Serrano and Proposition 13: Comment on Isaac Martin, "Does School Finance Litigation Cause Taxpayer Revolt"

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Abstract: The California Supreme Court's 1976 *Serrano* decision, which required equalization of school spending and property-tax bases, was followed in 1978 by Proposition 13, which severely limited property taxes. This comment explains that evidence supporting a causal connection between the two events is not flawed by the problem of ecological inference. The *Serrano* decision applied to school districts, not individuals, and so the behavior of voters grouped by school districts is appropriate for testing the connection. Additional evidence presented here emphasizes the need to contrast a rejected property-tax limitation in 1972 with the overwhelming support for Proposition 13 six years later.

In a recent issue of the *Law and Society Review*, Isaac Martin (2006) challenged my thesis that the *Serrano* decision was responsible for the passage of Proposition 13. My story, which I first advanced in Fischel (1989), is that the 1976 *Serrano* decision so thoroughly divorced local property tax payments from local school spending that voters rationally opted to cut property taxes in 1978 and oblige the state of California to use statewide funds for public school expenditures. Prior to *Serrano*, California voters had overwhelmingly rejected several proposals to limit local property taxation and induce the state to pick up the school-spending burden. After the 1977 state legislature conformed to *Serrano*, however, local property taxation no longer enabled any school district to spend much more than any other. In my view, the Jarvis-Gann initiative was not a general tax revolt. Its success was due mainly to the changed fiscal circumstances that had been imposed on school districts as a result of the *Serrano* decision.

The first statistical evidence in support of my thesis (Fischel 1996) was the "swing" in the vote for Proposition 13 in 1978 from the most recent previous tax limitation initiative, the Watson initiative of 1972. Watson had proposed a limit on property tax rates (one-percent) that was similar to that of Proposition 13. He also proposed a state-finance equalization of school spending within counties, which in some ways conformed to *Serrano*. Both his 1968 and 1972 initiatives failed by almost a two-to-one margin. The intervening *Serrano II* decision explains why in 1978 voters changed their minds and supported the Jarvis-Gann initiative by almost a two-to-one margin.

I found that school districts that were subject to the most stringent changes in fiscal circumstance as a result of *Serrano* swung disproportionately from opposition to the Watson initiative to support for the Jarvis initiative (Proposition 13). For example, the city of El Segundo, which had a large amount of taxable property (due mainly to an oil refinery) and a relatively low student enrollment (due to an aging population) had the highest tax base per pupil of any district in Los Angeles County. Only 23 percent of the city's voters favored the 1972 Watson initiative, compared to 34 percent statewide. In 1978, however, El Segundo voted disproportionately in favor of Proposition 13, with 80 percent of voters favoring it, compared to the statewide 65 percent. El Segundo's 1972 to 1978 "swing" was the largest in Los Angeles County, 250.2 percent.

§1. Martin's Critique and the Ecological Fallacy

Kirk Stark and Jonathan Zasloff (2003) offered statistical evidence that they claimed undermined my connection between taxable property per pupil and the Watson-to-Jarvis swing. Using a larger sample of districts throughout California and multiple regression analysis, they found that the fraction of the district that was elderly and the average income of the district's residents explained the swing far better than taxable wealth per pupil. My reply to them (Fischel 2004) showed that the fraction of elderly (over 65) was highly collinear with taxable wealth per pupil and that their "income" and "elderly" variables were consistent with my story about voters being alienated from the property tax by the *Serrano* decision.

Isaac Martin's objections to my statistics are different. He argues that analyses of votes by district are misleading because of the ecological fallacy. The fallacy, first identified by Robinson (1950), is that one can infer individual choices from grouped data. Just because a large majority of college professors and residents of Hanover, NH, usually

vote for Democrats does not mean that any particular professor living in Hanover will vote Democratic. Even the most exquisitely accurate information about collective decisions based on grouped data does not warrant any particular inference about the decisions of individual members of that group.

Instead of just carping about methodology, however, Martin undertook a creative and difficult exercise to make his point. He was able to infer the actual preferences of individuals who responded to opinion polls concerning Proposition 13 in the year after it was passed. These observations were of individuals, not groups, so the ecological fallacy did not come into play. Martin found that there was no statistical connection between school finance conditions to which they were subject (he inferred school-district residency from zip-codes) and votes for Proposition 13. From this he concluded that the connection between *Serrano* and Proposition 13 was not sustainable.

My initial reaction to Martin's article was to ask him for his data, which he promptly and usefully provided to me, because his sample looked meager in size. The number of respondents to the Field poll in 1978 whose location could be inferred was only 369. This by itself was not necessarily a problem, but the distribution of their locations was. Martin was able to assign respondents to 39 school districts, from which the votes of the districts could be inferred from the individual responses.

The districts in Martin's sample are listed in Table 1, except for Baker Valley Unified (3 observations) and San Lorenzo Valley Unified (1 observation), both of which lacked a representative city from which actual votes could be inferred. Half of the 369 respondents whose school district he could identify were from only two districts, Los Angeles Unified (36 percent) and San Francisco Unified (14 percent), and most of the rest were from no more than ten large school districts. Even fairly large school districts like Santa Barbara were represented by only two observations. The votes of more than half of his districts were to be inferred from fewer than four individuals per district, and ten of those districts were represented by a statistical dictator, a single individual.

§2. The Irrelevance of the Ecological Fallacy

Martin's justification for having so few observations could be that it is better than using grouped observations that are flawed by the ecological fallacy. However, the ecological fallacy does not apply to determining whether *Serrano* caused Proposition 13. This is because the California Supreme Court (and the plaintiffs' lawyers) *embraced* the ecological fallacy and set their remedy upon it.

Serrano was not about inequalities among *individual* taxpayers or students. It was about inequalities among *school districts*. Whether a student or taxpayer within a given district was rich or poor or black or white made no difference. The *Serrano II* court endorsed Judge Jefferson's several remedies (n. 22 of *Serrano II*), all of which refer to inequalities in tax base, tax rate, and per pupil spending by district, not by school or by individual. Whatever *Serrano's* remedial demands were — and they were unhelpfully ambiguous — it was clear that they were required of school districts, not individuals within those districts. (School-finance litigants originally wanted remedies keyed to disadvantaged students, but, as explained by Joseph Henke [1986], early defeats in federal court caused them to adopt a school-district strategy.) Hence, I argue, the fraction of voters within school districts who supported Proposition 13 and previous tax limitations is an unimprovable sample of how voters responded to *Serrano*.

