How Do States Formulate Medicaid and SCHIP Policy? Economic and Political Determinants of State Eligibility Levels[±]

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ABSTRACT

We exploit the existence of substantial variation in state policies toward public health insurance for children between 1990 and 2002 to estimate the economic and political determinants of state eligibility levels. Controlling for state and year effects, eligibility levels are not significantly associated with either the percentage of uninsured children in the state or the eligibility policy of neighboring states; further, variation in eligibility levels within state is *negatively* associated with both the federal matching rate and state fiscal capacity. We also observe that state political preferences, measured by the Democrats' share of seats in the lower chamber of the state legislature, are a relatively important a determinant of state eligibility levels. However, other political factors, such as party control of state government, voter turnout, legislative term limits and campaign finance regulations do not influence state eligibility levels.

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1. Introduction

The trend toward fiscal federalism over the last two decades has meant that states have increasing autonomy over social policies relating to education, welfare and health. An important example of this is observed in the expansion of eligibility for public health insurance for children in the United States since 1989. The federal government mandated a minimum level of expansion in Medicaid eligibility in the states, but at the same time gave states more flexibility than they had previously in setting eligibility levels and in the timing of adopting federally-mandated expansions of Medicaid. Congress encouraged further expansion of child health insurance coverage when it authorized the State Child Health Insurance Program (SCHIP) in 1996; at the same time, this legislation also left even more responsibility for both program design and funding to the states.

The expansion of public health insurance in the states has had substantial fiscal impact on the states. For example, in the mid-1980s, almost all of the children covered by the Medicaid program were participating in a welfare program. However, by 1996 roughly one in every three American children was eligible for Medicaid and by 2001 nearly two in three children were eligible for either Medicaid or SCHIP. Further, in 2003, Medicaid and SCHIP together covered 56 million people and Medicaid paid for about one-third of all births in the United States (NGA 2005). Not surprisingly, public health insurance is now one of the most important issues in state budget policymaking. In fact, Medicaid accounted for only 8.1 percent of the average state budget in 1987 (Kaiser Commission 2001) but this fraction rose to 21.5 percent by 2006 (NASBO 2007). For this reason, during recent economic downturns most states have struggled to maintain support not only for health care, but also for education and welfare programs.

The goal of this study is to examine the economic and political determinants of state Medicaid and SCHIP expansions between the 1990 and 2002. Although the outcomes of these policy changes (on private and overall health insurance coverage rates, as well as child health) have been fairly extensively studied,[1] analyses of the determinants of the policy changes themselves are less common. Further, the few existing studies of the formation of Medicaid or SCHIP eligibility policy have considered only a few explanatory variables. In contrast, we provide a more comprehensive examination, especially with regard to the influence of eligibility in neighboring states and potential political determinants of state eligibility. In particular, we examine the influence of state political preferences, partisan control of state government, and a collection of time-varying "good government" institutional reforms (e.g., legislative term limits and campaign finance reform).

We find that the more Democrats in the state legislature, the more generous is state health insurance eligibility for children. However, party control of the executive and/or legislative branch is not important; neither are "good government" reforms or voter turnout. However, after controlling for political preferences in the states, we find a positive (albeit imprecisely estimated) association between neighboring state policies and state eligibility. Consequently, while we do not find statistically significant evidence of a "race-to-the-bottom" in state health insurance eligibility for children, the magnitude of the point estimate in this case prohibits us from confidently dismissing the existence of such a phenomenon. Finally, in contrast to previous

[1] See Cutler and Gruber (1996), Blumberg, Dubay and Norton (2000), and Shore-Sheppard, Buchmueller and Jensen (2000) for studies of health insurance coverage patterns and Currie and Gruber (1996) for a study of child health outcomes.

studies that do not employ state fixed effects, we observe a negative association between state eligibility levels and federal matching rates.[2]

The next section provides an overview of the Medicaid and SCHIP expansion process, while Section 3 briefly discusses existing theoretical and empirical models of policy formation that are relevant to our analysis. Section 4 describes the data and methods used in the empirical analysis, Section 5 presents the results and Section 6 concludes.

2. History of Public Health Insurance Expansions

Title XIX of the Social Security Act authorized Medicaid in 1965 as a means of providing health insurance coverage to welfare recipients. Historically, low-income women and children were eligible for Medicaid through three channels: (1) as recipients of Aid to Families with Dependent Children (AFDC) or Supplemental Security Income (SSI), (2) by being identified by the state as Medically Needy (essentially having spent all income and assets for medical bills) or (3) being covered as "Ribicoff children", whose families met financial but not categorical eligibility requirements for AFDC (although this was also at a state's option). The majority of coverage was through the first channel.

Congress first approved state expansions in Medicaid eligibility in 1984. These expansions were optional and states could increase income requirements at their discretion, within federally-set limits. The first federally-mandated expansion in coverage came about as a result of the Omnibus Budget and Reconciliation Act (OBRA) of 1989. It required states to phase in coverage of all children under age 6 who were in families with incomes below 133 percent of the federal poverty level by 1992. OBRA 1989 also allowed states the option of further increasing eligibility as high as 185 percent of the poverty line. The next year, with

[2] This result is arguably consistent with Adams and Wade (2001), who find that the federal match is negatively associated with the state share of Medicaid spending.

OBRA 1990, Congress further instructed states to cover all children under age 11 whose family incomes were below the federal poverty line; the age limit was then increased by one year each calendar year so that by 1999 all children living in poverty were covered.

