

## Research Notes



# Earnings Determinants of Library Faculty of the University System of Georgia

W. Ken Farr and R. Neil Scott

This study analyzes the effects of selected factors on earnings of library faculty employed at senior colleges of the University System of Georgia with a master of library science degree. The factors are also dissected to explore for any differences in their impacts on earnings by gender. Major findings are that earnings increase with experience, becoming a library director, greater supervisory responsibility, and higher academic rank, whereas a decrease in salary can be expected upon changing jobs. Results from the study also suggest that male and female library faculty earnings are determined in the absence of gender discrimination. A surprising finding is that intellectual contributions and additional graduate education are not directly rewarded with significant increases in earnings.

**T**he major objectives of this paper are twofold. First, a model is developed to explore the influence of human capital, institutional, and personal characteristics on the compensation of library faculty employed by senior colleges of the University System of Georgia. A multiple regression analysis is employed to find the statistically significant factors that influence the earnings of members of this population. Second, even though the study is conducted within the limitations of a segment of the larger universe of academic libraries in the United States, a major contribution of this paper is that it can serve as a model for other colleges and

universities (or groups of such institutions) that wish to study the structure of their own compensation systems.

Other benefits of conducting studies such as this one are that results can be used as a basis from which to lobby to correct compensation discrepancies and/or to develop a formula-based salary scale to reward activities and attributes of library faculty in a more predictable manner. Researchers constructed an example of such a formula at Lamar University.<sup>1</sup>

Readers interested in a more basic, descriptive analysis of the original survey from which the data of this study were gathered are referred to the authors' previous article in *Southeastern Librarian*.<sup>2</sup>

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### Review of the Literature

In a nondiscriminating competitive labor market, marginal productivity theory suggests that wage differences depend largely upon differences in the productivity of labor. Other things being equal, higher incomes are generally expected to be associated with factors (e.g., education and experience) that enhance a person's labor productivity and vice versa. However, in real-world labor markets, market imperfections may also contribute to income differences between individuals in specific labor markets because an individual's factor endowments may be evaluated differently based on, for example, gender or race. In addition, wage differences of individuals may also reflect other factors that limit market participation, such as specific job qualifications.

Previous studies have found that wages in the academic setting are, in general, significantly determined by such institutional factors as intellectual activities, job performance, experience, and administrative responsibilities.<sup>3-10</sup> However, earlier studies focused attention primarily on "traditional" academic faculty, thus the role that these factors play in determining the earnings of library faculty is unclear as rewards for factor endowments are often market specific. The authors, however, believe that it is reasonable to assume, a priori, that similar factors would also be important in explaining earnings variations in the academic labor market for library faculty. Support for this argument is found in human capital theory which asserts that, through time, individuals accumulate skills that enhance the productivity of our labor services, based upon our education levels and work experience.

This assertion is further supported by the "Standards for Faculty Status for College and University Librarians" adopted and promoted by ACRL.<sup>11</sup> In recognition of these standards, which encourage equal treatment of academic library fac-

ulty with other comparably ranked instructional faculty, librarians employed by the University System of Georgia hold faculty status and are fully recognized by the Board of Regents as members of the "Corp of Instruction" at each institution.<sup>12</sup> Another basis for this assumption may be found in results from a dissertation which concluded that many of the same factors that influence academic faculty salaries in other disciplines are similar for academic librarians employed at medium-sized state-supported universities in the midwestern United States.<sup>13</sup>

### Description of the Survey and Data

The data used in this study were collected during the summer and fall of 1992 as part of a survey of all library faculty employed by the fourteen senior colleges of the University System of Georgia (a population of 95). The authors gathered data from a tailored questionnaire designed to obtain descriptive information while maintaining personal confidentiality. The authors limited the data set to librarians with academic rank who possess an ALA-accredited master's degree in library science (MLS) since the ALA master's degree is the minimum education level for those accepted for employment as a library faculty member in the University System of Georgia. The data were current for the budget year ending June 30, 1992. The final sample consisted of sixty-eight usable questionnaires, reflecting a response rate of 72 percent.

