Urban and Regional Analysis Group

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Working Paper No. 04-05
September 2004

Georgia State University

Andrew Young School of Policy Studies

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Abstract

This paper examines how home rule affects the ability of US county governments to meet their constituents' demands. The Cox specification test and the fiscal illusion estimates reveal that a greater degree of home rule meets the community's demand but also allows county governments to more thoroughly exploit voter fiscal illusion, thereby expanding county spending beyond the level that would be most preferred by voters under perfect information. The evidence from subsamples of urban and rural governments reinforces these conclusions.

Keywords: home rule, Dillon's rule, fiscal illusion

JEL Codes: H72

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*The authors gratefully acknowledge Shiferaw Gurmu, Doug Krupka, Greg Lewis, Christine Roch, David Sjoquist, and Sally Wallace for their helpful comments.

1 Introduction

In the U.S. counties are creatures of state government. Their duties and powers are defined by states and interpreted using either home rule or Dillon's rule. Under home rule, counties are viewed as being free to undertake activities unless expressly prohibited by the state. Under Dillon's rule, counties are free to undertake only those activities that are explicitly allowed by the state.[1] Of course, many states rely upon principles that fall short of the archetypes home rule or Dillon's rule. Nonetheless, the overriding principle used to define the roles of counties is generally identifiable as falling into one or the other interpretive rule.

This paper examines the extent to which local fiscal behavior reflects the rules or laws granting counties freedom to pursue a range of activities on their own (home rule) or constrain their actions (Dillon's rule). In particular, does home rule free counties to serve their constituents better or are the restrictions embodied in Dillon's rule needed to keep a local Leviathan at bay? There are theoretical arguments on both sides of the issue, so that, ultimately, the question must be answered empirically. Although home rule concerns might seem arcane at first glance, the answer to this question has ramifications for the broader debate over the structure and performance of the local public sector.

Home rule removes restrictions on the range of activities that local governments can undertake, freeing them to better serve their constituents if so inclined. In this view, the restrictions embodied in Dillon's rule make it difficult for local governments to fulfill their residents' demands for public services, particularly during extending periods of urbanization or economic growth. Of course, even if not naturally inclined in this direction, sometimes the existence of other nearby jurisdictions provides the threat of competition sufficient to act as a disciplining device, forcing the locale to do a better job meeting constituents' demands (Fischel, 2001). In this case, too, restricting the range of local government options with something less than home rule can reduce the ability of the local public sector to satisfy their residents.

[1] Dillon's rule is the "strict construction" interpretation of local government powers by courts. This rule takes its name from the 1968 ruling of Judge John Dillon in *City of Clinton v. Cedar Rapids and Missouri Railroad Company.*

However, the absence of strong horizontal competition among localities opens up an alternative hypothesis. Brennan and Buchanan's (1980) Leviathan model of government implies that granting home rule relaxes restrictions on local government activities, allowing them greater freedom to pursue their expansionist goals. In this view, far from being a deleterious constraint on local governments, Dillon's rule is the type of constitutional constraint needed to harness the local Leviathan, tying it more tightly to community demand.

From a slightly different perspective, home rule also opens up the possibility of more dimensions to local government behavior, that is, more margins on which to adjust taxes and spending. Most analyses of local spending use the median voter model to aggregate individual constituents' demands to derive a functional concept of community demand. According to Plott (1976), though, multiple dimensional decisions are less likely to satisfy the median voter's demand than single dimension decisions. Since home rule opens up the range of activities that can be pursued by the local government, Plott's theorem implies that home rule pushes the local government away from satisfying the median voter's demand. On the other hand, however compelling these theoretical arguments are, the scant empirical evidence on this point leads to the opposite conclusion. Turnbull and Djoundourian (1994) test Plott's theorem for municipalities in five Midwest states and find that city governments that are closest to the single-service-single-tax characteristic do not support the median voter characterization of public demand while municipalities with a wide mix of services and own revenue sources do. Thus, if the implications of Plott's theorem hold then home rule opens up the possibility that counties will behave as if they are not constrained by community demand. But, if it turns out that the empirical conclusions of Turnbull and Djoundourian extend to counties, then counties under home rule will be more likely to behave as if constrained by community demand than will their Dillon's rule counterparts.