The combination of federal mandates and optional extensions caused a great deal of variation in the way that states implemented public health insurance programs for children. For example, although states were required to cover children under age 6 at 133 percent of the poverty line by 1992, thirty states offered even more generous coverage than the federal guideline by this point. So while Alabama and Oklahoma just met the 133 percent guideline in 1992, Arkansas and Indiana were also covering infants at 185 percent and 150 percent of the federal poverty line, respectively. During the 1990 to 2002 period there is large cross-state variation in program generosity. In 1990, depending upon the state, anywhere between 2 and 20 percent of children were eligible for Medicaid. By 2002, the figure for Medicaid/SCHIP eligibility ranged from 32 to 80 percent. There is also variation in the timing of program expansions, so that certain states became more relatively generous and others less so over time. As an example, ten states had offered the median Medicaid eligibility package in 1994. But among these states there are large differences in both 1989 to 1994 eligibility changes (anywhere from 5.8 to 17.5 percentage point increases) and 1994 to 1998 eligibility changes (anywhere from 3.4 to 23.3 percentage points).[3]

A slightly different form of extended public health insurance coverage for children in low-income working families came in 1997 when Congress gave states $4.8 billion per year to develop State Child Health Insurance Programs (SCHIPs). These SCHIP programs could be implemented through a state's existing Medicaid program, through a separate system, or through

[3] These estimates of percent of children eligible by state are based upon the authors' calculations of the simulated instrument eligibility variable described in Section 4.

a mix of the two. Unlike Medicaid, the package of medical services covered by SCHIP programs varies by state and plans often require premiums or co-payments based upon family income. The average change in eligibility for public health insurance resulting from SCHIP programs was dramatic. Through SCHIP, by 2002 many states offered public health insurance for children to families with earnings as high as the state median income level. Consequently, the number of American infants eligible for public health insurance rose by 30 percentage points and the number of eligible children under six rose by 60 percentage points (Gruber 2000).

3. Estimating the Determinants of Medicaid and SCHIP Policy in the States

The health and public policy literatures suggest a number of important determinants of Medicaid eligibility. Kousser (2002) finds that changes in the discretionary portion of state Medicaid spending between 1980 and 1993 were significantly negatively correlated with changes in the Republican share in the legislature; he argues that party control of the legislative branch matters, but that many studies in the earlier literature miss this because they focus on total spending variables that include federally-mandated spending. He also finds a significant positive effect of per capita state income and a significant negative effect of the percent minority population. However, Kousser does not control for state fixed effects, despite employing a panel data set of state-level observations.

Ullman and Hill (2001) examine determinants of changes in the average income eligibility levels (as a percent of the federal poverty level) for states between 1997 (pre-SCHIP) and 2000 (post-SCHIP). The only significant effects in their model are for the initial eligibility level (negative), per capita income (positive) and fraction of children uninsured in 1997 (positive). Changes in the federal matching rate and party control of governorship and

legislature are not significant; however, it should be noted that the power of the model is limited due to its very small sample size (n=51).

Pracht and Moore (2003) focus on a single component of the Medicaid program – prescription drug coverage. They estimate a simultaneous equations model of Medicaid per capita drug expenditures, drug recipients per capita and drug reimbursement rates. Their underlying theoretical model assumes that states must set both "depth" of policy (expenditures per recipient) and "breadth" of policy (number of recipients), and that these two must trade off against one another at any given fixed level of total expenditure. Using a panel dataset for states from 1985 to 1996, they find strong evidence of a direct interest group effect, with the percentage of pharmacists belonging to the American Pharmaceutical Association leading to significant increases drug reimbursement rates, which in turn increase both number of recipients and per capita expenditures.

Howard (2007) studies the determinants of total Medicaid expenditures in a 1986 to 2004 panel of state data. He, like Pracht and Moore, explicitly models the tradeoff between benefit and eligibility levels[4], and also considers the relative influence of the three primary Medicaid recipient groups (families, the disabled and the elderly) in setting policy. He finds evidence of substitution between both benefits and eligibility and spending on different groups, although in all cases the substitution is asymmetric. For example, increases in the cost of coverage for families divert resources away from the elderly and disabled, but the reverse is not true. And increasing the number of Medicaid recipients has a much weaker effect in reducing the expenditures per recipient than the other way around.

[4] Exploring substitution between benefit levels and eligibility levels in child health insurance is a possible area for future work. The likely obstacle is that because of federal mandates there is much less variation in Medicaid benefits for children across states than there is for the disabled and particularly the elderly.

Another set of studies examine the impact of federal cost sharing on state Medicaid policy decisions. Medicaid is financed by a matching grant, whereby the federal government matches state spending, subsidizing between 50 and 80 percent of total expenditure. The matching rate is an inverse function of a state's per capita income relative to the national average. The goal of such a matching grant was to support states with weak tax bases; however, there is evidence that during the 1980s and 1990s states subverted the system by extracting additional federal funds through special provider taxes (Adams and Wade 2001; Baicker and Staiger 2005). Adams and Wade (2001) perform an empirical analysis of a 1984 to 1992 state panel dataset, testing the impact of federal matching rates and a set of median voter model variables (i.e. median tax price and income) on state Medicaid spending net of these special provider tax schemes. They find that a greater federal matching rate is associated with higher overall Medicaid spending, but lower state spending, indicating that states substitute federal for state dollars (for example, by taking advantage of higher federal subsidization to lower taxes). It should be noted that our analysis includes both Medicaid and SCHIP, which is funded by a block grant under which initial funding is set based approximately on the Medicaid matching rate and the marginal match rate on state expenditures is zero. One would expect a much smaller (if any) response of states to the matching rate once SCHIP has been implemented.

