

To: Faculty Assembly

From: Faculty Compensation Board (James Beers, Lawrence Evans, Mark Forsyth, Julie Galambush, Laura Heyman, Melissa McInerney, John Merrick, Ken Moore)

Date: May 8, 2014

Re: Analysis of differential between annual salary of retiring faculty and new Assistant Professor hires

Executive Summary

In response to a request by the Faculty Assembly, the Faculty Compensation Board presents this analysis of the differential between the annual salary of retiring faculty and that of new hire Assistant Professors. We find that retiring faculty earn approximately \$50,000 more per year than the new Assistant Professors hired in the same department (for Arts and Sciences) or school (Mason School of Business, School of Education, Marshall-Wythe School of Law, or VIMS). We were also asked to quantify the lag between a retiree's last year of service and the first year a new hire Assistant Professor is on the job. In addition to the approximately \$50,000 difference in salary, we find that it takes departments or schools between one and two years to hire a new Assistant Professor after a faculty member retires.

Data and Analysis

We received salary information for all faculty who retired between the years 2007-2012 (AY 2006-2007 through AY 2011-2012), as well as salary information for all new assistant professors hired during that same period, with names removed from the data. We also received information on the faculty member's rank, school, department (for A&S), and year of retirement or hire. For retiring faculty, we also have salary information that dates back five years prior to retirement. The analysis was performed by Melissa McInerney, a labor economist, using data provided by the Office of Institutional Analysis and Effectiveness. The major purpose of this exercise is to quantify (1) the salary differential between retiring faculty and newly hired Assistant Professors in the same department (A&S) or school (business, law, education, and VIMS) and (2) the number of years between a faculty member's retirement and the hire of a new Assistant Professor. We were also asked to summarize the evidence from the empirical economics literature regarding the impact of early retirement incentives on retirement decisions.

1. Difference in Average Annual Salary Between Retirees and New Assistant Professors

To determine the average annual difference in salaries, we compute the difference in each school/department, and then take the average of these differences. On average, the

difference between a retiring faculty’s salary and that of a new hire is roughly \$50,000, as shown in Table 1, below. We note that we do not have information on a faculty member’s discipline for Education, Business, Law, and VIMS. Therefore, we are unable to match the discipline of the retiree with the discipline of new hire in these schools. This could lead us to understate the difference in average annual salaries if, for example, more new Assistant Professors were hired in disciplines with higher average salaries and the retirements occurred in disciplines with lower average salaries.

Table 1: Difference in One Year’s Worth of Annual Salary Between Retiring Faculty and New Assistant Professor Hires in the Same Department

School	Average Retiree Salary ¹	Average New Hire Salary ²	Difference
Overall	129,848	73,661	56,496
Education	116,942	62,368	54,574
Business	153,382	139,167	14,216
Law	220,793	104,018	116,775
VIMS ³	155,634	78,250	77,384
All A&S	118,682	64,710	54,171
A & S Area I ⁴	110,993	53,501	57,942
A & S Area II	124,098	71,365	52,732
A & S Area III	121,490	67,035	55,214

¹Adjusted for pre-retirement raises (2012 \$). We exclude one retiree from the Law school and one retiree from the Physics department because their last observed salary was several years before their retirement date.

²Average new hire salary for Assistant Professors hired in the same school and department (for A&S) as the retiree (2012 \$)

³VIMS salaries reflect 12-month contracts.

⁴Area I (Art and Art History; Classical Studies; English; Modern Languages and Literatures; Music; Philosophy; Religious Studies; Theater; Speech and Dance); Area II (Anthropology; Economics; Government; History; Kinesiology; Military Science; Psychology; Sociology); Area III (Applied Science; Biology; Chemistry; Computer Science; Geology; Mathematics; Physics)

2. Average Number of Years Between Retirement and New Assistant Professor Hire

Of course, it is also important to know how many years separate a retirement and a new Assistant Professor hire. On average, we observe 1.5 years between a retiree’s last year of service and a new Assistant Professor’s hire. This gap is slightly higher for Law and VIMS (3

and 1.8 years, respectively) and lower for Education and Business (1.2 and 1.3 years, respectively).¹

Table 2: Number of Academic Years Between a Faculty Member’s Retirement and the Start Date of the Next Assistant Professor Hired in the Retiree’s Department (A&S) or School (Education, Business, Law, VIMS)

School	Average Years Between New Hire Start Date and Retiree ¹
Overall	1.48
Education	1.17
Business	1.33
Law	3.00
VIMS	1.83
All A&S	1.40
Area I	1.73
Area II	1.23
Area III	1.20

¹We do not include physics faculty in this section of the analysis because the new Assistant Professors were hired prior to any observed retirements.