Although a starting point, our concern goes beyond the question of whether or not the county behaves as if it is satisfying community demand. Just as important is *where* the locale ends up on the demand curve. This question motivates the second stage of our analysis, a closer look at the relationship between home rule and fiscal illusion. The premise underlying fiscal illusion is that the information asymmetry can lead to taxpayers to systematically misperceive the tax price of additional public spending, which in turn affects the equilibrium level of community spending (Oates, 1988; Turnbull, 1998). The more complicated the budgeting process, the greater the potential for fiscal illusion. The greater the number of taxes levied or services offered, the more tenuous the tax-service nexus for voters and the greater the potential for fiscal illusion. And greater fiscal illusion allows voters to systematically underestimate the tax price of additional public spending, thereby supporting more spending than they would under perfect information. By this argument, if home rule leads to greater fiscal illusion, then home rule also leads to the inefficient expansion of county government spending.

The rest of the paper is organized as follows. Sections 2 and 3 focus on whether home rule or Dillon's rule (or either one) affects the extent to which counties behave as if they are constrained by (or are satisfying) community demand. Section 2 explains the empirical measure of home rule and its antecedentes in the literature. Section 3 summarizes the empirical method and reports the state-by-state analysis showing that counties in home rule states generally do a better job of meeting community demand. Section 4 extends the analysis to examine the relationship between home rule and fiscal illusion. It adapts the fiscal illusion model developed in Turnbull (1998) to provide an empirical framework for estimating the degree of fiscal illusion consistent with observed county government behavior. The estimates reveal that counties operating under home rule exhibit significantly stronger fiscal illusion than counties under Dillon's rule, results consistent with the Leviathan model of local governments. Section 5 concludes.

2 Home Rule Categories

In practice, every local government possesses some degree of local autonomy and every state legislature retains some degree of control over local governments. No state reserves all power to itself, and none yields all of its authority to localities.

Drawing from the insights provided by various studies (McBain, 1916; Mead, 1987; Weeks and Hardy, 1987; Zimmerman, 1991; Hill, 1993; Krane et al., 2001), our home rule categories are based on how narrowly states restrict the range of functions that can be undertaken by county governments. We use four categories ranging from strong Dillon's rule (no home rule) to strong home rule. We categorize states using the constitutional, legislative, and institutional characteristics reported in Krane et al. (2001), guided by previous attempts to measure the degree of home rule.

McBain (1916) defines municipal home rule as any power of self-government that may be conferred on a city. Mead (1987) categorizes individual states by the presence or absence of home rule and the legal basis on which it is grounded. Weeks and Hardy (1987) provide a different range of classifications: non-home rule governments, in which Dillon's rule prevails; home rule charter governments, in which the original home rule idea that a city should exercise those powers expressly granted in their locally adopted charters; and home rule grant governments.

Zimmerman (1991) defines home rule more broadly than charter-writing authority and uses the broader concept to measure local government discretion across the U.S. This is the first study to construct quantitative measures of local discretion in order to rank all fifty states by the discretionary authority of general-purpose local governments in four areas: structure, functions, personnel, and fiscal policy. The indices are based on the information provided by state constitutions and statutes.

Hill (1993) evaluates states according to two principles: whether home rule is established by state constitution or legislation and whether home rule (when granted) is structural, broad functional, or limited functional. Structural home rule allows some local autonomy for choosing a particular form of government. Broad functional home rule allows local governments broad local powers and wide discretion in choice of activities. Limited home rule, on the other hand, provides a degree of local government autonomy, but with narrower restrictions on local powers and choice of activities.

Krane, Rigos, and Hill (2001) adopt a wider view of the home rule concept, drawing from the legal definitions in the state constitutions and state codes as well as referring to how local governments operate in actual practice. One goal of their survey is to provide a sense of how closely actual practice follows the legal definition of home rule. Their study provides a detailed summary of the relevant factors at work in each state. It is arguably the best assessment of the current status of home rule in each state.

We categorize the thirty eight states in our sample by the strength of home rule powers based on Krane et al.'s (2001) comparative study. Our measure designates four different degrees of home rule: strong home rule, weak home rule, weak Dillon's rule, and strong Dillon's rule. Table 1 presents our classification of each of the thirty eight states. Twelve states are strong home rule states, nine are weak home rule states. Eight states are weak Dillon's rule states and nine are strong Dillon's rule (no home rule) states.