Martin (p. 534) does acknowledge that "using aggregate data does not entail an ecological fallacy as long as the hypothesis itself concerns only aggregate differences in behavior — in this case, district-level differences in voting (Fischel 2004; see King 1997 [Martin's citations])." This would seem to validate using school-district level voting. But then Martin immediately goes on to say, "The difficulty arises because both Fischel and his critics [Stark and Zasloff] attempt to use aggregate data to adjudicate between this hypothesis and alternative hypotheses that concern differences at the individual level."

Martin uses as an example of alternative hypotheses the interpretation of the effect of elderly voters on the vote swing from Watson to Jarvis. Stark and Zasloff interpret the effect of percent elderly (over age 65) as undermining my hypothesis, and I reply that it is consistent with it because *Serrano* changed the way such voters viewed local taxes. We seem to have agreed to disagree about that.

Martin's contention about the ecological fallacy is not theoretically invalid. I argue instead that it is unimportant. Either value per pupil or percent elderly is adequate to support my theory. *Serrano's* disruption of the connection between local taxes and school spending would alienate both the elderly and residents of districts with high value per pupil (Fischel 2004). Unless Martin has in mind some other hypothesis that is not based on grouped data, his concern about the ecological fallacy seems irrelevant to my tests of the *Serrano*-Proposition 13 hypothesis.

§3. Why School Districts Are the Critical Unit

A defense of Martin's sampling procedure might not rely on ecological inference. Proposition 13, like all other statewide voter initiatives, was decided on the basis of statewide majorities. The Field poll and other statewide polls attempt to mimic this principle by sampling voters without regard to where they live. As a result, any random statewide sample will have many more respondents from large school districts than smaller districts. About half of the sample should come from the twenty largest districts, and indeed, Martin's sample largely conforms to this, since he extracted his observations from statewide polls. (Martin's sample is overweighted to Los Angeles, which has about 12 percent of the state's population, not his sample's 32 percent, but my point is that any statewide sample will weight Los Angeles most heavily.)

It seems reasonable to do this, of course, because initiatives are not tallied by school districts. If majorities in the smallest 900 of California's (approximately) 1000 school districts favored an initiative, it would not pass if similar majorities in the largest 100 school districts were opposed to it. But it is precisely this attention to statewide voting that caused the opinion polls and their interpreters to overlook the school-district basis for the success of Proposition 13. Martin is not the first to do a statistical analysis of the Proposition 13 vote based on statewide polling results and come up with meager results. Both Sears and Citrin (1982) and Magleby (1984) found that statewide data could explain little of the vote by the recorded demographic characteristics of the voters. None of the polls undertaken at the time thought to record the school district of respondents.

Martin's individual-voter approach is not fated to fail the test that I regard as important. With an expanded sample, he could in principle recreate the vote within districts on the 1978 initiative. The possible gain from this is that he could get a more accurate match of district and voters. As he points out, and as Stark and Zasloff and I freely admit, votes by cities are usually not exactly the same as votes by school district

because of imperfect congruence between district and city boundaries. I will present some improved results on this below, but it still must be admitted that cities and school districts that perfectly overlap with each other are rare. (In California, the rare examples are mostly in the San Francisco Bay area, including Alameda, Albany, Berkeley, Emery, Fremont, Newark, Oakland, Piedmont, San Francisco, and Vallejo.)

§4. Why "It don't mean a thing if it ain't got that SWING."

Aside from its limited number of observations per school district, the other serious problem with Martin's data is that he can apply it only to the 1978 vote. There appear to be no surveys that asked voters by school district how they voted both on the Watson initiative in 1972 and the Jarvis initiative in 1978. Thus Martin cannot use the dependent variable that both Stark and Zasloff and I regarded as crucial, the swing in the votes between the two initiatives.

Martin regresses the usual suspects only on the vote for Proposition 13. He finds with his individual data what I have found with my grouped data: The *Serrano*-measure variables, especially "value per pupil," do not work. The reason that the vote on Proposition 13 itself is not easily explained by *Serrano*-variables is that the property tax by itself is an unpopular tax (as Martin points out on p. 547). In surveys that ask which tax — income, sales, or property — is least palatable, the property tax almost always wins. The reasons are well known: The property tax is highly visible, unlike the withholdings of income taxes. It is usually paid in large amounts only once or twice a year, unlike a sales tax. And unlike both other taxes, it is not automatically adjusted downward when incomes fall. If you lose your job or retire or otherwise reduce your ability to pay, your income tax payments will fall and, because you spend less, so will your sales taxes. But your property taxes will not fall. Moreover, the property tax is usually a local tax, and its revenues pay for social welfare expenditures, including education, that seem to many people to be more naturally the obligation of the state and national government.

As a result of the property tax's undeniable unpopularity, many people who voted for Proposition 13 surely did so for reasons that had little to do with the *Serrano* decision. It is likely that about half of the vote for Proposition 13 came from such voters. The evidence is from the previous Watson initiatives. As the elected assessor of Los Angeles County, Philip Watson was well aware of voter dissatisfaction with the property tax. His proposed property-tax limitations in 1968 and 1972 were attempts to respond to underlying dissatisfaction with local property taxation. The 1972 initiative would have capped the property tax rate at one percent of value and obliged the state government to shoulder the burden of most social welfare expenditures, including most education spending (Watson 1972). Despite opposition from almost all political interests (including, in 1972, Governor Ronald Reagan), Watson's initiatives got about a third of the vote. Thus without any prod from the *Serrano* decision, it was evident that a third of the electorate was willing to severely limit the property tax.

It is my contention (implicit in earlier work, explicit now) that voters who would have favored the 1972 Watson initiative would also have favored Proposition 13. As a result, the best way to determine the effects of *Serrano* are to look at the *change* in the votes from 1972 to 1978. If one looks only at the 1978 vote, the analyst will detect die-hard Watson voters (who did not like property taxes under normal circumstances) as well as

those who were especially alienated by the school-finance legislation induced by *Serrano*. It follows that the only way to detect the special influence of *Serrano* on property-tax votes is to look at the change in voting by school district. (Martin [pp. 542-544] does examine a survey that appears to ask about evolving attitudes about property taxes and school funding. However, this survey is not coded by school district, and so it cannot be used to address the *Serrano*–Proposition 13 connection that I have proposed.) To put it in broad terms, I contend that Watson demonstrated that a third of California voters don't like the property tax. The additional third of the electorate that made Jarvis the darling of the tax-rebels was provided by the California Supreme Court. The only available way to detect that additional third is to look at the change in school district votes between 1972 and 1978.

