# SECOND ANNUAL LOGISTICS FACULTY SALARY SURVEY

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**ABSTRACT**

*While the Association to Advance Collegiate Schools of Business International (AACSB) conducts an annual survey of business school faculty and administrative salaries, the data do not include salary figures for logistics (and related areas such as transportation and supply chain management) faculty. Since the growth in number of logistics faculty positions has continued to exceed the output of doctoral programs in the field for more than a decade, it is logical to assume that logistics faculty salaries, at all levels, are increasing. However, without factual data, what salary should a new logistics Ph.D. expect, and what should an administrator budget for a logistics faculty position? In order to provide such factual data, the authors developed an electronic salary survey and distributed it to 249 faculty at colleges and universities in the United States. This is the second year of the survey.*

## INTRODUCTION

For the reader unfamiliar with hiring practices in academia, a brief overview of the process will enhance the understanding of the purpose of this research. The typical business faculty position at most colleges and universities in the United States requires a terminal degree or doctorate as a minimum qualification. Of the 458 business schools/colleges accredited in the United States by the Association to Advance Collegiate Schools of Business (AACSB) International, only 126 (27.51 percent) offer doctoral programs. Of those business schools/colleges offering doctoral programs, only 16 (3.49 percent of the 458 accredited schools/colleges, 12.70 percent of the accredited doctoral granting institutions) offer doctoral programs in logistics, transportation, supply chain management or related fields (Mondello, 2007). The typical well-established business doctoral program, including all functional areas (accounting, management, logistics, etc.) will enroll fewer than ten new students each academic year, with average time to degree completion in the range of three to five years. The supply of new doctorates to fill all business faculty positions is decidedly small and fixed in the short to intermediate term.

For more than thirty years, logistics-related degree programs have been growing in number and enrollment (Lancioni et al., 2001; Golicic et al., 2004). For the same period of time,

staffing the increasing number of programs with qualified faculty has been a continuing problem (Tyworth and Grenoble, 1985; Rutner et al., 1996; Golicic et al., 2004). According to the Graduate Management Admission Council, there were 1.4 openings per doctoral graduate at AACSB member schools in the 1998-1999 academic year, with the number rising to 2.1 the following year (Graduate Management Admission Council, 2001). Further, the Logistics Academic Hiring Survey conducted annually by Dr. Martha Cooper at the Ohio State University directly illustrates the continuing gap between available faculty positions in logistics and the annual supply of new doctoral graduates in the field. In the 2000 survey, of 17 responding universities, there were 16 entry-level positions available, and just 3 logistics Ph.D. graduates that year (Cooper, 2000). In 2003, of 20 responding universities, there were 18 available positions, and only 4 graduates (Cooper, 2003). In the 2006-2007 recruiting season, there were 43 available positions, and only 13 graduates available. Note that this survey includes only logistics doctoral-granting universities, indicating that the real gap between the supply of qualified new faculty and open positions across all AACSB member schools is much greater than that suggested by the quoted survey results.

The preceding discussion leads directly to the need for and importance of the survey research conducted by the authors. Each year university logistics, transportation and supply chain management programs are faced with the need for salary information when hiring for new and vacant positions, or for justifying salary adjustments for current faculty to remain competitive with other universities. Many fields of specialization utilize data from the annual study of U.S. faculty and administrative personnel salaries conducted by the AACSB International. In 2006, the AACSB conducted the 39th annual survey of U.S. faculty and administrative personnel salaries (Association to Advance Collegiate Schools of Business International, 2007). Responses were received from 491 institutions. Salaries are stated as nine- or 10-month equivalents to allow direct comparability. Salary data were collected in 28 fields of specialization, including Management,

Marketing, and Production and Operations Management as shown in Table 1. The category "other" received an average of 31 responses per rank yet includes general business, health services and hospital administration, hotel, restaurant and tourism, public administration, supply chain management, transportation and logistics, and other not classified.

The logistics and supply chain management discipline is composed of an amalgam of overlapping disciplines, creating a dilemma as to which category should be used to best reflect salaries in the logistics field. For this reason, in 2006 the authors decided to initiate an annual logistics faculty salary survey in order to provide discipline-specific information of use to both faculty looking for positions and administrators seeking to fill them. This article reflects the second year of data collection.

## SURVEY METHODOLOGY

The survey methodology emphasized simplicity, ease of response, and confidentiality. The survey instrument is shown in Figure 1. A contact list was compiled from the Council of Supply Chain Management Professionals (CSCMP) annual Educators' Conference registration list for the last seven years. The list was reviewed to remove duplicates, adjust for known changes of employment, and to remove faculty members whose primary field was not in logistics, transportation, or supply chain management. The authors added the names of other known logistics faculty members not included in the registration lists.

