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ABSTRACT

The 1985-86 National Survey of Private Schools collected comprehensive data on teacher salary, other income, and "in-kind income" from a national sample of private school teachers. The 1984-85 Public School Survey collected similar data from a national sample of public school teachers. The results of these two surveys provided the best opportunity in many years to compare teacher compensation in the public and the private school sectors. This report presents the results of such a comparison. Public school teachers had significantly higher average salaries than private school teachers. Three data tables are appended. (JD)

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NATIONAL CENTER FOR EDUCATION STATISTICS

Survey Report

March 1989

**Teacher Compensation: A
Comparison of Public and
Private School Teachers,
1984-1986**

Jeffrey Williams
Elementary/Secondary Education Statistics Division

Data Series:
SP-PUP-84/86-4.2

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Teacher Compensation: A Comparison of Public and Private School Teachers, 1984-1986

Teacher compensation has received increased attention since, in 1983, the National Commission on Excellence in Education cited the level of salaries in teaching as too low to attract enough talented college graduates to the field.¹ Several more recent studies have been published focusing on public school teachers' compensation, salary structures, or both.² However, no source of data on salaries of teachers in all types of private elementary and secondary schools in the United States has appeared until recently.

The 1985-86 National Survey of Private Schools collected comprehensive data on teacher salary, other income, and "in-kind income" from a national sample of private school teachers. The 1984-85 Public School Survey collected similar data from a national sample of public school teachers. The results of these two surveys provided the best opportunity in many years to compare teacher compensation in the public and the private school sectors. This report presents the results of such a comparison. The report also draws from relevant findings presented in "Salary Structures for Public School Teachers, 1984-85", "(Barro), Private Schools and Private School Teachers: Final Report of the 1985-86 Private School Study (Westat), and Background and Experience Characteristics of Public and Private School Teachers: 1984-85 and 1985-86, Respectively" (Strang).

The main results are presented on page 2 as highlights.

¹ A Nation at Risk, National Commission on Excellence in Education, (Washington, D.C.: 1983).

² For example, "Salary Structures for Public School Teachers, 1984-85", Survey Report, S.M. Barro, National Center for Education Statistics, June 1988; and The Evolution of Teacher Policy, Linda Darling-Hammond and Barnett Berry, Rand Corporation, March 1988, JRE-01.

Highlights

- o The average base academic year salary of public school teachers was \$9,935 more than the average base salary of private school teachers, \$24,335 vs. \$14,400 (table 1).
- o The average base academic year salary for full-time private school teachers varied significantly by the religious or nonsectarian orientation of the school.

| | <u>Salary</u> | <u>Standard error</u> | <u>Number*</u> |
|-----------------------------------|---------------|---------------------------|----------------|
| Catholic school | \$14,036 | (331) | 2,548 |
| Other religious orientation | 13,764 | (854) | 1,372 |
| Nonsectarian school | 16,779 | (864) | 759 |

*Number of teachers in the sample responding in each category.

The salaries in Catholic schools and in schools of a religious orientation other than Catholic were not significantly different. The average base academic year salary was significantly higher in nonsectarian schools. However, even teachers in nonsectarian schools had salaries that averaged significantly less than the average base academic year salary of public school teachers of \$24,335.

- o The highest base academic year salary reported by a private school teacher was \$49,700; the highest salary reported by a public school teacher was \$51,895. The lowest salary for a private school teacher was \$0; the lowest for a public school teacher was \$7,300. (Table 2 shows the distribution of full-time public and private school teachers by categories of base academic year salaries.)

Other Findings

Salary differences of full-time public and private, paid teachers, by selected characteristics (table 1)³

- o The differences between public and private average salaries were larger for teachers with advanced degrees (i.e., masters or doctorate) than for teachers with a bachelor's degree or less.
- o The public-private difference in average salaries was much smaller in the South than in the other three regions of the United States. The difference was greatest in the Northeast.
- o The public-private salary difference was greater for elementary school teachers (\$10,811) than for secondary school teachers (\$7,908).

Distribution of full-time teachers, by base academic year salary category (table 2)⁴

- o The majority (61 percent) of the public school teachers made between \$15,000 and \$25,000 in salary in school year 1984-85.
- o In that year, one third of the public school teachers made \$25,000 or more; only 5 percent of private school teachers did in 1985-86.

Salaries of full-time teachers, by years of teaching experience (table 3)⁵

- o The average salary of public school teachers reaches a peak at the 26- to 30-years-experience category, then drops off slightly in the more-than-30-years category.

