DOCUMENT RESUME

ED 127 694 EA 008 610

AUTHOR Cox, Millicent
TITLE Taxpayer Impacts of State-Wide Taxation for School Districts in California. The Rand Paper Series.
INSTITUTION Rand Corp., Santa Monica, Calif.
SPONS AGENCY Ford Foundation, New York, N.Y.
REPORT NO P-5674
PUB DATE Jun 76
NOTE 29p.
AVAILABLE FROM Publications Department, The Rand Corporation, 1700 Main Street, Santa Monica, California 90406 ($1.50)

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS Comparative Analysis; Court Litigation; *Educational Finance; Elementary Secondary Education; Expenditure Per Student; Family Income; *Finance Reform; Property Taxes; School District Spending; *School Taxes; Simulation; State Aid; *State School District Relationship; *Tax Allocation; Tax Effort
IDENTIFIERS California

ABSTRACT

California is under court order (Serrano v. Priest) to revise the system of financing public elementary and secondary education. Initial analysis had predicted that a shift to statewide taxation would result in greater educational resources at a lower tax cost for lower income families and fewer resources at a higher tax cost for wealthier families. However, this analysis overlooked the role of nonresidential property values in the tax base. This paper presents simulation results for California school districts of three alternatives: statewide property taxation, district power equalizing property taxation, and statewide income taxation for education. The results show that any alternative for taxation has the result of most families being "better off." Property tax proposals shift the costs of education to industrial and commercial land uses, and the income tax alternative shifts the costs among families. (Author)

TAXPAYER IMPACTS OF STATE-WIDE TAXATION FOR SCHOOL DISTRICTS IN CALIFORNIA

Millicent Cox

June 1976

P-5674

The Rand Paper Series

Papers are issued by The Rand Corporation as a service to its professional staff. Their purpose is to facilitate the exchange of ideas among those who share the author's research interests; Papers are not reports prepared in fulfillment of Rand's contracts or grants. Views expressed in a Paper are the author's own, and are not necessarily shared by Rand or its research sponsors.

$1.50

The Rand Corporation
Santa Monica, California 90406

ABSTRACT

California is under court order (Serrano vs. Priest) to revise the system of financing public elementary and secondary education. Initial analysis had predicted that a shift to state-wide taxation would result in greater educational resources at a lower tax cost for lower income families and fewer resources at a higher tax cost for wealthier families. However, this analysis overlooked the role of non-residential property values in the tax base. This paper presents simulation results for California school districts of three alternatives: state-wide property taxation, district power equalizing property taxation, and state-wide income taxation for education. The results show that any alternative for taxation has the result of most families being "better off." Property tax proposals shift the costs of education to industrial and commercial land uses, and the income tax alternative shifts the costs among families.

This paper presents the results of research completed by the author at the University of Southern California under a grant from the Ford Foundation

TABLE OF CONTENTS

I

INTRODUCTION

A series of recent court decisions in California in Serrano v. Priest have established the need for major changes in the method of financing public elementary and secondary education. The Court has given the legislature and governor until 1980 to come up with the needed revisions in the school finance laws and the state's contribution to local school districts. The purpose of this paper is to examine alternative methods for taxation for school purposes and estimate the net changes in educational costs and expenditures on various taxpayers in California.

In Serrano, the Los Angeles Superior Court considered the issue of unequal access to public education for children who reside in different school districts (which have different tax bases). The tax base for public education is the assessed value within the geographic confines of the district. The usual measure of the ability of school districts to provide educational services is the assessed value of taxable properties per student. The higher the assessed value per student, the lower the tax rate required to finance a given level of expenditures per student. The question of unequal access to education is based on the unequal dollar return to each mill of tax rate and the relationship between school resources and the income of the families of the children in the school district. The decision held that school resources, which are related to tax rate and assessed value, are dependent on accident of residency.

In order to evaluate the financial impacts of alternative proposals for educational finance change on California taxpayers, a simulation model was developed to measure the expected values of taxes and expenditures per pupil in the school district. These results were analyzed by district and by taxpayer income groups to derive some predictions of whether taxpayers would be better off or worse off under each plan.