After the initial survey was distributed, the list was corrected for any undeliverable addresses, and surveys were sent to the updated addresses. In total 249 surveys were sent. A follow-up survey was sent two weeks later. Due to the number of automated "out-of-office" replies and recognizing responses could be reduced because of the time of year, a third distribution was completed two weeks after the second.

**TABLE 1**
**2006-2007 AACSB SALARY DATA**
(000's)

| Rank | Management | Marketing | Production/ Operations Management | Other* |
|---|---|---|---|---|
| **Assistant** | $ 93.4 | $ 99.6 | $111.0 | $ 74.9 |
| - Private | $ 84.4 | $ 93.9 | $ 93.4 | $ 71.3 |
| - Public | | | | |
| **Associate** | $ 97.0 | $ 106.5 | $108.3 | $ 92.3 |
| - Private | $ 87.9 | $ 95.7 | $ 98.0 | $ 80.7 |
| - Public | | | | |
| **Full** | | | | |
| - | $126.7 | $117.6 | $142.4 | $153.5 |

| | | | | |
|---|---|---|---|---|
| Private - Public | $107.5 | $147.2 | $118.3 | $124.2 |

* Includes an average of only 31 responses per rank covering General Business, Health Services/Hospital Administration, Hotel/Restaurant/Tourism, Public Administration, Supply Chain Management/Transportation/Logistics, and "Other not classified"

Source: Association to Advance Collegiate Schools of Business International, *Salary Survey Report 2006-2007*.

## FIGURE 1
## SURVEY INSTRUMENT

All of us are faced with the need for salary information when hiring for new positions or justifying adjustments to remain competitive in the market. The AACSB salary survey does not include a separate category for logistics faculty. We would appreciate your assistance by filling out this confidential survey and either e-mailing (logisitics@unt.edu) or faxing (940-369-7012) the survey back to us. The results will be available at the CSCMP Educators Conference in October.

Current rank:

- ° Full
- ° Associate
- ° Assistant
- ° Visiting
- ° Instructor/Non-PhD/Adjunct
- ° Other (please specify) _____

Current field (primary):

- ° Logistics/Transportation/Supply Chain
- ° Marketing
- ° Operations Management/Decision Sciences
- ° Operations Research
- ° Industrial Engineering _____
- ° Other (please specify)

_____ years Years in present rank

_____ years Total years in academic service since Ph.D./D.B.A. granted

My current institution is:

- ° Public
- ° Private
- ° AACSB accredited
- ° Not AACSB accredited

$ _____ Base 9 month salary/wages (do not include summer pay, special stipends, professorships, chaired positions, or other non-base remuneration)

$ _____ Total wages/salary compensated (including summer pay , special stipends, professorships, chaired positions, or other non-base remuneration)— do not include benefit packages

Current employer:

- ° Logistics, Transportation, Supply Chain Management, etc., Ph.D.-granting institution
- ° Other Ph.D.-granting institution–with undergraduate and graduate degrees in logistics fields
- ° Other Ph.D.-granting institution–no degrees offered in logistics fields
- ° Non-Ph.D.-granting institution–with undergraduate and graduate degrees in logistics fields
- ° Non-Ph.D.-granting institution–no degrees offered in logistics fields

Present allocation of your workload as your performance is measured (should total 100%):

_____ % Teaching

_____ % Research

_____ % Service

_____ % Administration

E-mail to logistics@unt.edu or fax to (940) 369-7012.

The research employed a process to create an aggregate data set while maintaining the confidentiality of the respondents. Respondents had the option to email completed surveys to a controlled email address assigned to the University of North Texas Center for Logistics Education and Research, to fax the completed one-page survey to the Center, or to

complete an on-line Websurveyor questionnaire. A research assistant numbered the response (to allow for the ability to confirm or correct data input) and entered the response into a Microsoft Access file. Original completed surveys, which could contain identifying marks such as email addresses or fax numbers, were isolated from the authors. The Access file was then passed to the authors for analysis.

Out of 249 surveys sent out, usable responses were received from sixty-one faculty representing a response rate of 24.5 percent.

## ANALYSIS OF RESULTS

### Demographics

The demographics in Table 2 reflect a broad mixture of responses. The data allow the survey report to differentiate pay structures in greater detail than the aggregate reports from the AACSB survey. With this information, the authors were able to develop conclusions regarding compensation differences between public and private universities, institution accreditation, type of program, years of service and workload allocation.

### Base Salary vs. Total Compensation

Survey respondents were asked to identify their base nine-month salary, as well as the total compensation, which includes such additional incentives as summer pay, special stipends, professorships, chaired positions, administrative positions or remuneration for other activities. Neither figure included benefit packages. Table 3 compares total compensation with base salary.

