Who Gives? The Determinants of Contributions to Education Foundations, Booster Clubs and PTAs in California

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Abstract: We examine the success of education foundations in securing private contributions to the public education system. We extend and enrich the research in Brunner and Sonstelie (1996 and 2003) by developing a measure of the size of the constraint imposed by the tax limits in each district, and incorporating this measure into estimates of revenue generating ability of each foundation. Estimates of the size of the tax limit constraint are derived from a series of structural equations that identify the level of student performance under the counterfactual scenario in which there are no tax limits. The percent difference between the desired performance level and the level attainable given the tax limits is used to measure how restrictive the tax limit is for each school district. Our study shows that this variable explains much of the between-district variance in the amount of revenue raised by education foundations. We also extend the model to account for other characteristics that influence private contributions to public goods and for the relationship between the parcel tax and private contributions. Finally, we analyze the extent to which private contributions are crowded out by government funding.

INTRODUCTION

In 1978, Proposition 13 limited the ability of local governments in California to raise funds through property taxes. Since that time, communities throughout California have established education foundations[1] intended to generate private revenue for public schools and school districts. The success of education foundations indicates that some voters are willing to provide private funds to supplement property taxes and state aid. Their proliferation in the period after the passage of Proposition 13 may also reveal that the tax limits force voters to consume less educational performance than they would choose to consume in the absence of restrictions. Though this relationship has been examined in previous literature, we are unaware of any studies that have provided more than suggestive evidence of the link between the restrictions of Proposition 13 and the growth in education foundation contributions[2]. In this analysis, we measure the restrictiveness of the Proposition 13 tax limits in terms of educational performance. This variable measures the difference between the demands for educational performance under two scenarios: with tax limits and without tax limits. We then relate this measure to the success of the education foundations, and we find that for every one percentage point increase in the relative restrictiveness of the tax limits, education foundation contributions increase by approximately $21 per pupil. At the mean of our measure of relative restrictiveness, this amount corresponds to $23 per pupil in foundation contributions. The more restrictive the tax limits in terms of student performance, the more successful the education foundation is in securing private contributions.

[1] We will use the term "education foundation" to indicate private organizations that raise funds for public schools. These organizations include education foundations, parent teacher organizations, and booster clubs.

[2] Brunner and Sonstelie (1996) demonstrate that districts most constrained by Proposition 13 generate more average private contributions per pupil than less constrained districts, but did not use a statistical analysis.

We use a system of equations to create the variable of interest because we do not observe the counterfactual level of student performance. That is, we want to estimate what educational performance would be without the property tax limits imposed by Proposition 13. The intuition of our model is simple. Every voter has an optimal level of public services given their budget constraint and the budget constraint of the community in which they reside. Proposition 13 shifted both the individual voter and community budget constraints by limiting the extent to which property tax rates can be raised. With this change in the district's and each voter's personal budget constraint, voters demand a different level of educational performance. The specifics of the property tax alternative, the parcel tax (explained below), allow us to identify this shift in voter demand. The percent difference between the demands under the two scenarios is our measure of the relative restrictiveness of the Proposition 13 tax limits.

Although the option to develop and contribute to education foundations is present in California, we realize that due to the public good attributes of public education, we cannot expect the accumulation of private funding to be as responsive to voter demands as taxes would be. That is, although education foundations are successful at securing contributions, their success is limited by free riders, who are non-contributors benefitting from the educational contributions made by others. Free riding is examined in the public good literature (Becker 1974, Bergstrom and Goodman 1973). Some recent studies focusing on education foundation contributions do their analyses within the public good context. Brunner and Sonstelie (2003) and Downes and Steinman (2008) use foundation contributions to test the results of public good theory. For example, both papers find that contributions are negatively related to size, which is consistent with public good theory (Bergstrom et. al. 1986). In addition, Brunner and Sonstelie (2003) find that contributions are larger in communities with more income inequality, and Downes and

Steinman (2008) find that local tax price is positively related to contributions. We also include variables expected to affect free riding in the present analysis. Our results for each of these variables are relatively consistent with public good theory. We find that income at the upper tail of the distribution is positively related to per pupil contributions. We also find an inverted U-shaped relationship between school district size and contributions per pupil. That is, contributions are largest in medium sized districts. This may reflect both a free rider problem associated with large districts and potentially less need associated with small districts.

Our paper also extends the literature by using parcel tax revenue in the foundation equation, which we argue is important due to the availability of both avenues to raise additional revenue locally. Without including parcel taxes in the analysis, we may underestimate the effects of other community characteristics that are correlated with the willingness to supply additional funding to the public education system. We find that foundation contributions increase by approximately $0.30 per pupil for every additional dollar of parcel revenue, so the parcel tax and foundation contributions are complementary sources of additional revenue.

BACKGROUND

Proposition 13 is restrictive in the sense that it limits the local property tax rate to 1 percent of assessed value and that full re-assessments only occur when property changes hands. Proposition 13 changed California's education finance system in that it gave the state more responsibility in distributing funds across districts to decrease the reliance of the education finance system on the tax base of the district. In fact, presently, districts in California receive a higher proportion of their funding from the state than do districts in the average state (Duncombe and Yinger 2008).

Proposition 13 was not the only source of change to the education finance system in California during the 1970s, though. In 1971, the California Supreme Court's rulings in the case of Serrano v. Priest led the state to specify a revenue limit for each district. Subsequent *Serrano* decisions provided specific guidelines; revenue limits across districts should be within $100 per pupil (in 1974 dollars). The districts that had a high revenue limit in 1975 experienced little change in their revenue limits over time. The districts that began with a low revenue limit saw their limits increase over time to move toward meeting the *Serrano* guideline. The *Serrano* decisions did not put restrictions on categorical aid programs, however, so the restriction on general-purpose aid did not force equalization in the education finance system as a whole.

The limit on the tax rate, however, did have a strong effect in that it significantly decreased the ability of the district to raise funds locally in support of public education. In fact, the parcel tax is the only means by which the district can raise local taxes beyond the limit, and a two-thirds vote required for passage. The required supermajority vote makes the parcel tax difficult to pass, and only about 20% of districts have even put a proposed parcel tax on the ballot. Approximately 64 school districts passed a parcel tax between 1983 and 2005, which is roughly 7% of the districts in California[3]. Additionally, communities may not wish to use a traditional parcel tax because it is a regressive tax on homeowners. A traditional parcel tax requires the same payment from owners of large, expensive homes and owners of small, inexpensive homes. Of the proposed parcel taxes, only a few lead to varying taxes for different types of homes and businesses.