§5. Improving the City-School District Match with GoogleEarth

Martin's other objection to my statistical results is that the match between cities, for which 1972 and 1978 voting data exist, and school districts, which are the relevant observation, is imperfect. I concede that poor matching of districts with cities could create biased results and that the direction of the bias is not known. In this section I describe a method of selecting cities that match up with school district boundaries that is more accurate than that previously adopted by Stark and Zasloff or myself. I do not claim perfect accuracy for this new sample, but it does reduce observational error.

GoogleEarth is a satellite mapping program that shows locations in great detail. One can see where land is developed and where it is open. Houses can be distinguished from factories, commercial buildings, parking lots, and port facilities. Most importantly, GoogleEarth overlays municipal boundaries and school district boundaries. This overlay is available from U.S. Census TIGER maps, but the satellite pictures add an important dimension.

School districts in California, as in almost all other states, cover the entire territory of the state. It is impossible to find a place to live in the state that is so remote from civilization that it is not included in a school district. Municipalities, however, are far more selective in their coverage, and this affects the overlap of cities and school districts. Even a school district that bears the name of a city can have boundaries that exceed that of the city. Even worse for my effort, parts of a single city may be in two or more different districts. Observing the cities using GoogleEarth with the boundaries of both cities and school districts allows one to judge how close the city vote would mimic the school district vote. (This procedure is described in more detail in Fischel 2007.)

The boundaries seen on GoogleEarth are from the year 2000, but the boundaries of interest are from the 1970s. Both municipal and school district boundaries can be changed. Most school district boundary changes, however, occur as the result of consolidations involving small rural districts. In well-populated urban areas, boundaries almost never change except for "unifications," which usually merge two or more elementary districts with the high school district to which the elementary districts formerly sent their graduates. As a result of district boundary stability, then, my sample of communities can be expanded from those that are solely unified districts. This also reduces whatever bias may arise from using only unified school districts in the sample.

The remaining difficulty is that municipal boundaries do change. Almost all changes, however, are municipal annexations of unincorporated territory of the county.

Municipalities hardly ever shrink in area, and they almost never annex populated territory that belongs to another municipality. As a result, it is reasonable to assume that a municipality that was largely within a given school district in the year 2000 (as shown on GoogleEarth) was also within that school district (or its predecessor elementary and high school district) in the 1970s. Municipalities whose boundaries in 2000 now extend beyond their school district(s) have to be excluded from the sample, but this leaves a good number of municipalities in 1972 and 1978 whose voters can be attached to a known school district.

With this identification procedure in mind, I first used Martin's sample of school districts to re-examine the regression that I used in my 2004 reply to Stark and Zasloff (Fischel 2004, p. 899). In that work, the variable SWING (percent change in the vote on the 1972 Watson initiative to the 1978 Jarvis initiative) was the dependent variable. The regressors were the city's 1980 household income (INCOME), percent African-American (BLACK), percent over age 65 (SENIOR), and the 1977-78 equalized value per pupil (VALUE/HSPUPIL). I found that these variables explained a large fraction of the variation in the Watson-to-Jarvis SWING both statewide and in Los Angeles County. SENIOR and VALUE/PUPIL were closely correlated, however, and only when I dropped SENIOR from the regression was VALUE/PUPIL highly significant.

Martin's sample identified school district location, not a particular city, from which votes can be determined in the 1972 and 1978 initiatives. He had each respondent's vote from the survey, and so he did not have to use city data. My sample of voters is much larger, but I need to decide which city is representative of the district when there is more than one. With GoogleEarth, I tried to identify at least one city (and, in one case, a county) that was wholly within Martin's school district group. I was successful in all but two of his districts: Baker Valley, a tiny district in the desert northeast of San Bernardino, and San Lorenzo Valley, a rural district in Santa Cruz County, contain no municipalities. For the remaining 37 districts, I selected the largest city that was entirely within the school district as my representative voting-unit for the district. In most cases, this constituted an apparent majority of the district, but there were some instances in rural areas in which the city was considerably smaller than the surrounding unincorporated area (Placerville, San Anselmo, and Watsonville) and thus might be imperfect representatives of the districtwide vote.

Tables 2 and 3 show the results of this regression. Contrary to Martin, whose sample of individual voters revealed no connection with any of the *Serrano*-related variables, the regressions do indicate some connection in explaining variations in SWING. (The comparison is inexact, since Martin could examine only the vote on Proposition 13, not the swing from Watson to Proposition 13.) Figure 1 plots SWING against VALUE/HSPUPIL. (Martin used high school attendance as his base in order to compare unified and high school districts.) The correlation is .29, which is not as strong as in other samples, but is not insignificant. Without Berkeley, which is arguably a special case because of the university, the simple correlation is .36.

The regression results summarized in Tables 2 and 3 further confirm that *Serrano*-related variables are statistically significant in explaining variations in SWING. The independent variables SENIOR and INCOME are positive and significant, as I had previously argued was consistent with the *Serrano*-caused-Prop 13 hypothesis. In Table 2, VALUE/HSPUPIL is positive but not significant. The regression in Table 3 suggests

that this was because SENIOR was picking up much of the variation in VALUE among districts. When SENIOR is omitted, the coefficient on VALUE/HSPUPIL more than doubles and is significant.

The coefficient on BLACK, the percent of the city that was African-American, BLACK, was in all cases negative and significant. As I previously explained (Fischel 2003, p. 18, n. 56), this was not for any *Serrano*-related reason. It was because Howard Jarvis, Proposition 13's major advocate, was perceived by blacks as a racist, while Philip Watson, the spokesman for the 1972 initiative, was not. It can hardly be argued, however, that "whites" caused Proposition 13, since African-Americans are a sufficiently small minority that they had only a modest influence on the vote in either initiative.

My examination of the actual vote swing in Martin's sample of districts is compromised by several factors. As already mentioned, some of the cities were small relative to district populations. The use of value per high-school student could bias the results because component elementary school districts may have much different tax bases—indeed, that may be a reason they were resistant to district unification. Most important, however, is that the 1972 Watson initiative, which is the base from which SWING is calculated, had features that almost surely would have caused districts in different counties to respond differently.

Watson had proposed to shed local responsibility for school spending by equalizing spending within each county in the state. He claimed as an incidental benefit of his initiative that this equalization would respond to *Serrano I*, which had been decided the year before (Watson 1972). It was quickly pointed out that this would not seem to be an appropriate response, since it would still allow for substantial spending differences among counties. Watson's initiative would surely have affected school districts differently by county, and thus the base from which the SWING in votes is calculated would be different.