**TABLE 2**
**RESPONDENT DEMOGRAPHICS (2007)**

| | | | | | |
|---|---|---|---|---|---|
| 42.6% | Full Professor | 82.0% | Public University | 41.0% | Logistics Ph.D. granting |
| 31.1% | Associate | 18.0% | Private | 32.8% | Other Ph.D. granting |
| 24.6% | Assistant | | | 21.3% | Non-Ph.D. granting |
| 1.6% | Visiting | 98.4% | AACSB Accredited | 4.9% | Not Specified/Other |
| | | 1.6% | Not accredited | | |

**TABLE 3**
**NINE-MONTH BASE SALARY V. TOTAL COMPENSATION (2007)**

| | Mean Nine-month Base Salary | Mean Total Compensation | Additional Incentives |
|---|---|---|---|
| **Assistant** | $107,048 | $124,822 | +17% |
| **Associate** | $111,754 | $131,260 | +18% |
| **Full** | $131,572 | $156,975 | +19% |

The nine-month base provides a convenient benchmark of compensation. However, this approach ignores total compensation. Many programs use other income sources as a means to attract and retain their faulty. The nine-month base provides an incomplete measure of compensation. The addition of incentives to base salary represents from seventeen percent (Assistant) to nineteen percent (Full) of total compensation.

Figures 2, 3, and 4 summarize base salary and total compensation at each academic level. These summary figures do not encompass all key differences since total compensation is influenced by factors such as public or private institution, institution accreditation, type of program, years of service and workload allocation.