The characteristics of the parcel tax and the potential inadequacy of school funding due to the tax limits imposed by Proposition 13 have made private contributions to public education a

[3] Though, a few of these 64 instances are districts passing a parcel tax more than once.

more desirable option for many districts. Post-Proposition 13 California has experienced the emergence and growth of education foundations. Almost half of the districts in California have at least one education foundation raising over $25,000[4] and they raise approximately $75 per pupil, on average. Determining the characteristics of communities in which foundations are successful gives us valuable information about the future of education finance in California and potentially in other states with tax limits.

THE MODEL

We use a structural model to estimate the demand for educational performance, and these estimates are used to predict what district performance would be if there were no restrictions on the property tax rate. The performance with no tax limits is then compared to the performance with tax limits to determine the extent to which restrictions in the current system shift outcomes away from voters' unrestricted demand. The variable that measures relative restrictiveness of the tax limits imposed by Proposition 13 is used as an explanatory variable in the foundation contribution equation.

Education Cost Functions

To begin, we estimate the education cost function with school district data. These estimates yield cost and efficiency indexes that are used in the estimation of demand for educational performance, which will be described in detail below[5]. The estimates of demand are required to construct the variable of interest.

A school district faces a cost function, $C\{S,W,Q\}$, where C is total cost per pupil, S is education quality, W is the price of hiring a teacher of a given quality, and Q is a set of variables

[4] We are only able to observe contributions of organizations that have collected more than $25,000 in the year because the IRS requires only these organizations to complete the Form 990.

[5] We also use cost and efficiency indexes in the foundation contribution equation because we believe these characteristics will affect the decision to contribute.

describing students in the district, such as total enrollment and the poverty rate. Spending per pupil, *E*, equals *C* divided by district efficiency, *e*. Without loss of generality, this efficiency measure can be scaled to equal one in a fully efficient district and to fall below one in less efficient districts. We can write the expenditure equation as:

$$E \equiv \frac{C\{S, W, Q\}}{e} \tag{1}$$

All else equal, inefficient districts must spend more than efficient districts to produce the same level of educational performance.

The Efficiency Equation

There are two main components of inefficiency: waste and spending on outputs other than those included in *S*, that is, other than those specified in the cost estimation. The "waste" component reflects the incentives facing school officials and the incentives that encourage voters to monitor school activities. The "other output" component reflects factors influencing the demand for outputs other than the one specified by the analyst. This understanding of efficiency will be imperative in interpreting results for the foundation contribution equation[6].

Both components of efficiency may be influenced by the district. First, a higher wage rate has both an income and substitution effect for voter monitoring, which can be thought of as a type of leisure activity. The income effect leads to more monitoring, the substitution effect to less. Second, a higher income may encourage voters to push for a broader set of outputs, which lowers efficiency. However, the demand for a broader set of outcomes cannot be realized without additional revenue collected locally, through a parcel tax. The demand of the decisive voter is the one relevant in deciding whether a parcel tax is collected and therefore whether a

[6] See Golebiewski and Yinger (2008b) for a more detailed explanation of this interpretation of efficiency measures.

broader set of outcomes can be achieved. Because 67 percent of the voters must agree before a parcel tax can be implemented and because higher-income voters are more likely to approve, the relevant voter is the one whose income is at the 33rd percentile of a district's household income distribution. Income in the efficiency equation is augmented with aid and other contributions, and we allow for a flypaper effect, labeled *g*. These other sources of income have only an income effect for monitoring, not a substitution effect.

Previous studies also suggest that a lower tax price weakens voters' incentives to monitor school officials and boosts their demand for a broader set of objectives (Duncombe and Yinger 2001, 2006). Also, as shown by Duncombe and Yinger (2008) and as discussed below, the tax price in California increases with the marginal cost of performance in the district (*MC*) and decreases with the number of parcels in the district (*N*). An individual living in a district that has a lower cost for an additional unit of performance has a lower tax price than an individual in a district with a higher marginal cost. Districts with a low marginal cost may be less efficient than others with a higher marginal cost. Also, an individual living in a district with more parcels per pupil has a lower tax price. So, a district with a higher number of parcels may be less efficient.

Our approach is to incorporate these hypotheses into a multiplicative efficiency equation. Let γ be the income elasticity of efficiency, δ be the price elasticity of efficiency, and K_e be a constant. This equation can be written as:

$$e = K_e \left(Y_{33} + g\left(\frac{R + A^C + A^F + \bar{F}}{N} \right) \right)^{\gamma} \left(\frac{MC}{N} \right)^{\delta} M^{\lambda} \tag{2}$$

where R is the district's revenue limit (composed of property tax revenue and unrestricted state aid), A^C is categorical aid, A^F is federal aid, and $\bar{F}$ are education foundation contributions. The significance of these variables is discussed below. Determinants of efficiency other than augmented income and tax-price are represented by *M*. These variables are associated either with the incentives that lead voters to monitor school officials or with the incentives of school officials themselves.

The Expenditure Equation

Efficiency cannot be measured directly, but its determinants can be incorporated into the estimation of a cost function. We assume that educational cost depends, in a multiplicative way on teacher salaries, *W*, and school characteristics, *Q*, such as enrollment and measures of disadvantage:

$$C = K_C S^{\sigma} W^{\rho} Q^{\nu} \tag{3}$$

where κ is a constant and σ measures returns to quality scale; $\sigma < 1.0$ indicates increasing returns and $\sigma > 1$ indicates decreasing returns. With this cost function, marginal cost is not constant:

$$MC \equiv \frac{\partial C}{\partial S} = \sigma K_C S^{\sigma - 1} W^{\rho} Q^{\nu} \tag{4}$$

Substituting equations (2)-(4) into the definition of *E* in equation (1), we find that

$$E = K_E \left(S^{\sigma-\delta(\sigma-1)}\right)\left(W^{\rho}Q^{\nu}\right)^{1-\delta}\left(Y_{33} + g\left(\frac{R + A^C + A^F + \bar{F}}{N}\right)\right)^{-\gamma} N^{\delta} M^{-\lambda} \tag{5}$$

where $K_E = (K_C)^{1-\delta} / (K_e \sigma^{\delta})\, k^*$. Taking logs, using the simplification for the income term that $\ln\{1+\alpha\} \approx \alpha$ when α is less than one, and adding a separate flypaper effect for each element of school revenue yields an equation that can be estimated:

$$\begin{aligned} \ln\{E\} &= \ln\{K_E\} + \left(\sigma - \delta(\sigma-1)\right)\ln\{S\} + \rho(1-\delta)\ln\{W\} + \nu(1-\delta)\ln\{Q\} \\ &- \gamma \ln\{Y_{33}\} - \gamma g_1\left(\frac{R}{N}\right) - \gamma g_2\left(\frac{A^C}{N}\right) - \gamma g_3\left(\frac{A^F}{N}\right) - \gamma g_4\left(\frac{\bar{F}}{N}\right) + \delta \ln\{N\} - \lambda \ln\{M\} \end{aligned} \tag{6}$$

Education Demand Function

Next, we estimate the demand for educational performance. Again, we estimate demand to create the variable of interest in the foundation contribution equation. If Y is a voter's income and Z is spending on everything except public schools, then a California voter's budget constraint is

$$Y = Z + tV + P + F \tag{7}$$

where V stands for the market value of a voter's home and t indicates the effective property tax rate for education, P is the parcel tax paid by the voter and F is the taxpayer's contribution to an education foundation.