### Primary Model Specification

The traditional human capital model forms the basis for the factors included to explain income variations of library faculty. In addition to factors indicating investments in human capital (HC), this conventional model is expanded to capture the effects of administrative responsibilities (A), rank (R), and personal characteristics (P). Also, since other studies have shown that earnings may vary by gender, this possibility is also explored.<sup>14-20</sup>

The formal model is expressed as follows:

$$y_i = f(\text{HC}_i, \text{A}_i, \text{R}_i, \text{P}_i, \text{e}_i) \quad i = 1, \dots, T \quad (1)$$

where each component is explained as follows:

The term  $y_i$ , the dependent variable, is the natural logarithm of the annual (12-month) salary of the  $i$ th library faculty member. The reason for the logarithmic form of salary is because of its preponderance in similar academic studies as there is no strong theoretical support for the exact functional form of the dependent variable. In an effort to improve response rates, wage information was gathered using categorical choices and the midpoint of each category was used as an approximation of salary.<sup>21</sup>

The explanatory variables begin with  $\text{HC}_i$  which represents *three* human capital measures of the  $i$ th library faculty member. The first is experience, a continuous variable that measures the number of years since receiving the MLS degree. The second is publications, a weighted composite continuous variable that represents the cumulative intellectual output of the  $i$ th library faculty member during his or her career. A weighting scheme is used to reduce the number of independent variables and increase the degrees of freedom in the regressions models. The weights assigned to specific intellectual activities are: published books by a factor of 5; published academic research articles by a factor of 2.5; academic research papers presented at professional organization meetings by a factor of 1.25; book reviews by a factor of .625; and any other "intellectual" activity reported in the survey by a factor of .3125. Although any weighting scheme is subjective and there is always the problem of evaluating quality versus quantity, the authors believe that the above scale is consistent in terms of the importance assigned to intellectual activities for academic librarians. In addition, weighting schemes such as the one

described have been shown to be useful in similar empirical studies.<sup>22,23</sup> No attempt was made to adjust this variable to differentiate between single and joint authorship. The third and final human capital variable is used to capture the effects of a specialized subject degree. This is a dichotomous variable with a value of one if the  $i$ th library faculty member has one or more graduate subject degrees in addition to the MLS, zero if otherwise. This variable is included to capture benefits associated with additional degrees where it is expected that a supplemental degree(s) would enhance the operation of the library in that field. Each of the above variables is expected to have a positive impact on salary since each reflects an increase in human capital.

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The next explanatory component is  $\text{A}_i$  which represents *two* administrative measures. The first is a dichotomous variable that takes a value of one if the  $i$ th library faculty member is the director of the library, zero if otherwise. This variable is included to capture the expected positive influence on salary of an individual ultimately responsible for the operation of a college library. The second administrative variable is used to measure supervisory responsibilities of the  $i$ th library faculty member. This is a weighted composite continuous variable where the number of professional library faculty supervised is weighted by a factor of 1, the number of support staff supervised is weighted by a factor of .5, and the number of student assistants supervised is weighted by a factor of .25. This weighting scheme is again used to reduce the number of explanatory variables and increase the de-

degrees of freedom. It is also used to attach importance to the *type* as well as the *number* of individuals supervised. As before, any weighting scheme is subjective and subject to debate. However, the authors believe that this scheme, as designed, is consistent with the importance assigned to levels of supervisory responsibility for library faculty. A positive impact on earnings is expected from both of these administrative measures.

The term  $R_i$  is included to represent the three academic ranks of assistant professor, associate professor, and full professor. Each is a dichotomous variable where a value of one is assigned according to the *i*th library faculty member's rank, zero if otherwise. These variables are included to capture rewards that are given for an amalgam of achievements accumulated by an individual during his or her career which are not explicitly accounted for in the model or which individually would not have a significant impact on wages. In association with an increase in rank often comes an increment in one's salary. It is therefore expected that each of these variables would have a positive impact on salary.

The final explanatory component of the model is  $P_i$  which represents two personal characteristic measures. The first is the number of library employers (excluding the first employer) of the *i*th library faculty member during his or her years of employment since receiving the MLS degree. This continuous variable is included based upon the hypothesis that individuals who change their employer more frequently, do so to enhance their salary. While economic theory does not provide direct evidence of the likely effect of this variable, other studies have found mobility to be a significant positive earnings determinant in academia.<sup>24,25</sup> The second personal characteristic variable is gender, a dichotomous variable that takes a value of one if the *i*th library faculty member is male, zero if otherwise. This variable is included to

assist in exploring for gender bias in library faculty earnings. If differences exist in starting pay, other things constant, and/or if differences exist in how factor endowments are evaluated for salary, gender discrimination may be the cause. Conversely, discrimination cannot be argued if differences in earnings are explained by factor endowments. A methodology to explore for this possibility is developed in the next section.