**FIGURE 2**
**ASSISTANT PROFESSOR COMPENSATION SUMMARY**

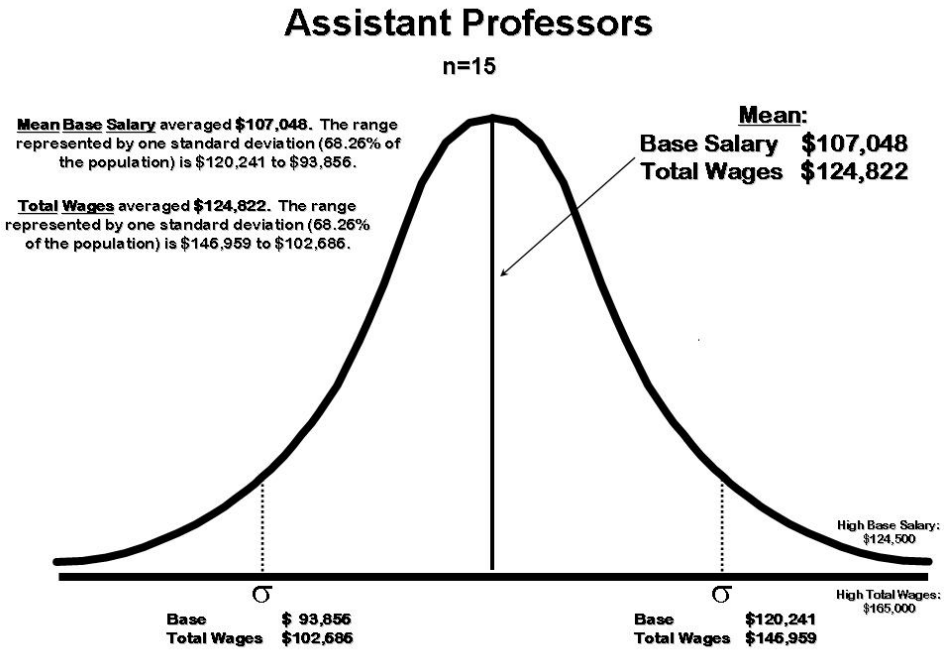


**FIGURE 3**
**ASSOCIATE PROFESSOR COMPENSATION SUMMARY**

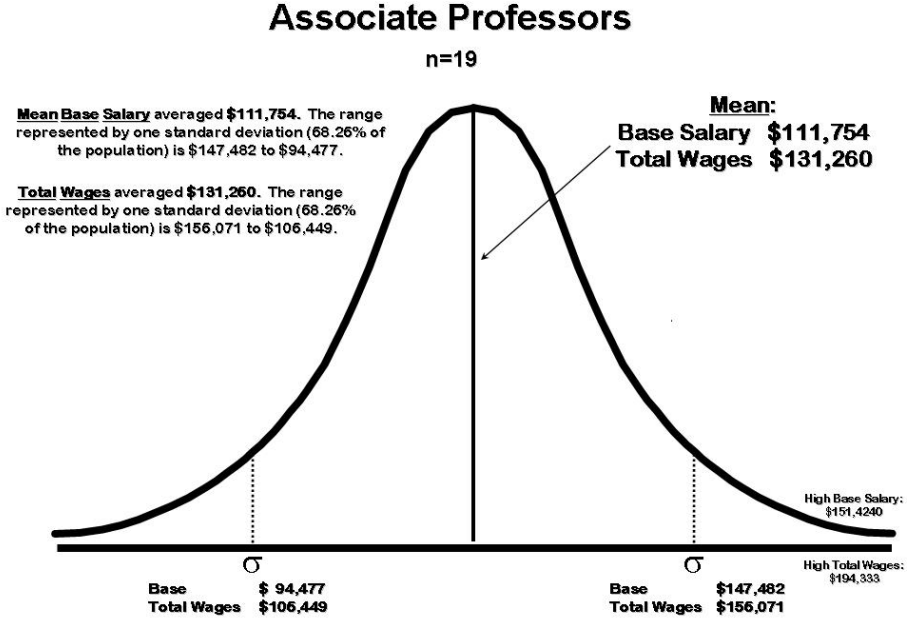



**FIGURE 4**
**FULL PROFESSOR COMPENSATION SUMMARY**

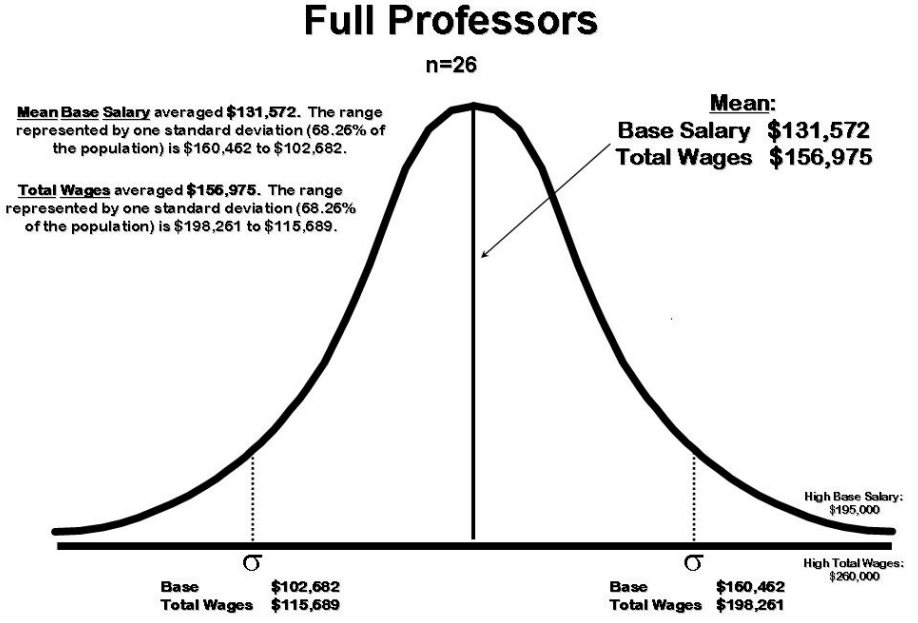


Table 5
(continued)

**Public vs. Private Institutions**

The first difference is shown in Table 4. Eighty-two percent of respondents are employed at public institutions. In line with the AACSB data, logistics faculty compensation at private institutions is higher than that from public institutions.

The survey suggests logistics and supply chain assistant professors at public institutions generally receive a higher level of compensation but Full professors at private institutions are paid more.

The AACSB Salary Report serves as a common base to compare salaries. Table 5 reflects the problem of combining logistic and supply chain salaries into the "Other" category in the AACSB Salary Report. It also reflects the misinformation which may result from using the other common fields as a basis for determining logistics and supply chain management salaries.

**TABLE 4**
**PUBLIC V. PRIVATE**

| | Mean Nine-Month Base Salary | Mean Total Compensation | Private Premium |
|---|---|---|---|
| **Assistant** | | | |
| Public | $ 107,333 | $ 125,167 | -10% |
| Private | 97,613 | 114,336 | |
| **Associate** | | | |
| Public | 111,740 | 127,036 | |
| Private | 112,000 | 167,167 | |
| **Full** | | | |
| Public | 129,646 | 154,820 | +0.13 |
| Private | 146,333 | 173,500 | |

**TABLE 5**
**COMPARISON OF SURVEY RESULTS WITH 2006-2007 AACSB SALARY DATA**
(000's)

| Rank | 2007 Salary Survey Results | Management | Marketing | Production/ Operations Management | Other* |
|---|---|---|---|---|---|
| **Assistant** | | | | | |
| Public | $ 107,333 | $ 93.4 | $ 99.6 | $ 111.0 | $ 74.9 |
| Private | 97,613 | 84.4 | 93.9 | 93.4 | 71.3 |
| **Associate** | | | | | |
| Public | 111,740 | 97.0 | 106.5 | 108.3 | 92.3 |

| Rank | 2007 Salary Survey Results | Management | Marketing | Production/ Operations Management | Other* |
|---|---|---|---|---|---|
| Private | 112,000 | 87.9 | 95.7 | 98.0 | 80.7 |
| **Full** | | | | | |
| Public | 129,646 | 126.7 | 117.6 | 142.4 | 153.5 |
| Private | 146,333 | 107.5 | 147.2 | 118.3 | 124.2 |

* Includes general business, health services/hospital administration, hotel/restaurant/tourism, public administration, supply chain management/transportation/logistics, and other not classified

Source: Association to Advance Collegiate Schools of Business International, *Salary Survey Report 2006–2007*.