A regression using statewide data, such as Martin's sample, would have to account for the county-specific difference in voter response to the Watson initiative. (This may be one reason why Stark and Zasloff's statewide sample seemed to perform more poorly than my original Los Angeles County sample.) However, no county besides Los Angeles has enough school-district/ municipality combinations to construct a statistically significant sample. For this reason, I redoubled my efforts to get an accurate match of city and school district boundaries within Los Angeles County.

§6. The Expanded Los Angeles County Sample and Regressions

Using GoogleEarth and the previously-described procedure as my guide, I was able to expand the sample of 36 unified districts from Fischel 2004 (p. 899) by adding ten Los Angeles County districts that were combinations of elementary and high school districts. The maps also permitted a more precise identification of cites and unified districts. Where there were two or more cities almost entirely within the same district (in nine districts), I used only the largest city's votes and demographic characteristics to represent the district's voters. I excluded the cities of La Mirada, La Puente, La Verne, and Walnut because their voter turnout between 1972 and 1978 grew by more than a third, which suggests to me that additional housing or territory had been added during that period, thus changing the characteristics of the median voter.

I am reasonably confident that the 46 cities in my Los Angeles County sample corresponded to the boundaries of the districts in 1972 and 1978 even though I inferred the overlap using 2000 data from GoogleEarth. In mature urban areas, school district boundaries and municipal boundaries are stable over time. The few school consolidations in this group were easily identified and always involved creating a unified district from component elementary districts and a high school district. Boundaries of new unified districts thus corresponded to easily-identified boundaries of former elementary and high school districts. (The now-unified districts that in the 1970s were elementary and high school districts are Manhattan Beach, Redondo Beach, and San Gabriel.)

After identifying the 46 cities that were representative of their school districts, I ran three regressions using the same independent variables that I used in the Martin-sample regressions, with one exception. Instead of computing value per high-school pupil, the present regression uses as its base all pupils, both high school and elementary, in the city's school districts. The variable VALUE/PUPIL was the equalized assessed valuation per pupil in the 1977-78 school year, averaged among high-school and elementary districts within the city where necessary to make them comparable to unified districts. (See appendix below for details.) I used 1980 data for the 1972 Watson vote regression (Table 6) to make its coefficients comparable to those of the 1978 Jarvis vote. Even though the VALUE/PUPIL numbers changed over that inflationary six-year period, I assume that the relative ranking of these communities with respect to these variables did not.

Figure 2 plots the relationship between VALUE/PUPIL and SWING. The relationship is very strong. The simple correlation between them is .72. If the right-side outliers of Beverly Hills and El Segundo are excluded, the correlation is .55. The lowest observation for VALUE/PUPIL is Baldwin Park, which was the poster-child for the *Serrano* litigants. Its SWING was low not because of opposition to Proposition 13 — 70 percent of its residents voted in favor of it — but because Baldwin Park had given unusually high support (44 percent) for the 1972 Watson initiative. The only negative SWING was from Compton, which had by far the largest percentage of African-Americans (75 percent) in the sample.

Table 4 indicates that the success of Proposition 13 compared to the Watson initiative, as indicated by SWING, can be accounted for by the shift in support by, in order of significance, communities with high VALUE/PUPIL, higher personal incomes (INCOME), and older populations (SENIOR). Communities with more black residents swung the other way. This regression strongly supports the idea that value per pupil, which was the focus of *Serrano* equalization, was a major contributor to the property tax revolt.

It is actually a little too strong, since VALUE/PUPIL and SENIOR are highly correlated in this and other samples. Multicollinearity can cause the significance of the relevant variables to shift with small changes in samples. In my previous regression using the 36 unified Los Angeles districts (Fischel 2004, p. 899), the variable SENIOR was highly significant and VALUE/PUPIL was not. SENIOR accounts for more the Watson-to-Jarvis SWING because most of the variation in VALUE/PUPIL among districts is caused by the denominator, and districts with many elderly residents simply have fewer pupils and thus an elevated "value/pupil." In addition, older voters who had opposed

Watson because local school quality added to their homes' value were most likely to swing towards Jarvis after *Serrano II* undermined that connection.

The importance of using SWING to measure *Serrano's* impact can be seen by comparing the regression in Table 5 with that of Table 6. The dependent variable in Table 5 is simply percent favoring Proposition 13, which was Martin's dependent variable. If one looked only at this, one would come to the same conclusion that Martin did with his individual observations, which is that *Serrano* had little to do with the success of Proposition 13. Indeed, Table 5 is consistent with the idea that Proposition 13 was a "revolt of the rich," since only income is positively associated with the vote. Black voters clearly opposed Jarvis, which also seems consistent with the "revolt of the rich" story.

Examination of Table 6, in which the 1972 Watson vote is the dependent variable, suggests a different story. A mere six years before 1978, the same districts had opposed Watson's property-tax limitation, and those most opposed to it were in districts with high VALUE/PUPIL. In 1972, *Serrano* had not been implemented, and no one knew what the implementation would be. School districts with higher-than-average resources were opposed to a tax limitation. (In unreported regressions, I used SENIORS without VALUE/PUPIL and then vice versa, and both independently were negative in the Watson vote.) Table 6 demonstrates the status-quo variation against which the *Serrano* decision must be measured. Before *Serrano* was implemented, there were voters who favored a severe property-tax limitation, but they were only about a third of the electorate. When local taxes were connected with local schools, as they still were in California in 1972, voters were reluctant to limit property taxes.

§7. *Serrano's* Remedy Alienated High-Spending and High-Wealth Districts

Professor Martin expresses concern that other state courts and litigants will hold back because of the *Serrano*–Prop 13 example. Given the extent of school-finance litigation and the large number of plaintiff victories since 1990, one might wonder what there is to worry about. (For a detailed inventory of cases, see Lukemeyer 2003.) I know of no court that has cited the *Serrano*–Prop 13 connection. But this leads to the question of why, if state courts continue down in the direction pointed to by *Serrano*, tax revolts are not more common. In previous work (Fischel 2001, chap. 6), I noted some suspicious connections between court-ordered (or legislative anticipation of a court order) equalizations and property-tax revolts, but I lack the type evidence that the Watson-Jarvis swing offers to back up my hunches. (Blankenau and Skidmore [2002] have multi-state evidence in support of the connection, but the variety of state circumstances cautions against too much confidence in such results.)