To determine the combined budget constraint, we set expenditure equal to revenue. School district revenue comes primarily from property taxes and unrestricted lump-sum state aid, A^U, which add up to a district's revenue limit, R. A district also may receive revenue from categorical aid, A^C; federal aid, A^F; parcel taxes, and education foundations. Let $\bar{V}$ indicate property value per pupil, N equal the number of parcels per pupil, and $\bar{F}$ equal contributions from education foundations per pupil. Then the district budget constraint is

$$E \equiv \frac{C\{S,W,Q\}}{e} = t\bar{V} + A^U + A^C + A^F + NP + \bar{F} = R + A^C + A^F + NP + \bar{F} \tag{8}$$

Solving equation (8) for P, the parcel tax level needed to balance the budget, and substituting the result into equation (7) yields

$$Y + \frac{R + A^C + A^F + \bar{F}}{N} = Z + tV + \frac{C\{S,W,Q\}}{eN} + F \tag{9}$$

The left side of this equation is household income augmented by school revenue, and the right side is household spending. Tax price, T_P, is what an increment in S costs a voter:

$$T_P \equiv \frac{\partial \text{Spending}}{\partial S} = \frac{dC}{dS}\frac{1}{eN} = \frac{MC}{eN} \tag{10}$$

A greater number of parcels results in a lower price, that is, in a greater ability to spread out the cost of education over many parcels. Although most districts do not levy a parcel tax, it still provides a clear measure of what it would cost voters to raise revenue beyond the limits in Proposition 13. Tax price also depends on *MC* and *e*.

District-level demand for *S* is a function of district-level income, augmented by state aid, and of district-level tax price. More specifically, we specify a demand function by substituting the above expressions for augmented income and tax price into a standard multiplicative form for demand. Recall our measure of voter income is the 33rd percentile of a district's household income distribution due to the requirement of a 2/3rd vote to pass a parcel tax. We also add a flypaper effect, *f*, which allows government revenue to have a different impact on demand than does household income, and include other demand determinants, *X*. The result:

$$S = K_D \left(Y_{33} + f\left(\frac{R + A^C + A^F + \bar{F}}{N} \right) \right)^{\theta} \left(\frac{MC}{eN} \right)^{\mu} X^{\alpha}, \qquad (11)$$

where K_D is a constant, θ is the income elasticity of demand, μ is the (negative) price elasticity. Taking logs, we get the estimating equation for demand:

$$\begin{aligned} \ln\{S\} &= \ln\{K_D\} + \theta \ln\{Y_{33}\} + \theta f_1 \frac{R}{N} + \theta f_2 \frac{A^C}{N} + \theta f_3 \frac{A^F}{N} + \theta f_4 \frac{\bar{F}}{N} \\ &+ \mu_1 \ln\{MC\} - \mu_2 \ln\{e\} - \mu_3 \ln\{N\} + \alpha \ln\{X\} \end{aligned} \qquad (12)$$

Restrictiveness of the Tax Limit

To determine the extent to which demand is restricted under Proposition 13, we use the estimates of the demand equation to predict the level of performance under two different scenarios: without the tax limits imposed by Proposition 13 (Scenario 1) and with the tax limits, but excluding foundation contributions (Scenario 2). We leave out actual foundation contributions from Scenario 2 because we aim to explain these contributions and need to remove the endogeneity resulting from using foundation contributions in the estimate of demand.

Equations (13) and (14) show the modification to the estimating equations necessary to predict the level of performance demanded under Scenario 2. These equations are almost identical to the equations used for estimation. The only difference is the exclusion of the foundation contributions. The tax price is a function of the number of parcels and the relevant voter is the voter with income at the 33rd percentile of the distribution. With tax limits, the value of the voter's home is not relevant to the tax price faced by that voter. Instead, as described above, the number of parcels within the school district determines the tax price and the voter's share of property taxes and state aid. Note that both demand and efficiency must be modified to predict demand because efficiency affects the tax price faced by voters.

$$S_{Scenario2} = K_D \left(Y_{33} + f\left(\frac{R + A^C + A^F}{N} \right) \right)^{\theta} \left(\frac{MC}{e_{Scenario2} N} \right)^{\mu} X^{\alpha} \tag{13}$$

$$e_{Scenario2} = K_e \left(Y_{33} + g\left(\frac{R + A^C + A^F}{N} \right) \right)^{\gamma} \left(\frac{MC}{N} \right)^{\delta} M^{\lambda} \tag{14}$$

Equations (15) and (16) display the changes necessary to predict the level of performance demanded under Scenario 1. A number of variables need to be modified under this scenario. Median income and the ratio of median house value to total property value per pupil are used as the income and tax price variables. This reflects the realization that the median voter is the relevant voter in determining the level of performance demanded in a given district. That is, under Scenario 1, a vote concerning tax rate is decided by the vote of the median voter. Also, without restrictions on tax rate, the parcel tax is no longer the only avenue through which to raise additional taxes locally; the property tax rate is likely the means through which local tax revenue is increased. As a result, the number of parcels in a district is no longer relevant in either the demand or efficiency equations. The value of the median voter's home relative to the total property value per pupil determines the voter's tax price and her share of local tax revenue and state aid under Scenario 1.

$$S_{Scenario1} = K_D \left(Y_{50} + g\left(\left(R + A^C + A^F \right) \left(\frac{V_{50}}{\overline{\overline{V}}} \right) \right) \right)^{\theta} \left(\frac{MC}{e_{Scenario1}} \left(\frac{V_{50}}{\overline{\overline{V}}} \right) \right)^{\mu} X^{\alpha} \tag{15}$$

$$e_{Scenario1} = K_e \left(Y_{50} + g\left(\left(R + A^C + A^F \right) \left(\frac{V_{50}}{\overline{\overline{V}}} \right) \right) \right)^{\gamma} \left(MC \left(\frac{V_{50}}{\overline{\overline{V}}} \right) \right)^{\delta} M^{\lambda} \tag{16}$$

