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SALARIES FOR ACADEMIC ACCOUNTANTS: THE NUMBERS CRUNCH

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ABSTRACT

Economists have determined that many labor markets have been segmented or have actually become two separate markets. This theory of dual labor markets has found several applications in the literature. The purpose of this article is to examine the Association to Advance Collegiate Schools of Business (AACSB) "37th Annual Salary Survey Report: 2004-2005" results for accountants to determine if there exists a dual labor market for academic accountants. The results of the AACSB survey are not only that there is salary compression, but that there exists actually salary inversion, where assistant professors are paid more than associate professors in some cases. The data show that new hires and current faculty experience statistically significant differences in their salaries, confirming the probability that a dual labor market exists for academic accountants.

Salaries in academic institutions are frequently the subject of debate and the cause of political unrest in academe. They are commonly regarded as a function of academic rank. That is, full professors are typically paid more than associate professors, who, in turn, are paid more than assistant professors, and so on. Further, as Hazard Adams [1, p. 4] observed in his entertaining disquisition on

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academe, "At major universities in this country, where most of the research in academe is carried on, the three announced criteria for promotion are usually research, teaching, and university service." Most faculty have come to expect the rewards of employment to be determined on this basis, including promotion, tenure, and annual salary increments.

A number of studies of academic salaries and compensation levels have been reported in the economics and education literature. Economists [2-4] have discovered a close association between rated performance in the criteria of teaching, research, and service with both the granting of tenure and promotion and, in turn, with faculty salaries. However, as Barbezat and Hughes [5] have found, this close association of promotion and tenure criteria with faculty salaries is often a matter of market mobility. In other words, to obtain the benefits of their own productivity with respect to salary, faculty members must often place themselves on the market to obtain their pay raise.

Kasten [6] has found that faculty salaries have been examined using essentially the same criteria as observed in the economics literature. In addition, other studies have found different explanatory variables that correlate well with faculty salaries. Peter Blau [7] found that the two most significant explanatory variables in determining faculty salaries across institutions were the institution's size and affluence.

The thread running throughout these studies is that there is both an external labor market for academics (i.e., competition among institutions) and an internal labor market (i.e., wage determination internal to each institution). This consistency in the literature suggests that modern labor economics may offer some useful insights into the reasons why academic salaries are as observed in their respective disciplines.

The purpose of this article is to provide a quick review of the differences between internal and external labor markets and then to apply these insights to data for academic accountants.

INTERNAL AND EXTERNAL LABOR MARKETS

To understand the determination of salaries in academic institutions, it is necessary to come to grips with what economists call "the labor market." In fact, there are two labor markets, as Professors Hyclak, Johnes, and Thornton explain:

> With wages set by the firm within Internal Labor Markets to maximize the joint gains from establishing and maintaining the employment relationship, it is no longer possible to think of wages in general as being determined by the intersection of traditional labor supply and demand curves. External labor market forces do affect the wages of workers at the point of entry to the firm, but for workers already employed, wages are determined in a manner consistent with the long-run objectives of the firm. With this in mind, it is easier to see why wages would vary by firm, industry, or

> occupation even when we control for the education, experience, and compensating differentials on the job. In fact, variables indicating the firm, industry, and occupation of a worker often explain more of the variation in wages across workers than the human capital variables that are consistent with the competitive model of labor supply [8, p. 276].

In other words, there is a market in which only current employees are relevant with respect to wage determination, that is the internal labor market. The external labor market is the forum in which prospective employers and employees come together to determine new employment contracts. In the external labor market, it is the interaction of the traditional labor demand and labor supply that will determine not only the amount of labor to be hired, but also what the wage will be.

In the internal labor market in academe, tenure appears to play several important economic roles. It serves to bring the individual faculty member's interests into alignment with the long-term interests of the academic institution [9]. Tenure is usually granted after a significant probationary period, usually six years, but salary increments are generally determined annually. For the accounting professor who receives tenure, it is generally true that over the years leading up to the tenure decision, salary increments should have been reflective of at least acceptable performance. Hence, there should be a positive correlation between salary increments over the probationary period and the granting of tenure.