One candidate for explaining the uniqueness of the *Serrano*–Prop 13 connection is the extremity of the *Serrano* remedy that Judge Jefferson ordered in 1974 and which the California Supreme Court endorsed at the end of 1976. As described by Elmore and McLaughlin (1982, chap. 2), there were two competing remedies among the plaintiff attorneys in the *Serrano* litigation. One was advanced by Coons, Clune and Sugarman (1970). They insisted that the proper remedy was to share tax bases among school districts. Their "district power equalization" plan was founded on the principle that equal tax rates should generate equal spending per pupil. They were explicitly opposed to equalizing spending per pupil (Coons, Clune and Sugarman 1971, n.44).

While Coons, Clune, and Sugarman got most of the scholarly attention, the more workaday *Serrano* lawyers argued simply for equal spending per pupil. *Serrano*-litigators Sidney Wolinsky and John McDermott thought that equality of spending was more important than the tax-base equity (Elmore and McLaughlin 1982, p. 44). Equalizing tax bases would not necessarily equalize spending, and the emerging facts about school-district demographics revealed that more than half of the state's poor and minorities lived in districts with above-average VALUE/PUPIL. (McCurdy 1974; replicated by Sonstelie, Brunner, and Ardon 2000). The way the equal-spending and equal-tax-base factions apparently resolved their differences was to argue for both remedies to Judge Bernard Jefferson, to whose court in Los Angeles *Serrano* had been remanded. The judge, they assumed, would choose the remedy that he thought was most consistent with the marching orders of the state supreme court in *Serrano I*.

What Judge Jefferson chose to do, however, was not to choose. He simply granted every point that the plaintiffs had argued. Their internal conflicts were glossed over. As a result, a fair reading of his decision was that school districts had to both share tax bases *and* spend the same amount per pupil. In *Serrano II*, the California Supreme Court simply affirmed the trial court's remedy without unpacking its internal inconsistencies. A careful examination of the decision by Lee Friedman and Michael Wiseman (1978, 201-202) concluded that only realistic way to comply with both prongs of the *Serrano II* remedy was for the state to take full control both the spending and revenue for all school districts.

The state legislature was not willing to go that far, but *Serrano II* gave John McDermott, the plaintiffs' lawyer in Sacramento, a powerful tool with which to shape the legislation (Elmore and McLaughlin 1982, chap. 3). Proposals that deviated from absolute equality of spending and absolute equality of tax base for any given level of spending caused McDermott to threaten to haul the state back into court. The result was legislation, AB 65, that was truly revolutionary. Although not all tax bases were shared, as Stephen Sugarman (1977) complained, the legislation called for all incremental local spending to come from equalized tax bases. On the spending side, the highest spending districts were not immediately pulled down to the state mean, but AB 65 made it clear that equalization to within a narrow band of spending per pupil for almost all districts would be achieved within a few years (California Department of Education 1979).

Because the legislature did not want to equalize spending per pupil at a low number, substantially more fiscal resources for education were required. Much of those resources came from local school property taxes, whose tax-base was being boosted by the unprecedented inflation at the time. The state could not simply equalize spending from its own tax sources. That would have left some districts with a property-tax advantage — lower local property tax rates to achieve the same level of spending — to which the fiscal-equity advocates strenuously objected. Had the state aimed solely at equalized tax bases for any given level of spending, however, the result would have been at least some unequal spending and some painful redistributions of resources away from low-income but high value-per-pupil districts such as San Francisco.

The result was that local property taxes had to keep going up to fund the state's increase in school spending (Fischel 1996, pp. 627-33, and 2004, pp. 917-19). In other states and in California before *Serrano*, local districts whose tax-bases inflated could respond to taxpayer complaints. School boards could lower tax rates so that tax bills would increase only by the amount locally desired for schools. But with the state's

Serrano-driven takeover of school finances, local districts were not at liberty to lower rates in response to inflated property values. Local tax revolts were impossible not just because the voter initiative is not available to school districts in California, but because the state had largely eradicated any remaining local discretion over school spending in responding to *Serrano*. A local school director who sought to reduce local property taxes in response to her constituents' pleas would be advised by counsel that this was contrary to state law. As "creatures of the state," school districts have no ability to contravene state law.

The double-whammy of the *Serrano II* remedy can explain the dual results of the swing from the 1972 Watson initiative to Proposition 13 in 1978. It wasn't just districts with high tax-base per pupil that were disaffected by the *Serrano* remedy. Districts with high family incomes (which did not, contrary to the rhetoric of the *Serrano* advocates, have the highest tax bases) were alienated by the equal spending prong of the remedy. The whole point of paying for an expensive home in an affluent residential community like San Marino is to be able to send your children to better-than-average schools. San Marino was not among the districts with high value per pupil (see Figure 2), in part because of its many pupils and in part because it lacked much industrial and commercial tax base. But San Marino was a high-income place, and it had a 190 percent swing, more than twice the Los Angeles County swing of 86 percent. *Serrano's* extraordinary remedy, created by the disagreement among the plaintiff attorneys and the failure of the courts to reconcile them, made it more extreme than either *Serrano*-faction may have intended. Equal spending alienated voters in high-income districts, and equal tax bases alienated taxpayers in district with high value per pupil.

§8. Why Has the *Serrano*–Prop 13 Story Become the Conventional Wisdom?

I first thought of the connection between Proposition 13 and *Serrano* almost as soon as Proposition 13 passed in 1978. So did a handful of other economists. But I did not publish my first paper on the connection until 1989, more than a decade later. The main reason for this delay was that I was confident that some alternative story would emerge that would easily explain why California voters did this to themselves. But no coherent story emerged. Indeed, if there were an obvious cause of Proposition 13, the legislature could probably fix it and Proposition 13 would be gone by now.

Popular stories purporting to explain Proposition 13 ranged from the preposterous (the genius of Howard Jarvis, mostly promoted by himself) to the gratuitously insulting (Californians are especially selfish and/or stupid) to the obvious but unhelpful (the legislature did not lower property taxes—and why was that?). The "revolt of the rich" story is upended by the simple fact that the votes of the richest half of the electorate could have been discarded in 1978 and Proposition 13 would still have passed handily. The serious academic work was inconclusive. The title of Sears and Citrin's 1982 book suggested the puzzlement: *Tax Revolt: Something for Nothing in California.* Why would an electorate try to get "something for nothing" when the fallout is obviously so dire? And if it was temporary insanity or a miscalculation by the 1978 legislature, why is Proposition 13 so durable that it has become the "third rail" of California politics, an issue that still threatens to electrocute any politician who would dare to tamper with it?