Finally, studies of a number of different state and local fiscal decisions find some form of interdependence based upon spatial proximity or migration patterns (Besley and Case 1995; Case, Hines and Rosen 1993; Brueckner 1998). The studies most relevant to our study of public health insurance coverage are analyses of spatial interdependence in welfare policy driven by the "race to the bottom" effect of welfare migration. In "race to the bottom" models, states have an incentive to make their welfare programs less generous than those of their neighbors in order to

prevent potential welfare recipients from migrating into the state. The empirical evidence on this question is mixed. Shroder (1995) estimates a structural model using state panel data for 1982 to 1988 and concludes that there is no consistent significant relationship between a state's AFDC benefit and its neighbor's benefit. Figlio, Kolpin and Reid (1999) estimate reduced form models using state panel data for 1983 to 1994 and instrumenting for neighbor's benefit using labor market variables such as female employment rate and average weekly wages in variety stores. They find a strong, positive, statistically significant relationship between benefits in neighboring states. Brueckner (2001) surveys the empirical evidence on this topic and reviews the theory and concludes that although the empirical evidence is indeed mixed, "the direct behavioral evidence of strategic interaction is compelling."

Even so, the only paper that we are aware of in the public health insurance literature that considers the possibility of strategic interaction between states is Volden (2006), who tests the hypothesis that states learned from each other in designing SCHIP programs between 1998 and 2001. He examines determinants of state-to-state correlations in the adoption of a several different amendments to the original SCHIP program. Volden argues that states learned from one another, in the sense that they were more likely to adopt other states' policies when those policies had been successful (by reducing costs or increasing the number of insured).

Our subsequent analysis contributes to this growing literature on the determinants of state Medicaid and SCHIP policies by estimating the within state effects of a more comprehensive set of economic and political factors, and explicitly testing for the presence of a "race-to-the-bottom" in state eligibility policies.

4. Data and Methods

We examine the determinants of state child health insurance eligibility from 1990 to 2002 using a state-level panel dataset that we have compiled from a variety of sources. This is an appropriate time period to study given the important changes that occurred in public health insurance policy during this time. Our dependent variable is a single "simulated instrument" that captures a number of dimensions of Medicaid and SCHIP eligibility expansions; the independent variables include basic state demographic attributes, as well as a more rich set of political determinants than has been examined in previous studies of the determinants of state Medicaid coverage.

Our measure of public health insurance eligibility is a "simulated instrument" similar to the one developed by Currie and Gruber (1996). We create this variable by calculating the fraction of children in a single national cross-sectional sample of children (from the March 1996 wave of the Survey of Income and Program Participation) who would be eligible for either Medicaid or SCHIP based upon their ages, family incomes and family structures by state and year rules. The state/year eligibility rules are taken from the National Governors Association *Maternal and Child Health Update*, an annual publication that tracks Medicaid and SCHIP policy at the state level. Because an eligibility percentage is estimated for each state and year using the same full national sample, the measure captures only legislative decisions and not changes in the demographic composition of state population. Consequently, we model the determinants of the "generosity" of state child health insurance eligibility criteria.

A primary advantage of this eligibility measure is that it collapses what is a complex set of eligibility rules into a single variable. This complexity results from the fact that in the early 1990s, as Medicaid expansions were being phased in, it was not uncommon for states to have different income thresholds for children of different ages. For example, in California in 1992,

infants in families with income below 185% of the federal poverty line (FPL) were automatically eligible for Medicaid, while for children ages 2 to 5 and 6 to 8 the relevant thresholds were 133% and 100% FPL, respectively. Additionally, children between 9 and 18 were eligible for Medicaid if their families met categorical eligibility requirements for AFDC and had incomes below 69% FPL. Figure 1 graphs values of the "simulated instrument" variable for a number of years between 1990 and 2001. The magnitude of the eligibility expansions over this period is dramatic; over these twelve years the estimated fraction of children eligible for some type of public insurance grew from 3.9 to 60.3 percent. As demonstrated by the state-level minimum and maximum values for each year, there was a great deal of variation in exactly how much eligibility was expanded. Finally, the simulated instrument variable has the advantage of capturing quite precisely the policy decision made by a state rather than the outcome of this decision. In this way, our analysis differs fundamentally from those previous studies that employ Medicaid *spending* as the dependent variable (e.g., Adams and Wade 2001; Kousser 2002), since spending is also determined by important unobserved factors, such as the price of health care and the take-up rate for public programs.

We estimate regressions with state and year fixed effects, so our parameters are identified based upon within-state, over-time variation. However, because many of political variables do not change annually, and because not all state legislatures meet annually, we take as our unit of observation the two-year electoral cycles from 1990-2002 (for states with odd-year cycles, the data range from 1991-2003). Also, because state policies do not take effect immediately, we consider the relationship between our simulated instrument at the end of the electoral cycle, and the independent variables at the start of the electoral cycle. That is, child health insurance eligibility in 1990 is modeled as a function of the state economic and political environment as of

1989 (i.e., state political institutions and demographics).[5] The one exception to this rule for the federal match; we expect policy makers to make eligibility decisions in anticipation of the federal match, so we model eligibility as a function of the contemporaneous federal match.

In our baseline specifications, we model child health insurance eligibility in year *t* as a function of the year *t* values of the federal matching rate, and the year *(t-1)* values for state tax capacity, the percentage of uninsured children in the state and the population weighted average of eligibility levels in neighboring states. The Federal Medical Assistance Percentage (FMAP), or matching rate, measures the fraction of total spending on a state's Medicaid program that is covered by the federal government, ranging from a minimum of 50 percent (1-to-1 matching) to a maximum of 80 percent (4-to-1 matching) in the poorest states. We control for time-varying differences in fiscal capacity across states by employing the fiscal capacity index developed by Tannenwald (1999, 2002), Tannewald and Turner (2004) and Yilmaz et al. (2006).[6] We obtain our measure of fraction of children without health insurance from the U.S. Census Bureau's annual health insurance tables and the Current Population Survey.

Because both the eligibility level in neighboring states and the percentage of uninsured children in a state are themselves determined by the state's eligibility policy decision, we also estimate these models via two-stage least squares, where the instruments are the population weighted averages of the exogenous variables for neighboring states. After identifying our

[5] We also check the robustness of this modeling assumption by replicating our analysis using the two-year lead of state eligibility levels as the dependent variable; this allows for a longer "policy lag."