The component  $e_i$  is a random disturbance term included to capture any unexplained variation in earnings not accounted for by the explanatory variables.

### Model Decomposition

To investigate for differences in library faculty salaries by gender, begin by decomposing the earnings model into its component parts, as suggested by Alan Blinder.<sup>26</sup> To simplify this procedure, first rewrite equation (1) in more general terms as:

$$y_i = \alpha + \sum_{j=1}^n \beta_j Z_{ji} + e_i \quad i = 1, \dots, T \quad (2)$$

where  $y_i$  is the salary received by the *i*th individual,  $Z_{ji}$  represents factor endowment values taken by the *j*th explanatory variables of the *i*th individual,  $\alpha$  and  $\beta_j$  represent unknown parameter coefficients to be estimated using least squares, and  $e_i$  is a stochastic disturbance term. Equation (2) can be rewritten to represent a male or female sample as:

$$\bar{y}^m = \hat{\alpha}^m + \sum_{j=1}^n \hat{\beta}_j^m \bar{Z}_j^m \quad (3)$$

$$\bar{y}^f = \hat{\alpha}^f + \sum_{j=1}^n \hat{\beta}_j^f \bar{Z}_j^f \quad (4)$$

where  $\hat{\alpha}$  and  $\hat{\beta}_j$  represent estimates of the unknown parameters in equation (2), the m and f superscripts refer to results from a sample of males or females, and the bar superscripts refer to sample means.

Total differences in the average salaries of males and females can therefore be shown as:

$$\bar{y}^m - \bar{y}^f = (\hat{\alpha}^m - \hat{\alpha}^f) + \sum_{j=1}^n \hat{\beta}_j^m (\bar{Z}_j^m - \bar{Z}_j^f) + \sum_{j=1}^n \bar{Z}_j^f (\hat{\beta}_j^m - \hat{\beta}_j^f) \quad (5)$$

where  $(\bar{y}^m - \bar{y}^f)$ , which is referred to as the total effect of the average salary differences, decomposes into the sum of three components: the constant effect, the endowment effect, and the coefficient effect, respectively. To explain each component, first assume that salaries of female library faculty are determined in the absence of discrimination. This can be expressed as:

$$\bar{y}^h = \hat{\alpha}^m + \sum_{j=1}^n \hat{\beta}_j^m \bar{Z}_j^f \quad (6)$$

where  $\bar{y}^h$  represents female mean salaries when factor endowments of females are evaluated using the rewards structure for males. Earnings variations that are explained by differences in average factor endowments can then be shown as:

$$\bar{y}^m - \bar{y}^h = \sum_{j=1}^n \hat{\beta}_j^m (\bar{Z}_j^m - \bar{Z}_j^f) \quad (7)$$

which is the endowment effect shown in equation (5). Any remaining difference in total earnings between male and female library faculty is then referred to as the *residual effect*, defined as the difference between  $(\bar{y}^h - \bar{y}^f)$  and shown as:

$$\bar{y}^h - \bar{y}^f = (\hat{\alpha}^m - \hat{\alpha}^f) + \sum_{j=1}^n \bar{Z}_j^f (\hat{\beta}_j^m - \hat{\beta}_j^f) \quad (8)$$

where the residual effect is the sum of the constant and coefficient effect in equation (5). The constant effect represents earnings differentials unrelated to factor endowment levels or the evaluation of said endowments for income determination. The coefficient effect, conversely, represents earnings variations as a result of the differences in how factor endowments are evaluated. This suggests that even if both

male and female library faculty had  $\bar{Z}_j^f$

factor endowments, earnings differences would still exist. Given this, an argument for traditional gender discrimination may be made if the constant and/or coefficient effect is significant and of the appropriate sign, which in this context is expected to be positive since it is generally assumed that males earn more than females in comparable positions.