Martin (pp. 529-30) suggests that the timing of *Serrano* and Proposition 13 caused people to think of them as related, but my experience was that almost every scholar

initially thought my idea was novel and, when they were being charitable, "interesting." After I published my 1989 article, I took a sabbatical year at Boalt Hall Law School in Berkeley, home turf of Jack Coons and Steve Sugarman. I gave a seminar on the paper, and they were polite but, to put it mildly, unconvinced. I wrote a short op-ed article about it, and an enterprising Los Angeles radio interviewer saw it and offered to host a debate about my theory with John McDermott, one of the lead lawyers for *Serrano*. I agreed to an on-air conversation, but McDermott demurred, opining that it would be unhelpful to debate a "crackpot idea" (as the radio guy reported to me.) I wrote several other articles about the subject, but they were modestly cited, and no court or popular news outlet has embraced this explanation, contrary to Martin's fears about its influence.

But within the last decade, my argument does seem to have become the conventional wisdom. A public economics text by an author I have never met uses it as an example of the perils of badly-designed school-finance reform (Jonathan Gruber 2005). Several law-journal articles refer to it in passing as if it were something most people knew (e.g., Denise Morgan 2001). Most striking to me is that the Wikipedia article on Proposition 13 takes the *Serrano* connection for granted: "Proposition 13 drew its impetus from 1971 and 1976 California Supreme Court rulings in Serrano v. Priest…" <http://en.wikipedia.org/wiki/California_Proposition_13_(1978)t> (January 2008). Wikipedia aspires to be a collection of the conventional wisdom — contributors are warned against "research" — and I rely on it to tell me what "everyone knows" about any given subject. (Its Proposition 13 article had no citations, and I offered both my work and the contrary position of Stark and Zasloff as examples in the article's background discussion after I noticed it, but I did not contribute to the article.)

I think that the *Serrano*–Prop13 story has become the conventional wisdom by default. It is not that the explanation is air tight. My best results are sensitive to sample selection and multicollinearity; I do not have disaggregated property-tax data to prove that it was school taxes rather than other property-taxes that were driving voters to the brink; and evidence from other states about the impact of *Serrano*-style suits on tax revolts is sketchy. The reason for the success of my explanation is that it presents a coherent story. Statistical debates are a useful form of scholarly dialogue, but finding better story is the more important task. The challenges to it by Stark and Zasloff and by Martin are not persuasive enough to dislodge the thought that the best way to loosen the bonds of Proposition 13 may be to modify *Serrano*.

Table 1. Martin's Sample (without Baker & San Lorenzo School Districts) and City Data

Representative City	City pop 1980	1977 School District	Martin's Obser-vations	VALUE/ HS PUPIL	City SWING
Arroyo Grande	11,290	Lucia Mar Unif	1	53,769	99.40%
Barstow	17,690	Barstow Unif	7	51,550	73.90%
Berkeley	103,328	Berkeley Unif	4	118,960	37.40%
Beverly Hills	32,367	Beverly Hills Unif	1	179,184	153.80%
Carpinteria	10,835	Carpinteria Unif	2	137,011	107.00%
Cerritos	53,020	ABC Unif	1	40,297	59.20%
Chula Vista	83,927	Sweetwater HS	2	41,531	69.30%
Concord	103,255	Mt. Diablo Unif	3	63,498	126.30%
Cupertino	34,015	Fremont HS	1	74,328	165.40%
El Monte	79,494	El Monte HS	2	47,928	73.10%
Fresno	218,202	Fresno Unif	5	57,191	42.30%
Fullerton	102,034	Fullerton HS	12	66,706	109.00%
Garden Grove	123,307	Garden Grove Unif	10	41,704	93.20%
Glendale	139,060	Glendale Unif	7	74,906	109.70%
Long Beach	361,334	Long Beach Unif	8	98,203	108.50%
Los Angeles	2,966,850	Los Angeles Unif	114	75,497	76.80%
Mountain View	58,655	MV-LosAltos HS	2	136,228	138.00%
Oakland	339,337	Oakland Unif	7	86,389	57.80%
Ontario	88,820	Chaffey HS	1	53,804	106.80%
Orange	91,788	Orange Unif	1	61,429	91.10%
Oxnard	108,195	Oxnard HS	1	67,364	118.80%
Pasadena	118,550	Pasadena Unif	2	75,995	106.50%
Placerville	6,739	El Dorado HS	1	56,720	139.10%
Redondo Beach	57,102	South Bay HS	1	91,610	132.90%
Redwood City	54,951	Sequoia HS	2	134,855	136.80%
Sacramento	275,741	Sacramento Unif	12	61,823	71.90%
San Anselmo	12,053	Tamalpais HS	15	137,185	96.10%
San Diego	875,538	San Diego Unif	11	82,389	55.20%
San Francisco	678,974	San Francisco Unif	44	167,805	90.50%
San Mateo	77,561	San Mateo HS	2	137,269	145.50%
Santa Barbara	74,414	Santa Barbara HS	2	96,023	79.20%
Santa Monica	88,314	Santa Monica Unif	2	146,900	109.00%
Sierra County	3,073	Sierra-Plumas Unif	5	139,211	101.40%
Sonoma	6,054	Sonoma Val Unif	3	82,412	179.10%
Stockton	149,779	Stockton Unif	5	62,240	54.40%
Torrance	129,881	Torrance Unif	8	73,772	132.60%
Watsonville	23,543	Pajaro Valley Unif	3	77,281	138.00%

Table 2: SWING Regression using Martin sample

Dependent Variable: SWING

Regression Statistics	
R Square	0.548
Adjusted R^2	0.491
Observations	37

	Coefficients	*Standard Error*	*t Stat*
intercept	-0.0937213	0.2929782	-0.32
BLACK	-1.2263272	0.5042291	-2.43
SENIOR	3.1650350	0.9219564	3.43
VALUE/HSPUPIL	0.0000012	0.0000012	1.01
INCOME	0.0000381	0.0000117	3.27

Table 3: SWING regression using Martin sample without SENIOR

Dependent Variable: SWING

Regression Statistics	
R Square	0.381
Adjusted R^2	0.325
Observations	37

	Coefficients	*Standard Error*	*t Stat*
intercept	0.5442618	0.260893	2.09
BLACK	-1.6302918	0.564773	-2.89
VALUE/HSPUPIL	0.0000027	0.000001	2.17
INCOME	0.0000184	0.000012	1.57

Table 4: SWING regression using the 46-city Los Angeles County sample
Dependent variable: SWING