3 Home Rule and Community Demand

3.1 The test procedure

We apply the Cox specification test in order to see whether or not county governments behave as if constrained by community demand. We estimate two venerable community demand frameworks based on the median voter model. We also estimate several ad hoc government spending equations to serve as reasonable alternatives. The set of empirical models being tested are non-nested hypotheses. They differ in terms of functional form and/or explanatory variables (e.g., median income and tax price versus average income and tax price) so that one model cannot be derived as a special case of another. Goodness-of-fit based tests like the F-test are not appropriate for non-nested hypotheses. Instead, the Cox test is an appropriate method for such settings (Cox, 1961, 1962; Pesaran, 1974).

The Cox test and decision rules are based on pairwise tests of all of the specifications in the set of hypotheses. For example, when testing the two non-nested empirical models, H_f and H_g, we first treat H_f as the maintained hypothesis in order to calculate the Cox statistic, an asymptotically normal statistic based on the Neyman-Pearson likelihood ratio. The maintained hypothesis is rejected for a sufficiently negative Cox statistic. The next step of the procedure is to switch the roles of the two models, now treating H_g as the temporarily maintained hypothesis against the alternative H_f. A significantly negative statistic calls for rejecting H_g. Thus, the Cox procedure can yield the following conclusions: do not reject either H_f or H_g; reject either one or the other model, but not both; or reject both models. This last possibility, that of bilateral rejection, means that the Cox test might reject all of the models in the stated set of hypotheses. In such cases, the Cox test is essentially rejecting all of the examined models in favor of an unspecified alternative model. Therefore, the Cox test allows us to test the median voter models of community demand against both the set of ad hoc alternatives specified here and a set of unknown alternative formulations. In this sense our set of alternative specifications is not crucial to testing the median voter demand model. Nonetheless, our choice of alternatives follows previous tests of the median voter model (MVM) as well as having the intuitive appeal of a test of competing median and average voter models of community demand.[2]

3.2 Alternative functional forms

The cross-sectional county data are from the 1992 *Census of Governments* and the *1994 County and City Data Book.* Total tax base, county government general expenditure, by major categories, and state and federal aid receipts for 1990 are from the 1992 *Census of Governments.* The median house value, median household income, number of households, population, and population density data are from the *1994 County and City Data Book.* The average household income data are from the *1990 Census of Population.*

We use the following notation: E = local government spending; m = pivotal voter's money budget before local tax; and s = pivotal voter's share of the local tax base, a tax price concept; N = jurisdiction population; D = jurisdiction population density; and H = Herfindahl index of spending concentration. There are two forms of the expenditure function that appear in much of the local public spending literature, the model in which the pivotal voter's income is aggregated with his share of intergovernmental grants and a version in which income and share of grants enter as

[2]Turnbull and Djoundourian (1994) test the MVM for U.S. cities. Turnbull and Mitias (1999) test county governments in five Midwest states as well as state governments.

separate terms:

$$\ln E_i = \beta_0 + \beta_1 \ln s_i + \beta_2 \ln(m_i + s_i G_i) + \beta_4 \ln N_i + \beta_5 \ln D_i + \beta_6 \ln H_i + \varepsilon_i \quad (1)$$

$$\ln E_i = \beta_0 + \beta_1 \ln s_i + \beta_2 \ln m_i + \beta_3 \ln s_i G_i + \beta_4 \ln N_i + \beta_5 \ln D_i + \beta_6 \ln H_i + \varepsilon_i \quad (2)$$

The second version is the more popular of the two forms, probably because it allows for asymmetric community responses to marginal increases in voter income and intergovernmental grants, an asymmetry often found in local government spending behavior. Turnbull (1995) shows that including the tax share term in the grants variable in the second function means that the tax share coefficient, β_1, is interpreted as the tax price elasticity in both formulations. The interpretation of the other variable coefficients is straightforward: β_2 is the income elasticity and β_3 the grant elasticity of community demand. The set of alternative expenditure functions are based on these two general forms.