## AACSB ACCREDITED INSTITUTIONS VS. NON-ACCREDITED INSTITUTIONS

Only one survey respondent reported employment at an institution that was not accredited by the AACSB. Subsequently, there is insufficient data to compare the differences. AACSB accreditation involves adherence to a set of performance criteria and periodic review in order to promote quality and consistency in collegiate business education. In the first annual survey there was sufficient data and a clear difference in compensation at all levels for both the base salary and total compensation. Base salaries were considerably lower at non-accredited institutions. In addition, additional incentives represented a higher percentage of the total compensation package.

## PREMIUM FOR RESEARCH

Respondents were asked to allocate their workload based on teaching, research, service, and administrative duties. It was expected that tenure requirements would drive up the research allocation of untenured assistant professors. The actual allocations of workload reported by assistant professors in the respondent group was fifty-one percent for research, thirty-four percent for teaching, and eighteen percent for service and administration.

Research allocations varied at the associate and full professor levels as shown in Table 6. Analysis reflects a clear compensation premium is paid for both the base salary and total compensation to senior faculty respondents that reported a higher allocation of their workload for research. Faculty at the rank of associate professor with a higher research allocation received eleven percent more in total compensation than the average respondent in rank and nineteen percent more compared to those with less than a thirty-five percent research workload. Faculty at the rank of professor with a higher research allocation received twenty percent more in total compensation than the average respondent in rank and eighteen percent more compared to those with less than a thirty-five percent research workload.

## ADMINISTRATIVE PAY

Average workload allocation differences between associate and full professors were somewhat obscured by the diverse mixture of activities, including administrative duties, at each level. The relationship in the sample

between compensation and administrative duties was analyzed separately as shown in Table 7.

**TABLE 6**
**WORKLOAD ALLOCATION**

| | | | Research Premium | |
|---|---|---|---|---|
| | **Mean Nine-month Base Salary** | **Mean Total Compensation** | **Relative to Mean** | **50% + vs. Less than 35%** |
| **Associate** | | | | |
| 50% to 70% research | $ 124,097 | $ 137,389 | +11% | +19% |
| 35% to 49% research | 99,500 | 130,472 | | |
| Less than 35% research | 104,260 | 122,400 | | |
| **Full** | | | | |
| 50% to 70% research | $ 146,914 | $ 188,333 | +20% | +18% |
| 35% to 49% research | 132,877 | 152,250 | | |
| Less than 35% research | 124,125 | 157,250 | | |

**TABLE 7**
**ADMINISTRATIVE PAY PREMIUM**

| | **Mean Nine-month Base Salary** | **Mean Total Compensation** | **Additional Incentives** |
|---|---|---|---|
| **Associate** | | | |
| Administrative role | $ 115,325 | $ 149,567 | +4% |
| No administrative role | 110,734 | 124,722 | |
| **Full** | | | |
| Administrative role | 136,684 | 170,657 | + 9% |
| No administrative role | 125,495 | 142,300 | |

## TYPE OF PROGRAM

Respondents were also asked to identify the academic level of their respective institutional programs. The reported levels reflected whether their institution granted a Ph.D. in logistics,

None of the respondents reported high allocations for both research and administrative duties. While all respondents reporting administrative duties also reported an allocation for research, the results suggest faculty members must choose between focusing on research or on administration in order to increase their total compensation. The average compensation premium for undertaking administrative duties within the sample was four percent for associate professors and nine percent for full professors. Comparing Table 6 with Table 7 clearly reflects that heavier research still pays a higher premium than administration.

**TABLE 8**
**PH.D. GRANTING INSTITUTIONS**

| | Mean Nine-month Base Salary | Mean Total Compensation | Premium |
|---|---|---|---|
| **Assistant** | | | |
| Logistics PhD. granting | $ 116,250 | $ 139,750 | + 21% |
| Other PhD. granting | 100,917 | 110,550 | + 15% |
| Non-PhD. granting | 96,235 | 118,043 | |
| **Associate** | | | |
| Logistics PhD. granting | $ 114,653 | $ 130,053 | + 12% |
| Other PhD. granting | 113,700 | 130,600 | + 1% |
| Non-PhD. granting | 102,131 | 122,215 | |
| **Full** | | | |
| Logistics PhD. granting | $ 144,687 | $ 175,433 | + 45% |
| Other PhD. granting | 130,743 | 158,257 | + 11% |
| Non-PhD. granting | 99,500 | 115,000 | |

granted a Ph.D. in other fields, or were non-Ph.D. granting institutions. The results are shown in Table 8. Programs awarding a Ph.D. in logistics accounted for forty-one percent of the respondents.