³Includes only full-time teachers who had a salary. All differences cited are significant at the 95-percent confidence level. Public school teacher estimates were inflated to 1985-86 dollars using an inflation factor of 7.2 percent computed by the American Federation of Teachers (Nelson, Gould, and Silverwood, 1986).

⁴Table 2 includes some full-time private school teachers who reported no salaries.

⁵Includes only full-time teachers who had a salary. Years of experience are measured as years of full-time experience plus one-half the sum of the years of part-time teaching experience. Public school salaries were inflated to 1985-86 dollars as described in footnote 3.

- o The salary peak for private school teachers comes with 16 to 20 years of experience, then drops by an average of over \$5,000 after 30 years. Some of this drop may be accounted for by Catholic members of religious orders who tend to be older and to have logged substantially more teaching time on average than higher salaried lay teachers.

Further Considerations

Private School Teachers' In-Kind Income

Twenty-three percent of private school teachers received in-kind income in 1985-86. The average value of in-kind income for those who received any was \$2,900⁶ (Westat, 1987). In-kind income may include housing, meals, transportation, and reduced tuition rates for family members in addition to or in lieu of salary. The survey asked for the estimated total value of in-kind income from mid-June 1985 to mid-June 1986. In-kind income was not asked for in the 1984-85 Public School Survey, since it does not apply to public school teachers.

It is difficult to estimate in-kind income. Estimates of this variable are generally considered unreliable—or, at best, distinctly less reliable than base academic year salary data.

Additional School-Related Compensation

Public school teachers earned an average of \$315 each (Barro) and private school teachers earned an average of \$185 (Westat, 1987) for work performed outside the school year. One-half of private school teachers received only a base salary.

Catholic School Teachers Who Are Members of Religious Orders

Approximately 20 percent of the Catholic school teachers are members of a religious order (nuns, brothers, and priests). They typically receive stipends significantly lower than salaries paid to lay teachers. They tend to be older and to have logged substantially more teaching time in Catholic schools than do lay teachers. Less than 10 percent of the clergy and other religious teachers were paid on the same salary schedule as lay teachers in 1985-86 (Augenstein, 1986).

⁶ Standard error is 360.

Summary

Public school teachers had significantly higher average salaries than private school teachers. This was true for all of the subgroups of teachers analyzed, although the difference varied across the subgroups. The average differential of \$9,935 becomes somewhat less if the average in-kind income of private school teachers and the average supplemental contract amounts for both public and private school teachers are taken into account. This reduces the average differential by \$537, making it \$9,398. However, the reader should be aware that only an estimated 23 percent of private school teachers received any in-kind income in 1985-86.

The differences in average salaries are large in absolute terms and are also large in relation to the average private school teacher's salary.

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Survey Methodology and Data Reliability

The Public School Survey of 1984-85 obtained responses from 8,568 teachers and 2,301 administrators from an initial sample of 2,801 schools. Actual response rates producing the numbers of teachers and schools indicated were 85 percent for schools and 80 percent for teachers. The schools were selected from the Common Core of Data, maintained by the National Center for Education Statistics (NCES), and were stratified on school type (i.e., elementary, secondary, and other) and on local education agency size (i.e., 1 to 5 schools, 5 to 50 schools, and more than 50 schools). Teachers were sampled from lists provided by the schools, stratified by "teaching assignment" (i.e., elementary, mathematics or science, and other). School-level data were collected on enrollment, student characteristics, staffing levels, use of aides and unpaid volunteers, computer usage, incentive pay programs, and other areas. Teacher-level data were collected on demographic characteristics, educational background, training experiences, time usage, use of aides and unpaid volunteers, compensation, and other employment, as well as other topics. Data collection occurred within the first few months of 1985.

The 1985-86 National Survey of Private Schools obtained responses from 5,295 teachers and 1,175 administrators of 1,387 private schools during spring 1986. The overall response rate for teachers was 76 percent. The schools were selected from lists developed in 1983 of all identifiable private schools in 75 primary sampling units. Teachers were selected without stratification from lists supplied by the schools. At the school level, information is available about religious orientation, grades served, enrollment and student characteristics, tuition, staffing, use of aides and volunteers, program offerings, and years of operation. From teachers, information was obtained about demographic and educational characteristics, courses taught, time expenditures, cash and noncash compensation, use of teacher aides and unpaid volunteers, and other employment.

For both surveys, national estimates were constructed by weighting the responses to the questionnaires from the sample schools and teachers. Since the estimates were obtained from a sample of teachers, they are subject to sampling variability. The standard errors in tables 1 through 3 provide indications of the accuracy of each estimate, in that the standard error of an estimate is a measure of the variability between the values of the estimate calculated from different samples and the value of the statistic in the population. The interval from two standard errors below the estimate to two standard errors above includes the population parameter in about 95 percent of all possible samples.