The first step in the analysis is to answer the question of the relationship between school district wealth and family income. If this relationship is direct, then the forecast for property tax alternatives is relatively simple. In previous research,[1] it has been shown that there is no relationship between school district wealth and family income. This is probably related to the extreme variation in school district wealth ($78 assessed value per pupil to $1,088,434 assessed value per pupil) and limited variation in family income ($6,068 average to $73,530 average family income) and the variety of location decisions. In urban high school districts, a direct relationship was found. However, these districts are a small subset of the districts, with a small share of the total students.

An additional regression equation was tested to see if the wealth of the family could be used to predict the wealth of the school district in which the family resided. Records were generated for each family in California, with the 1970 income (mid-value of the range reported on the Census) and the school district assessed value per student. These regression results demonstrated even more clearly that the family income could not be used to predict the wealth of the school district in which the family resides.

In the simulation model, data for Alameda, Fresno, Los Angeles, and Santa Clara counties were used to calculate the financial impacts on school districts and families of the school finance alternatives. Because the previous regressions had found no relationship between family income and school district wealth, there was no expectation that the rich would be better off (or worse off) under any specific proposal.

The simulation model calculates the changes in taxes under three possible plans: state-wide property tax, district power equalization, and state-wide income taxes, using the unit grant distribution method. The basic minimum under the district power equalization method was the same as the state-wide property tax method.

In the following sections, the results will be presented in terms of the characteristics of the school districts affected. Under each simulation the major importance is the financing method selected, the rates of taxation, and the distributional grant size. This analysis will point

---

[1]Millicent Cox, Analysis of the Characteristics of School District, California, 1970. Los Angeles, University of Southern California, 1974.

to characteristics of the districts affected which are also related to the characteristics of the residents of the district and the questions of impact analysis. Major concerns in the analysis are: what number of districts and students are affected? what is the wealth of the districts and the income of the families? is the wealth of the district derived from residential or non-residential property? what is the size of the changes in expenditures per student relative to tax collections per student? The answers to each of these questions will be presented for each finance alternative, then the impacts of the alternative will be summarized.

II

STATE-WIDE PROPERTY TAX IMPACTS

Under the state-wide property tax, the rate was set at $4/$100 assessed value, with unit grants of $875/ADA. (This is similar to the Senate Select Committee proposal.) The $4 rate is less than the state average of $4.119 for unified districts and $4.173 in non-unified areas. The $875 expenditures per ADA is less than the state and local contribution in high school districts ($970) but greater than that in elementary ($739 average) and unified districts ($806). An additional version of the simulation, allowed districts to retain their current level of non-foundation state aid in addition to the unit grant. (This money is categorical grants.)

Of the districts within the four counties, only 17 percent had a decline in expenditures per student without state grants and 15 percent had a decline with state grants. (See Table II.) These districts included approximately 2 percent of the total ADA. The districts with an increase in total expenditures per student and a decrease in tax collections per student were 65 percent of the number of districts and contained 89 percent of the students.

The assessed value per student in districts with declines in expenditures per student was significantly higher than that in districts with increases in expenditures per student. ($109,448 average vs. $13,592 average in districts with increases in expenditures per student.) The average differences between expenditures and locally collected taxes in districts with declines in expenditures was -$7,387. The average difference in districts with increase in expenditures was +$332. In districts with declines, the local tax collections exceeded local expenditures by over $7,000 per student in the district, while in the districts with increases in expenditures, the local tax collections were less than the expenditures by just over $300. The redistribution is quite significant from small, high wealth districts to large, lower wealth districts.

