*The Politics of Tax Increases in the States**

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This paper updates a recent study of the factors prompting states to adopt new tax instruments by testing the explanation supported in the original work over a longer time period and broadening the pooled cross-sectional time series analysis to include increases in the *rates* of *existing* tax instruments. Our results are consistent with the original study's support for a "political opportunity" explanation that suggests that politicians are most likely to adopt tax increases when the electoral risks of doing so are minimized.

Berry and Berry (1992) find support for a "political opportunity" explanation of state tax innovation: politicians are most likely to adopt a new tax instrument when they are least likely to pay an electoral cost for such behavior, that is, when it is a long time until the next election and when conditions make a tax increase relatively palatable to the electorate: (1) there is a fiscal crisis in state government and (2) other neighboring states have "bit the bullet" recently and adopted a tax. But adoptions of new tax instruments have been very rare in recent decades. By the last quarter of the twentieth century, the vast majority of states had already adopted *each* of the tax instruments on which states currently rely.[1] Thus, in most states in the modern era, boosting the rates of existing taxes is the only alternative for increasing revenues. This update assesses the generality of Berry and Berry's (1992) explanation by estimating their model for a broader set of tax increases (an increase in the *rate* of an *existing* tax as well as the adoption of a new tax instrument). Berry and Berry focused on short time periods during the twentieth century in which there was a relatively high concentration of tax adoptions to allow sufficient variation in the dependent variable for empirical analysis. As a bonus, expanding attention to include rate increases allows the explanation to be tested over a longer continuous period, 1960–86.

*We are grateful to Richard Winters for sharing his data on the timing of state tax rate increases and to Aubrey Jewett for poring over legislative statutes for more specific information about these increases. The research was supported by a grant from the Committee on Faculty Research Support at Florida State University.

[1]By 1976 all states had cigarette and gasoline taxes; 45 had general sales taxes; 44 had corporate income taxes; and 43 had individual income taxes.

American Journal of Political Science, Vol. 38, No. 3, August 1994, Pp. 855–59

The Model and Data

Berry and Berry (1992) tested five explanations of tax innovation. Little support was found for two: the *economic development* explanation, which suggests that increases in state personal income and urbanization prompt a greater probability of a tax adoption, and several versions of a *party control* explanation which point to impacts of (1) the ideology of the party in control of government, (2) whether there is unified or divided party control, and (3) the historical context of interparty competition. However, the empirical evidence supported three "political opportunity" explanations: the probability of a tax adoption becomes larger as (a) the amount of time until the next gubernatorial election increases (the *election cycle* explanation), (b) the *fiscal health* of a state government deteriorates, and (c) the number of taxes recently adopted by neighboring states increases (the *regional diffusion* explanation). This research update tests each of these explanations, as well as a sixth proposition consistent with the notion that politicians seek to avoid the electoral costs of a tax increase: since taxes are very *un*popular with state electorates but state lotteries tend to be quite popular (Berry and Berry 1990), when politicians choose to increase revenues they should be less likely to raise taxes if adopting a lottery is a realistic alternative.

The model tested is a discrete event history analysis (pooled cross-sectional time series) specification:

$$\begin{aligned} ADOPT_{i,t} = \Phi(&b_0 + b_1 INCOME_{i,t-1} + b_2 URBAN_{i,t-1} + b_3 FISCAL_{i,t-1} \\ &+ b_4 ELECT1_{i,t} + b_5 ELECT2_{i,t} + b_6 NEIGHBORS_{i,t} \\ &+ b_7 LOTTOK_{i,t} + \beta PARTY_{i,t}), \end{aligned} \tag{1}$$

where Φ denotes the cumulative normal distribution function associated with a probit specification. The conceptual dependent variable $ADOPT_{i,t}$ is the probability that state i will adopt a tax increase in year t; this variable is measured with an indicator that equals one if state i increases taxes in year t and zero otherwise.[2] $LOTTOK_{i,t}$ equals one if adopting a lottery is a realistic alternative for state i in year t (i.e., if it is after 1970, and state i has not yet adopted a lottery)[3] and zero otherwise. The remaining independent variables are defined and measured exactly as in Berry and Berry

[2]Specifically, a state is coded as an adopter if it (1) adopts *any* new tax instrument or (2) increases rates in either of two broad-based general taxes: the general sales tax or the individual income tax (13.2% of the cases in the pooled sample are so coded). Tax rate increases were identified from the data set used by Kone and Winters (1993); the exact dates of adoption of these increases were taken from legislative statutes.

[3]While the first states to adopt a modern lottery (New Hampshire and New York) did so in 1964 and 1967, lotteries were not adopted with any frequency until the 1970s. In contrast, adoptions are spread out quite evenly over the period 1971–86.

(1992) (see the original article for greater detail): *INCOME*, by state per capita income in real dollars, and *URBAN*, by percentage urban population. *FISCAL*, an indicator of state government fiscal health, is the ratio of total state revenue minus total state spending to total state spending; *NEIGHBORS* (specifying regional diffusion) is the number of tax increases by neighboring states very early in the year of measurement, or in the year prior to the year of measurement; *ELECT*1 equals one in the year of a gubernatorial election and zero otherwise; and *ELECT*2 equals one if it is neither an election year nor the year after an election and zero otherwise. Finally, *PARTY* denotes one or more variables that reflect the effect of party control on the probability of a tax increase; the particular variables differ depending on which of four party control propositions (described in the original article) is specified.

