Economic and Political Determinants of State Spending

Chris Dunlap '98
Illnois Wesleyan University

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Abstract

Policy in the American States, Erikson, Wright, and McIver (1993) study the effects of individual state partisanship and political ideology on state presidential voting. In general, they found that partisanship and ideology affected presidential voting independently of one another. In addition, from 1988 through 1992 (the last year of their study), they found that ideology became more important in explaining variation in presidential vote. Renner (1997) took this study further, and showed, using newer data, that since 1992, partisanship and ideology have become more equal in their explanation of tile variance in presidential voting.

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Introduction

In their landmark work, *Statehouse Democracy: Public Opinion and Policy in the American States,* Erikson, Wright, and McIver (1993) study the effects of individual state partisanship and political ideology on state presidential voting. In general, they found that partisanship and ideology affected presidential voting independently of one another. In addition, from 1988 through 1992 (the last year of their study), they found that ideology became more important in explaining variation in presidential vote. Renner (1997) took this study further, and showed, using newer data, that since 1992, partisanship and ideology have become more equal in their explanation of tile variance in presidential voting.

This study attempts to take these two studies even further, in an attempt to discover the effects these variables have on policy outputs. As Renner states in his article, "(partisanship and ideology) may not only add explanatory power to models predicting state presidential vote but public policy outputs as well" (14). Specifically, this study will attempt to determine the effect these variables have on overall levels of state spending. However, in determining the effect of these political variables on state spending, one cannot ignore the effect of economic variables on expenditure levels. The purpose of this paper is to determine the effects of both economic and political variables on state spending. The results of this test should give insight into how these factors affect levels of state spending, as well as defining the variables, either economic or political, to explain the variation. In the end, this paper hopes to determine whether states spend more money because they are richer and have a higher standard of living or whether a liberal ideology is driving their preference for the larger provision of public goods?

Theory and Literature Review

Thomas Dye (1966) was one of the pioneers in state policy studies. Dye concludes that economic variables are much more powerful than political variables in determining state policy. Furthermore, Dye asserts that economic variables are, essentially, the only important determinants of state policy. However, in previous research, empirical support has been given to both economic and political effects. This paper examines the theory behind the economic and political variables, and tests both groups of variables empirically. Economic ability-to-pay theory states that the income of a state should positively affect the expenditure level of that state. The theory says that a state

with a higher income should have a higher level of spending than a state with a lower income because the "richer" state will have more money to fund government projects. The "poorer" state does not have as much ability to fund government projects, and will, therefore, limit its amount of spending, according to what it can afford.

Some empirical evidence supports the ability-to-pay theory. Agthe, Billings, and Marchand (1996) tested the economic and political effects on state spending for environmental programs using a cross-sectional model of 48 states. The authors found that state per capita income positively affected spending on environmental programs, which gave support to the ability-to-pay theory discussed previously.

Jack Tweedie (1994) explored the economic and political effects on state Aid to Families with Dependent Children (AFDC) programs. Tweedie also found that personal income had a positive affect on AFDC payments. Unlike the work by Agthe, Billings, and Marchand, however, Tweedie used the change in personal income as opposed to absolute levels of income. Nonetheless, both studies demonstrate support for the ability-to-pay argument.

Some authors have argued that the urbanization of a state's population is a determining factor of state spending levels, explaining that states with higher levels of urban population spend less than states **with less urban** populations. Researchers argue this is a result of the states' ability to deliver goods to many people at once. When more people live in one populous area,

it is easier for a state to achieve economies of scale in the delivery of government provided goods. A state can deliver goods to more people at once and reduce delivery costs of such goods.

Again, some empirical evidence supports this notion. The Agthe, Billings, and Marchand (1996) article also showed that urbanization had a negative effect on environmental expenditures. States with higher levels of urbanization did indeed spend less on environmental programs. Additionally, Gamkhar and Oates (1996) studied the effect of federal funding on overall levels of state spending. In this study, the authors found that urbanization had a negative effect on overall spending levels. The results of both studies generally support the notion that increased urbanization of a population should lower the cost of government programs for a state.

