

AN ANALYSIS OF THE COST OF EDUCATION  
IN THE ANCHORAGE SCHOOL DISTRICT  
WITH COMPARISONS TO OTHER AREAS

DRAFT REPORT

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## I. SCHOOL DISTRICT EXPENDITURES PER STUDENT

Table 1 shows that of the 88 school districts in the United States with enrollments between 30 and 60 thousand students, the Anchorage School District ranks second in expenditures per student. Much of this is attributable to the high cost of living in Alaska. Table 2 shows several ratios comparing the Anchorage situation to the national average. In terms of expenditures, Anchorage School District is 68 percent above the United States average, 63 percent above the average of comparable-sized districts, and 29 percent higher than Hawaii. In terms of cost of living, however, Anchorage is only 41 percent above the U.S. average and only 14 percent above Hawaii.

## II. EXPENDITURES PER STUDENT ADJUSTED FOR COST OF LIVING

Deflating student expenditures by the cost-of-living index reduces Anchorage's rank to 19th out of the eighty-eight districts (78th percentile). It places Anchorage's per-student expenditures approximately 21 percent above the U.S. average (see Table 3).

On average in the United States, 65 percent of total general school district expenditures is for wages and salaries; therefore, the three-family budget prepared by the U.S. Bureau of Labor Statistics (BLS) is a good indicator of the cost of providing education. (Anchorage wage and salary payments as a percentage of total expenditures were just below the national average, but interest on debt at 5.6 percent was over twice the national average of 2.2 percent. In fact, Anchorage ranks 18th among school districts with enrollments over 5,000 in terms of annual interest paid on debt.)<sup>1</sup>

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<sup>1</sup>It is led by New York, Los Angeles, Chicago, Cleveland, Boston, Philadelphia, Pittsburgh, Baltimore, two Florida districts, and districts in Kentucky, Texas, Virginia, Michigan, Minnesota, Nevada, and Ohio.

TABLE 1. EXPENDITURES PER STUDENT

Selected School Districts with Enrollments  
Between Thirty and Sixty Thousand

	<u>District</u>	<u>Expenditures Per Student</u>
Top 10	Rochester, N.Y.	\$2,574
	<u>Anchorage</u>	<u>2,553</u>
	Minneapolis	2,528
	Oakland	2,467
	St. Paul	2,386
	San Joes	2,236
	Grand Rapids, MI	2,229
	Tacoma	2,194
	Dayton	2,126
	Stockton	2,114
Bottom 10	Corpus Christi	1,180
	Gaston, N.C.	1,176
	Cobb County, Georgia	1,141
	Harris County, Texas	1,115
	Huntsville, AL	1,112
	Charleston, S.C.	1,097
	Greenville, S.C.	1,096
	Virginia Beach, VA	1,083
	El Paso, Texas	980
	Montgomery, AL	974
	Average United States	1,517
	Average of 88 Districts	1,562
	Hawaii	1,978

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Note: Includes all expenditures except employee retirement and insurance trust expenditures.

Source: Finances of School Districts, Governmental Finances Volume 4, No. 1, 1977 Census of Governments, U.S. Department of Commerce, Bureau of the Census, Table 10. Data for 1976.

TABLE 2. EXPENDITURE AND COST-OF-LIVING RATIOS  
BETWEEN ANCHORAGE SCHOOL DISTRICT AND OTHERS

EXPENDITURES

Average United States	1.68
88 Comparable-sized Districts	1.63
Hawaii	1.29

COST OF LIVING

Anchorage/U.S. Urban Average	1.41
Anchorage/Honolulu	1.14

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Source: Table 1 and Autumn 1978 Urban Family Budgets and Comparative Indexes for Selected Urban Areas, U.S. Department of Labor, Bureau of Labor Statistics, 1979.