Important to note in both scenarios is the assumption that state and federal aid would be identical to the amount of aid distributed in the present system. This may not reflect reality but we have no basis for which to modify aid in the counterfactual scenario (Scenario 1). Taking logs of equations (13) and (15), respectively, we obtain the two predictions generated using the results of the demand equation (12):

$$\begin{aligned} \ln\{S_{Scenario2}\} &= \ln\{K_D\} + \theta \ln\{Y_{33}\} + \theta f_1 \frac{R}{N} + \theta f_2 \frac{A^C}{N} + \theta f_3 \frac{A^F}{N} \\ &+ \mu_1 \ln\{MC\} - \mu_2 \ln\{e_{Scenario2}\} - \mu_3 \ln\{N\} + \alpha \ln\{X\} \end{aligned} \tag{17}$$

$$\begin{aligned} \ln\{S_{Scenario1}\} &= \ln\{K_D\} + \theta \ln\{Y_{50}\} + \theta f_1 R \left(\frac{V}{\overline{\overline{V}}} \right) + \theta f_2 A^C \left(\frac{V}{\overline{\overline{V}}} \right) + \theta f_3 A^F \left(\frac{V}{\overline{\overline{V}}} \right) \\ &+ \mu_1 \ln\{MC\} - \mu_2 \ln\{e_{Scenario1}\} - \mu_3 \ln\left\{ \frac{V}{\overline{\overline{V}}} \right\} + \alpha \ln\{X\} \end{aligned} \tag{18}$$

Our variable of interest is generated by subtracting (17) from (18). This is the percent difference between the level of performance demanded without restrictions and that demanded with the restrictions imposed by Proposition 13. The larger this variable, the more restrictive the tax limits. We expect this to have a large impact on the extent to which education foundations raise revenue for the local school district. The intuition is as follows: Proposition 13 is most restrictive in communities that have a large property tax base. These communities generally have a higher income and therefore a higher demand for education.

However, as evidenced in equations (13) and (15), the tax share of the residents also varies under the two scenarios. So, depending on the median house value, the total property value per pupil, and the number of parcels, the tax price may be higher or lower under Scenario 1, as compared to Scenario 2. If the tax share under Scenario 1 is lower than under Scenario 2, then the demand for performance under Scenario 1 will exceed the demand for performance under Scenario 2 (since median income is higher than income at the 33rd percentile and the price is lower). However, if the tax share under Scenario 1 is higher[7], then the income and tax price effects work in opposite directions, so the sign of the change is indeterminate.

Foundation Equation

We assume a semi-log function for education foundation contributions[8]:

$$F = K_F + \tau\{S^*\} + \omega \ln\{Y_{75}\} + \omega h(A) + \varphi_1 \ln\{MC\} - \varphi_2 \ln\{e\} - \varphi_3 \ln\{T_P\} + \eta \ln\{Y^*\} + \psi \ln\{J\} \tag{19}$$

where S^* measures the restrictiveness of the tax limits, Y^* measures the dispersion in income in the district, J is a vector of other characteristics thought to have an effect on the amount of foundation contributions collected within the district (including parcel tax revenue), and each of the other variables are defined as they were previously. We use the income of the household at the 75th percentile to reflect the public good theory result suggesting that voters at the upper end of the distribution are those that make positive contributions to the public good (Andreoni 1988,

[7] The tax price in the scenario without tax limits, Scenario 1, is higher in approximately 60% of the districts.
[8] We use semi-log due to the number of observations of the dependent variable that take the value of zero.

Glazer and Konrad 1996). This is in contrast to previous literature that uses median income, possibly to reflect the demand for performance in a scenario with no tax limit (Brunner and Sonstelie 1996, 2003, Downes and Steinman 2008).

S^* is this study's variable of interest, and we expect the sign of τ to be positive[9]. In other words, the more restrictive the tax limit, the more successful the education foundations in the district will be at raising supplementary funding for its schools through private donations. In addition, public good theory suggests a number of factors that will affect how much money is raised as contributions to a public good, including the dispersion of income, the heterogeneity of preferences within a school district, and the size of the population benefitting from the public good (Bergstrom et. al. 1986, Brunner and Sonstelie 2003). Larger communities are expected to collect lower levels of contributions, since the propensity to free ride is expected to increase with population.

We also include variables to give suggestive evidence on the "warm glow" and signaling explanations of private giving of Andreoni (1989) and Glazer and Konrad (1996), respectively. "Warm glow" is the additional utility associated with feeling good about contributing to a charity or public good. This utility is above that which is gained in consuming the public good. So, individuals may contribute more than the level optimal when solely considering the utility gained through the consumption of the public good. Glazer and Konrad (1996) suggest that contributing to a public good may do more than just give the individual a "warm glow"; it may also be used as a signal of wealth. To control for these effects, we include measures of individuals not likely to derive direct utility from public education, the percent elderly. Additionally, we include measures of cost indexes since the higher the value of these indexes, the less educational

[9] S^* takes a positive value for 85 percent of districts in the sample, which means that they consume less educational performance in the presence of the Proposition 13 tax limits than they would in their absence.

performance can be purchased for an additional dollar in contributions. In other words, contributors do not get as great a direct benefit from their contribution, which may indicate additional indirect benefit, possibly in the form of warm glow and/or signaling. The signaling theory regarding wealth distribution suggests that districts with lower levels of income inequality collect more private contributions to the public good. Glazer and Konrad (1996) show that redistributing income to decrease income inequality causes an increase in contributions. This result reflects the greater difficulty in signaling wealth in communities with low dispersion in income. As implied by the use of these variables, our evidence is merely suggestive and does not allow us to separate the two effects.

With focus on our application in California, we must also consider the decision of the voters to pass a parcel tax and/or contribute to an education foundation in communities that want to supplement the property taxes and state aid currently collected by their school district. This relationship between education foundations and parcel taxes is likely to be endogenous because the unobservable characteristics related to voters' preferences for educational performance and their willingness to contribute are likely to be correlated. The instrument used for parcel tax revenue is the percentage of other districts in the county that are paying a parcel tax. We consider this variable exogenous because other districts' choice of instituting a parcel tax should have no effect on a district's foundation contributions, but it will influence a district's choice of whether to propose a parcel tax.