However, the relation between tenure status and salary increments can be expected to disconnect once tenure is granted. It is promotion that rewards continued meritorious performance and reflects salary increments granted for that performance. In other words, the observed salary differentials between assistant professor salaries and associate professor salaries are a simple continuation of the institutional recognition of meritorious performance over the period.

Within the internal labor market, other determinants are associated with salaries paid. In his book, Blau [7] asserts that the affluence and size of academic institutions are the most significant determinants of faculty salaries. These findings are consistent with the institutional wage standards commonly known to economists and applied in internal labor markets. These standards are: 1) comparative norm, 2) ability-to-pay, and 3) standard of living [10]. The comparative norm suggests that the external labor market will determine wages and employment distributions among the various competing employers and employees. Thus, in determining salaries, an academic institution will compare the salaries that it pays with others whom are similarly situated.

Ability-to-pay has several implications in academic employment. As Blau [7] discovered in his research, schools in the southern United States tended to pay less than those in the north. He suggests that the difference was primarily a reflection of the relative affluence of the state universities located in those regions of the United States. Much the same is also likely true of those private institutions with large endowments and ability to charge high tuitions vis-à-vis those private institutions whose financial positions are not as robust.

Table 1. Accounting Faculty Salaries
AACSB Salary Survey 2004-2005

	Mean	Median	Maximum	Minimum
Public Accredited				
All Faculty				
Professor	111.3	101.0	280.7	43.5
Associate professor	93.4	89.7	175.1	41.3
Assistant professor	93.8	90.0	156.0	37.6
Instructor	53.9	49.8	131.0	20.4
New Hires				
Professor	156.7	147.5	280.0	96.0
Associate professor	103.1	103.0	135.0	70.4
Assistant professor	98.1	93.0	145.0	51.3
Instructor	52.6	50.0	126.7	28.0
New doctorate	105.3	95.0	205.0	52.3
Public Non-Accredited				
All Faculty				
Professor	82.1	83.2	121.0	59.6
Associate professor	74.9	74.0	96.6	49.6
Assistant professor	67.8	68.9	97.6	38.2
Instructor	46.9	45.8	81.4	25.2
New Hires				
Professor	102.0	97.0	121.0	88.0
Associate professor	85.7	86.5	89.7	80.0
Assistant professor	67.9	68.3	80.0	51.4
Instructor	f43.7	40.5	50.6	39.1
New doctorate	76.4	72.6	87.0	70.0
Private Accredited				
All Faculty				
Professor	133.0	117.3	325.0	45.0
Associate professor	103.4	97.6	203.0	50.3
Assistant professor	106.1	100.3	180.0	41.0
Instructor	60.1	54.1	155.0	25.0
New Hires				
Professor	n/a	n/a	n/a	n/a
Associate professor	109.4	101.5	190.0	75.0
Assistant professor	117.5	120.0	155.0	45.0
Instructor	77.9	62.0	155.0	36.0
New doctorate	117.4	130.0	155.0	45.0

Table 1. (Cont'd.)

	Mean	Median	Maximum	Minimum
Private Non-Accredited				
All Faculty				
Professor	79.5	78.8	110.0	55.8
Associate professor	75.9	72.1	122.2	56.2
Assistant professor	64.2	61.6	94.0	37.3
Instructor	59.7	54.6	90.5	39.0
New Hires				
Professor	n/a	n/a	n/a	n/a
Associate professor	82.0	80.0	100.0	68.0
Assistant professor	64.6	70.0	94.0	37.3
Instructor	53.5	47.5	80.0	39.0
New doctorate	98.0	94.0	110.0	90.0

Standard-of-living is also a critical element of the economic theory of labor markets. The wage variable in any labor market analysis is the "real wage." Professors, like any other potential employee, offer their services for what the wage will purchase for them, not for the nominal wage itself. Ninety-thousand dollars may be a decent salary for a nine-month contract in Western Kentucky, whereas in New York City the high cost of living suggests that $90,000 would not provide a high living standard. Therefore, in any discussion of salary determination, the respective cost of living in particular locations becomes an important determinant of academic salary.