Using the methodology of John Jackson and James T. Lindley, a statistical test for significance of the residual effect can be accomplished by combining the male

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and female sample data on the variables in equation (1).<sup>27</sup> A dichotomous variable to represent gender is included, as well as a complete set of gender interaction terms. The residual effect can be tested assuming the null hypothesis of no significant differences in earnings by gender using the following test statistic:

$$u = \frac{(SSE_R - SSE_U) / J}{SSE_U / (T - K)} \quad (9)$$

where  $SSE_R$  is the sum of squares of the least squares errors obtained from the restricted model excluding the gender and interaction terms, and  $SSE_U$  is the sum of squares of the least squares errors obtained from the unrestricted model which includes the gender and interaction terms.  $J$  represents the number of joint hypotheses being tested;  $K$ , the number of parameters estimated in the unrestricted model; and  $T$ , the sample size. The test statistic  $u$  follows an F distribution with  $J$  and  $(T - K)$  degrees of freedom.

The components of the residual effect can also be tested for statistical significance. This is done by testing for the coefficient effect using the same procedure as above, except the gender dummy is

added to the restricted model. The constant effect is tested using a t-test on the parameter estimate of the gender variable in the unrestricted model.

Since some regression equations are estimated with pooled cross-sectional data using both male and female library faculty, correction for heteroscedastic errors is necessary. Further, since tests for gender bias depend on regression errors, proper model specification becomes critical. Therefore, a RESET test was conducted and the model judged to be properly specified.<sup>28-30</sup> Finally, the presence of multicollinearity was tested using the matrix decomposition procedure suggested by David A. Belsley, Edwin Kuh, and Roy E. Welsch, and judged to be of no consequence for any of the estimated regression equations.<sup>31</sup>

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**The empirical evidence suggests that the greatest addition to earnings comes from being a library director.**

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### Presentation and Analysis of Results

Table 1 presents parameter estimates of five separate regressions related to equation (1). All five are necessary to accomplish the objectives of the study since each contains information that is needed for statistical analysis.

Overall, each equation is statistically significant at the  $\alpha = .01$  level, with the lowest estimated  $R^2$  of .85 for the female model. This suggests that the specified model does an acceptable job of explaining wage variations of library faculty. Exploring for significant differences in salary by gender begins by reviewing the parameter estimates from the male and female regressions (see columns 1 and 2). These suggest that several common factors significantly influence salary, including experience, appointment as library director, supervisory responsibility, and the rank of associate professor. However, differences are also shown to exist. Additional significant variables for the males regression include publications, the rank

of assistant professor, and the number of past employers. An additional significant variable for the females regression is the rank of full professor. Other differences include the intercepts of the two regressions, which suggest a lower starting salary for females, and the magnitude of the coefficients on the explanatory variables, which imply differences in how unit changes in these variables impact salary. While differences appear to exist, the question becomes: are the visible differences statistically significant?

The answer to this question is given at the bottom of table 1 where the estimated mean salary of men ( $\bar{y}^m$ ) is shown to be only 4.63 percent higher than for women ( $\bar{y}^f$ ), which was defined earlier to be the total effect. Roughly 28 percent of this difference is explained by factor endowments (the endowment effect), while the remaining 72 percent (the residual effect) is a result of other causes. Using equation (9), a test of statistical significance on the residual effect is performed and found to be insignificant. In addition, a test of the differences in starting pay (the constant effect) is also shown to be insignificant. Moreover, the evaluation of factor endowments that determine salary (the coefficient effect) is not significantly different between the sexes. Results of these tests suggest that there are no significant differences in the earnings of library faculty by gender that cannot be explained in economic terms. As such, the two groups can be "pooled" and treated as identical within the context of the regression model. The appropriate regression for further analysis then becomes the pooled model without gender dummy or interaction terms (see column 3).

Regression (3) results in table 1 are summarized in dollar equivalents in figure 1. These estimates show that an individual with an MLS from an ALA-accredited program holding the rank of instructor in a senior college of the University System of Georgia with zero values for the explanatory variables would have had a starting