TABLE I

SIMULATION RESULTS, STATE-WIDE PROPERTY TAX
ALAMEDA, FRESNO, LOS ANGELES, AND SANTA CLARA COUNTIES, 1970

	All Districts	Without State Aid			
		Expenditures Decline		Expenditures Increase	
		Taxes Decline	Taxes Increase	Taxes Decline	Taxes Increase
Number of Districts	93	6	10	60	17
Average Daily Attendance	1,596,301	22,093	10,765	1,415,492	148,291
Average Family Income ($)	12,492	14,115	17,132	12,258	10,018
Assessed Value/ADA ($)	30,083	68,750	133,868	12,610	17,058
Assessed Value:					
Industrial & Commerical (%)	41.3	47.6	72.7	34.9	42.9
Residential (%)	42.7	30.0	10.2	54.9	23.2
Agricultural (%)	14.2	21.7	17.0	7.7	32.9
Poverty Income (%)	2.4	2.6	3.0	1.8	4.1
Number of Children Below Poverty	338,153	3,920	1,076	302,533	30,624
Average Expenditures Minus Taxes ($)	*	-13,726	-3,583	298	450

*Without state aid: -$996.
With state aid: -$816.

TABLE I - continued

	All Districts	With State Aid: Expenditures Decline, Taxes Decline	With State Aid: Expenditures Decline, Taxes Increase	With State Aid: Expenditures Increase, Taxes Decline	With State Aid: Expenditures Increase, Taxes Increase
Number of Districts	93	5	9	61	18
Average Daily Attendance	1,596,301	16,624	10,693	1,420,261	148,363
Average Family Income ($)	12,492	13,051	17,659	12,377	10,150
Assessed Value/ADA ($)	30,083	78,471	140,781	12,733	20,091
Assessed Value:					
Industrial & Commerical (%)	41.3	52.9	76.9	34.7	42.4
Residential (%)	42.7	22.8	11.1	55.1	22.0
Agricultural (%)	14.2	23.7	11.8	7.8	34.6
Poverty Income (%)	2.4	3.1	2.8	.8	4.2
Number of Children Below Poverty	338,153	3,709	1,034	302,744	30,666
Average Expenditures Minus Taxes ($)	*	-16,351	-3,784	500	522

The average family income was higher in districts with declines in expenditures per student than in districts with increase in expenditures. However, the average percent of income from poverty sources was also higher in the districts which are net contributors. Also, the percent of families in the districts with incomes less than poverty was 46 percent, while in districts with declines in expenditures per student, the percent of families below poverty was 66 percent. Therefore, while the average income is higher in districts with reduced expenditures per student, the intensity of poverty is also greater and the income distribution for all those districts is bimodal.

Districts with a decrease in expenditures per student had a higher proportion of their assessed value derived from non-residential land uses. (Industrial and commercial, primarily, with agricultural as the alternative.) Districts with an increase in expenditures per student had a higher proportion of the assessed value derived from residential land uses.

In summary, the state-wide property tax as a method of financing education would result in the following changes over the current system of local property taxation:

1. districts with a high property tax wealth will contribute to the support of districts with lower property tax wealth;

2. districts with relative few students will be contributing to the support of districts with many students;

3. districts with higher average family incomes, but concentrations in the wealthiest and poorest families, will be supporting districts with average family incomes;

4. districts with a concentration in non-residential land uses will be taxed to support districts with primarily residential land uses.

The result is not a taxing of the rich to pay the poor, but a taxing of non-children related land users to aid the concentrations of children-using land uses and the disolving of tax advantages related to districts with few children and sharing of their wealth with many districts.

III

DISTRICT POWER EQUALIZATION IMPACTS

The basic solution for district power equalization is the same as the state-wide property tax solution: the assumptions about the tax rate and the grant formula were the same. However, district power equalization solutions were modified for two considerations: would the district vote to return to the previous tax rate (higher than the minimum)? or would the district attempt to attain the previously higher expenditure level, rather than accept the unit grant level? These solutions were obtained by assuming that every district would return to the highest previous level, and calculations were made as to the distribution of the status of districts within the four counties (Alameda, Fresno, Los Angeles, and Santa Clara).[1]

Under the achievement of the highest tax level solution, the number of districts with reduced expenditures per student is not lower than under the minimum assumptions. (See Table II.) The number of students with lower expenditures per student in their district increased.