[6] This index is intended to measure the basic demand for public expenditures relative to the capacity to gather revenue through taxation by using the Representative Tax System method. Revenue capacity is estimated for each state by calculating the revenue that could be obtained by taxing all possible items at the national average rate and fully exploiting other revenue sources, including lotteries and user chargers. Expenditure need is estimated by calculating the amount needed to provide services at the national average level given a state's demographic characteristics. Data on fiscal capacity are available for 1987, 1991, 1994, 1996, 1997, 1999 and 2002; values for other years are linearly interpolated.

preferred baseline model, we then investigate the importance of various political determinants of state child health insurance eligibility.

Following previous studies we employ discrete measures for the party control of the state executive and legislature; however, we also examine the effects of a continuous measure of the fraction of legislators in a state's lower legislative house who are Democrats. This latter measure can be understood as a proxy for political preferences in the state, since lower chamber elections typically occur every two years and party affiliation is associated with ideological preferences regarding social safety net programs. Finally, we check whether voter turnout or political institutions, such as legislative term limits and campaign finance regulations, have any predictive power in our model. Previous research has identified voter turnout as a potentially important influence on the content of state budgetary decision making (e.g., Husted and Kenny 1997; Lott and Kenny 1999). And while there is a dearth of social scientific evidence that either legislative term limits or campaign finance reforms influence state policies, the public debate over such policies often makes such claims. We measure voter turnout by the fraction of voting age population that cast a ballot in the most recent presidential election. We also include indicator variables for the presence of state legislative term limits, limits on campaign contributions to candidates for state office, and public funding in gubernatorial elections. All of these political control variables are taken from the *Statistical Abstract of the United States* and the *Book of the States*.

All of the variables used in the subsequent analysis are defined in Table 1; descriptive statistics for the key variables of interest are presented in Table 2. The average value for the simulated instrument is 35.3; this means that across all states and years 35.3 percent of a national sample of children would be eligible for Medicaid or SCHIP by state law. This compares to an

average of 12 percent of children without health insurance across the entire sample. However, there is substantial variation in both of these variables over time, as shown in Figures 1 and 2.

5. Results

We present the results of our baseline models in Table 3; each column presents estimates from a separate regression, building up to our preferred baseline specification in the final column. In the first column, we present the estimated coefficients from an ordinary least squares regression (OLS) of state eligibility on fiscal capacity, the federal match and an indicator for SCHIP; the only controls in this model are state and year effects. Not surprisingly, as we move from model (1) to model (2), the estimated effect of the fiscal capacity measure is sensitive to the inclusion of state demographic controls. We do not present the coefficients on our demographic controls; however, we note that the log of state per capita income is strongly positive and the fraction population that is black is also positive (albeit not significant).[7] The primary purpose for this comparison is to demonstrate that the estimated effect of the federal match is not sensitive to the inclusion of demographic controls (especially the log of real per capita income), even though the matching formula is a function of state income.[8]

In columns (3) and (4), we estimate a model that includes two potentially endogenous variables, the percent of uninsured children and the weighted average of eligibility levels in neighboring states. We present OLS estimates in column (3) and instrumental variable estimates (IV) in column (4), where the instruments are the population weighted exogenous variables (i.e., everything but "% Uninsured Kids" and Neighborhood Eligibility") for the neighboring states. We present both OLS and IV estimates because we cannot reject the null hypothesis that either

[7] This is in contrast to Kousser (2002), who finds that percentage black population is negatively associated with Medicaid spending, although, aside from the difference in our dependent variable, Kousser does not control for state fixed effects.

[8] In fact, omitting the log of real per capita income from the set of control variables in any of our subsequent models does not appreciably alter the coefficients of interest that we present here.

or both of these variables are exogenous. However, since our instruments are jointly significant in the first stage ($p<.01$) and pass an over-identification test, our preferred model is the IV model in column (4). Regardless, neither the percent uninsured children nor neighbor eligibility are individually or jointly statistically significant in either the OLS or IV specification.

Despite the trend of increasing eligibility over time observed in Figure 1, the indicator for SCHIP is consistently negative in Table 3; the presence of a state SCHIP program results in about a 6-8 percentage point decreased in the simulated eligibility level, or about a 20% decrease in the mean value of the dependent variable. Not surprisingly then, the year indicators in our models (not shown) have large, positive and successively increasing coefficients. We have also explored whether the determinants of state eligibility vary before and after SCHIP implementation; however, we cannot reject the null hypothesis that the interactions of SCHIP and the key independent variables reported in column (3) of Table 3 are jointly zero.

We also note here that the sign on the estimated effect of the federal match is consistently negative; that is, states reduce the generosity of their child health insurance programs as the federal subsidy increases. This unexpected result is robust across nearly every subsequent model that we examine here (albeit sometimes only marginally statistically significant); further, the negative point estimate on the federal match holds up even when we omit controls for state poverty rates, the log of real per capita state income and the fiscal capacity index. Similarly, once we include the set of state demographic controls beginning with the model in column (2), the fiscal capacity index is also negatively associated with eligibility levels (and likewise fairly robust across all of our models).

These negative associations are also substantively significant. For example, given the estimates in models (2-4) in Table 3, a one-standard deviation increase in the federal match (i.e.,

an increase of 8.7 percentage points) is associated with a decrease in the simulated eligibility levels of about 6 percentage points (or about an 18% reduction compared to the mean eligibility level for the full sample). Similarly, the estimates in columns (2-4) imply that a one standard deviation increase in fiscal capacity yields a decrease in simulated eligibility levels of 3 percentage points (or about a 9% decrease from the mean eligibility level). Consequently, despite the strong positive year effects on eligibility levels over time that are common to all states, the within state effects of the federal match and fiscal capacity are persistently negative.