DATA AND ESTIMATION

Our models are estimated with data for regular school districts in California in 2003-04 and 2004-05[10]. Data from the two years are pooled, and a dummy variable for 2003-04 is included in the regression. Most of the data are from the California Department of Education and can be downloaded from their website. We use per pupil operating spending minus transportation and special education as the dependent variable for our expenditure equation. The dependent variable for the demand equations is a district's academic performance index (API), which is a performance indicator used by the state of California. The wage variable in the expenditure equation is a district's minimum teacher salary, which is the only salary variable that can be compared across districts. The share of students eligible for free lunch and the share classified as English learners (EL) are used to measure student poverty and students with limited English proficiency, respectively. We use students who are outside the regular classroom at least 80 percent of the school day as our measure of special education.

Data on earnings, income, population, demographics, housing units, renters and employment come from the 2000 Census. In addition, we contacted the auditor-controller or assessor in each county and received data on the number of parcels within each district from 28 counties and 507 school districts. To predict the number of parcels for those that are missing, we regressed parcels on the number of housing units, the number of business establishments in the county, and total employment in the district, all expressed in per pupil terms, and used the coefficients from the regression. We estimate the expenditure equation with 2SLS, treating API and teacher salaries as endogenous. Instruments for these variables include exogenous demand variables of other districts in the same labor market area, including the median house value, the

[10] Some districts are not included in the analysis due to missing data. We have no reason to believe these districts are different, on average, than the districts included in the estimation.

share of renters, the share of students with limited English proficiency, the total enrollment, and the share of African American residents.

The education foundation contribution data came from the National Center for Charitable Statistics in the form of the Core-PC File. The NCCS Core files are based on the Internal Revenue Service's annual Return Transaction Files (RTF). They contain data on all 501(c)(3) organizations that were required to file a Form 990 or Form 990-EZ. Of the organizations that appear in the data, we use those that have a National Tax Exempt Entities code which indicates an education-related organization. We drop those organizations that are associated with colleges, nursery schools and private schools, as determined by identifying the name of the school usually included in the name of the organization. We identified the private schools using the NCES Private School Universe Survey available at http://nces.ed.gov/surveys/pss/privateschoolsearch/. The remaining organizations are linked to districts by the zip code associated with the organization[11]. We use the net income of these organizations to measure the level of contributions to the district.

The nature of education foundations poses a complication in the estimation of the foundation contribution equation. As mentioned previously, about 50% of school districts in California appear in the data as having education foundation contributions of $0. This may indicate that there are no education foundations in those districts, or if education foundations exist in the district, they raise less than $25,000 annually. Due to the censored nature of the data, we need a Tobit model. We also have an endogeneity issue, so we instrument for our parcel tax variables. The first column of Table 4 presents estimates using a Tobit procedure with

[11] The zip code of the organization is linked with the zip code of schools, which has a corresponding district code. Also, some of the organizations are linked to districts using information provided by Eric Brunner on foundations that existed in 2001.

instruments. Also, because our variable of interest is a generated variable, we bootstrap the system to correct the standard errors for each of the estimating procedures. These estimates appear in Table 5.

RESULTS

Table 4 presents the results for the foundation contribution equation. Our results show that for a one percentage point increase in the relative restrictiveness of the tax limits imposed by Proposition 13, foundation contributions rise by approximately $21 per pupil. At the mean of the restrictiveness variable (1.1 percent), this corresponds to $23 per pupil. We interpret the findings to say that the limits imposed by Proposition 13 caused voters to consume less educational performance than they would in the absence of the limits, and the voters are willing to contribute privately in response to move to a higher performance level. Comparing the $23 per pupil increase in contributions per pupil to the mean of contributions, $38, the restrictiveness explains approximately 60.5% of contributions.

The results for enrollment are interesting in that the relationship between enrollment and foundation contributions per pupil appears to have an inverted U shape. That is, the largest contributions per pupil are found in districts of medium size. This result may reveal that the expected result of contributions declining with size does not appear until the size of the district gets very large, which is consistent with the finding of Brunner and Sonstelie (2003) in California.

The coefficient on tax price reveals that foundation contributions increase with tax price, and we find this effect independent of parcel tax revenue itself. This result indicates that in communities with a higher tax price, voters opt to collect revenue privately to avoid the high price associated with taxes. Also, the result for the dispersion of income, though insignificant, reveals that for every 1 percentage point increase in the ratio of income at the 25th percentile to that at the 75th, foundations collect $20 per pupil more. An increase in contributions in response to a decrease in the dispersion of income is consistent with public good theory. We also consider this effect indicative of the argument made by Brunner and Sonstelie (2003), in which the parents of the community cooperate to reach a common goal. At the limit, communities with no dispersion in income collect more foundation contributions since families in the community are more likely to put pressure on other families knowing that the contribution will not be particularly burdensome for that family. The coefficient on income at the upper tier of the distribution shows a $386 increase in foundation contributions per pupil in response to a one percent increase in income at the 75th percentile. The second column of Table 4 shows the results with the interaction of income and enrollment. As enrollment increases, the effect of the log of income at the 75th percentile declines by $141, but including the interaction term increases the individual effect of a one percent increase in income at the 75th percentile to $1414 per pupil.

The result for the cost index reveals that a one percent increase in the cost index (which varies by enrollment changes in the district) increases foundation contributions by $6.26 per pupil, though it is insignificant. The cost index increases with the percentage of disadvantaged students and the higher the cost index, the more expensive it is to produce educational performance. An additional dollar in contributions does not purchase as much performance, however the contributions are larger in districts with higher cost, so this may indicate either a "warm glow" or signaling explanation of contributing to the public good. Though, it may also reflect contributions from businesses which are more frequent in higher cost neighborhoods, or that contributions are linked to the perception of student needs.

Also, a one percentage point increase in elderly residents increases foundation contributions by $5.74 per pupil. Though this result is relatively small, it reveals that the proportion elderly is positively related to the amount of foundation contributions. However, as shown in the second column of Table 4, the effect of the interaction of percent elderly and tax price is negative, which is not consistent with the “warm glow” or “signaling” explanations of Andreoni (1989) and Glazer and Konrad (1996).

We also estimate the effect of parcel taxes on education foundation contributions, and our results show that in communities where voters are paying a parcel tax, education foundation contributions increase by about $0.30 for every additional dollar in parcel tax revenue. This could mean that some communities that have passed a parcel tax have proposed a low level of the parcel tax because of its greater likelihood of being voted favorably upon by households at the low end of the distribution. Then, these communities supplement the parcel tax revenue with education foundation contributions. Another possibility is that communities seek to minimize the free riding that occurs when all additional local revenue is made of by voluntary contributions. They do so by taxing all households with a parcel tax.