The average assessed value per student of the districts in the category of lower expenditures per student is higher in the high tax solution than in the basic solution. The assessed value is also higher under the high tax alternatives in districts with reduced expenditures per student than in districts with increased expenditures per student. Compared with the basic solution, the size of the difference in expenditures per student and taxes in a larger negative in high tax solution decline in expenditures districts and a smaller positive in high tax solution increase in expenditures districts than in the basic solutions.

---

[1]The results for elementary and high school districts were merged in a weighted manner (see Appendix D). Thus districts could still have a lower expenditure and tax solution in total, when one component varied. The effect of the retention formula (in this case, 70%) means even districts at their previous high tax may not have same level of expenditures.

TABLE II

SIMULATION RESULTS, DISTRICT POWER EQUALIZATION WITH DISTRICTS ACHIEVING HIGHEST PREVIOUS TAX (IF ABOVE MINIMUM) ALAMEDA, FRESNO, LOS ANGELES, AND SANTA CLARA COUNTIES, 1970

		Without State Aid			
		Expenditures Decline		Expenditures Increase	
	All Districts	Taxes Decline	Taxes Increase	Taxes Decline	Taxes Increase
Number of Districts	93	4	10	62	17
Average Daily Attendance	1,596,301	553	10,765	1,574,218	148,291
Average Family Income ($)	12,492	13,198	17,132	12,377	10,018
Assessed Value/ADA ($)	30,083	93,505	133,868	12,824	17,058
Assessed Value:					
Industrial & Commerical (%)	41.3	57.4	72.7	34.7	42.9
Residential (%)	42.7	12.6	10.2	55.2	23.2
Agricultural (%)	14.2	29.6	17.0	7.7	32.9
Poverty Income (%)	2.4	3.5	3.1	.8	4.1
Number of Children Below Poverty	338,153	154	1,076	306,299	30,624
Average Expenditures Minus Taxes ($)	*	-21,988	-3,583	244	450

*Without state aid: -$1,100.
With state aid: -$978.

TABLE II - continued

	All Districts	With State Aid: Expenditures Decline, Taxes Decline	With State Aid: Expenditures Decline, Taxes Increase	With State Aid: Expenditures Increase, Taxes Decline	With State Aid: Expenditures Increase, Taxes Increase
Number of Districts	93	4	10	62	17
Average Daily Attendance	1,596,301	553	10,765	1,574,218	148,291
Average Family Income ($)	12,492	13,198	17,132	12,377	10,018
Assessed Value/ADA ($)	30,083	93,505	133,868	12,824	17,058
Assessed Value:					
Industrial & Commerical (%)	41.3	57.4	72.7	34.7	42.9
Residential (%)	42.7	12.6	10.2	55.2	23.2
Agricultural (%)	14.2	29.6	17.0	7.7	32.9
Poverty Income (%)	2.4	3.5	3.1	1.8	4.1
Number of Children Below Poverty	338,153	154	1,076	306,299	30,624
Average Expenditures Minus Taxes ($)	*	-26,916	-3,583	401	450

The average family income in high tax solution decline in expenditure districts is higher than in increase in expenditure districts and higher than basic solution decline in expenditure districts. The intensity of poverty families in the income distribution of the districts is also greater, in measuring the percentage of family incomes in below poverty families.

Under the high tax solution, districts with reduced expenditures have a greater concentration of industrial, commercial and agricultural contributors to the property tax base than under the basic solution. The residential concentration under the high tax solution in districts with increased expenditures is also greater than in the basic power equalization solution.

The high tax solution under district power equalization provides the same variation from the current system of school finance that the basic solution (or state-wide property tax). However, several aspects of that solution are intensified.

1. The demands on districts with high property tax bases to contribute to the general pool are greater.

2. The size of the districts with the decline in expenditures is smaller under the high tax solution.

3. The average family income is about the same as in the basic solution for districts with both increases and declines in expenditures per student, but the concentration of family incomes in the below poverty level is slightly higher for those districts with a decline in expenditures.

4. The concentration of industrial-commercial-agricultural land uses in districts with declines in expenditures per student is slightly greater in the high tax solution than in the basic solution.