ACCOUNTING SALARIES

The Association to Advance Collegiate Schools of Business (AACSB) conducts an annual salary survey and publishes its results [11]. Table 1 presents a selection of accounting faculty salary data from that survey.

Based on Table 1, a few things about the salary structure for academic accountants are obvious. In accordance with the findings of Blau [7] and consistent with the theories of the internal and external labor markets, higher salaries are paid to new hires than those paid to all faculty in each category of institution. The market appears to set higher values on faculty at each rank than the various internal salary policies set for the existing faculty cohorts. The data also suggest that private accredited schools pay more for both new hires and existing faculty than their counterparts in public accredited schools; whereas the public non-accredited schools generally pay higher salaries for both existing faculty and new

hires than those paid by their private counterparts. Appearances, however, may be misleading; therefore, an *F Test* was applied to the data to determine whether the salary differences between new hires and all faculty salaries is statistically significant.

Because of the limited number of observations, the tests for significance can be applied only to the new hire against all faculty salary data; further breakdowns result in proportionate losses of degrees of freedom rendering such tests less than robust. For the Analysis of Variance reported in Table 2, however, it is clear that there is a statistically significant difference in the salaries reported for new hires, versus those salaries reported by AACSB for all accounting faculty (*F* Statistic = 19.89, which is significant at .01).

Of greater significance is salary compression, clearly evident in this data. Generally, attaining the rank of associate professor is associated with productivity in teaching, research, and service outlined in an internal salary policy. If, however, the salary policy generates annual salary increments which do not keep pace with the increases evident in the external labor market, one should expect to observe compression in salaries between assistant and associate professors. The inference drawn from the data, then, is that academic institutions practice a form of wage discrimination (a practice consistent with profit-maximization) in which only those faculty that are mobile capture their external market value while those less mobile will fall behind. This will be true even if the less-mobile faculty perform well measured against the standards of the internal salary policy. Needless to say, wage discrimination of this sort may lead to political stress within academic accounting departments.

SALARY DETERMINATES

The internal labor market determines salaries through the internal salary policy developed by the individual academic institutions. As William Becker observed:

> Much has been written in the higher education administration literature about measuring the research, teaching, and service outcomes of faculty

Table 2. ANOVA Accounting Salaries

Source	*d.f.*	SS	MS	*F*
Treatments	1	10591.87	557.47	19.89
Error	19	189,126.20	11,089.75	
Mean all faculty	$91,450			
Mean new hires	$98,700			

> members [13-16]. How each of many multiple outcomes enters salary determination equations is also well studied [12, p. 420].

In accounting, there have been studies concerning the quality of business and accounting journals [17]. This literature suggests that there is no uniform agreement concerning what journals are the best, particularly given the varying missions of particular business or accounting programs. The role that research plays in determining annual salary increments is normally specified in university policies. In organizations with collective bargaining arrangements, the labor agreement is normally the authority covering salary determination, which may also include credit for research.

The role of teaching and service also varies by school. The problems associated with measuring and evaluating these elements of productivity are also well documented, making it difficult to generalize [18]. Yet most academic institutions will make the effort to measure the effectiveness of these activities and include them when determining annual salary increments.

Another critical element in the determination of salaries is the cost-of-living in the institution's community. Blau's [7] study revealed significant regional variations in academic salaries. His data showed that southern schools typically paid less than schools located in other regions of the country. In large measure, this difference is predictable from standard labor economics. Labor economists have long recognized it is the real wage which is the determinate of labor supply, therefore cost-of-living is a significant determinate of the wage rate [8]. While one might attribute this salary differential to the relative lack of affluence of the southern schools, perhaps it is the cost-of-living that explains much of the difference.