Regression Statistics	
R Square	0.749
Adjusted R^2	0.724
Observations	46

	Coefficients	*Standard Error*	*t Stat*
Intercept	0.368795727	0.141873266	2.60
INCOME	1.04928E-05	4.06759E-06	2.58
BLACK	-1.0928	0.247270082	-4.42
SENIOR	1.804242085	1.012400071	1.78
VALUE/PUPIL	1.11029E-05	2.79013E-06	3.98

Table 5: Determinants of the 1978 Proposition 13 ("Jarvis") Vote.
Dependent variable: Jarvis%

Regression Statistics	
R Square	0.694
Adjusted R^2	0.664
Observations	46

	Coefficients	*Standard Error*	*t Stat*
Intercept	0.665265545	0.03995451	16.65
INCOME	3.89899E-06	1.14552E-06	3.40
BLACK	-0.50400	0.069636481	-7.24
SENIOR	-0.15017	0.285113255	-0.53
VALUE/PUPIL	5.8634E-08	7.8576E-07	0.074

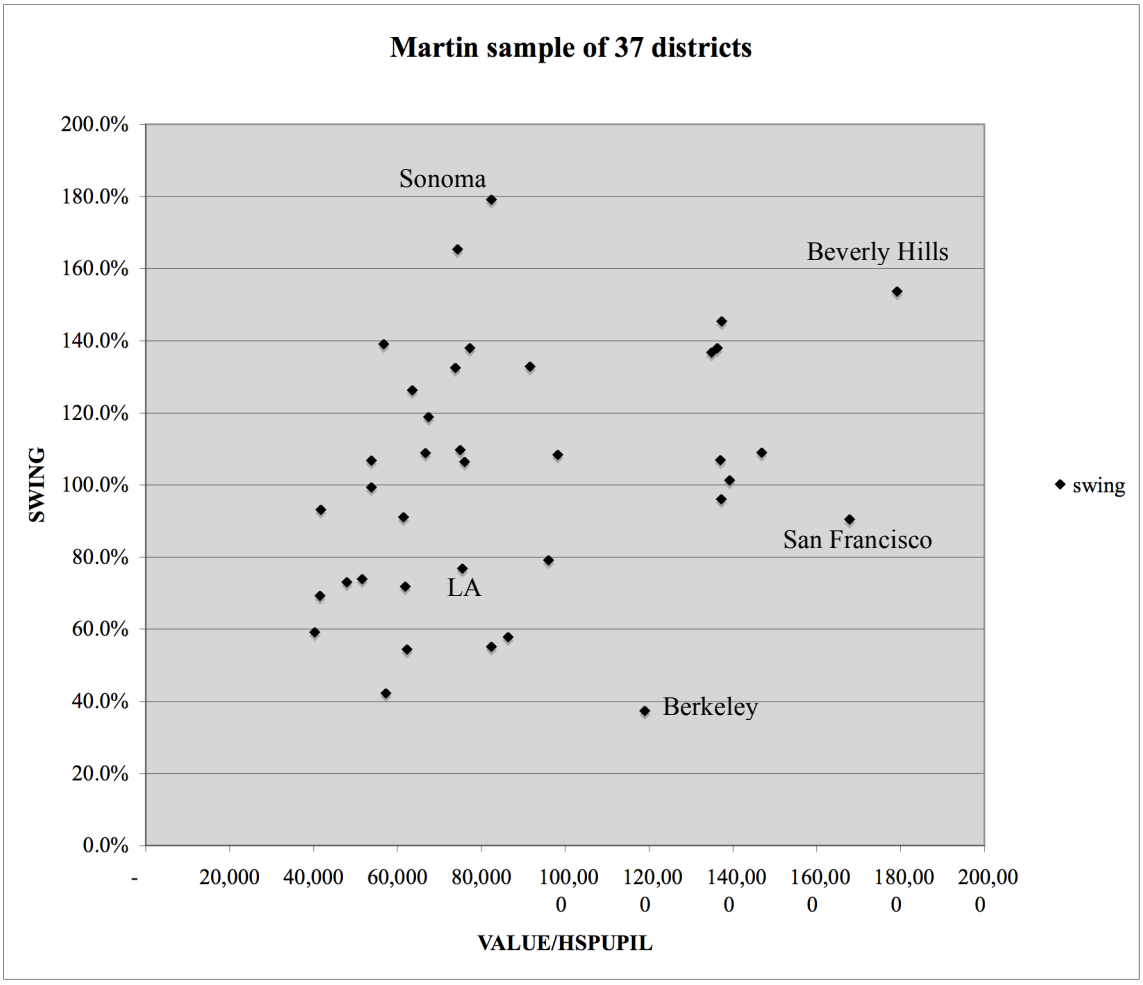
Table 6: Determinants of the 1972 Proposition 9 ("Watson") Vote.
Dependent variable: Watson%