Faculty at Ph.D. granting institutions may face different expectations for research, in the classroom, as well as additional responsibilities, including guiding doctoral candidates, all of which warrant higher salaries. The average compensation premium for working at an institution granting a Ph.D. in logistics compared to a non-Ph.D. granting institution was twenty-one percent for assistant professors, twelve percent for associate professors and forty-five percent for full professors.

## YEARS OF SERVICE

Respondents were asked to identify time in rank and total time in service. Longer time in service results in higher pay and does not reflect salary compression at the assistant and full professor levels. Figures 5 and 6 illustrate compensation differences across academic rank and years of service.

It is encouraging to note salaries for early

associate professors reflecting higher rates (see Figures 8 and 9).

Over time, associate salaries degrade, likely due to "associate purgatory," where some associate professors simply stop seeking to fulfill the requirements for promotion to full professor. As a result, additional incentives taper off.

## SURVEY LIMITATIONS

This survey has several limitations that could affect the accuracy of the data collected and the analysis.

**Self-reported Data-** The data come directly (e.g. self reported) from the faculty members. It is assumed that each respondent accurately reported his/her compensation.

**FIGURE 5**
**RANK OF ASSISTANT PROFESSOR**

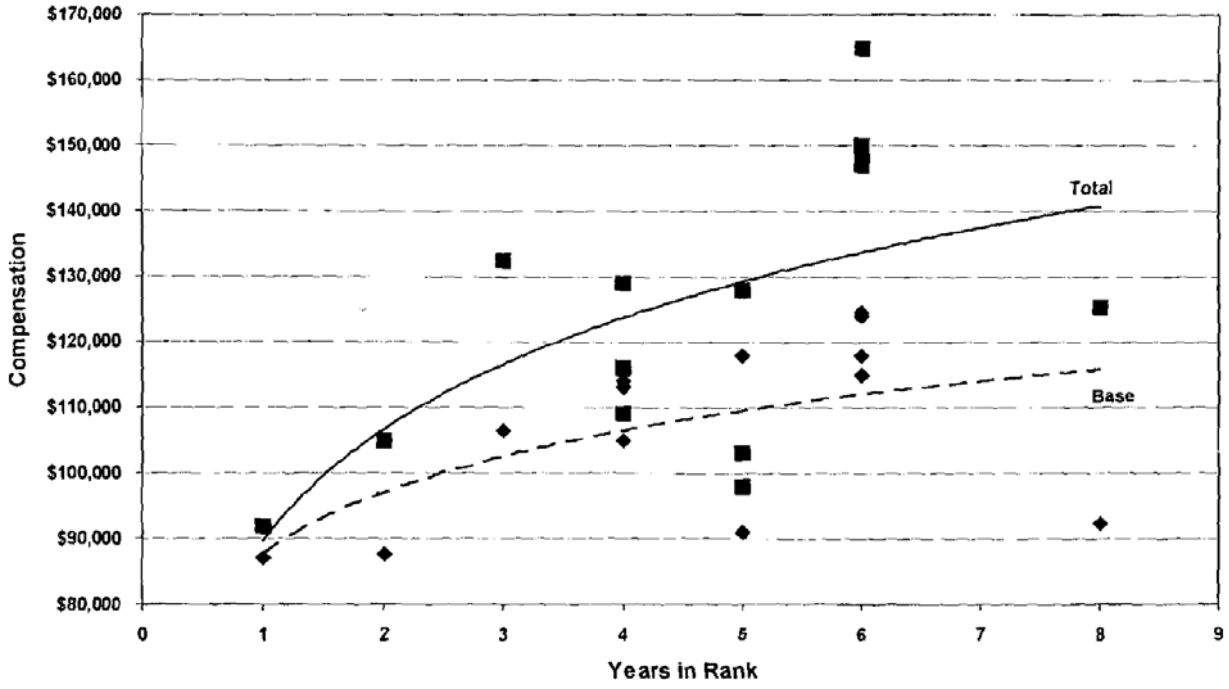


**FIGURE 6**
**RANK OF FULL PROFESSOR**

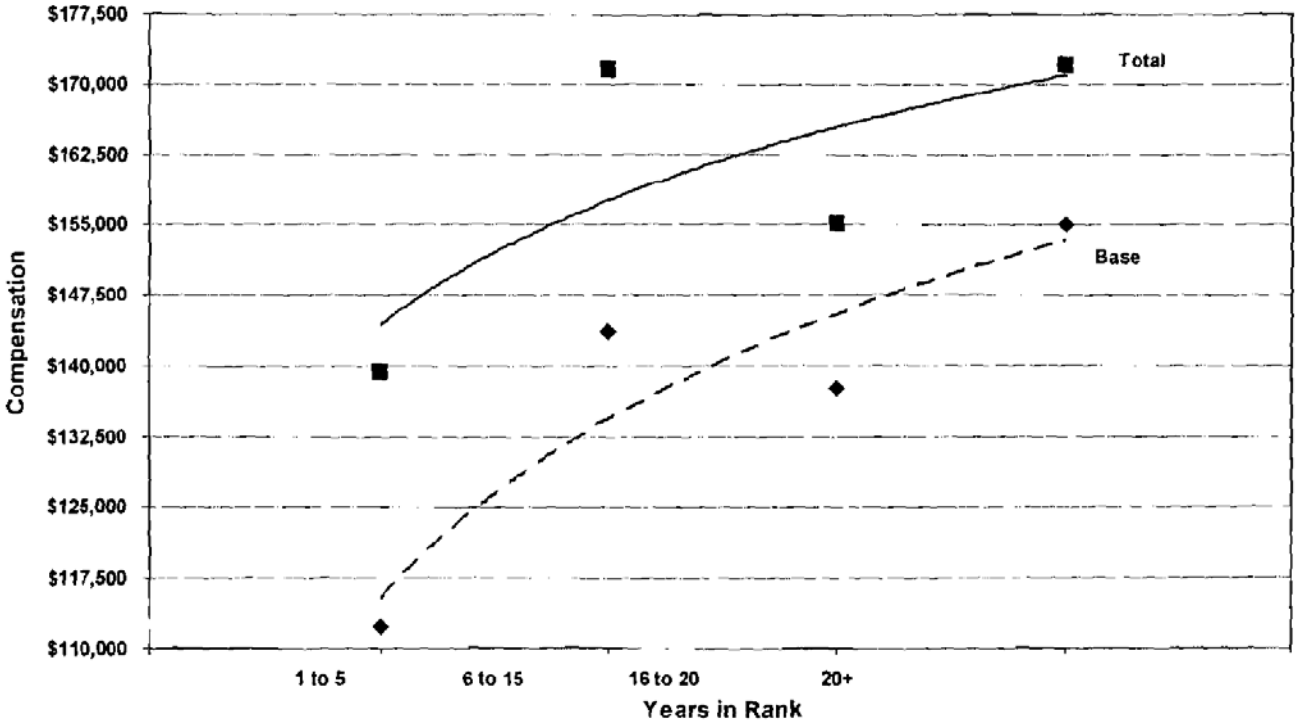


**FIGURE 8**
**ASSOCIATE PROFESSORS**
**FIRST FIVE YEARS IN RANK**

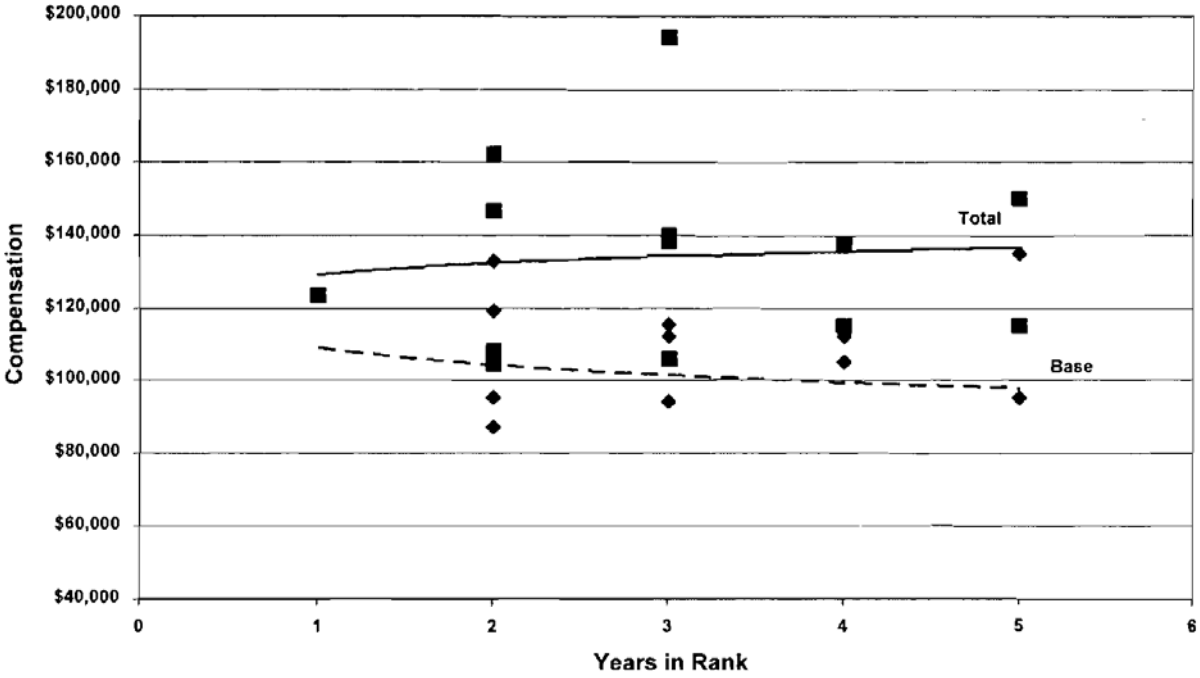
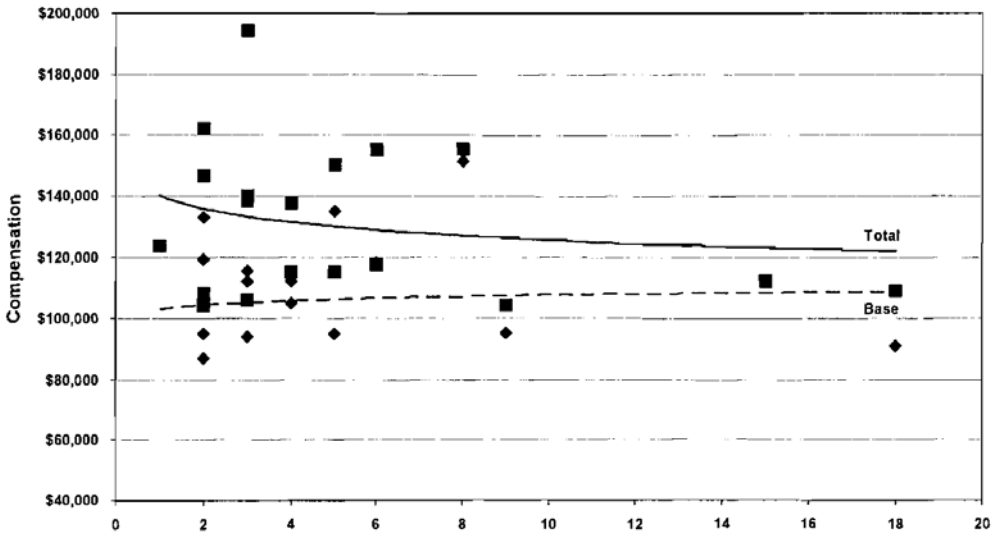