In Table 4, we investigate the effects of party control of state government on eligibility levels by adding political variables to the preferred IV model presented in column (4) of Table 3. Scanning across the columns of Table 4, it is apparent that once we control for the share of Democrats in the lower state house, political party control of either or both the executive branch or legislative branch of state government has no impact on eligibility levels. The estimated effect of the Democrat share of the legislature is large, positive and statistically significant in every specification. For example, a one-standard deviation increase in the share of Democrats in the lower state house implies a little more than a 3 percentage point increase in the simulated eligibility level (or about 9% of the mean of the dependent variable). Meanwhile, the other party control variables are neither individually nor jointly statistically significant.

Once again, for all three IV models shown in Table 4, we cannot reject the null hypothesis that % Uninsured Kids and Neighbor Eligibility are exogenous, although at the same time our instruments are jointly significant in the first stage ($p<.01$) and pass an over-identification test. Consequently, for completeness, we also present OLS estimates in column (4). We note that in Table 4, the IV estimates for Neighbor Eligibility are larger and more precisely estimated than in the OLS model, although still not statistically significant at

conventional levels. Even so, the magnitude of these estimates merits mention: a one standard deviation increase in Neighbor Eligibility implies about a 3 percentage point decrease in the state simulated eligibility. Thus the point estimate on Neighbor Eligibility suggests that the "race-to–the-bottom" phenomena may be as substantively important as the effects of party preferences; therefore, we caution against dismissing the existence of a race-to-the-bottom in eligibility levels based on our imprecise estimate (which is generated form a short panel of state-year observations).

In the wake of our findings in Table 4, we modify our preferred model to include the share of Democrats in the lower state house. Given this, we now explore the potential importance of other political variables in Table 5. Scanning across the columns of Table 5 reveals that voter turnout, legislative term limits, campaign contribution limits and public financing of gubernatorial campaigns are all unrelated to state eligibility levels; the coefficients on all of these variables are small in magnitude and neither individually nor jointly significant in any specification.

As an additional robustness check on our findings, we have also estimated all of our models presented above after substituting the two-year lead of simulated eligibility for the dependent variable. We lose several state-year observations from doing this, so predictably obtain less precise estimates in several cases. Nevertheless, the main findings are robust: the federal matching rate and fiscal capacity are negatively associated with changes in simulated eligibility within state; further, the share of Democrats in the lower state house is strongly and positively associated with eligibility, while other political variables are not. Finally, as above, we do not find strong evidence to support a "race-to-the-bottom" in child health insurance eligibility.

6. Discussion

The goal of this analysis has been to build a reasonably complete empirical model of the determinants of state-level Medicaid and SCHIP policy. Using a 1990 to 2002 panel of state data, we test the relative importance of economic and political determinants. After controlling for state and year effects, we observe a fairly large and robust negative association between state eligibility and either federal matching rates or fiscal capacity. This effect has not been previously observed as it would not be apparent in superficial analyses of time trends, since the year-over-year expansion of eligibility that is common across states confounds the within state effect. Further research should be aimed at understanding why federal subsidies and fiscal capacity lead to less generous eligibility policies for child health insurance programs.

We find at best very weak evidence of a race-to-the-bottom in eligibility levels; however, we also note that while imprecisely estimated, the point estimates on eligibility in neighboring states is substantively large. Additional research should be directed at re-examining the importance of eligibility levels in neighboring states over a longer time period. This somewhat ambiguous conclusion regarding the existence of a race-to-the-bottom mirrors the at best mixed findings for welfare policy discussed by Brueckner (2001).

Finally, unlike previous studies, we do not find important effects of the racial make-up of state population of political control of state government; instead, we observe a strong positive effect from the Democrat share of the lower house of the state legislature. We interpret this finding as evidence that the party preferences of state voters shape eligibility policy regardless of actual party control. To the extent that party preferences proxy for an ideological affinity for redistributive policy, this result is consistent with a strong influence of the median voter on

policy formation; although the more so when we consider that other political institutions do not influence eligibility levels.

One implication of the importance of the Democrat share of the legislature for state eligibility levels is that this suggests a potential instrumental variable for identifying the treatment effect of changes in state public health insurance on individual health. Existing studies of the effects of public health insurance on individual or population health outcomes assume that variations in state public insurance programs are exogenous (i.e., natural experiments); of course, changes in state policy are not obviously independent of expected changes in state population health. Our findings suggest at least one plausible instrument (the share of Democrats in the state legislature) for better identifying the treatment effect of public health insurance on health.

REFERENCES

Adams, E. Kathleen and Marcia Wade 2001. “Fiscal Response to a Matching Grant: Medicaid Expenditures and Enrollments, 1984-1992.” *Public Finance Review* 29(1): 26-48.

Baicker, Katherine. 2001. “Government decision-making and the incidence of federal mandates.” *Journal of Public Economics* 82: 147-194.

Baicker, Katherine and Douglas Staiger. 2005. “Fiscal Shenanigans, Targeted Federal Health Care Funds, and Patient Mortality.” *Quarterly Journal of Economics* 120(1): 345-86.

Besley, T. and Anne Case. 1995. “Incumbent behavior: vote-seeking, tax-setting, and yardstick competition.” *American Economic Review* 85: 25-45.

Blumberg, Linda J., Lisa Dubay and Stephen A. Norton. 2000. "Did the Medicaid Expansions for Children Displace Private Insurance? An Analysis Using the SIPP." *Journal of Health Economics* 19: 33-60.

Brueckner, Jan K. 2001. “Welfare Reform and the Race to the Bottom: Theory and Evidence.” *Southern Economic Journal* 66(3): 505-525.

Brueckner, Jan. 1998. “Testing for strategic interaction among local governments: the case of growth controls.” *Journal of Urban Economics* 44: 438-467.

Case, Anne, James. Hines and Harvey Rosen. 1993. “Budget spillovers and fiscal policy interdependence: evidence from the states.” *Journal of Public Economics* **52**: 285-307.