**TABLE 1**  
**Earnings Model Parameter Estimates**  
**(t-values are given in parentheses)**

Variable	(1)	(2)	(3)	(4)	(5)	Males Means	Females Means
	Males Model	Females Model	Pooled Model No Gender Dummy	Pooled Model Gender Dummy	Pooled Model Gender and Interaction		
<b>Constant</b>	10.1469 (205.6) <sup>a</sup>	10.0703 (224.9) <sup>a</sup>	10.0835 (333.0) <sup>a</sup>	10.0692 (310.4) <sup>a</sup>	10.0703 (224.9) <sup>a</sup>		
<b>Human Capital Variables</b>							
Experience	0.0110 (3.466) <sup>a</sup>	0.0075 (2.303) <sup>b</sup>	0.0087 (4.183) <sup>a</sup>	0.0084 (3.981) <sup>a</sup>	0.0075 (2.303) <sup>b</sup>	12.600	12.875
Publications	0.0052 (2.290) <sup>b</sup>	-0.0013 (-0.996)	0.0012 (1.124)	0.0013 (1.175)	-0.0013 (-0.996)	5.906	7.129
Subject Degree	-0.0595 (-1.654)	0.0067 (0.150)	-0.0027 (-0.114)	-0.0129 (-0.509)	0.0067 (0.150)	0.550	0.292
<b>Administrative Variables</b>							
Director	0.3611 (5.232) <sup>a</sup>	0.3840 (6.311) <sup>a</sup>	0.3324 (8.556) <sup>a</sup>	0.3423 (8.627) <sup>a</sup>	0.3840 (6.312) <sup>a</sup>	0.150	0.167
Supervisory Responsibility	0.0112 (3.021) <sup>b</sup>	0.0138 (2.871) <sup>a</sup>	0.0102 (4.780) <sup>a</sup>	0.0092 (4.082) <sup>a</sup>	0.0138 (2.872) <sup>a</sup>	6.163	3.250
<b>Rank Variables</b>							
Assistant Professor	0.1150 (2.183) <sup>c</sup>	0.0492 (0.999)	0.0847 (2.727) <sup>a</sup>	0.0897 (2.865) <sup>a</sup>	0.0492 (0.998)	0.400	0.479
Associate Professor	0.1595 (2.194) <sup>c</sup>	0.1607 (2.505) <sup>b</sup>	0.1674 (3.831) <sup>a</sup>	0.1792 (4.005) <sup>a</sup>	0.1607 (2.506) <sup>b</sup>	0.250	0.250
Full Professor	0.0636 (0.449)	0.4280 (3.461) <sup>a</sup>	0.2387 (3.003) <sup>a</sup>	0.2465 (3.089) <sup>a</sup>	0.4280 (3.461) <sup>a</sup>	0.050	0.042
<b>Personal Variables</b>							
Number of Employers	-0.0539 (-2.242) <sup>b</sup>	-0.0094 (-1.150)	-0.0172 (-2.303) <sup>b</sup>	-0.0160 (-2.126) <sup>b</sup>	-0.0094 (-1.150)	2.350	2.708
Gender Dummy				0.0307 (1.224)	0.0767 (1.150)	0.294	0.706
<b>Gender Interaction Variables</b>							
Gender-Experience					0.0035 (0.777)		
Gender-Publications					0.0065 (2.476) <sup>b</sup>		
Gender-Subject Degree					-0.0662 (-1.153)		
Gender-Director					-0.0229 (-0.249)		
Gender-Supervisory Responsibility					-0.0026 (-0.424)		
Gender-Assistant Professor					0.0657 (0.911)		
Gender-Associate Professor					-0.0012 (-0.013)		
Gender-Full Professor					-0.3644 (-1.937) <sup>c</sup>		
Gender-Number of Employers					-0.0445 (-1.751) <sup>c</sup>		

(Cont.)

TABLE 1 cont.

Variable	(1)	(2)	(3)	(4)	(5)	Males Means	Females Means
	Males Model	Females Model	Pooled Model No Gender Dummy	Pooled Model Gender Dummy	Pooled Model Gender and Interaction		
F-value	36.0400 <sup>a</sup>	23.7940 <sup>a</sup>	50.9930 <sup>a</sup>	46.2800 <sup>a</sup>	28.5470 <sup>a</sup>		
R-squared	0.97010	0.84930	0.88780	0.89030	0.91870		
M.S.E.	0.00436	0.01353	1.00000	1.00000	1.00000		
S.S.E.	0.04356	0.51423	0.71417	0.70541	0.55779		
T	20	48	68	68	68		
Mean In Salary	10.36952	10.32420	10.33753	10.33753	10.33753		
			Differences in Logarithms		Percentage Differences in Nominal Terms		
$\bar{y}^m = 10.3695$	Total Effect		$= y^m - y^f = .0453$		4.63		
$\bar{y}^h = 10.3569$	Endowment Effect		$= y^m - y^h = .0126$		1.27		
$\bar{y}^f = 10.3242$	Residual Effect		$= y^h - y^f = .0327$		3.32		
Constant Effect = Gender coefficient in the full Interaction Model = .076649							
Coefficient Effect = Residual Effect - Constant Effect = .0327 - .076649 = -0.043949							
$u$ for Residual Effect = $[(.71417 - .55779) / 10] / [(.55779 / (68 - 20))] = 1.3457$							
F critical = 2.0346 ( $\alpha = .05$ )							
$u$ for Coefficient Effect = $[(.70541 - .55779) / 9] / [(.55779 / (68 - 20))] = 1.41147$							
F critical = 2.0817 ( $\alpha = .05$ )							
<sup>a</sup> Significant at the $\alpha = .01$ level							
<sup>b</sup> Significant at the $\alpha = .05$ level							
<sup>c</sup> Significant at the $\alpha = .10$ level							

