

Appendix A

SALARY SURVEY DESCRIPTION

Introduction

Salary data were requested from 3,913 postsecondary degree granting institutions in 1997 that were eligible for Title IV federal financial aid. The survey form (attached) was the same for all institutions surveyed.

Although this report presents data on the average salaries, tenure status and the count of faculty on 9- and 10-month contracts, the Salary Survey collected the following data:

Total salary outlays (in whole dollars), the total number of full-time instructional faculty that were paid those outlays, and the number of those faculty that have tenure, who are on tenure track, and the number not on tenure track. These data were collected by rank (professor, associate professor, assistant professor, instructor, lecturer, and no academic rank) for men and women, and for 9/10 - month and 11/12 - month contracts. In addition, salary outlays, total number, and tenure status was collected for full-time faculty on contract schedules other than 9/10 and 11/12 months. These data were not collected by rank or by gender.

Fringe benefits data (Part B of the survey form) were collected for those full-time instructional faculty reported on Part A. Fringe benefits expenditures (in whole dollars) and the number of full-time faculty covered, by length of contract (9/10 and 11/12- month contracts) were collected for the following benefits plans:

1. Retirement plans (other than Social Security)
2. Medical/dental plans
3. Group life insurance
4. Other insurance benefits (Cafeteria Plan, etc.)
5. Guaranteed disability income protection
6. Tuition plans (dependents only) restricted/unrestricted
7. Housing plan -- restricted/unrestricted
8. Social Security taxes
9. Unemployment compensation
10. Worker's compensation
11. Other benefits in kind with cash options

Confidentiality of Data

The confidentiality of individuals' salaries was preserved in accordance with Title V, Section 501(a) of the Education Amendments of 1974 (Public Law 93-380, 93rd Congress, August 21, 1974) which amends Part A of the General Education Provisions Act by adding at the end thereof a new Section 406 specifically referring to NCES. Section (d)(2) of the Act is cited below:

"The Center shall develop and enforce standards designed to protect the confidentiality of persons in the collection, reporting, and publication of data under this section. This subparagraph shall not be construed to protect the confidentiality of information about institutions, organizations, and agencies receiving grants from or having contracts with the Federal Government."

Appendix B

SALARY SURVEY METHODOLOGY

Overview

The Salary survey is an annual survey, which was mailed to 3,913 institutions in 1997-98; 2,193 were sent to 4-year institutions; 1,720 were sent to 2-year institutions. Beginning in 1997-98 there were no less-than-2-year institutions included in the Salary mailout universe. However, it is possible that 8 institutions may have changed sectors after mailout. While they are included on the final data file the report does not include data for those institutions.

Prior to 1996, the salary universe was developed by selecting from the prior year's institutional characteristics (IC) Universe I: all accredited higher education institutions (including the accredited less-than-2-year institutions) and non-accredited institutions that grant bachelor, master's, doctoral, and first-professional degrees. Beginning in 1996, the subset of all postsecondary institutions that were eligible to participate in Title IV was validated by matching the IPEDS universe with the Postsecondary Education Participation System (PEPS) file which contains the Title IV eligibility status of postsecondary institutions. This file is maintained by the Office of Postsecondary Education (OPE). Using the PEPS file as the source for determining eligibility, 3,913 institutions were mailed the Salary Survey forms.

In addition, institutions were excluded from the survey based on responses to questions on the IPEDS Institutional Characteristics survey. The exclusions are:

- a. All of the instructional faculty at this institution are employed on a part-time basis
- b. All of the instructional faculty at this institution are military personnel
- c. All of the instructional faculty at this institution contribute their services (e.g., are members of a religious order)
- d. All of the instructional faculty at this institution teach preclinical or clinical medicine.

Salary Data Base Composition

The forms were mailed out in August 1997. The survey results were collected from November 15, 1997 through April 15, 1998. During this time period institutions were added to the universe and other institutions were deleted from the universe. Institutions were added if we were notified that an institution did not receive a survey form but met the requirements to be included in the Salary universe. The deletions (out-of-scope) were received through formal notification from IPEDS state coordinators, the Department of Education eligibility notices, and from follow-up telephone calls. They included schools that had closed, did not offer postsecondary programs, or were duplicated in the file.