In the highest expenditure level solution, districts were assumed to attempt to reach the higher of two: the unit grant or the expenditure level previous. Under the retention rate situation, allowing for the merger of elementary and high school districts, there were a few districts which did not attain the previous high expenditure level. (See Table III.) The number of districts with a decline in expenditures per student is lower

TABLE III

SIMULATION RESULTS, DISTRICT POWER EQUALIZATION WITH DISTRICTS ACHIEVING HIGHEST PREVIOUS EXPENDITURE LEVEL (IF ABOVE MINIMUM) ALAMEDA, FRESNO, LOS ANGELES, AND SANTA CLARA COUNTIES, 1970

		Without State Aid			
	All Districts	Expenditures Decline		Expenditures Increase	
		Taxes Decline	Taxes Increase	Taxes Decline	Taxes Increase
Number of Districts	93	4	6	22	6
Average Daily Attendance	1,596,301	322	912	1,420,506	174,551
Average Family Income ($)	12,492	16,996	13,633	12,443	11,499
Assessed Value/ADA ($)	30,083	109,104	153,795	14,169	26,101
Assessed Value:					
Industrial & Commerical (%)	41.3	61.7	78.4	34.6	45.8
Residential (%)	42.7	9.5	1.7	55.3	24.9
Agricultural (%)	14.2	28.6	19.8	7.6	28.3
Poverty Income (%)	2.4	3.3	4.5	1.7	3.7
Number of Children Below Poverty	338,153	36	455	302,651	35,011
Average Expenditures Minus Taxes ($)	*	-22,814	-6,243	198	86

*Without state aid: $1,234.
With state aid: $1,313.

TABLE III - continued

	All Districts	With State Aid			
		Expenditures Decline		Expenditures Increase	
		Taxes Decline	Taxes Increase	Taxes Decline	Taxes Increase
Number of Districts	93	6	6	59	22
Average Daily Attendance	1,596,301	6,057	736	1,414,761	174,727
Average Family Income ($)	12,492	16,681	14,550	12,321	11,249
Assessed Value/ADA ($)	30,083	94,945	157,571	12,391	25,071
Assessed Value:					
Industrial & Commerical (%)	41.3	56.2	76.4	34.3	46.3
Residential (%)	42.7	19.5	1.9	55.8	24.9
Agricultural (%)	14.2	23.9	21.6	7.4	27.9
Poverty Income (%)	2.4	2.5	3.4	1.7	4.0
Number of Children Below Poverty	338,153	365	308	302,322	35,158
Average Expenditures Minus Taxes ($)	*	-17,285	-6,754	322	141

than in the basic solution, and the enrollment in these districts is significantly lower than in the basic solution.

Under the highest expenditures solution the districts with the decline in expenditures per student have a higher average assessed value per student than the districts with a decline in the basic solution or than districts in general. The level of assessed value per student in the districts with an increase in expenditures per student is also higher than in the basic solution. This shift is due to the fact that the lowest districts in the decline solution (which are not lower than the average) are now in the increase situation.

The average family income in districts with a decline in expenditures under the highest expenditure solution is slightly lower ($14,978 and $15,616 with state aid). However, the concentration of poverty income has also increased in the districts with a decline in expenditures as compared with the same districts in the basic solution. (4.04% of total family income derived in families below poverty vs. 2.91% without state aid, and 2.94% vs. 2.91% with state aid.)

Under the highest expenditure solution, for districts with declines in expenditures per student, the basic source of property tax wealth is non-residential property. The percentage of residential property for these districts is 4.8 percent without state aid and 10.7 percent with state aid. This share is lower than that of the basic solution.

The highest expenditure solution demonstrates the same direction of change from the present as the basic solution or the highest tax solution. However, the highest expenditure solution demonstrates some reverses in direction between state aid with and without over the other solutions. The presence of state aid in a situation in which districts are attaining their highest expenditure levels is one which is associated with more students and more districts with declines in expenditures per student rather than less. However, the magnitude of the difference in taxes and expenditures is reduced appropriately.