The results for the revenue limit indicate that the higher the revenue limit in 1975, the larger the foundation contributions today. This may be due to the lack of growth of revenue limits in districts that had a high revenue limit in 1975, whereas the districts that began with lower revenue limits grew much faster. To make up for this difference, the districts with the higher revenue limits in 1975 raised more in foundation contributions, though the effect is extremely small.

Finally, for every one percent increase in efficiency, the district’s education foundation raises $107 less per pupil. To interpret this result, we must recall our understanding of efficiency from the model. Efficiency reflects both waste and spending on outputs other than those explicitly included in the model. So, a district that has a wide set of objectives may be more inefficient than a district that focuses on core subjects. With this understanding, it may be the case that in districts that also focus on extracurricular activities and non-core subjects, education foundations are more successful at raising voluntary contributions.

Table 5 presents the results for each of regressions using a bootstrap to correct the standard errors for the use of predicted variables in the regression. For each bootstrap replication, we estimate each step of the estimation process with the same subset of observations and produce standard errors in this way. The bootstrapped standard errors, as expected, are much larger than those directly estimated by the Tobit and Heckit commands. As a result, the number of significant variables decreases. These variables include the restrictiveness of the tax limit, the percent elderly, the log of income at the 75^{th} percentile, and the log of enrollment.

ROBUSTNESS

As a robustness check, we run the same estimation using the Heckman 2-step procedure. One might believe that the districts that do not appear to have a foundation are different than those districts that do, or in other words, there is a selection problem in our estimation. The Heckman 2-step estimation procedure is designed to handle this type of selection. In our estimation, districts choose whether or not to establish an education foundation based on their expectation of the level of foundation contributions that can be secured in the community. In the first step of Heckman's procedure, the selection of whether or not to have an education foundation is modeled. We use the percent of state aid that is categorical to explain the selection of whether or not a community has a foundation. Districts receiving a large fraction of their revenue as categorical aid may establish foundations as a safety mechanism. Since categorical aid is decided by the state on an annual basis, and there is a lot of room for states to alter this amount depending on the availability of funds within the state, it is a less reliable source of revenue. We do not include this variable in the second step of the Heckman's procedure, considering it to have little to do with the success of education foundations.

Alternatively, if the voters in a district are currently paying a parcel tax (in 2004 and/or 2005), it is unlikely that the amount of parcel tax revenue affects the selection of whether or not to have an education foundation since it is likely to have been established prior to 2004. Parcel tax revenue is included in the second step of Heckman's procedure because it is likely to affect the amount raised by the foundation due to its effect on the taxpayers' budget constraints and because it is another form of additional revenue for the districts. The endogeneity of the parcel tax in the second step of the Heckman procedure is corrected using 2SLS, instrumenting with the percentage of other districts in the county paying a parcel tax.

Each of the other variables that appear in equation (19) are used in both steps of the Heckman 2-step procedure. In theory, a community will seek to establish an education foundation if they believe that it will be successful at raising voluntary contributions. So, for example, if they know that there is a low level of dispersion in the income distribution, they may choose to establish a foundation, knowing that in their community, it is more likely to be successful. This understanding leads to the conclusion that the dispersion of income belongs in both steps of the 2-step procedure. There is a similar argument for each of the other variables.

The results of this estimation, presented in the fourth column of Table 4, suggest that there may be a selection problem in the data. However, in Table 5, the inverse mills ratio appears insignificant. We are not as concerned with selection because some observations of foundation contributions with a value of zero actually have positive contributions to the district, though the amount is less than $25,000. If this is the case, then the underlying problem with the data is not one of selection, but simply one of censoring, which we address in our other estimation strategies.

CROWD OUT

Considering this analysis in another framework, we can extend the estimation of the foundation contribution equations to measure the degree to which private contributions are crowded out by government funding of public education. That is, imagine a world in which public education is non-excludable and non-rivaled but funded solely by individual contributions, not by the government. Some communities are more successful in collecting voluntary contributions as a result of either a large gain in utility from consuming the public good or a lower likelihood of free riding by others in the district. We are interested in the amount of crowd out exhibited by the district because there is a loss of economic efficiency associated with taxing those who would not have contributed privately. Also, in districts where there would have been large amounts of private funding in the absence of government funding, the total amount of funding decreases as a result of crowd out, which is interesting to examine in this framework.

We are able to comment on the degree to which private contributions are crowded out by introducing interactions between our measure of restrictiveness and variables included to control for the public good attributes of public education[12]. The intuition is as follows: many districts were highly restricted by the tax limits of Proposition 13. Some of these districts did not collect a large amount of private contributions. The lack of success of these districts' foundations is

[12] Because the interactions are combinations of continuous variables, it is difficult to interpret the level of the coefficient. We will interpret the coefficient in terms of its sign, and in future versions of the paper, we will create interactions with discrete versions of the variables to lead to a more interpretable estimate.

likely due to the same characteristics of the community that would have generated a low level of contributions in a scenario in which the government did not fund public education. Table 6 presents these results.

The second and third columns of Table 6 present the results for the interactions with the restrictiveness variable estimated by a Tobit and a bootstrapped Tobit procedure, respectively. The interaction of restrictiveness with the measure of income indicates that the restrictiveness variable has more of an effect on contributions in districts with higher levels of income. That is, if a district is highly restricted by the property tax limits of Proposition 13, foundations collect a larger amount of voluntary contributions if voters in the district also have higher levels of income. This result is consistent with the argument related to higher income groups' higher valuation of the consumption of the public good. So, government funding of public education crowds out private contributions to a large extent in higher income communities.

The interaction of restrictiveness with the log of enrollment indicates that larger districts highly restricted by the tax limits have a more difficult time collecting voluntary contributions than do smaller districts that are also highly restricted. This result is also consistent with the public good literature that argues larger districts are more likely to be affected by free riding. In these districts, private contributions are not crowded out by government funding because the high propensity to free ride creates low levels of voluntary contributions. However, the result for the interaction of restrictiveness and enrollment squared is positive, which leads to the interpretation that highly restricted districts with both extremely low and extremely high enrollments are more successful at raising contributions. This result may be linked to the possibility that some contributions are designated to fund extracurricular activities, so highly restricted districts that are large may raise more money because they have a more extensive range of sports activities. In this case, these districts have large amounts of funding crowded out by government revenue.

The results for the interaction of restrictiveness and the cost index indicate more crowding out in higher cost districts. This may be because businesses contribute large amounts of contributions in districts that have a large proportion of higher cost students and are restricted by the tax limits of Proposition 13. These students in highly restricted districts have both higher costs and higher need, which lead to larger contributions. However, private contributions in higher cost districts may be crowded out by government funding. As for the interaction of restrictiveness and the distribution of income, the result is positive. In restricted districts with a low level of dispersion in the income distribution, families have multiple reasons to contribute. They desire a higher level of educational performance, members of the communities put pressure on one another to contribute toward educational performance, and families can use their contributions to signal wealth. Districts with a more equal distribution of income have higher levels of crowd out.