The overall response rate was calculated as the ratio of the number of completed questionnaires divided by the number of schools in the final universe. The final universe is derived by subtracting the number of institutions determined to be out-of-scope from the number of surveys mailed and adding in schools new to the universe. A summary of the universe and response rates are provided below:

TABLE B-1: SALARIES SURVEY RESPONSE TOTALS

Level	Mailed	Universe	Response	Response Rate
Total	3,913	3,906	3,655	93.6
4-year	2,193	2,221	2,092	94.2
Public	615	619	602	97.3
Nonprofit	1,465	1,464	1,364	93.2
For-profit	113	138	126	91.3
2-year	1,720	1,677	1,556	92.8
Public	1,088	1,073	1,026	95.6
Nonprofit	177	168	153	91.1
For-profit	455	436	377	86.5
Less than 2-years	0	8	7	87.5
Public	0	2	2	100.0
For-profit	0	6	5	83.3

Data Management

Follow-up for nonresponse was started on January 9, 1998 by telephone and letter. Data were edited for major reporting and processing errors. Generated totals were compared to the reported totals. If these were within an acceptable range, the generated totals replaced the reported totals; otherwise, institutions were contacted to resolve these discrepancies. Generated totals are indicated by an imputation flag code of 1. Also data for institutions with FICE codes were checked for consistency with their prior year's response. Data were imputed for total nonresponding institutions i.e., those that did not return a survey form.

Imputations

Partially Responding Institutions

In 1997-98, Salary imputation procedures were developed for partially responding institutions. However, where possible all missing data items were resolved during telephone follow-up with the institutions¹. Data for any partially responding institution reporting data for summary lines (7, 14, 15, 22 and 30) and column (4 and 5) but no corresponding detail data for lines (1-6, 8-14, 16-21 and 23-28) and columns (1, 2, 3, and 4) were imputed².

- I. The following describes the imputation procedures for partially responding institutions in a single imputation group:
 - A. For institutions with prior year salary data the prior year data was prorated to reported totals for columns 1-3. Estimates were made at the lowest possible level and then aggregated.
 - B. Columns 1-3 were added for each line to obtain imputations for column 4.

¹ Partial responding institutions were those who reported, but included at least one cell "not reported" status code in Part A.

² Lines and column numbers refer to positions on the attached Salary survey form.

- C. A salary/faculty ratio was computed by dividing column 5 by column 4 for each non-summary line in prior year salary data.
 - D. Column 5 interim figures for non-summary lines were added to obtain interim totals for lines and to prorate the interim figures to the reported salary for column 5.
 - E. For Institutions without prior year salary data, the same procedure above was used, except the group means were substituted for the prior year data.
- II. For partially reporting institutions that provided summary lines and some detail, the detail were subtracted from the reported totals and then the same procedure as above was used for the remaining lines and the remaining summary line totals.

Total Nonresponding Institutions

Imputation procedures used for nonresponding institutions were as follows:

- I. Imputation groups used to impute 1997-98 salary data.
 - 1. All responding institutions were grouped into IPEDS sectors and BEA Region³. If any group had fewer than 20 institutions, it was merged with the groups from the adjacent BEA Region.
 - 2. Sectors 1 and 2 (4-year public and private nonprofit) were further disaggregated into:
 - (a) schools granting 30 or more doctoral degrees
 - (b) schools granting 30 or more postbaccalaureate degrees, but not 30 or more doctoral degrees and
 - (c) all other schools (including schools with no Completions survey data)
 - 3. Sectors 3, 6, and 9 (for-profit 4-year, 2-year, and less-than-2-year) were in 1 imputation group
 - 4. Sectors 4 and 7 (public 2-year and less-than 2-year) were in 1 imputation group
 - 5. Sectors 5 and 8 (Non-profit 2-year and less-than-2-year) were in 1 imputation group
- II. For institutions that responded in 1996-97 and not in 1997-98, the following method was used:
 - A. A group ratio by sector was calculated for institutions responding in both 1996-97 and 1997-98. For each 1997-98 nonrespondent institution, the group ratio was multiplied by the institution's reported 1996-97 data to get an estimate for 1997-98 salary outlays and number of faculty. Data based on prior year's response are indicated on the salary data file by an imputation flag code of 3.
 - B. For all the reporting schools in each of the identified groups, the ratio for the average number of full-time instructional faculty (9/10, 11/12 and other summed) per full-time-equivalent student (FTE) was computed (This was done for both the current and prior years). FTE was calculated by taking all of the full-time students plus one third of the part-time students as reported in the IPEDS Fall Enrollment survey.
 - C. The FTE enrollment for the nonresponding institutions was obtained from the IPEDS Fall

³Bureau of Economic Analysis.