TABLE 3. REAL EXPENDITURES PER STUDENT

Selected School Districts with Enrollments  
Between Thirty and Sixty Thousand

<u>District</u>	<u>Real Expenditures Per Student</u>
Rochester, N.Y.	\$2,499
Minneapolis	2,478
Oakland	2,418
St. Paul	2,339
Dayton, Ohio	2,311
Stockton, CA	2,273
Tacoma, WA	2,239
Sacramento	2,214
Grand Rapids, MI	2,207
San Jose, CA	2,192
Portland, OR	2,174
Compton Unified, CA	2,027
Hartford County, MD	1,979
Flint, MI	1,901
Akron, Ohio	1,901
Polk County, FL	1,897
Long Beach, CA	1,890
Lansing, MI	1,882
<u>Anchorage</u>	1,837
U.S. Average	1,517
Hawaii	1,621

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Source: See Table 2.

Several school districts are closely comparable to Anchorage because the BLS three-family budgets are collected for those cities. Of that sample, Anchorage falls in the middle with respect to real expenditures per student (see Table 4).

TABLE 4. A COMPARISON OF SELECTED SCHOOL DISTRICTS'  
EXPENDITURES PER PUPIL AFTER REDUCING  
FOR COST-OF-LIVING DIFFERENCES

<u>District</u>	<u>Real Expenditures Per Student</u>	<u>Enrollment</u>
Minneapolis	\$2,478	50,468
Oakland	2,418	55,723
St. Paul	2,339	40,325
Dayton, Ohio	2,311	40,271
Tacoma, WA	2,239	32,254
<u>Anchorage</u>	1,837	40,183
Austin, Texas	1,761	58,445
Wichita	1,707	49,955
Kansas City, Kansas	1,632	39,026
Kansas City, MO	1,549	50,495
Jersey City, N.J.	1,532	37,301
(Hawaii)	1,621	174,838
U.S. Average	1,517	NA

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Source: See Table 2.

### III. EXPENDITURES PER STUDENT WEIGHTED BY TEACHER SALARIES

Since teacher salaries are a large share of the cost of education, it is appropriate to weight expenditures by this cost to get a measure of the relative quantity of education delivered per student. (This assumes that the quality of teachers is standard across districts.)<sup>2</sup> Using this measure, Anchorage ranks number 36 of 77 districts for which average statewide salary data is available. (Were data available for the other states, Anchorage's rank would rise.) (Since the average state salary was used rather than the Anchorage salary, this also tends to reduce Anchorage ranking.) Using this ranking, Anchorage is 7 percent above the national average (see Table 5).

### IV. CONCLUSION

Teacher salaries in Alaska are relatively higher than in other school districts around the country even after allowing for cost-of-living differences. Thus, although Anchorage spends 21 percent more per student in real terms than the national average, they only get 7 percent more output.

The brief analysis has not looked at student achievement across districts. If student achievement exceeds the national average, the quality of education would exceed the national average, and this analysis would need to be adjusted accordingly.

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<sup>2</sup>For this analysis, teacher salaries are statewide averages for classroom teachers from Statistics of Public Elementary and Secondary Day Schools 1977-78, National Center for Education Statistics, U.S. Department of Health, Education, and Welfare, p. 34. Large variation in wages within states reduces the value of this measure, and a bias may be introduced if rural regions pay teachers less. The bias would increase the calculated expenditures per pupil in districts from relatively rural states.

TABLE 5. REAL EXPENDITURES PER STUDENT

Teacher Salaries Used as Weights

	<u>District</u>	<u>Expenditures Weighted By Salaries</u>
Top 10	Minneapolis	\$2,421
	St. Paul	2,285
	Dayton, Ohio	2,273
	Omaha, Nebraska	2,121
	Portland, Oregon	2,101
	Polk County, FL	2,073
	Richmond, VA	2,055
	Rochester, N.Y.	2,037
	Oakland, CA	2,023
	Tacoma, WA	1,930
	<u>Anchorage</u>	1,624
	Hawaii	1,603
	U.S. Average	1,517
Bottom	[ El Paso, Texas	1,089

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Source: See text.