Empirical Results

The findings are quite similar to those of the original article. None of the party control explanations introduced by Berry and Berry (1992) are supported as originally conceived. But a model specifying one of these explanations—the *competitive context* hypothesis (1992, 719–20, 728)—generates results consistent with a modified version of the explanation. The model contains two party control variables; *INSTIT* equals one if a government is "unified" (i.e., the governor and both legislative houses are controlled by the same party) and zero otherwise; $HISTCONT_{i,t}$ denotes the historical degree of control of government institutions by the party in power in year t during the 12 years prior to t, measured on a scale from zero to one (see Berry and Berry 1992, 728, for details). The probit maximum likelihood estimates are as follow:[4]

$$\begin{aligned} ADOPT_{i,t} = \Phi [& -1.12^{***} + .00035\ INCOME_{i,t-1} + .0049\ URBAN_{i,t-1} \\ & (-3.82) \quad (0.12) \quad (1.25) \\ & - 1.076^{*}\ FISCAL_{i,t-1} - .97^{***}\ ELECT1_{i,t} \\ & (-1.88) \quad (-7.33) \\ & - .55^{***}\ ELECT2_{i,t} + .066^{*}\ NEIGHBORS_{i,t} \\ & (-5.15) \quad (1.66) \\ & - .159\ \text{LOTTOK}_{i,t} - .199\ INSTIT_{i,t} \\ & (-1.43) \quad (-0.72) \\ & + .178\ (INSTIT \times HISTCONT)_{i,t}]. \\ & (0.54) \end{aligned} \tag{2}$$

[4]The chi-square value for the overall model is 74.59 (df = 9), easily significant at the .001 level. Values in parentheses are t-ratios, and all significance tests are one-tailed ($^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$).

The fact that the coefficient estimates for *INSTIT* and *INSTIT* × *HISTCONT* are of roughly equal magnitude, with the former negative and the latter positive, suggests the proposition that (1) divided governments and (2) unified governments that have been in complete control for many years are the likeliest to raise taxes, but among unified governments, the probability of a tax increase diminishes as the degree of historical control by the party in power decreases. In particular, the probit results predict that the probability of a tax increase by a divided government is .126 (when all other independent variables are fixed at "central values").[5] There is a similar probability (.131) of a tax increase for a unified government that has had unified control each year during the previous 12. However, the probability is appreciably lower (.093) when the party controlling government has consistently been the out party in a unified government over the previous dozen years. Of course, the difference between these probabilities is not great;[6] furthermore, the proposition supported is generated *as a result* of the data analysis and thus cannot be viewed as being tested in this article. But the proposition is plausible and worthy of testing in further research using different data. It is also consistent with our "political opportunity" explanation, as it suggests that a tax increase is likeliest when politicians need not be concerned about being punished for raising taxes; either (1) there is unified control and an insufficient history of interparty competition to generate a fear of electoral retribution, or (2) there is divided control so that both parties would be held equally responsible for any tax increase.

As in the original study, support for the economic development explanation is at best mixed, as per capita income shows virtually no relationship to the probability of a tax increase, and urbanization shows only a weak impact. But also paralleling the original research, there *is* support for all the hypotheses underlying a political opportunity explanation. *ELECT*1, *ELECT*2, *FISCAL*, and *NEIGHBORS* all have statistically significant

[5]When calculating predicted probabilities of a tax increase to illustrate the magnitude of the effect of a variable in this study, the remaining independent variables are fixed at the following "central" values: (1) income, urbanization, fiscal health, and the product term—*INSTIT* × *HISTCONT*—each at its mean value in the sample; (2) the election cycle variables at the values indicating years that are neither election years nor years immediately following an election; (3) number of recent tax increases by neighbors at 1; (4) *LOTTOK* = 0 (adopting a lottery is unrealistic); and (5) institutional control (*INSTIT*) at the value representing unified control.

[6]Also, the coefficients for *INSTIT* and *INSTIT* × *HISTCONT* do not approach statistical significance at standard levels. (This is likely due to extreme multicollinearity involving these two variables; when either variable is regressed on the remaining independent variables in the model, the R-square value exceeds .89.)

coefficient estimates with the expected sign. An analysis of predicted probabilities demonstrates: (1) a powerful *election cycle* effect—the probability that a state in an election year, but having central values on all other independent variables, will increase taxes is only .048, while the probability for a similar state the year after an election is .243; (2) a moderate *fiscal health* impact—when fiscal health is excellent (at the 90th percentile of scores in the sample), the probability of a tax increase is only .084, but this probability rises to .135 when fiscal health becomes very poor (at the 10th percentile); and (3) a moderate *regional diffusion* effect—as the number of recent tax increases by neighboring states rises from zero to four, the probability of a tax hike grows from .095 to .147. Furthermore, while the coefficient for LOTTOK lacks statistical significance, the probit results imply that after 1970, the presence of a state lottery increases the probability of a tax increase from .080 to .106, presumably by removing the possibility that revenues could be increased through more popular means.

Conclusion

This update suggests that the politics of tax rate increases mirror the politics of tax adoptions. Politicians are most likely to increase tax rates when the political costs of doing so are minimized: (1) electoral conditions are favorable in that the next election is as far away as possible, and the nature of political competition and party control of governmental institutions tends to shield incumbents from being blamed by the electorate for tax increases; and (2) a fiscal crisis and the presence of neighboring states that have recently raised their taxes make a tax increase relatively palatable to the public. Tax increases are also more likely when the "path of least resistance" for raising revenues—adopting a lottery—is no longer possible.

Manuscript submitted 11 June 1993
Final manuscript received 27 September 1993

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