Council of State Governments. Various years. *The Book of the States*. Chicago, IL: American Legislators Association.

Currie, Janet and Jonathan Gruber. 1996. "Health Insurance Eligibility, Utilization of Medical Care, and Child Health." *Quarterly Journal of Economics*: 111(2): 431-66.

Cutler, David M. and Jonathan Gruber. 1996. “Does Public Insurance Crowd Out Private Insurance?” *Quarterly Journal of Economics* (May): 391-430.

Esterling, Kevin M. 2008. “Programmatic Expertise and Persuasion in the Intergovernmental Lobby: Medicaid and the Case of Mixed Federalism.” RWJF Scholars in Health Policy Research Program, Working Paper 38.

Figlio, David N., Van W. Kolpin and William Reid. 1999. “Do States Play Welfare Games?” *Journal of Urban Economics* 46(3): 437-54.

Howard, Larry L. 2007. “Disentangling Preferences for Component Groups within Medicaid: How State Governments Trade Off Eligibility and Benefits.” Working Paper, University of Houston.

Husted, Thomas A. and Lawrence W. Kenny (1997), "The Effect of the Expansion of the Voting Franchise on the Size of Government." *Journal of Political Economy* 108 (February): 54-82.

Kaiser Commission on the Future of Medicaid. Various editions. *Medicaid Expenditures and Beneficiaries: National Profiles and Trends*.

Kaiser Commission on Medicaid and the Uninsured. 2001. "The Role of Medicaid in State Budgets." Washington, DC: Kaiser Family Foundation. October.

Kousser, Thad. 2002. "The Politics of Discretionary Medicaid Spending, 1980-1993." *Journal of Health Politics, Policy and Law* 27(4): 639-671.

Lott, John R., Jr. and Larry Kenny, 1999. "Did Women's Suffrage Change the Size and Scope of Government?," *Journal of Political Economy* (107), No. 6, Part 1, Dec. , 1163-1198.

Nathan, Richard P. 1983. "State and Local Governments under Federal Grants: Toward a Predictive Theory." *Political Science Quarterly* 98(1): 47-57.

National Association of State Budget Officers (NASBO). 2007. "State Expenditure Report: 2006."

National Governor's Association and National Association of State Budget Officers (NGA/NASBO). 2007. "State Fiscal Survey: 2007."

National Governor's Association (NGA). various editions. "Maternal and Child Health Update: State Coverage of Pregnant Women and Children."

Plotnick, Robert D. and Richard F. Winters. 1985. "A Politico-Economic Theory of Income Redistribution." *American Political Science Review* 79(2): 458-473.

Plotnick, Robert D. 1986. "An Interest Group Model of Direct Income Redistribution." *Review of Economics and Statistics* 68(4): 594-602.

Pracht, Etienne E. and William J. Moore. 2003. "Interest Groups and State Medicaid Drug Programs." *Journal of Health Politics, Policy and Law* 28(1): 9-39.

Rom, Mark Carl, Paul E. Peterson and Kenneth F. Scheve, Jr. 1998. "Interstate Competition and Welfare Policy." *Publius* 28(3): 17-37.

Shore-Sheppard, Lara, Thomas S. Buchmueller and Gail A. Jensen. 2000. "Medicaid and crowding out of private insurance: a re-examination using firm-level data." *Journal of Health Economics* 19: 61-91.

Shroder, M. 1995. "Games the states don't play: welfare benefits and the theory of fiscal federalism." *Review of Economics and Statistics* **77**: 183-191.

Tannenwald, Robert. 1999. "Fiscal Disparity Among the States Revisited." *New England Economic Review* (July/August): 3-25.

Tannenwald, Robert. 2002. "Interstate Fiscal Disparity in 1997." *New England Economic Review* (Third Quarter): 17-33.

Tannenwald, Robert and Nicholas Turner. 2004. "Interstate Fiscal Disparity in State Fiscal Year 1999." Federal Reserve Bank of Boston, Public Policy Discussion Paper 04-09.

Tresch, Richard. 1975. "State Governments and the Welfare System." *Southern Economic Journal* 42.

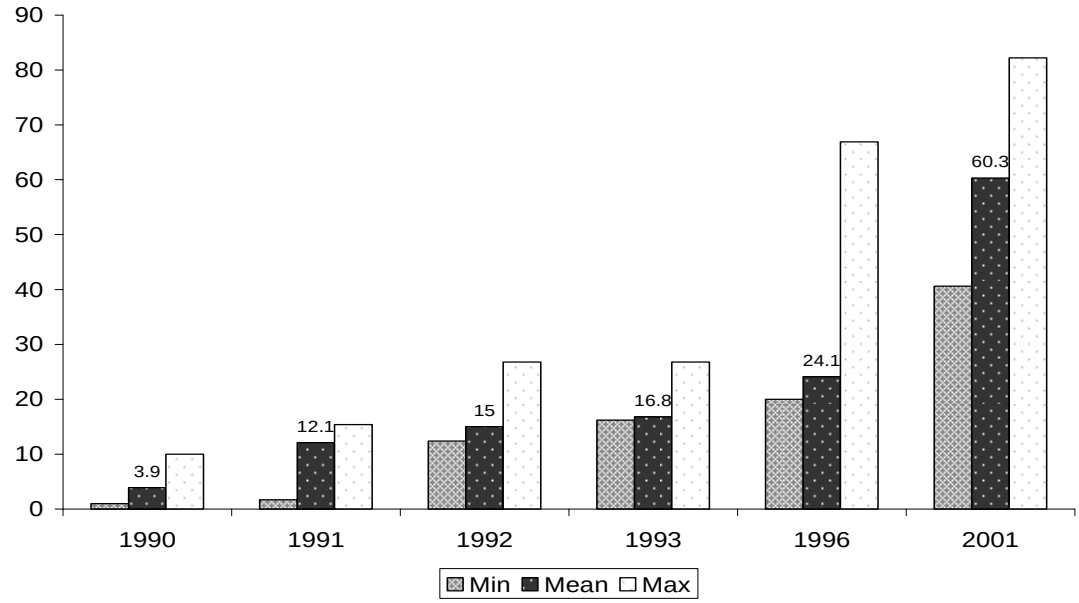
Ullman, Frank and Ian Hill. 2001. "Eligibility Under State Children's Health Insurance Programs." *American Journal of Public Health* 91(9): 1449-1451.