CONCLUSION

In this paper, we examine the success of education foundations in California in 2004 and 2005. We develop a measure of the restrictiveness of the tax limits imposed by Proposition 13 and estimate the relationship between this variable and the education foundation contributions. Our results show for every one percent increase in the ratio of the educational performance demanded in the absence of tax limits to that demanded with tax limits, education foundation contributions increase by $21 per pupil. In other words, our evidence shows that the tax limits in California are binding and that education foundation contributions vary with their level of restrictiveness.

Secondly, we control for the relationship between education foundation contributions and parcel taxes. We find that foundation contributions are larger in communities paying a parcel tax, which suggests a complementary relationship between the two revenue generators available to local governments in support of public education. Our results show that for every additional dollar of parcel tax revenue per pupil, contributions increase by $0.30. The relative size of the change in contributions caused by a dollar increase in revenue may reveal that taxes are either preferable to or more responsive to demand than private contributions.

Most of the evidence related to the relationship between private contributions and district characteristics are of the expected sign. We estimate a negative impact of size. We also estimate that crowd out is higher in districts with higher incomes and lower in districts with more pupils. We did not find much evidence of "warm glow" and/or signaling, though we were unable to directly estimate these two factors, nor were we able to separate these effects. Further work examining these effects in foundation contributions in California would be interesting in future research.

This study exhibits the importance of including a measure of the extent to which demand is restricted by tax limits when explaining the effectiveness of an organization raising private revenue for public education. If demand is severely restricted, voters are more willing to raise money through private contributions.

Table 1. Means

Variable	Observations	Mean	St. Dev.	Min.	Max.
API*	1827	728.56	79.05	498	949
Restrictiveness of Tax Limits	1827	0.011	0.015	-0.0857	0.1117
Foundation Contributions**	1827	38.47	214.82	0	6070.93
Log of Cost Index	1827	4.593	0.169	4.192	5.147
Log of Eff. Index	1827	2.088	0.207	0.909	4.605
Per Pupil Total Aid	1827	7354.76	2451.6	538.57	31974.5
Revenue Limit in 1975	1698	1017.63	433.31	511.32	7737.23
Income at 75^{th} Percentile	1827	88697.32	53737.37	35000	500000
Ratio of 25^{th} to 75^{th} Income	1827	0.337	0.058	0.12	0.67
Parcel Tax Rev. Per Pupil***	1827	32.54	197.75	0	2495.33
Elementary	1827	0.56	0.496	0	1
High School	1827	0.089	0.2851	0	1
Percent Elderly	1827	11.98	5.26	2.05	52.78
Total Enrollment	1827	6669.83	26664.68	15	747009
Per Pupil Expenditure	1827	7516.85	2114.43	387.46	31059.4
Per Pupil Parcel Count	1827	6.77	10.13	0.53	216.51

***** API is the Academic Performance Index used by the state of California to gauge student performance. We use the API to measure student performance in the equations.

** The mean of the foundation contributions for those districts that show a positive amount of contributions is $75.

***The mean of the parcel tax revenue per pupil variable for those paying a parcel tax is $772.

Table 2. Expenditure Results – Log of Expenditure Per Pupil

	2SLS Estimates (Standard Errors)
Log of API	1.1476*
	(0.6693)
Teacher Salary	0.7437
	(0.5884)
Log of Enrollment	-0.2445***
	(0.0359)
Log of Enrollment Squared	0.0127***
	(0.0019)
Percent of Students Receiving Free Lunch	0.0038**
	(0.0016)
Percent of LEP Students	0.0035***
	(0.0009)
Percent Special Education	0.0203**
	(0.0087)
Percent Migration	0.0025***
	(0.0007)
Change in Revenue Limit	0.1242***
	(0.0321)
Positive Enrollment Change	-0.0931***
	(0.0208)
Negative Enrollment Change	-0.485***
	(0.12)
Log of Income at 33rd Percentile	-0.0211
	(0.0688)
Log of Number of Parcels	0.0842***
	(0.0158)
Elementary	-0.1761***
	(0.0407)
High School	0.0619
	(0.0551)
Year 2004	0.0274
	(0.025)
Constant	-5.5618
	(7.8535)

*significant at the 10% level
**significant at the 5% level
***significant at the 1% level

Table 3. Demand Results – Log of Academic Performance Index

	OLS Estimates (Standard Errors)
Log of Income at 33rd Percentile	0.1268***
	(0.0078)
Adjusted Total Aid	0.2469***
	(0.0743)
Log of Tax Price	-0.0282***
	(0.0071)
Log of Renters' Tax Price	0.0026
	(0.0026)
Log of Efficiency Index	0.071**
	(0.029)
Log of Cost Index	-0.3155***
	(0.0187)
Log of Cost Index B	0.022
	(0.022)
Percent Black	-0.1917***
	(0.04)
Percent Rural	0.0297***
	(0.0061)
Percent School Age	-0.0028***
	(0.0006)
Percent Elderly	0.0019***
	(0.0005)
Elementary	0.0014
	(0.0043)
High School	-0.0485***
	(0.006)
Year 2004	-0.029***
	(0.002)
Constant	6.457***
	(0.165)

*significant at the 10% level
**significant at the 5% level
***significant at the 1% level

Table 4. Foundation Contribution Results – Education Foundation Contribution Per Pupil

