to administrators for their resource allocation decisions. Furthermore, faculty should understand their value so they can negotiate a realistic compensation package. Rational and efficient faculty compensation can be an important variable for attracting qualified individuals to academic professions.

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REFERENCES

1. Alreck, P. L., and Robert B. Settle. (1995) *The Survey Research Handbook*, second edition. Chicago, IL: Irwin,
2. Anonymous (2006) America's Best Graduate Schools 2006, *U.S. News and World Report*, www.usnews.com/usnews/edu/grad/rankings/rankindex_brief.php, (current March 20, 2006).
3. Association for Information Systems (2004) MIS Faculty Offer Survey, www.aisnet.org (current March 20, 2006).
4. Association to Advance Collegiate Schools of Business (2004) AACSB 2004-2005 Salary Survey Executive Summary, www.aacsb.edu. 2003, pp. 1-6, December 2004.
5. Association to Advance Collegiate Schools of Business (2003) AACSB 2003-2004 Salary Survey Executive Summary, www.aacsb.edu. 2003, pp. 1-6, December 2003.
6. Bertin, W.J. and T.L. Zivney (1992) The Determinants of Finance Faculty Salaries: The 1991-1992 FMA Salary Survey, *Financial Practice and Education*, pp. 19-29, Spring/Summer 1992.
7. DeLorme C.D., Hill R.C., and N.J. Wood (1979) Finance Research Productivity and Influences, *The Journal of Economic Education*, 11(1), pp. 20-25.
8. DeLorme D.D., Hill R.C., and N.J. Wood (1979) Analysis of a Quantitative Methods of Determining Faculty Salaries, *The Journal of Economic Education*, 11(1), pp. 20-25.
9. Dennis A.R., Valacich, J.S., Fuller, M.A., and Schneider, C. (2006) Research Standards for Promotion and Tenure in Information Systems, *MIS Quarterly*, 30(1), pp. 1-12.
10. Diamond A.M. (1986) What is a Citation Worth? *Journal of Human Resources*, 21(2), pp. 200-215.
11. Ferber M.A. (1974) Professors, Performance, and Rewards, *Industrial Relations*, pp. 69-77, February 1974.
12. Frolick M.N. (2005) Chen L. and B. D. Janz. Supply and Demand of IS Faculty: A Longitudinal Study, *Communications of the AIS*, 15, pp. 674-696.
13. Gillenson, M. L. and J. D. Stutz. (1991) Academic Issues in MIS: Journals and Books, *MIS Quarterly,* 15(4), pp. 447-452.
14. Glassman, A. Nanci and Myron Glassman. (1998) Screen Questions: How Screening Questions Can Cause Self-Selection Bias, *Marketing Research*, 10(3), pp. 27-32.
15. Guimaraes, T. (1998) Assessing Research Productivity: Important But Neglected Considerations, *Decision Line*, 29(3), pp. 18-22.
16. Hardgrave, B. C. and K. A. Walstrom. (1997) Forums for MIS Scholars, Communications of the ACM, 40(11), pp. 119-124.