The highest expenditure solution, because of its continued reliance on the property tax base, continues the shift in taxation from residential, large districts to non-residential, smaller school districts, and the redistribution of expenditures from the smaller, high property tax wealth districts to the larger, low property tax wealth districts.

IV

INCOME TAX IMPACTS

The final alternative considered was the elimination of the property tax and substitution of the state income tax as the source of revenue for local public education. The increase in the income tax rate was set at a rate high enough to replace the lost revenues, a 30 percent increase in current income tax collections. Approximately 17 percent of the districts are in situations of declining expenditures per student under the income tax alternative. (See Table IV.) These districts are the same as the districts with declining expenditures per student in the basic property tax solution. However, there is a change in the allocation of districts between districts with declines and increase in taxes. In the property tax solution, most districts had increases in taxes with declining expenditures. In the income tax solution, districts had declines in taxation with declines in expenditures.

Districts with declines in expenditures per student under income taxes are districts with a high assessed value wealth. However, the difference between expenditures and taxes is a smaller negative than under the property tax alternative. (The difference is -$2,411 for without state aid and -$2,742 with state aid under income tax as compared with -$8,272 under the property tax alternative.) Additionally the average advantage in districts with an increase in expenditures per student is slightly higher in the income tax solution ($352 vs. $332 and $553 vs. $505).

The average family income in districts with a decline is the same under income and property tax alternatives. However, districts with a decline in expenditures and an increase in taxes under property taxes have an average family income of $17,132 (without state aid) and $34,513 under income taxes. In other words, under the property tax alternative, the districts with increased taxes have lower average family income than under income taxes. The percentage of total family income below poverty under the income tax alternative for districts with a decrease in taxes is higher than under property taxes (3.10% vs. 2.64%).

TABLE IV

SIMULATION RESULTS, STATE-WIDE INCOME TAX
ALAMEDA, FRESNO, LOS ANGELES, AND SANTA CLARA COUNTIES, 1970

		Without State Aid			
		Expenditures Decline		Expenditures Increase	
	All Districts	Taxes Decline	Taxes Increase	Taxes Decline	Taxes Increase
Number of Districts	93	15	1	48	29
Average Daily Attendance	1,596,301	26,551	6,307	1,137,513	425,930
Average Family Income ($)	12,492	14,766	34,513	10,834	13,302
Assessed Value/ADA ($)	30,083	113,445	49,501	13,206	14,231
Assessed Value:					
Industrial & Commercial (%)	41.3	65.2	33.7	39.1	32.7
Residential (%)	42.7	14.4	65.4	44.1	54.1
Agricultural (%)	14.2	20.0	0.0	15.2	10.1
Poverty Income (%)	2.4	3.1	0.1	2.9	1.5
Number of Children Below Poverty	338,153	4,692		249,625	83,532
Average Expenditures Minus Taxes ($)	*	-2,260	-4,681	468	160

*Without state aid: $-123.
With state aid: $56.

TABLE IV - continued

	All Districts	With State Aid			
		Expenditures Decline		Expenditures Increase	
		Taxes Decline	Taxes Increase	Taxes Decline	Taxes Increase
Number of Districts	93	13	1	50	29
Average Daily Attendance	1,596,301	21,010	6,307	1,143,054	425,930
Average Family Income ($)	12,492	14,582	34,513	11,039	13,302
Assessed Value/ADA ($)	30,083	123,837	49,501	14,513	14,231
Assessed Value:					
Industrial & Commerical (%)	41.3	71.0	33.7	38.6	32.7
Residential (%)	42.7	11.4	65.4	43.7	54.1
Agricultural (%)	14.2	17.3	0.0	16.1	10.1
Poverty Income (%)	2.4	3.1	0.1	2.9	1.5
Number of Children Below Poverty	338,153	4,459	304	249,878	83,532
Average Expenditures Minus Taxes ($)	*	-2,597	-4,636	674	343

Under the income tax alternative, the districts with an increase in taxes have a higher percentage of residential property uses within their boundaries than the same districts under property tax (54% of value from residential property vs. 23%). This is a significant shift in the responsibility, compared with the shift implied in the use of property taxation for school finance.