Cost-of-living data [19] for selected urban areas of the United States are presented in Table 3.

For the top 20 graduate programs in business, according to *U.S. News & World Report,* all but three have ACCRA Index data available. The low is the Finger Lakes area in western New York where Cornell University is located in Ithaca; whereas the highest cost-of-living area is in New York City, where Columbia University and New York University have an ACCRA Index of 202.1. For accounting professors to maintain equivalent standards-of-living in New York City and in Ithaca, a professor in New York City would have to make slightly more than twice as much as a professor at Cornell. In the external market, it is clear that the cost-of-living in Ithaca, New York will provide an advantage over its peer institutions. These data also suggest one explanation for Blau's [7] observation that southern schools pay less. Emory (97.3), Duke (100.1), Texas (97.1), and Virginia (106.0) are all top-20 institutions located in the south, and only Virginia is statistically significantly above 100. (An index above 100 indicates a greater than national average cost-of-living.) Of the schools with a cost of living below 100, the only northern school is Cornell.

Table 3. Cost-of-Living Communities with Top 20 Business Schools

School	*U.S. News and World Report* ranking	ACCRA** index
Harvard University	1	141.1
University of Pennsylvania	2	125.4
Stanford University	2	179.5
Northwestern University	4	103.9
Massachusetts Institute of Technology	4	141.1
Dartmouth University	6	n/a/
University of California – Berkeley	6	141.1
University of Chicago	8	103.9
Columbia University	9	202.1
University of Michigan – Ann Arbor	10	n/a
Duke University	11	100.1
University of California – Los Angeles	12	113.2
New York University	13	202.1
University of Virginia	14	106.0
Cornell University	15	96.1
Yale University	15	123.8
Carnegie-Mellon University	17	n/a
Emory University	18	97.3
University of Texas – Austin	18	97.1
University of Washington – Seattle	18	116.4

**U.S. News & World Report,* retrieved from http://grad-schools.usnews.rankingsandreviews.com/usnews/edu/grad/rankings/mba/mbaindex_brief.php (accessed on June 28, 2006), America's Best Graduate Schools 2006 – Business

**American Chamber of Commerce Research Association (ACCRA) Index, August 2005.

CONCLUSIONS

The data for academic accounting salaries are consistent with a pattern of wage discrimination predicted by the existence of internal and an external markets for accounting professors, where increments determined internally do not keep pace with external market values. There is a "crunch" in the internal market for accountants. There is significant salary compression between the assistant and

associate professor ranks that may reflect the fact that assistant professors generally have been hired more recently from the external labor markets than associate professors. The data also show that new hires at each rank are paid notably higher salaries in both accredited and non-accredited institutions. The existence of the parallel internal and external markets suggests that salary compression will always be a problem at the associate and assistant levels, until and unless institutions fund increases for annual increments that are commensurate with the external market values.

Surprisingly, public accredited institutions appear to pay less than private accredited institutions. If Blau's [7] study is instructive, this suggests that private institutions may be more affluent, thereby able to pay higher salaries. This is an empirical question which deserves greater attention. The opposite appears to be the case in examining non-accredited institutions; the private schools in that category appear to pay less.

The data indicate that, among the top 20 graduate business programs, there is a wide variation in cost-of-living among different geographical regions. This variation suggests that pay structures at academic institutions can and should take into account cost-of-living factors. What may appear to be a modest nominal salary at a place like Cornell or University of Texas –Austin may not be so modest when compared to an area like New York City. For example, if a faculty member at Texas or Cornell makes 80% of what an equivalently qualified professor at Columbia makes, then the salary at Columbia has a lower claim on goods and services. At least some of the regional differences in salaries that Blau [7] observed, then, might be explained in terms of cost-of-living factors.

Salary determination is not as simple as one might think at first. Further study is warranted in these areas where individual salaries and productivity can be identified so that more robust statistical techniques can be applied thereby exploring more potential determinants in both the internal and external markets for accountants. This article attempts to provide a first step along that path.

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