In dealing with the political determinants of state spending, one can still think in terms of economic rationale. In economic terms, political ideology can be a factor of a person's preference for the provision of goods in either public or private markets. Political conservatives generally support less government involvement in the procurement of goods, and, instead, favor the provision of goods in the private market. Political liberals, on the other hand, often support a strong governmental role, usually advocating government involvement in redistribution of goods. In sum, the state with a greater liberal

influence typically spends more in the state distribution of provided goods.

Tweedie's study on AFDC expenditures (1994) tested the effects of ideology on AFDC spending levels. Tweedie found that public opinion did have a significant positive effect on state AFDC payments. Specifically, the more ideologically liberal a state was (measured as an index rating from the Americans for Democratic Action) the more that state spent on AFDC payments. State partisanship can be viewed in much the same way as ideology, although the two are not synonymous. It can be argued that Democrats, like liberals, usually favor a higher level of government interaction in the economy than Republicans. However, liberalism and Democratic partisanship are not necessarily one in the same. In the South, for example, voters traditionally held strong conservative ideologies, but the Democratic Party has dominated many state legislatures. Furthermore, on the individual level, voters may identify themselves according to ideology, but do not necessarily identify themselves according to a particular political party. On the other hand, voters may identify with a particular party, but may not necessarily identify with a particular ideology. Thus, partisanship and ideology are two different determinants. Moreover, as mentioned above, the South has traditionally held strong conservative values, while maintaining strong Democratic ties at the same time. This shows an inverse relationship between partisanship and ideology. This pattern is strikingly evident in Louisiana, where only 17 percent of voters identify themselves as ideologically liberal, but 55.3 percent ally themselves with the Democratic Party. On the other hand, 40 percent identify themselves as ideologically conservative, with only 20 percent identifying themselves as Republican. Therefore, it can be argued that by controlling for political ideology, Democratic partisanship could have explanatory power above and beyond that of ideology alone, consequently resulting in a positive effect on state spending levels.

This study will also look at other possible factors of state spending not included in previous research. On the economic levels, this paper will explore cost of living' as a factor in determining expenditure levels. One could assume that if it costs more to live in a state, it will be more expensive for tile government to buy and provide goods, thus increasing costs in the provision of public goods. The cost of living factor should, therefore, have a positive affect on government expenditure levels. Tweedie (1994) did look at cost of living as a variable in his research on AFDC payments, but found it to be an insignificant factor. On the other hand, he looked at the change in cost of living rather than the absolute levels of cost of living used in this study.

From the political perspective, this study looks at the partisanship of state legislatures as a whole, to see if there is an explanatory effect beyond individual partisanship identification. Because of political gerrymandering, the partisanship of the state's legislature is not necessarily a reflection of the

partisanship of the state's voters. Therefore, legislative partisanship could have an independent affect on state spending. Additionally, the study will include a control for region. Specifically, the control will be South/non-South, as southern states traditionally spend much less money than non-southern states.

The Empirical Model and Data

Using cross-sectional data on individual states, this research attempts to test tile affects of both economic and political variables on levels of state spending. The model to be used is as follows:

$$StExp = \alpha + \beta \, Inc + \beta \, CostLiv + \beta \, Dens + \beta \, StId + \beta \, StPar + \beta \, LegPar + \beta \, South$$

Where: StExp = state per capita expenditures on particular program
Inc = state per capita income
CostLiv = state's cost of living index value
Dens= the density of the state's population (population per square mile)
StId= state ideology (% liberals - % conservatives)
StPar state= partisanship (% Democrats - % Republicans)
LegPar = partisanship of the state's legislature (% Democrats - % Republicans)
South = the state is a southern state