The income tax alternative is different from the use of local property taxation for school finance in shifting of distributions in many ways:

1. High property wealth districts would have a decline in tax collections and a decline in expenditures per student.

2. Average family incomes in districts with higher taxes are higher than in districts with lower taxes.

3. Districts with greater share of residential property in the tax base would contribute relatively more to the general school fund.

4. Districts with declines in expenditures per student are one-tenth the size of districts with increases in expenditures per student.

Compared to the state-wide property tax, income taxation for school district finance would result in:

1. districts with higher taxes having higher average family incomes than under property taxation;

2. districts with concentration of industrial and commercial property having lower taxes than under property taxation;

3. approximately the same districts having a decline in the level of expenditures per student, although the difference between tax collections and expenditures would not be as great.

While the differences between a simple state-wide property tax solution and the results of power equalization are not great in terms of their impacts on districts and the number and size of the effects on these districts, the differences in property taxation and income taxation are quite different. An additional analysis will explore the extent of this difference.

V

IMPACTS ON CALIFORNIA FAMILIES

The point of the following analysis of the simulation results is to answer the question: knowing the family's income, what is the likely size and direction of change in these tax alternatives? Will the family be better off? (Better off means less taxes to pay, more education to consume, or any combination such that the difference between education and taxes is positive.)

Families were defined to be better off under the proposed alternative if the expenditures per student increase and taxes decrease, if the expenditures increased and taxes increases, but by less, or if the expenditures decreased and the taxes decreased by more. Families were defined as worse off if the expenditures per student decreased, and taxes increased or if the difference between the expenditures and taxes was negative. (In the box below, areas marked "a" are definitely better off, "b" worse off, and "c" determined by the relative changes in expenditures and taxes.)

		Taxes	
		+	-
Expenditures	+	c	a
	-	b	c

The distribution of families by income class was calculated for the entire population, and for the subpopulations, "better off" and "worse off." (See Table V.) If the change in taxation were to affect families about the same across income levels, then the distribution of better off and worse off would be the same as that for the total population. Under the property tax assumptions, families with low incomes (less than $3,000 per year) are likely to be better off in the same proportion that they are of the total population, but their expected occurance rate of worse off is slightly lower. (Total population is 12% families with less than $3,000; better off is 12%, worse off is 8%.) Under the property tax, the use of state grants increases the probability that a low income family

TABLE V

PERCENTAGE OF FAMILIES BY INCOME CLASS WHO ARE BETTER OFF OR WORSE OFF UNDER ALTERNATE SCHOOL FINANCE PROPOSALS
ALAMEDA, FRESNO, LOS ANGELES, AND SANTA CLARA COUNTIES, 1970

Income Level	Total Population	State-Wide Property Tax		State-Wide Income Tax	
		Without State Aid	With State Aid	Without State Aid	With State Aid
Less than $3,000	12				
Worse off		8	11	9	7
Better off		12	12	12	12
$4,000-$7,999	20				
Worse off		16	18	18	14
Better off		21	20	21	21
$8,000-$11,999	25				
Worse off		25	23	23	19
Better off		25	25	25	25
$12,000-$24,999	36				
Worse off		40	32	38	42
Better off		35	35	35	35
$25,000 and over	6				
Worse off		10	17	11	19
Better off		6	6	6	6

will be worse off (8% to 11%). High income families ($25,000 and over) are as likely to be better off as they occur in the total population (6% of all families, 6% of better off families) but are more likely to be worse off (10% without state aid and 17% with state aid).

Under the income tax alternative, lower income families are slightly less likely to be worse off (9% without state aid and 7% with state aid) than under state-wide property tax or in the current situation. Higher income families are slightly more likely to be worse off (11% without state aid and 19% with state aid).

While the use of any of the alternative for financing education in California is not likely to achieve an "ideal" redistribution of educational resources based on family incomes, it is apparent that the changes will affect a small number of families adversely, and a large number of families in a positive manner (with relation to both taxes and expenditures per student). Even in the income tax alternative, the additional burden on middle class families is not as high as would be necessary in many districts to achieve the proposed level of expenditures per student.