Because the two surveys used in this analysis were conducted separately, at different times, using different procedures, and different populations, standard errors that reflect the sample designs described above were computed separately for public and private school teachers. Standard errors for the private school survey were computed using a balanced-half sampling technique, known as balanced repeated replications (Flyer and Mohadjer, 1988). Standard errors for the public school

survey were computed using a Taylor series linearization (CDC TAB's, Version 1.0, developed by Dr. C. D. Carroll). Standard errors for the public school teacher salary estimates were inflated by 1.072 (Nelson, Gould, and Silverwood, 1986) before they were used in computing the difference in means t-tests. The results of these two variance estimation procedures are asymptotically equivalent; thus, these standard errors were used in computing difference of means t-tests. A Bonferroni adjustment was used to insure that the overall alpha level did not exceed 0.05 (Neter, Wasserman, and Kutner, 1985). Comparisons of public and private school teachers salaries cited in the text are significant at the 95 percent confidence level. The same is true for comparisons of public-private differences in salary, e.g., differences as a function of highest earned degree. The 13 subgroup comparisons in table 1 were tested for significance as a group; so were the 7 subgroup comparisons in table 3.

Survey estimates are also subject to errors of reporting and errors made in the collection of the data. These errors, called nonsampling errors, can sometimes bias the data. While general sampling theory can be used to estimate the sampling variability of an estimate, nonsampling errors are not easy to measure and usually require either an experiment to be conducted as part of the data collection procedure or use of data external to the study. Such studies are part of an ongoing effort to quantify problems in the data and to improve data collection procedures to eliminate or minimize biases that may enter the estimates.

Table 1.-- Average base academic year salaries of full-time public and private school teachers, by selected teacher characteristics: 1984-86

| Characteristic | Public school teachers | | | Private school teachers | | Salary difference |
|------------------------|------------------------|---------|-----------------------------|-------------------------|---------|-------------------|
| | 1984-85 salary | Number* | Salary in 1985-86 dollars** | 1985-86 salary | Number* | |
| All teachers | \$22,701 (116) | 8,257 | \$24,335 | \$14,400 (446) | 4,679 | \$9,935 |
| Sex: | | | | | | |
| Males | 24,313 (179) | 3,121 | 26,064 | 17,338 (611) | 1,111 | 8,726 |
| Females | 21,930 (126) | 5,136 | 23,509 | 13,615 (429) | 3,568 | 9,894 |
| Race/ethnicity: | | | | | | |
| White (non-Hispanic) | 22,782 (124) | 6,892 | 24,422 | 14,666 (488) | 4,267 | 9,756 |
| Black (non-Hispanic) | 21,991 (263) | 981 | 23,574 | 13,286 (1027) | 189 | 10,288 |
| Other minority | 22,774 (413) | 326 | 24,414 | 13,610 (575) | 223 | 10,804 |
| Highest earned degree: | | | | | | |
| Bachelor's or less | 20,473 (122) | 4,191 | 21,947 | 13,520 (371) | 3,302 | 8,427 |
| Master's or more | 25,128 (152) | 4,066 | 26,937 | 16,917 (637) | 1,377 | 10,020 |
| Region: | | | | | | |
| West | 24,430 (247) | 1,614 | 26,189 | 15,540 (593) | 837 | 10,649 |
| North Central | 23,430 (235) | 1,979 | 25,117 | 14,053 (282) | 1,276 | 11,064 |
| Northeast | 25,003 (306) | 1,392 | 26,803 | 14,243 (716) | 1,421 | 12,560 |
| South | 20,080 (129) | 3,272 | 21,526 | 14,828 (1332) | 1,145 | 6,698 |
| Level of instruction: | | | | | | |
| Elementary | 22,390 (154) | 3,819 | 24,002 | 13,191 (433) | 3,111 | 10,811 |
| Secondary | 23,309 (164) | 4,266 | 24,987 | 17,079 (523) | 1,531 | 7,908 |

*Number of teachers in the sample responding in each category.

**Using a public school teacher salary inflation factor of 7.2 percent.

Note: Includes only full-time teachers who had salaries.
Standard errors of estimates are presented in parentheses.

Source: U.S. Department of Education, National Center for Education Statistics, 1985-86 Private School Survey and the 1984-85 Public School Survey.