**FIGURE 9**
**ASSOCIATE PROFESSORS**
**ALL YEARS WITHIN RANK**



**Sampling Error** – Not all logistics, transportation and supply chain management faculty attend the CSCMP Educators' Conference or are included in the CSCMP membership roster. The use of the convenience sample excludes some faculty from participation.

**Overlapping Disciplines** – The academic field of logistics involves overlapping disciplines that may include faculty classified as logistics, transportation, supply chain management, marketing, management, operations and production, or industrial engineering. The population of all faculty in these fields is not known.

**Survey Time of Year** – The survey was completed in June and July. Many faculty do not teach during the summer months and may not have been available to respond to the survey. Future surveys will be conducted in early May to resolve this potential limitation.

**Low Response Rate** – Due to the confidential nature of the data collected, some potential respondents may have opted not to participate. It is hoped that as this survey is repeated annually and recognition of its value and importance increase, more faculty will participate.

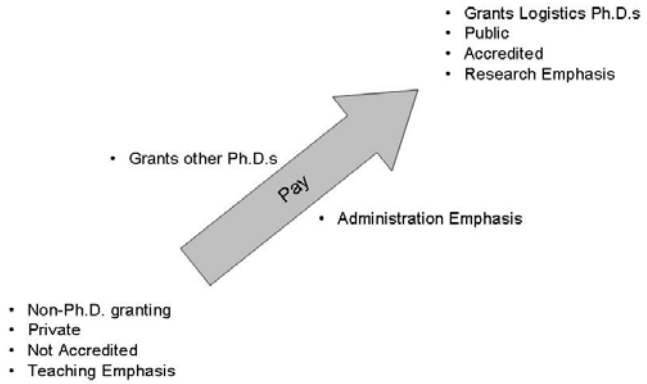
## SUMMARY AND CONCLUSIONS

The second annual logistics faculty salary survey offers career guidance for both new and current faculty members, as well as admini-strators. Salary represents one of the key criteria used in selecting faculty positions, and new career candidates seeking employment will find the highest compensation in accredited public institutions granting Ph.D.'s in logistics as shown in Figure 10. Long term career focus should emphasize research first and administra-tion second to increase potential compensation levels.

Care should be taken when utilizing a single overall average salary for a given academic rank. Readers should consider which variables best reflect their situation and interpret the data accordingly.

Finally, it is the expectation of the authors that as the logistics faculty salary survey continues to be conducted annually, and published in this journal, longitudinal results may yield additional data.

**FIGURE 10**
**COMPENSATION HIERARCHY**



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## AUTHOR BIOGRAPHY


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## AUTHOR BIOGRAPHY

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