	Tobit IV Estimates (Standard Error)	Tobit IV Estimates With Interactions (Standard Error)	Heckman IV Estimates (Standard Error)
Parcel Tax Revenue Per Pupil	0.29**	0.34**	0.20**
	(0.15)	(0.14)	(0.098)
Restrictiveness of Prop. 13 Tax Limits	2151.97***	2091.69***	778.69**
	(354.21)	(724.21)	(367.96)
Log of Tax Price	18.05	93.75***	16.19*
	(17.57)	(29.67)	(9.48)
Log of Efficiency Index	-107.25*	-65.94	-126.05***
	(61.22)	(60.54)	(34.91)
Log of Cost Index	6.26	-156.84*	118.45**
	(90.64)	(92.80)	(51.76)
Percent Elderly	5.74***	-8.19*	4.80***
	(1.99)	(4.59)	(1.19)
Revenue Limit in 1975	0.025	0.024	0.007
	(0.024)	(0.025)	(0.013)
Elementary	-11.12	-56.25**	8.92
	(23.89)	(24.08)	(14.92)
High School	-9.28	-14.58	-6.26
	(30.66)	(30.01)	(18.95)
Total Aid Per Pupil	-0.0004	-0.0001	-0.001
	(0.007)	(0.007)	(0.004)
Log of Income at 75th Percentile	386.44***	1414.48***	266.34***
	(42.20)	(122.47)	(38.89)
Ratio of Income at 25th To Income at 75th	20.11	110.18	-27.55
	(184.31)	(189.83)	(98.48)
Log of Enrollment	120.38***	1729.49***	65.99**
	(44.56)	(187.21)	(26.51)
Log of Enrollment Squared	-4.29	-4.92*	-3.35**
	(2.80)	(2.91)	(1.52)
Year 2004	8.14	5.70	7.91
	(16.56)	(16.35)	(9.69)
Log of Tax Price X Percent Elderly		-7.15***	
		(2.12)	
Log of Income at 75th Percentile X Log of Enrollment		-140.81***	
		(15.63)	
Inverse Mills Ratio			62.62***
			(22.22)
Constant	-5059.37***	-15972.92***	-3653.21***
	(861.11)	(1526.50)	(595.25)

*significant at the 10% level
**significant at the 5% level
***significant at the 1% level

Table 5. Foundation Contribution Estimates with Bootstrapped Standard Errors – Education Foundation Contributions Per Pupil

	Tobit IV Estimates (Bootstrapped Standard Error)	Tobit IV Estimates (Bootstrapped Standard Error)	Heckman IV Estimates (Bootstrapped Standard Error)
Parcel Tax Revenue Per Pupil	0.29 (0.19)	0.34* (0.19)	0.20 (0.14)
Restrictiveness of Prop. 13 Tax Limits	2151.97** (902.06)	2091.69** (879.70)	778.69* (453.38)
Log of Tax Price	18.05 (17.14)	93.75** (40.58)	16.19** (8.19)
Log of Efficiency Index	-107.25 (84.42)	-65.94 (73.17)	-126.05** (58.24)
Log of Cost Index	6.26 (111.13)	-156.84 (117.81)	118.45 (77.79)
Percent Elderly	5.74** (2.91)	-8.19* (4.57)	4.80** (2.22)
Revenue Limit in 1975	0.025 (0.026)	0.024 (0.024)	0.007 (0.012)
Elementary	-11.12 (17.16)	-56.25*** (18.34)	8.92 (12.55)
High School	-9.28 (19.63)	-14.58 (20.07)	-6.26 (11.25)
Total Aid Per Pupil	-0.0004 (0.007)	-0.0001 (0.007)	-0.001 (0.004)
Log of Income at 75th Percentile	386.44*** (83.56)	1414.48*** (359.98)	266.34*** (89.29)
Ratio of Income at 25th To Income at 75th	20.11 (215.92)	110.18 (201.30)	-27.55 (112.46)
Log of Enrollment	120.38*** (53.36)	1729.49*** (467.06)	65.99 (42.45)
Log of Enrollment Squared	-4.29 (2.66)	-4.92 (3.52)	-3.35** (2.04)
Year 2004	8.14 (15.93)	5.70 (15.31)	7.91 (10.00)
Log of Tax Price X Percent Elderly		-7.15*** (2.75)	
Log of Income at 75th Percentile X Log of Enrollment		-140.81*** (37.47)	
Inverse Mills Ratio			62.62 (39.84)
Constant	-5059.37*** (1366.50)	-15972.92*** (4185.62)	-3653.21*** (1279.54)

*significant at the 10% level
**significant at the 5% level
***significant at the 1% level

Table 6. Foundation Contribution Estimates – with Interactions to Identify Crowd-Out

Variable	**Tobit IV Estimates (Standard Error)**	**Tobit IV Estimates (Standard Error)**	**Tobit IV Estimates (Bootstrapped S.E.)**
Parcel Tax Revenue Per Pupil	0.29**	0.315**	0.315*
	(0.15)	(0.145)	(0.189)
Restrictiveness of Prop. 13 Tax Limits	2151.97***	-81761.63*	-81761.63***
	(354.21)	(42581.38)	(8235.74)
Log of Tax Price	18.05	89.572***	89.572*
	(17.57)	(30.05)	(48.31)
Log of Efficiency Index	-107.25*	-48.63	-48.63
	(61.22)	(62.33)	(78.87)
Log of Cost Index	6.26	-254.68**	-254.68*
	(90.64)	(111.29)	(141.90)
Percent Elderly	5.74***	-8.86*	-8.86*
	(1.99)	(4.61)	(4.89)
Revenue Limit in 1975	0.025	0.006	0.006
	(0.024)	(0.025)	(0.031)
Log of Tax Price X Percent Elderly		-7.44***	-7.44**
		(2.13)	(3.25)
Log of Income at 75th Percentile X Log of Enrollment		-155.54***	-155.54***
		(16.61)	(34.07)
Elementary	-11.12	-63.74***	-63.74***
	(23.89)	(24.10)	(19.68)
High School	-9.28	-9.34	-9.34
	(30.66)	(29.88)	(20.67)
Total Aid Per Pupil	-0.0004	-0.0005	-0.0005
	(0.007)	(0.007)	(0.007)
Log of Income at 75th Percentile	386.44***	1473.86***	1473.86***
	(42.20)	(129.55)	(312.37)
Ratio of Income at 25th To Income at 75th	20.11	-191.56	-191.56
	(184.31)	(236.49)	(423.56)
Log of Enrollment	120.38***	1983.22***	1983.22***
	(44.56)	(206.56)	(426.37)
Log of Enrollment Squared	-4.29	-10.06**	-10.06*
	(2.80)	(4.17)	(5.30)
Year 2004	8.14	3.298	3.298
	(16.56)	(16.25)	(15.35)
Restrictiveness X Log of Income at 75th Percentile		5701.59***	5701.59***
		(1745.76)	(1937.50)
Restrictiveness X Log of Enrollment		-5766.23**	-5766.23*
		(2680.22)	(3099.04)
Restrictiveness X Log of Cost Index		7533.04	7533.04**

		(4940.79)	(3702.41)
Restrictiveness X Ratio of Income at 25th to Income at 75th Percentile		22433.93**	22433.93
		(11201.12)	(24869.74)
Restrictiveness X Log of Enrollment Squared		334.78*	334.78*
		(181.77)	(200.14)
Constant	-5059.37***	-16444.24***	-16444.24***
	(861.11)	(1678.22)	(3498.05)

*significant at the 10% level
**significant at the 5% level
***significant at the 1% level

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