To control the population size of the state, overall expenditures, including welfare and environmental costs, are measured on a per capita basis. Education expenditures are also individualized on a per pupil basis. Obviously, a state such as California will spend more than a state such as Delaware due to the increased number of people the state must provide for. Moreover, welfare expenditures are measured in terms of AFDC payments per capita. In addition, the state's general fund for its environmental agency is used as a proxy for environmental expenditures. Income is measured on a per capita basis. The state's cost of living is measured as a nominal index value. Instead of using urbanization to test for the ability to achieve economies of scale in the delivery of goods, this study will look at the density of the state's population. This measure should take into account variations in the geographic size of the state as well as the compactness of the population. Thus, if states such as Rhode Island and New York have similar levels of urbanization, the effect of having to deliver goods to a larger geographic area is not captured by the urbanization measure. One could assume that it would cost more to deliver goods in New York than Rhode Island because of the larger distances goods must travel in New York. Therefore, the variable is defined as persons per square mile.

State ideology is measured as the difference between the percentage of a state's liberal identifiers minus the percentage of a state's conservative

identifiers. This is to control for the effect of relative power for each ideology. For example Wyoming and Michigan have similar levels of liberal identifiers (21.9% and 22.8% respectively). However, Wyoming has a much higher percentage of conservative identifiers than Michigan (39.7% to 3 1.6% respectively). Thus, even though absolute values of liberalism are similar in these two states, this does not accurately reflect the power of liberals relative to the power of conservatives in each state. The partisanship of the state and the partisanship of the state's legislature are, therefore, measured in the same manner. Only the Lower House is included in the legislative partisanship measure. Southern states are defined as the eleven Confederate states plus Kentucky and Oklahoma.

Data for this study is taken from various sources including *Congressional Quarterly's State Fact Finder* by Hovey and Hovey, *The Book of the Statcs,* and the *1997 World Almanac.* Data for the state's partisanship and ideology are taken from Erikson, Wright, and McIver's pooled data from 1976 to 1988. This source is widely used in previous studies of state partisanship and ideology. Additionally, Alaska and Hawaii are omitted cases because of the extraordinarily high expenditure levels associated with higher costs in delivering goods to these areas. Nebraska is also omitted because of the fact that it has a non-partisan legislature, therefore, the effects of legislative partisanship cannot be tested on this case.

Results

After running a series of bivariate correlations between the variables in the model, individual state partisanship and legislative partisanship were highly correlated. Thus, legislative partisanship was dropped from the model. While it is true that the legislatures are responsible for implementing policy, implying that the partisanship of the legislature may be more important as a predictor, the purpose of this paper is not to establish a predictive model of state expenditures, but to test the affect that certain variables have on state spending. Because individual level partisanship and ideology was used in the original Erikson, Wright, and McIver and Renner studies, this paper tests the affects of these two variables on state spending. Therefore, individual level partisanship was retained in the model and legislative partisanship was dropped.

After dropping legislative partisanship from the model, here is the revised model:

StExp = a + β Inc + β CostLiv + β Dens + β StId + β StPar + β South

Where:
StExp = state per capita expenditures on particular program

Inc = state per capita income
CostLiv = state's cost of living index value
Dens = the density of the state's population (population per square mile)
StId = state ideology (% liberals - % conservatives)
StPar = state partisanship (% Democrats - % Republicans)
South ~ the state is a southern state

The results of regression are presented in Table I on the following page. The purpose of this paper is to examine the affects that the selected independent variables have on state spending levels. Although the magnitude of the coefficients for the independent variables will be discussed, they are not the focus of conclusion. Instead, the focus will be on the explanatory power of the variables indicated by the absolute value of the beta weights of each variable.