salary of \$23,945 for fiscal year 1992.

Among the human capital factors included in the model, only experience is found to be statistically significant. Regression estimates show that earnings increase with each year of experience by a nominal .87 percent, or \$208 per year. Both of the administrative variables are found to significantly improve salaries. The position of library director is estimated to enhance earnings by a nominal 39.43 percent, or \$9,441. Responsibility for directly supervising employees is estimated to increase salary by \$245 for each professional library faculty member supervised, \$123 for each support staff member supervised, and \$61 for each student supervised.

All academic ranks are found to be statistically significant. Salary increases nominally with the rank of assistant professor by approximately 8.8 percent, or \$2,116, over the salary of an instructor.

Likewise, the rank of associate professor is associated with a salary increase of a nominal 18.2 percent, or \$4,363, over the rank of instructor. For a full professor the increase is 26.9 percent, or \$6,455.

The last factor found to be statistically significant is the number of employment changes. While many other studies found this variable to positively increase earnings, estimates show that each employment change since receiving the ALA-accredited MLS degree causes salary to decrease nominally by 1.7 percent, or \$409. This suggests that library faculty change jobs for reasons ranked higher in importance than earnings. Moreover, regardless of the reason for the job change, the library faculty in this study had to accept significantly lower salaries when changing employers.

### Summary and Conclusions

This earnings study of library faculty em-



ployed by senior colleges of the University System of Georgia found no evidence to suggest that gender discrimination plays any role in determining salary. In other words, the same set of factors is significant in determining salary for both males and females, as well as how they are evaluated in setting salaries.

The significant factors found to increase earnings for library faculty are experience, administrative responsibilities, and faculty rank. The empirical evidence suggests that the *greatest* addition to earnings comes from being a library director. This conclusion is not unexpected since the individual in this position is ultimately responsible for the overall day-to-day operations of the library. However, results also indicate that significant increases in salary can also be achieved by those individuals who are not library di-

rectors by assuming additional supervisory responsibilities.

Experience is another factor found to increase earnings significantly. Interestingly, the evidence suggests that earnings increase linearly with experience, *vis-à-vis*, as theoretically expected in a nonlinear fashion. Because human capital theory suggests that with greater experience comes greater productivity, the study's empirical evidence is unclear as to the exact economic interpretation of experience's impact on earnings. Does salary increase with experience because of increased productivity or simply because of longevity? This issue warrants further study.

The significance of faculty rank variables explains the rewards given to individuals based on a composite of factors not specifically included in the study or which individually do not affect salary.

FIGURE 1

**1992 Fiscal Year Salary Estimate of College Librarians in the University System of Georgia Based on the Results of This Study**

I. Base pay of ALA-accredited MLS academic library faculty member with rank of instructor:		\$23,945
II. <b>Add:</b> \$208 for each year of post-MLS experience:	( $\$208 \times \underline{\hspace{1cm}}$ Years) =	+ $\underline{\hspace{1cm}}$
\$9,441 if hold position of library director:	( $\$9,441$ ) =	+ $\underline{\hspace{1cm}}$
Number of people directly supervised:		
	( $\$245 \times \underline{\hspace{1cm}}$ faculty) =	+ $\underline{\hspace{1cm}}$
	( $\$123 \times \underline{\hspace{1cm}}$ support staff) =	+ $\underline{\hspace{1cm}}$
	( $\$61 \times \underline{\hspace{1cm}}$ student assistants) =	+ $\underline{\hspace{1cm}}$
	Total =	+ $\underline{\hspace{1cm}}$
Faculty rank:		
	(\$2,116 for assistant professor)	
	(\$4,363 for associate professor)	
	(\$6,455 for professor)	+ $\underline{\hspace{1cm}}$
III. <b>Subtract:</b> Number of post-MLS employers, excluding present employer:		
	( $\$409 \times \underline{\hspace{1cm}}$ employers) =	- $\underline{\hspace{1cm}}$
	<b>Predicted Salary =</b>	<b>\$ <math>\underline{\hspace{1cm}}</math></b>