Regression Statistics

R Square	0.482
Adjusted R^2	0.432
Observations	46

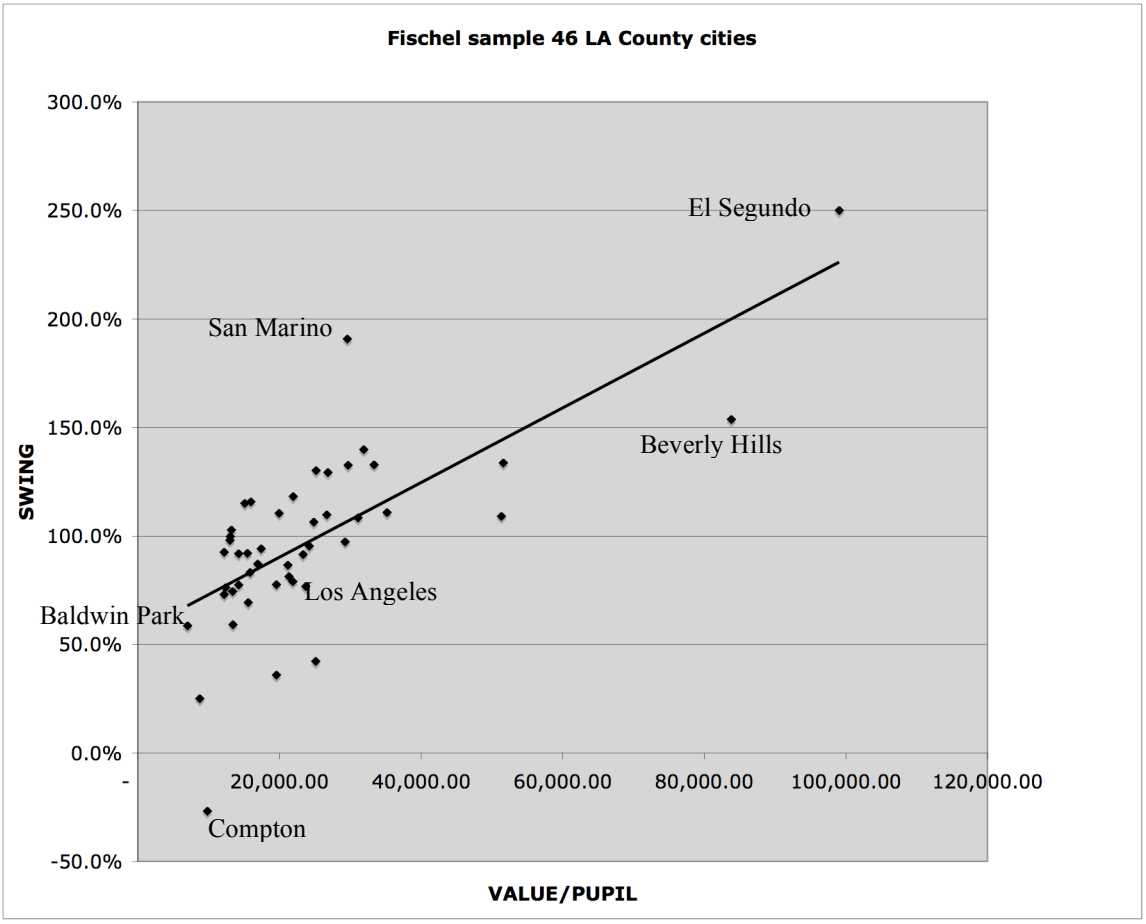
	Coefficients	*Standard Error*	*t Stat*
Intercept	0.423927343	0.026380429	16.07
INCOME	4.38032E-07	7.56342E-07	0.60
BLACK	-0.03757	0.045978296	-0.82
SENIOR	-0.31578	0.18824934	-1.68
VALUE/PUPIL	-1.495E-06	5.18807E-07	-2.88

Figure 1: SWING and VALUE/HSPUPIL for Martin's Sample (without Baker and San Lorenzo School Districts)



(The simple correlation between SWING and VALUE/HSPUPIL is .29. Without Berkeley, it is .36.)

Figure 2: SWING and VALUE/PUPIL for 46-city Los Angeles County sample



(The simple correlation between SWING and VALUE/PUPIL is .72. If Beverly Hills and El Segundo are excluded, the correlation is .55.)

§Appendix: Creating VALUE/PUPIL using elementary and high school districts.

The sample of 46 city-districts whose data where used in Figure 2 and Tables 3, 4, and 5, consisted of 36 cities than had a single unified districts and 10 cities that had a combination of elementary and high school districts or unified districts. In each of these 46 cities, at least two-thirds (and in all but eight cases, more than 90 percent) of the city's territory was in the district or districts indicated in the second column. When the city was divided between districts, the fractional weights given to each district are indicated in the second column. The VALUE/PUPIL observations for unified districts are from the tables in California State Department of Education, *California Public Schools* for years 1970-71 (Table IV-11) and 1977-78 (Table IV-14). VALUE/PUPIL for cities containing combinations of elementary and high-school districts were created from the same source by assuming the high-school and elementary-school district(s) within the city had been unified in 1977-78 and weighted as indicated in the second column below. In many cases parts of the school district are outside of the city, and their votes were not recorded as being in the city. However, in all cases except Hidden Hills, the voters within the city were at least half (more commonly over 90 percent) of the voters within the indicated school district.

City	***School district(s) within city***	**VALUE/PUPIL**
Alhambra	Alhambra City Elem; Alhambra City HS	21,845.00
Arcadia	Arcadia Unif	25,162.95
Azusa	Azusa Unif	12,955.77
Baldwin Park	Baldwin Park Unif	7,017.52
Bellflower	Bellflower Unif	16,891.69
Beverly Hills	Beverly Hills Unif	83,819.34
Burbank	Burbank Unif	35,158.50
Cerritos	ABC Unif	13,425.00
Claremont	Claremont Unif	15,963.68
Compton	Compton Unif	9,776.03
Covina	½ Covina Valley Unif; ½ Charter Oak Unif	13,176.00
Culver City	Culver City Unif	29,251.06
Downey	Downey Unif	23,321.42
Duarte	Duarte Unif	13,056.21
El Monte	El Monte Union HS; ½ El Monte City Elem, ½ Mountain View Elem	12,152.00
El Segundo	El Segundo Unif	99,040.00
Glendale	Glendale Unif	26,641.65
Glendora	Glendora Unif	14,238.77

Hawthorne	Hawthorne Elem; Centinela HS	24,168.00
Hermosa Beach	Hermosa Beach City Elem; ½ Manhattan Beach Unif; ½ Redondo Beach Unif	51,614.00
Hidden Hills	Las Virgenes Unif	21,172.00
Inglewood	Inglewood Unif	19,561.21
Lawndale	Lawndale Elem and Cintenela HS	17,417.00
Long Beach	Long Beach Unif	31,065.79
Los Angeles	Los Angeles Unif	23,675.32
Lynwood	Lynwood Unif	8,702.13
Manhattan Beach	Manhattan Beach Elem and HS (now Manhattan Beach Unif)	31,898.00
Monrovia	Monrovia Unif	19,536.94
Norwalk	$^{2}/_{3}$ Norwalk-La Mirada Unif; $^{1}/_{3}$ Little Lake City Elem and Whittier HS	14,193.00
Montebello	Montebello Unif	25,082.28
Palos Verdes Estates	Palos Verdes Peninsula Unif	26,817.09
Paramount	Paramount Unif	15,845.92
Pasadena	Pasadena Unif	24,809.58
Pico Rivera	El Rancho Unif	12,369.00
Pomona	Pomona Unif	13,356.43
Redondo Beach	Redondo Elem and South Bay HS (now Redondo Beach Unif)	33,358.00
Rosemead	½ Rosemead Elem and El Monte HS; ½ Garvey Elem and Alhambra HS	15,586.00
San Dimas	Bonita Unif	15,082.00
San Gabriel	San Gabriel Elem; Alhambra HS (now San Gabriel Unified)	21,326.00
San Marino	San Marino Unif	29,559.47
Santa Monica	Santa Monica Unif	51,323.70
South Pasadena	South Pasadena Unif	21,913.74
Temple City	Temple City Unif	15,433.73
Torrance	Torrance Unif	29,698.17
West Covina	West Covina Unif;	12,198.00
Whittier	Whittier HS; ½ Whittier City Elem, ½ East Whittier City Elem	19,924.00

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