U.S. Census Bureau. various editions. *Statistical Abstract of the United States*.

Volden, Craig. 2006. "States as Policy Laboratories: Emulating Success in the Children's Health Insurance Program." *American Journal of Political Science* 50(2): 791-797.

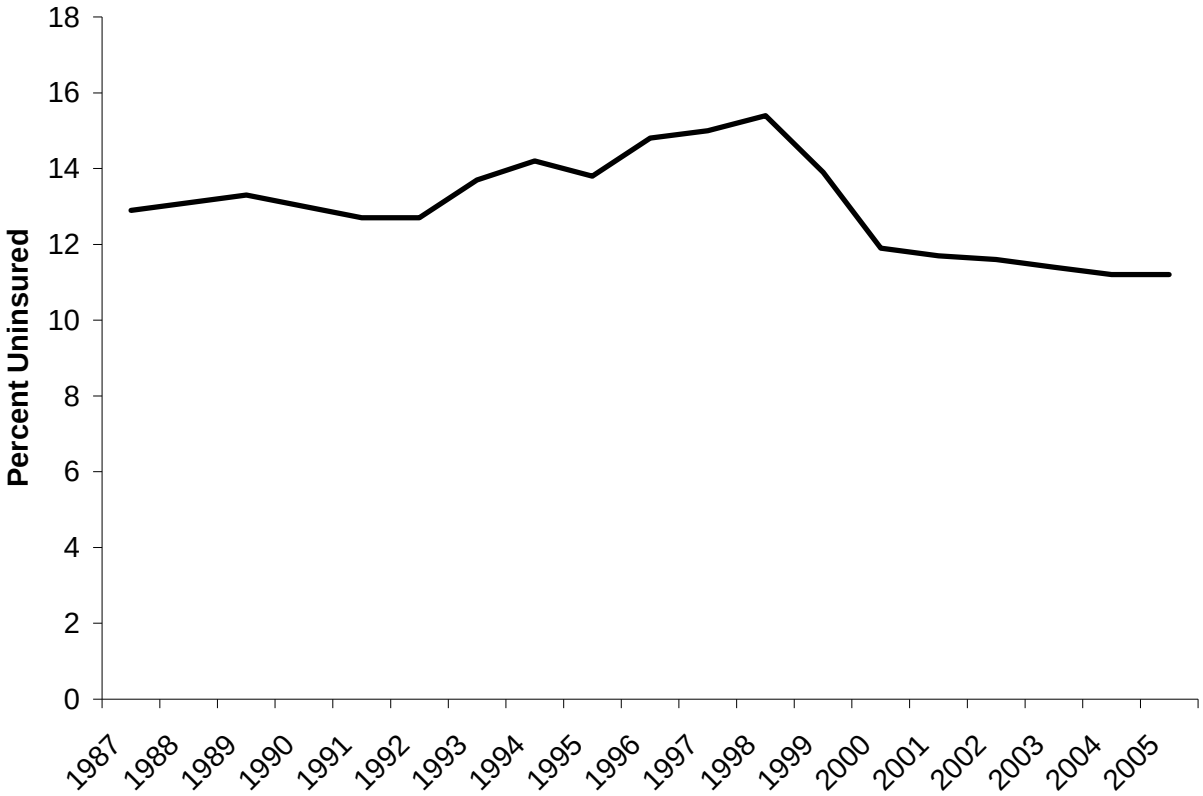
Yilmaz, Yesim, Sonya Hoo, Matthew Nagowski, Kim Rueben and Robert Tannenwald. 2006. "Measuring Fiscal Disparaties Across the U.S. States: A Representative Revenue System/Representative Expenditure System Approach, Fiscal Year 2002." Boston, MA: Federal Reserve Bank of Boston, New England Public Policy Center Working Paper 06-02.

FIGURE 1:
Estimated Fraction of Children Eligible for Public Health Insurance



Source: Values are for authors' "simulated instrument" eligibility variable, created by state and year using March 1996 Survey of Income and Program Participation data. Min and max values are minimum and maximum state-level values for each year.

FIGURE 2:
Fraction of Children Uninsured by Year



- *Source: U.S. Census Bureau from Current Population Survey Data.*

Table 1: Definitions of Variables

Variable	Description
State Child Health Insurance Program Variables	
Simulated Instrument	Fraction of national 1996 Survey of Income and Program Participation sample of children (0-18) eligible for Medicaid based upon state and year rules.
Federal Matching Rate	Fraction of total Medicaid (SCHIP) spending paid by federal government.
SCHIP	Indicator for state SCHIP program
Other State Variables	
Uninsured Kids	Fraction of children with no health insurance reported by U.S. Census Bureau from Current Population Survey (lagged one year).
Neighbor Eligibility	Population weighted average of the simulated instrument for neighboring states.
Fiscal Capacity Index	Potential state tax revenue given tax base and average national tax rates; measured by Tannenwald (various years) using Representative Tax System method.
Democrat Share of State House\Assembly	Fraction of lower house of the state legislature that is Democrat.
Democrat Governor	Governor is Democrat
Unified Democrat Government	Governorship and both houses of state legislature are controlled by Democrats.
Unified Republican Government	Governorship and both houses of state legislature are controlled by Republicans.
Term Limits	State law sets maximum number of terms for state legislators.
Contribution Limits	State law restricts corporate giving to campaigns for governor and state legislator.
Public Funding	Public funding of state gubernatorial races.
Age Less Than 18	Fraction of state population under age 18.
Age 65or Older	Fraction of state population over age 65.
Black	Fraction of state population African-Am.
College	Fraction of state population with a college degree
High School	Fraction of state population with a high school diploma.
Hispanic	Fraction of state population Hispanic.
Metro	Fraction of state population residing in a metropolitan area
Poverty	Fraction of state population in poverty
Log(Income)	Natural logarithm of real per capita state income