APPENDIX A

ANCHORAGE SCHOOL DISTRICT EXPENDITURES  
RELATED TO PERSONAL INCOME

TABLE 6. ANCHORAGE PROPERTY TAXES (MILLION \$)  
AS A PERCENTAGE OF DISPOSABLE  
PERSONAL INCOME

(million \$)

Calendar Year	Total Tax Levy	School Tax	Non-School Tax	Personal Income	Disposable Personal Income (DPI)	School Tax/DPI	Total Tax Levy/DPI
1980	-	-	-	-	-	-	-
1979	-	-	49.733	-	-	-	-
1978	73.739	27.877	45.862	-	-	-	-
1977	69.735	30.397	39.338	2,073.8	1,696.76	1.79	4.11
1976	63.441	30.875	32.566	-	1,523.05	2.03	4.17
1975	24.880	11.802	13.078	-	657.57	1.79	3.78
(1975-12/75)							
1974-75	41.578	18.312	23.266	-	1,109.14	1.65	3.75
1973-74	41.200	20.533	20.647	-	.823.21	2.50	5.0
1972-73	31.041	14.251	16.790	-	701.99	2.03	4.4
1971-72	23.124	11.631	11.493	-	638.44	1.82	3.6
1970-71	16.667	7.487	9.180	-	584.99	1.28	2.8

Sources: 1979: Jim Dusik, OMB  
1976-78: Annual Financial Report, Municipality of Anchorage  
1975- : Annual Financial Report, Municipality of Anchorage  
Personal Income: BEA data  
DPI: Created using state DPI/PI ratio

TABLE 7. A SUMMARY OF THE NATIONAL AVERAGE OF PROPERTY TAXES  
PAID AS A PERCENTAGE OF DISPOSABLE PERSONAL INCOME

(Billion \$)

Year	Personal Income (PI)	Disposable Personal Income (DPI)	Property Tax	Property Tax/PI	Property Tax/DPI	Sales Tax	Property Tax + Sales Tax/ DPI
1980							
1979							
1978							
1977	1,537	1,309					
1976	1,383	1,186	54.884	3.97	4.63	7.156	5.23
1975	1,253	1,084	50.040	4.31	4.62	6.468	5.21
1974	1,155	985	46.404	4.02	4.71	5.542	5.27
1973	1,052	902	43.970	4.18	4.87	4.924	5.42
1972	943	801 *	40.876	4.33	5.10	4.238**	5.63
1971	864	746.4	36.726	4.25	4.92	3.662	5.41
1970	801	686	32.963	4.12	4.81	3.068	5.25
1965	537	472.2	21.817	4.06	4.62	2.059	5.06

\* 1975 Statistical Abstract, Table 624.

\*\* 1975 Statistical Abstract, Table 416.

Source: Statistical Abstract

APPENDIX B  
DATA SOURCES ON SCHOOL FINANCES

1. Finances of School Districts, 1977 Census of Governments.  
 This has revenues, expenditure, enrollment data for all school districts over 5,000 enrollment for FY 1976.
  
2. Statistics of Public Elementary and Secondary Day Schools (1977-78), National Center for Education Statistics, H.E.W., Education Division.  
 This has data by state on number of staff, average salary level for FY 1977. Data also for twenty largest districts.
  
3. Digest of Education Statistics (1977-78), National Center for Education Statistics, H.E.W.  
 This contains some of the information from 2 (above), but nothing useful in addition.

From this data and BLS family budget data, one can calculate:

1. Expenditures per student (total, capital, wages and salaries, interest) for all districts over 5,000 students.
2. Real expenditures per student on same basis using family budget cost-of-living indexes.
3. Real expenditures per student using statewide average teacher salary as deflator.

For example:

	<u>U.S. Average</u>	<u>Anchorage</u>
Expenditures per student:	\$1,517	\$2,553
Cost of Living:	100	139
Real Expenditure Per Student:	1,517	1,837
Average Classroom Teacher Salary:	14,244	22,397*
Real Expenditure Per Student with Teacher Salary as Deflator:	1,517	1,624

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\* Data for Alaska rather than for Anchorage.

Since the teacher is the basic education input, deflating by the cost of a teacher gives some measure of the real level of service delivery to the district. Because teachers are relatively expensive in Alaska, deflating by this measure puts Anchorage much closer to the national average.

Additional information of value would all be on a district-by-district basis since state data is too aggregate. Such information would include:

1. Average teacher salary
2. Student-teacher ratio or number of teachers
3. Number of professional support staff