17. Hinkle, Dennis E., William Wiersma, and Stephen G. Jurs. (1998) *Applied Statistics for the Behavioral Sciences*, Houston Mifflin, Boston, MA.
18. Holsapple, C. W., L. E. Johnson, et al. (1994) Business Computing Research Journals: A Normalized Citation Analysis, *Journal of Management Information Systems,* 11(1), pp. 131-140.
19. Im, K. S., K. Y. Kim, et al. (1998) An Assessment of Individual and Institutional Research Productivity in MIS, *Decision Line,* 29(1), pp. 8-12.
20. Im, K. S., K. Y. Kim, et al. (1998) A Response to Assessing Research Productivity: Important But Neglected Considerations, *Decision Line*, 29(5), pp. 12-15.
21. Johnson, G.E. and F.P. Stafford. (1974) The Earnings and Promotion of Women Faculty, *The American Economic Review*. 64(5), pp. 888-903.
22. Johnson G.E. and F.P. Stafford. (1974) Lifetime Earnings in a Professional Labor Market: Academic Economists, *The Journal of Political Economy,* May/June, pp. 549-569.
23. Judd, C. M., E. R. Smith, and L. H. Kidder. (1991) *Research Methods in Social Relations*, London, UK: Holt, Rinehart and Winston.
24. Katz D.A. (1973) Faculty Salaries, Promotions, and Productivity at a Large University, *The American Economic Review,* 63(3), pp. 469-477.
25. Keller G. and B. Warrack. (2003) *Statistics for Management and Economics*, 6th edition, Pacific Grove, CA: Brooks/Cole – Thomson Learning.
26. Koch J.V. and J.F. Chizwar. (1973) The Influence of Teaching and Other Factors Upon Absolute Salaries and Salary Increments at Illinois State University, *The Journal of Economic Education,* 5(1), pp. 27-34.
27. Kohler, Heinz. (2002) *Statistics for Business and Economics,* London, UK: South-Western and Thompson Learning.
28. Larsen, Kai R. and M. Pamela Neely. (2000) Profiles of MIS Doctoral Candidates: Ideals and Reality, *The Database for Advances in Information Systems*, 31(3), pp. 64-77.
29. Lemann, N. (1998) Universities Use Rankings, Too, *US News & World Report*. 125(8), p. 81.
30. Scheaffer, Richard L. and William Mendenhall. (1990) *Elementary Survey Sampling*, 4th Edition, Duxbury Press, Belmont, California.
31. Shelton, B. A. and S. Skaggs. (1996) How Faculty Members Spend Their Time: A Closer Look, *Academe*, 82(5), pp. 16-20.
32. Siegfried, J.J. and K.J. White. (1973) Financial Rewards to Research and Teaching: A Case Study of Academic Economists, *Journal of Economic Education,* May, pp. 309-316.
33. Stevens, James. (1986) *Applied Multivariate Statistics for the Social Sciences*, Hillsdale, New Jersey: Lawrence Erlbaum Associates.
34. Swidler, S. and E. Goldreyer. (1998) The Value of a Finance Journal Publication, *The Journal of Finance,* 53(1), pp. 351-363.
35. Tribunella, T.J. and H.R. Tribunella. (2006) An Economic Model for Ranking AIS Journals, *The Review of Business Information Systems*, forthcoming 2006.
36. Tribunella, T.J. (2005) AIS Faculty Familiarity and Perceptions of AIS Journals, *The Review of Business Information Systems*, 9(3), pp. 1-18.
37. Tribunella, T.J. and R. Yeh. (2005) A Quantitative Analysis of AIS Professor Compensation, *The Review of Business Information Systems*, 9(1), pp. 1-15.
38. Tribunella, T.J. and M. Pamela Neely. (2004) A Quantitative Analysis of MIS Faculty Compensation, *Proceedings of the 2004 Annual Decision Sciences Institute Meeting*, Boston, Massachusetts, November, pp. 27-28.
39. Tuckman H.P. and J. Leahey. (1975) What is an article worth? *Journal of Political Economy*, 83(51), pp. 951-967.
40. Tuckman H.P. and R.P. Hagemann. (1976) An Analysis of the Reward Structure in Two Disciplines, *Journal of Higher Education,* 47(4), pp. 447-464.
41. Walstrom, K. A. and B. C. Hardgrave. (2001) Forums for Information Systems Scholars: III, *Information & Management,* 39(2), pp. 115-124.
42. Wood N.J. and C.D. DeLorme.(1976) An Investigation of the Relationship Among Teaching Evaluations, Research and Ability, *The Journal of Economic Education,* 7(2), pp. 77-80.
43. Vinocur, B. (1998) Publish or Perish: the Economic Implications, *Dow Jones Asset Management*, January/February, pp. 53-54.
44. Yoffie, Amy J. (1998) The 'Sampling Dilemma' In No Different Online, *Marketing News*, 32(8), p. 16.
45. Zivney T.L. and W.J. Bertin. (1992) Publish or Perish: What the Competition is Really Doing, *The Journal of Finance*, 47(1), pp. 295-329.