Two factors which were included in this study and not found to be significant in salary determination were publications and graduate academic degrees in addition to the MLS. While these factors individually may not significantly affect salary, they *may* be important to specific administrators who make promotion decisions; hence increments given for higher ranks can indirectly reflect these factors.

The study also shows that library faculty who change employers find that each move significantly lowers their salary. This finding is somewhat surprising since similar studies of other groups have shown this factor to affect earnings positively. This suggests that library faculty change jobs for reasons ranked higher in importance than to seek a higher salary. Two peculiarities of this market may help explain why this is true. First, in the labor market for library faculty, positions are often advertised and funded based on minimum qualifications. However, it is not uncommon to find a large number of applicants for each vacant position. As a result, employers often find the applicant pool to include many candidates with qualifications far exceeding the minimum requirements of the position advertised. This allows an opportunity for the employer to fill the position with a person who has a current salary, which is based on the qualifications of the individual in his or her current position, that is higher than the amount allocated for the position the individual is seeking. This means that if the individual accepts the offered position, he or she will have to accept a reduction in earnings.

A second peculiarity related to this finding can be found in the fact that the aca-

demical library labor market is dominated by females (70 percent in the sample for this study). Numerous studies have shown that females tend to have lower reservation wages than men. That is, the minimum earnings that a female will accept for a given position is generally lower than those for men. These facts help explain, based on the results of this study, the obvious willingness of library faculty to accept lower salaries when changing employers. Brenda Major and Janice J. Kirkland provide a review of the literature, with an examination and discussion of gender differences related to personal entitlement with respect to payment for work performed.<sup>32,33</sup>

A final observation concerns empirical evidence that suggests that intellectual activities are not directly rewarded with significant increases in earnings. This finding is contrary to previous studies of academic faculty disciplines and probably affects the amount of effort exerted by library faculty to contribute in this area. (As noted earlier in the paper, promotion increments can capture the impact of intellectual contributions on earnings.) Given ACRL's desire to encourage college administrators to treat academic library faculty equally to comparably ranked faculty in other disciplines, this finding suggests that the reward structure for research activities may not be in place to support the promotion provisions of the "Standards." However, whether the lack of reward for intellectual activities is peculiar to library faculty at the senior colleges of the University System of Georgia is unclear. It may be that the research activities of faculty in *all* disciplines at these institutions are not directly rewarded. Additional research is needed to provide further insight into this aspect.

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### Notes

1. Jeanie M. Welch, "Suggested Guidelines for Salary Determination in an Academic Library," in *Energies for Transition: Proceedings of the Fourth National Conference of the Association of College and Research Libraries* (Chicago: ACRL, 1986), 152-56.

2. R. Neil Scott, W. Ken Farr, E. Lorene Flanders, and Bonnie E. Spiers, "Professional and Salary Characteristics of Librarians Employed by Senior Colleges of the University System of Georgia," *Southeastern Librarian* 44, no. 3 (fall 1993): 46-51.