It also appears that the low income families reside in a variety of districts, and, therefore, it is not possible to forecast their being worse off in general because of residing in high wealth districts. Additionally, the wealthier are not a significant population of high wealth districts.

BIBLIOGRAPHY

Advisory Commission on Intergovernmental Relations. State-Local Revenue Systems and Educational Finance. Washington, D.C., 1971.

Alexander, Arthur J. Inequality in California School Finance: Dimensions, Sources, Remedies. Rand Corporation (R-1440-FF), 1975.

Barro, Stephen M. Alternatives in California School Finance. Rand Corporation (R-663-RC/CC), 1971.

Benson, Charles S. The Economics of Public Education. Boston: Houghton Mifflin Company, 1968.

Benson, Charles S. (Director). Final Report to the Senate Select Committee on School District Finance, Vol. 1. Sacramento, 1972.

Benson, Charles S. Perspectives on the Economics of Education. Boston: Houghton Mifflin Company, 1963.

Bish, Robert L. The Public Economy of Metropolitan Areas. Chicago: Markham Publishing Company, 1971.

California State Board of Equalization. California Property Tax Laws. Sacramento, 1971.

California State Department of Education. California Public School Directory. Sacramento, 1971.

Callahan, John J., William H. Wilken, and M. Tracy Sillerman. Urban Schools and School Finance Reform: Promise and Reality. Washington, D.C.: The National Urban Coalition, 1973.

Coons, John E., William H. Clune III, and Stephen D. Sugarman. Private Wealth and Public Education. Cambridge, Massachusetts: Harvard University Press, 1970.

Cox, Millicent. Analysis of the Characteristics of School Districts, California, 1970. University of Southern California, 1974.

Cox, Millicent. Data Sources and Methodology. University of Southern California, 1972.

Cox, Millicent. Formulation of a Model for Analysis of Alternatives for Educational Finance. University of Southern California, 1974.

Feldstein, Martin S. Wealth Neutrality and Local Choice in Public Education. American Economic Review 65, No. 1 (1975), pp. 75-89.

Flournoy, Houston I., State Controller. Annual Report of Financial Transactions Concerning School District of California, Fiscal Year 1970-71, Sacramento, not dated (presumably 1972).

Large Urban School Districts - The Potential Victims of Serrano. California Journal (May 1974), pp. 169-170.

Levin, Betsy, Michael A. Cohen, Thomas Miller, and William V. Scanlon. Paying for Public Schools: Issues of School Finance in California. Washington, D.C.: The Urban Institute, 1972.

Meltsner, Arnold J., Gregory W. Kast, John F. Kramer, and Robert T. Nakamura. Political Feasibility of Reform in School Financing: The Case of California. New York: Praeger Publishers, 1973.

Reischauer, Robert D. and Robert W. Hartman, with Daniel J. Sullivan. Reforming School Finance. Washington, D.C.: The Brookings Institute, 1973.

Rossmiller, Richard A., James A. Hale, Lloyd E. Frohrreich. Fiscal Capacity and Educational Finance. Madison, Wisconsin: The University of Wisconsin, 1970.

Scribner, Jay D. (ed.) California Supreme Court Decision (Serrano v. Priest): Implications for Equality of Educational Opportunity. University of California at Los Angeles, 1971.

Stubblebine, William Craig and Ronald Teeples. California and the Financing of Education: Alternatives in the Wake of Serrano v. Priest. Claremont Economic Papers No. 44, 1972.

Tiebout, Charles M. A Pure Theory of Local Expenditures. Journal of Political Economy 64 (October 1956), pp. 416-424.

Tripp, Minot W. An Easy Way Out of Serrano - Legalizing The Status Quo. California Journal (June 1974), pp. 203-204.

Vieg, John A., Hubert C. Armstrong, Frank Farner, Gerhard N. Rostrold, John P. Shelton, and Procter Thomson. California Local Finance. Stanford, California: Stanford University Press, 1960.

Zumbrun, Ronald A. and John H. Findley. Yet Another View of Serrano. California Journal (August 1974), p. 279.