Table I
Effects on Overall Levels of State Spending

Variable	Coefficient	Beta	Significance
Inc	-0.0576	-0.2536	0.252
CostLiv	49.8171	0.6284	0.0102
Dens	-0.189	-0.0861	0.671
StId	9.0368	0.1294	0.5646
StPar	12.747	0.2715	0.1609
South	-449.189	-0.3848	0.069

Multiple R = 0.699
R Square = 0.4888
Adjusted R Square = 0.412

Overall, this model has an Adjusted R Square value of .412, meaning the model explains approximately 41 percent of the variance in spending between states. Cost of living and the South dummy variable are the only variables that are significant at the .05 and 10 levels, respectively. Cost of living did have a significant positive effect on income per capita. For every point increase in the cost of living index, a state spends almost $50 more per capita. Population density and income per capita did not yield significant results.

In looking at the political variables, neither ideology nor partisanship had a significant affect on expenditures. The variables did show positive relationships with expenditures, even though the variables were not statistically significant. As expected, the South regional dummy variable did have a significant negative effect on expenditures. The data indicates that southern

states spend, on average, less per capita than non-southern states.

Cost of living and the regional control variables have an interesting affect on the other variables in the model. Previous research found significant relationships between income and expenditures per capita. However, most of these studies did not control for differences in cost of living between states or for region. This study shows that, controlling for these two factors, income per capita does not have a significant affect on expenditures.

Another deviation of this work from previous literature is the insignificant affect of density on expenditures. This study used population density as opposed to the urbanization measure found in previous work, which could account for the dissimilar findings. However, density seems to have a sounder theoretical basis for its use because it takes geographic size of the state into account. Perhaps using both measures may result in more significant results. Nonetheless, the results indicate that by controlling for the other factors in the model, population density does not have a significant affect on state spending.

The data is somewhat inconclusive concerning the question as to whether economic or political variables are more powerful in explaining variation among state expenditures. The economic variable, cost of living, is clearly the most dominant explanatory variable, with a beta weight of .6284. The second most powerful, and only other significant variable in the model is the regional control variable, with a beta weight of negative .3848. The political variable of partisanship has a beta weight of .2715, but this value is not much larger than the beta weight of -.2536 for income per capita. However, both of these variables were insignificant. Therefore, one may conclude that economic variables are slightly more powerful than political variables in explaining variation in state spending. This supports the previous work by Thomas Dye (1966). However, the results of this study are not completely conclusive.

One cause for poor performance of many of the variables in this model could be the low number of cases observed. This study looked at data on states' expenditures for only one year, leaving less than 50 cases to be tested. Perhaps observing each state's spending over several years would result in more significant results.

Conclusion

Although this model only explained approximately 42 percent of the variance in state expenditures, some interesting results were found. Perhaps most intriguing is that when controlling for cost of living and geographic region, state income per capita has an insignificant effect on state expenditures per capita. One explanation for this finding could be that the south control variable takes differences among state incomes into account, thereby reducing the effect of income per capita on expenditures. Additionally, cost of living may account for some of the variance in income as well. Perhaps states with

a higher cost of living must make up for this difference by offering higher salaries, which, presumably, increase the states income per capita.

Several other factors not taken into account in this study naturally have additional affects on state spending. One factor many economists might argue to be an important determinant of state spending is income distribution. If a state has large numbers of "rich" people and large numbers of "poor" people, income per capita may not accurately reflect the need to support the large, poor cleavage of population. The large number of persons with high incomes and large number of low income levels would average each other out when determining per capita income. Another state may have similar income per capita statistics due to the fact that they have large numbers of "average" income citizens. These people do not necessarily need the governmental support that citizens from a state with a wider income distribution may need.

Additionally, state legislatures are the actual bodies to implement policy. Therefore, the partisanship of each legislature may indeed have an effect on expenditures. This study, however, was not able to test for this effect because of multi-col linearity problems with the data. More research could look into the causes of income distribution and legislative partisanship.

An additional area for further examination is the affect the factors in this model have on specific policy expenditures. Perhaps some areas of policy, such as welfare, may be driven by political influences, while other areas, such as education, may be driven by more economic influences. These distinctions are somewhat blurred when looking at overall levels of spending. Nevertheless, examining aggregate levels of spending does give some insight into what factors affect state policy.

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