Table 2.-- Distribution of full-time public and private school teachers, by base academic year salary category: 1984-86

| Salary category | Public school teachers, 1984-85 | | Private school teachers, 1985-86* | |
|-----------------|---------------------------------|----------|-----------------------------------|----------|
| | Percent | Number** | Percent | Number** |
| Total | 100.0 | 8,257 | 100.0 | 4,704 |
| \$ 0 | 0 | 0 | .5 (.12) | 25 |
| 1 - 9,999 | .2 (.07) | 10 | 17.8 (2.6) | 821 |
| 10,000 - 14,999 | 6.1 (.42) | 445 | 39.4 (1.9) | 1,952 |
| 15,000 - 24,999 | 60.8 (.85) | 4,878 | 37.3 (2.6) | 1,710 |
| 25,000 - 34,999 | 30.0 (.80) | 2,666 | 4.6 (.78) | 180 |
| 35,000 or more | 3.1 (.32) | 258 | .3 (.14) | 16 |

*Includes some private school teachers who reported no salary.

**Number of teachers in the sample responding in each category.

Note: Standard errors of estimates are presented in parentheses.

Source: U.S. Department of Education, National Center for Education Statistics, 1985-86 Private School Survey and the 1984-85 Public School Survey.

Table 3.-- Average base academic year salaries of full-time public and private school teachers by years of teaching experience: 1984-86

| Years of experience | Public school teachers | | | Private school teachers | | Salary difference |
|---------------------|------------------------|---------|-----------------------------|-------------------------|----------|-------------------|
| | 1984-85 salary | Number* | Salary in 1985-86 dollars** | 1985-86 salary | Number** | |
| All teachers | \$22,701 (116) | 8,257 | \$24,335 | \$14,400 (446) | 4,679 | \$9,935 |
| 5 or Less | 16,395 (138) | 1,068 | 17,575 | 12,191 (356) | 1,409 | 5,384 |
| 6 to 10 | 19,307 (129) | 1,586 | 20,397 | 14,500 (640) | 1,126 | 6,197 |
| 11 to 15 | 22,970 (154) | 1,933 | 24,624 | 16,415 (597) | 830 | 8,209 |
| 16 to 20 | 25,839 (191) | 1,570 | 27,699 | 18,069 (571) | 461 | 9,630 |
| 21 to 25 | 26,943 (274) | 922 | 28,883 | 16,546 (708) | 277 | 12,337 |
| 26 to 30 | 27,812 (337) | 495 | 29,814 | 16,326 (789) | 124 | 13,488 |
| More than 30 | 26,912 (330) | 447 | 28,850 | 12,223 (660) | 250 | 16,627 |
| Not answered | -- | 236 | -- | -- | 202 | -- |

--Not applicable.

*Number of teachers in the sample responding in each category.

**Using a public school teacher inflation factor of 7.2 percent.

Note: Includes only full-time teachers who had salaries.
Standard errors of estimates are presented in parentheses.

Source: U. S. Department of Education, National Center for Education Statistics, 1985-86 Private School Survey and the 1984-85 Public School Survey.

Bibliography

- Augenstein, John J. Catholic High Schools and Their Finances, 1986. Washington, D.C.: National Catholic Educational Association, 1986.
- Barro, S. M. "Salary Structures for Public School Teachers, 1984-85." Survey Report. Washington D.C.: U.S. Department of Education, National Center for Education Statistics, June 1988.
- Bredeweg, Frank H. United States Catholic Elementary and Secondary Schools, 1986-87, A Statistical Report On Schools, Enrollment, and Staffing. Washington, D.C.: National Catholic Educational Association, 1987.
- Darling-Hammond, L., and Berry, B. The Evolution of Teacher Policy. Washington, D.C.: Rand Corporation, March 1988.
- Flyer, P., and Mohadjer, L. The WESVAR Procedure. Rockville, Md.: Westat, Inc., 1988.
- Hammer, C. L., and Batcher, M. K. "The 1985 Public School Survey, Early Tabulations." ED.TABS. Washington, D.C.: U.S. Department of Education, Center for Education Statistics, November 1986.
- Nelson, F. H., Gould, J. C., and Silverwood, J. Salary Trends 1986: Survey and Analyses. Washington D.C.: American Federation of Teachers, July 1986.
- Neter, J., Wasserman, W., and Kutner, M. H. Applied Linear Statistical Models, Second Edition. Homewood, Il.: Richard D. Irwin, Inc., 1985.
- Strang, W. Background and Experience Characteristics of Public and Private School Teachers: 1984-1985 and 1985-86, respectively. Contractor report. Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, October 1988.
- Westat, Inc. Private Schools and Private School Teachers: Final Report of the 1985-86 Private School Study. Contractor report. Washington, D.C.: U.S. Department of Education, National Center for Education Statistics, 1987.