3. Josef M. Broder and Rod F. Ziemer, "Determinants of Agricultural Economics Faculty Salaries," *American Journal of Agricultural Economics* 64 (May 1982): 301-3.
4. Charles D. Delorme Jr., R. Carter Hill, and Norman J. Wood, "Analysis of a Quantitative Method of Determining Faculty Salaries," *Journal of Economic Education* (fall 1979): 20-25.
5. M. A. Ferber, "Professors, Performance, and Rewards," *Industrial Relations* (Feb. 1974): 69-77.
6. D. A. Katz, "Faculty Salaries, Promotions, and Productivity at a Large University," *American Economic Review* (June 1973): 469-77.
7. Matt L. Riggs, Ronald G. Downey, Patricia E. McIntyre, and Donald P. Hoyt, "Using Discriminant Analysis to Predict Faculty Rank," *Research in Higher Education* 25, no. 4 (1986): 365-76.
8. Howard P. Tuckman and Jack Leahey, "What Is an Article Worth?" *Journal of Political Economy* 83, no. 5 (1975): 951-67.
9. Howard P. Tuckman, James H. Gapinski, and Robert P. Hagemann, "Faculty Skills and the Salary Structure in Academe: A Market Perspective," *American Economic Review* (Sept. 1977): 692-702.
10. William C. Weiler, "Integrating Rank Differences into a Model of Male-Female Faculty Salary Discrimination," *Quarterly Review of Economics and Business* 30, no. 1 (1990): 3-15.
11. "Standards for Faculty Status for College and University Librarians," *College & Research Libraries News* (May 1992): 317-18.
12. *Policy Manual: Board of Regents, University System of Georgia*, 2nd ed. (Atlanta: University System of Georgia, 1982): 19-30.
13. Ung Chon Kim, "A Statistical Study of Factors Affecting Salaries of Academic Librarians at Medium-Sized State-Supported Universities in Five Midwestern States," (Ph.D. diss., Indiana Univ., 1980).
14. Andrew P. Barkley, "Earnings of Kansas State University Agriculture Graduates: 1978-88," *American Journal of Agricultural Economics* (Feb. 1992): 215-22.
15. Alan S. Blinder, "Wage Discrimination: Reduced Form and Structural Estimates," *Journal of Human Resources* (fall 1973): 436-55.
16. Ronald Oaxaca, "Male-Female Wage Differentials in Urban Labor Markets," *International Economic Review* (Oct. 1973): 693-709.
17. John D. Jackson and James T. Lindley, "Measuring the Extent of Wage Discrimination: A Statistical Test and a Caveat," *Applied Economics* 21 (Apr. 1989): 515-40.
18. James T. Lindley, Mary Fish, and John Jackson, "Gender Differences in Salaries: An Application to Academe," *Southern Economics Journal* (Oct. 1992): 241-59.
19. Kenneth Rosenzweig, Elizabeth Gustafson, and Lawrence Hadley, "An Economic Analysis of the Earnings of Industrial Accounts," *Journal of Economics and Finance* 18, no. 1 (spring 1994): 125-38.
20. Weiler, "Integrating Rank Differences," 3-15.
21. Warren P. Preston, Josef M. Broder, and Maria Cristina P. Almero, "Temporal Analysis of Income Earned by Former Agriculture Students," *American Journal of Agricultural Economics* (Feb. 1990): 13-23.
22. Broder and Ziemer, "Determinants of Agricultural Economics," 301-3.
23. Delorme, Hill, and Wood, "Analysis of a Quantitative Method," 20-25.
24. Broder and Ziemer, "Determinants of Agricultural Economics," 301-3.
25. Katz, "Faculty Salaries, Promotions, and Productivity," 469-77.
26. Blinder, "Wage Discrimination," 436-55.
27. Lindley, Fish, and Jackson, "Gender Differences in Salaries," 241-59.
28. James B. Ramsey, "Tests for Specification Errors in Classical Linear Least-squares Regression Analysis," *Journal of the Royal Statistical Society, series B* (1969): 350-71.
29. Jerry G. Thursby and Peter Schmidt, "Some Properties of Test for Specification Error in a Linear Regression Model," *Journal of the American Statistical Association* 72, no. 359 (Sept. 1977): 635-41.
30. Jerry G. Thursby, "Alternative Specification Error Tests: A Comparative Study," *Journal of the American Statistical Association* 74, no. 365 (Mar. 1979): 222-25.
31. David A. Belsley, Edwin Kuh, and Roy E. Welsch, *Regression Diagnostics: Identifying Influential Data and Sources of Collinearity* (New York: John Wiley and Sons, 1980).
32. Brenda Major, Dean B. McFarlin, and Diana Gagnon, "Overworked and Underpaid: On the Nature of Gender Differences in Personal Entitlement," *Journal of Personality and Social Psychology* 47, no. 6 (1984): 1399-1412.
33. Janice J. Kirkland, "Equity and Entitlement: Internal Barriers to Improving the Pay of Academic Librarians," *College & Research Libraries* 52 (July 1991): 375-80.