Enrollment survey.

- D. The average number of full-time instructional faculty per FTE enrollment for the sector was then multiplied by the FTE enrollment of the non-responding institution. This yielded an estimate for full-time instructional faculty for the nonresponding school.
 - E. To distribute the estimated total full-time instructional faculty across the various academic ranks, the total full-time faculty from each school's prior year Salary report was computed. The total full-time faculty equals the sum of rows 15, 30 and 31 in column 4 of the Salary form.
 - F. Each institution's ratio of total full-time faculty to FTE enrollment for the prior year was computed. The prior year full-time faculty was then multiplied by the current year's FTE enrollment to obtain the imputation for the current year's total full-time faculty.
 - G. To compute the imputations for the nonsummary cells in columns 1-3, each cell in columns 1-3 in the institutions prior year Salary report was multiplied by the ratio computed above in Step F.
 - H. The imputations were rounded to units and details were added to obtain imputations for the nonsummary cell in column 4 and then for summary cells in columns 1-4.
 - I. The prior year salary/faculty ratios were multiplied by the corresponding nonsummary faculty imputations in column 4 to obtain interim salary imputations for nonsummary cells. Details were then added to obtain interim salary imputations for summary cells.
 - J. Final imputations were obtained by multiplying each interim salary imputation computed in Step I by the group ratio of current year average salary to prior year average salary computed in Step A.
- III. For nonresponding institutions that reported salary data in the prior year but are not on the Fall enrollment file in either the current or prior year, the prior year's response was used as final imputes for columns 1-4 and interim imputes for column 5. To obtain the final imputes for column 5; the interim figures were multiplied by the group ratio of the current year average salary to prior year average salary.
- IV. The imputation method below was used for nonresponding institutions **without** prior year Salary data, but with data on the Fall Enrollment file:
- A. Using institutions that reported data for salary and fall enrollment, the following aggregates were computed:
 - 1. The aggregate FTE on the Fall Enrollment file.
 - 2. The aggregate for each cell of Part A on the Salary survey.
 - 3. The total full-time faculty - men plus women for all contract lengths. (Column 4, rows 15 + 30 + 31)
 - B. The group average for each cell on the Salary form was computed by dividing the cell aggregate by the number of institutions in the group.
 - C. The group ratio of aggregate total full-time faculty from Step A-3 was compared to the

aggregate full-time-equivalent enrollment from Step A-1.

- D. A group mean of total full-time faculty was computed by dividing the aggregate total full-time faculty from Step A-3 by the number of institutions in the group.
- E. The FTE for each nonresponding institution was obtained from the Fall Enrollment Survey.
- F. The imputation for the total full-time faculty for each nonresponding institution was calculated, by multiplying the group ratio of aggregate total full-time faculty to aggregate full-time-equivalent enrollment (Step C) by each institution FTE (Step E).
- G. The ratio of the imputed total full-time faculty in the nonresponding institution from Step F was computed to the group mean total full-time faculty from Step D.
- H. The ratio of the imputed total full-time faculty in the nonresponding school to the group mean total full-time faculty was multiplied by the group average for each nonsummary cell in column 1- 3 by the group average (Step B) to obtain faculty imputations for the nonresponding institution.
- I. The imputations were rounded to units and added to obtain imputations for nonsummary cells in column 4 and then for summary cells in columns 1-4 for the nonresponding institutions.
- J. For each nonsummary line in the group means (Step B) the ratio of salary to faculty was computed.
- K. The group mean salary/faculty ratios were multiplied by the corresponding nonsummary faculty imputations in column 4 for the nonresponding school to obtain salary imputations for nonsummary cells. The details were added to obtain salary imputations for summary cells.

For totally nonresponding institutions, without prior year salary data, not on the current year Fall Enrollment file, the group means were used as imputations.

- VI. Part B was not imputed for any nonresponding institution.