Table 2: Descriptive Statistics

	Mean	S.D.
State Medicaid Program Variables		
Simulated Instrument	35.3	16.3
Federal Matching Rate	60.7	8.7
Other State Variables		
%Uninsured Kids	12.0	4.8
Neighbor Eligibility	36.4	15.6
Fiscal Capacity Index	99.3	15.2
Democrat Share of State House\Assembly	.56	.17
Democrat Governor	.46	.50
Unified Democrat Government	.22	.41
Unified Republican Government	.17	.38
Voter Turnout	.54	.07
Legislative Term Limits	.31	.46
Contribution Limits	.81	.39
Public Funding	.22	.42

Notes: N=350 observations for 50 states in each of 7 two-year electoral cycles, from 1990-2002 (states with odd-year elections range from 1989-2003). Medicaid program variables and neighbor eligibility are for year *t*, all other variables are for year *t-1*.

Table 3: Baseline Results

	OLS (1)	OLS (2)	OLS (3)	IV (4)
% Uninsured Kids			0.07	0.31
			(1.01)	(0.52)
Neighbor Eligibility			-0.05	0.16
			(0.21)	(1.00)
Fiscal Capacity Index	0.05	-0.22**	-0.22*	-0.20**
	(0.45)	(2.02)	(1.95)	(1.97)
Federal Matching Rate	-0.78**	-0.73*	-0.72*	-0.79**
	(2.06)	(1.89)	(1.86)	(2.14)
SCHIP	-5.83	-6.50*	-6.53*	-7.75**
	(1.41)	(1.85)	(1.84)	(1.98)
Demographic Controls	No	Yes	Yes	Yes
State and Year Effects	Yes	Yes	Yes	Yes
R^2	.78	.80	.80	.80

*Notes: N=350. *p<.10, **p<.05, and ***p<.01; absolute value of t-statistics in parentheses. Demographic controls include age, educational attainment, ethnicity, metropolitan area status, poverty status, race and the log of real per capita income.*

Table 4: Effects of Party Control of State Government

	IV (1)	IV (2)	IV (3)	OLS (4)
% Uninsured Kids	0.08	0.03	0.12	0.03
	(0.15)	(0.07)	(0.23)	(0.11)
Neighbor Eligibility	0.23	0.23	0.25	0.08
	(1.45)	(1.42)	(1.57)	(1.09)
Fiscal Capacity Index	-0.22**	-0.22**	-0.21**	-0.22**
	(2.13)	(2.24)	(2.11)	(2.01)
Federal Matching Rate	-0.70*	-0.70*	-0.69*	-0.66*
	(1.94)	(1.95)	(1.93)	(1.74)
SCHIP	-7.31*	-7.21*	-7.62*	-6.94*
	(1.89)	(1.89)	(1.96)	(1.95)
Democratic Share of the State House\Assembly	19.55**	19.44**	19.04**	16.56*
	(2.41)	(2.40)	(2.21)	(1.81)
Democratic Governor		0.36	0.69	0.33
		(0.32)	(0.59)	(0.27)
Unified Democratic State Government			-1.36	-1.23
			(0.83)	(0.68)
Unified Republican State Government			-1.71	-1.86
			(0.97)	(1.14)
Demographic Controls	Yes	Yes	Yes	Yes
State and Year Effects	Yes	Yes	Yes	Yes
R^2	.80	.80	.80	.81

*Notes: N=350. *p<.10, **p<.05, and ***p<.01; absolute value of t-statistics in parentheses. Demographic controls include age, educational attainment, ethnicity, metropolitan area status, poverty status, race and the log of real per capita income.*

Table 5: Other Political Determinants

	IV (1)	IV (2)	IV (3)	OLS (4)
% Uninsured Kids	0.07	0.02	0.01	-0.03
	(0.13)	(0.04)	(0.02)	(0.15)
Neighbor Eligibility	0.24	0.26	0.26	0.08
	(1.45)	(1.52)	(1.51)	(1.11)
Fiscal Capacity Index	-0.22**	-0.20*	-0.20**	-0.21*
	(2.17)	(1.85)	(1.88)	(1.82)
Federal Matching Rate	-0.70*	-0.62*	-0.62*	-0.61
	(1.95)	(1.68)	(1.69)	(1.55)
SCHIP	-7.30*	-7.05*	-7.03*	-6.42*
	(1.89)	(1.81)	(1.81)	(1.79)
Democratic Share of the State House\Assembly	19.51**	21.02**	20.99**	18.69**
	(2.40)	(2.49)	(2.49)	(2.06)
Voter Turnout	-1.93		-0.66	2.51
	(0.09)		(0.03)	(0.10)
Legislative Term Limits		-1.94	-1.94	-2.07
		(1.32)	(1.31)	(1.42)
Contribution Limits		2.44	2.44	2.42
		(1.08)	(1.08)	(0.95)
Public Funding		-1.52	-1.53	-0.93
		(0.80)	(0.81)	(0.51)
Demographic Controls	Yes	Yes	Yes	Yes
State and Year Effects	Yes	Yes	Yes	Yes
R^2	.80	.80	.80	.81

*Notes: N=350. *p<.10, **p<.05, and ***p<.01; absolute value of t-statistics in parentheses. Demographic controls include age, educational attainment, ethnicity, metropolitan area status, poverty status, race and the log of real per capita income.*