Evidence from Economics Literature

The Economics literature shows that early retirement incentives have a modest impact on retirement decisions, and the evidence generally suggests individuals are approximately 10 percent more likely to retire when an incentive is offered.

Evidence examining the impact of retirement incentives on academic or state employees finds modest effects; individuals become 7 to 10 percent more likely to retire. Pencavel (2001) studied buyouts from the University of California system in the early 1990s and found when the incentives are 10 percent higher, long-term employees are between 7 and 8 percent more likely to retire early. Hogarth (1998) examined an early retirement incentive program in New York State from the early 1980s that awarded three additional

¹ Since many departments have more new hires than retirees, of course, identifying the number of years between a retirement and the next Assistant Professor hired does not necessarily represent the time-to-hire after a faculty member retires. A few departments in A&S (Applied Science, Chemistry, Classical Studies, and English) have the same number of new hires and retirees. We find that the time between retirement and the hire of a new Assistant Professor is somewhat lower in these departments (1.37 years, on average) than in all of A & S.

years of service to those state employees who retired within a certain window. She found that the incentive increased the likelihood of retirement by 10 percent.

It is worth noting that these incentives reflect enhancements to an employee's pension and not a one-time cash incentive payment. Mehay and Hogan (1998) instead examine the impact of a lump sum separation bonus from the military in 1992, and find that the presence of this incentive increased separations by 10 percent.

Data Appendix

Table 3, below, describes the salaries of the retirees. We make two adjustments to the retiring salaries and one restriction to the data. First, since any proposed early retirement incentive would replace the 8/7 program (and perhaps also replace individually negotiated raises that precede retirement), the retiring faculty salaries have been adjusted to remove these pre-retirement incentives. Specifically, we observed the average annual salary increase for the faculty member in the fifth through third year prior to retirement, which precedes the pre-retirement bonuses (observed in the last two years of service). We replace observed salaries for the last two years of services with an adjusted salary that reflects this more modest annual salary increase. Second, the salary averages presented below are all presented in 2012 dollars.

Table 3: Calculating Salary of Retiring Faculty Member in Year of Retirement

School	Number of retirees	Average Retiree Salary in Year of Retirement (2012 \$)	Average annual salary increase for retirees in the fifth through third year prior to retirement	Average annual salary increase for retirees in year of retirement and year prior to retirement	Average Retiree Salary, Adjusted for Pre-Retirement Raises (2012 \$)
Overall	65	139,376	3.9%	7.9%	129,848
Education	6	131,083	3.0%	9.1%	116,942
Business	6	155,143	6.5%	6.7%	153,382
Law	3	222,028	6.7%	7.3%	220,793
VIMS ¹	6	157,368	5.6%	6.9%	155,634
All A&S	44	130,268	3.2%	8.1%	118,682
Area I	15	124,162	3.3%	9.0%	110,993
Area II	13	134,083	2.5%	6.7%	124,098
Area III	16	132,893	3.5%	8.3%	121,490

¹VIMS salaries reflect 12-month contracts.

Finally, this analysis only retains those schools and/or departments in which we observe both a retirement and a new Assistant Professor hire in the years 2007-2012. That is, Geology; Music, Theatre, Speech, and Dance; and Sociology are not included because we do not observe a retirement but we do observe new Assistant Professors hired during these years.

To find the difference between a retiree’s salary and that of new Assistant Professors in the same department, we preserve only those new Assistant Professor hires that are in a school or department in which a retirement preceded the hire. That is, for each retirement, we exclude Assistant Professor hires that predate that retirement. For example, Economics department faculty members retired in the years 2009 and 2011, so new Assistant Professor hires in that department in the years 2007 and 2008 were excluded from this analysis. As with the retiree salaries, all dollar values are converted to the same year, 2012, for comparability across years.

Table 5: Calculating Salary of New Assistant Professors

School	Number of New Assistant Professors Hired 2007-2012	Number of New Assistants in Departments with a Retirement During this Period	Number of New Assistants Hired After a Retirement in Their Department	Average annual starting salary for New Assistant Professors (2012 \$)
Overall	121	111	92	73,661
Education	8	8	8	62,368
Business	9	9	9	139,167
Law	3	3	3	104,018
VIMS ¹	4	4	4	78,250
All A&S	97	87	68	64,710
Area I	26	21	20	53,501
Area II	39	35	26	71,365
Area III	32	31	22	67,035

¹VIMS salaries reflect 12-month contracts.

References

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- Mehay, Stephen L. and Paul F. Hogan. 1998. “The Effect of Separation Bonuses on Voluntary Quits: Evidence from the Military’s Downsizing.” *Southern Economic Journal*, 65(1): 127-139.
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