According to the median voter model (MVM), community demand for local public spending reflects the demand of the median income voter. The MVM versions of (1) and (2) use median household income and median property tax share (calculated as the median house value divided by the total tax base) for m and s terms, respectively. Clearly, these two MVM specifications are non-nested hypotheses in light of the different functional forms based on the treatment of household income and share of intergovernmental aid. The remaining alternative specifications are based on the assumption that the community demand for public spending reflects the demands of the average household in the community. These average voter models (AVMs) use average household income and average tax share (calculated as the per household share of the property tax raised) for the income and tax share variables in (1) and (2). These functions, too, are tested pairwise against each other as well as against each of the median voter formulations.

3.3 Specification Test results

Table 2 presents key parameter estimates for the alternative specifications for pooled, home rule, and Dillon's rule counties. The MVM expenditure functions yield inelastic tax price effects while the average voter model versions yield elastic or close to unit elastic estimates. The median household income yields smaller income elasticities than average household income but the difference in median versus average variables does not appear to systematically affect the grant elasticity estimates. The Herfindahl index of spending concentration has a significantly positive coefficient in all of the estimated models in Table 2; counties that concentrate their spending on fewer service categories also tend to spend more than counties with more diffuse spending patterns. This is consistent with similarly defined fiscal variables elsewhere in the literature (Turnbull, 1998, Campbell and Turnbull, 2003).

Rather than report the matrices of Cox statistics from all of the pairwise tests, we simply note at this point that the Cox specification test rejects all of the models when performed on the pooled, home rule, and Dillon's rule samples of counties. This is not surprising given the strict test criteria and the breadth of counties in such broadly pooled samples. In any event, we argue that it is more meaningful to apply the Cox test to the set of spending models for each state individually in order to allow other state-specific effects that might not be fully captured by the state dummy variables used in the pooled data models reported in table 2.

We apply the Cox test procedure to all pairwise comparisons of the four alternative empirical models for each of the 38 states. Table 3 reports the test conclusions (at the 5% level) for the 38 pooled samples of counties as well as the indicated subsamples for each individual state. We find the states in our sample yield surprisingly strong support for the MVM; 25 of the state samples do not reject the MVM and 13 do.

Before correlating the MVM rejection/acceptance with degree of home rule, we consider additional sample breakdowns. First, we subdivided each state into urban and rural county samples, where counties in a Metropolitan Statistical Area (MSA) are considered urban and those outside MSAs are rural. There are two related rationales for separating urban and rural counties in the analysis: horizontal competition among local governments and vertical relationships among overlapping city and county jurisdictions. Considering each in turn, horizontal competition among local governments can constrain their expansionary tendencies, providing an external constraint on local Leviathans (Brennan and Buchanan, 1980). We expect greater horizontal competition in urban areas than in rural areas because urban areas comprise numerous local governments within the single integrated metropolitan economy while rural areas do not. At the same time, the theory of overlapping jurisdictions recognizes that county governments not only respond to horizontal competition by other county governments, but that they also interact with the municipalities and other local governments within their borders (Turnbull and Djoundourian, 1993). There is a greater number of such overlapping relationships in urban areas than in rural areas where much county land lies outside incorporated city government boundaries, so we expect urban counties to be more keenly affected by the presence of overlapping jurisdictions than are their rural counterparts.

When tested separately, differences do arise between the urban and rural counties. However, only Illinois, Minnesota, and Pennsylvania provide situations in which breaking counties into urban and rural samples changes the Cox test conclusion from MVM rejection (for the state sample as a whole) to no rejection (for both the separate urban and rural samples). Arkansas and West Virginia, on the other hand, project support for the MVM by their rural counties even though the statewide samples reject the MVM for each.

Fischel (2001) argues that smaller governments are more likely to be responsive to voters than are larger governments. To see the extent to which this proposition holds for counties, we repeat the Cox specification tests on subsamples of small and large counties for each individual state. We apply the Quandt (1958, 1960) switching regression to Model B to derive the optimal partition for "small" and "large" counties in each state. We then repeat the Cox tests on each of these subsamples to evaluate how population size affects the role of community demand as a constraint on county governments. The conclusions from these tests are reported in the last two columns of table 3. As in the urban-rural comparison, there appears to be no clear pattern of stronger support or rejection of the MVM for small versus large counties.

Turning to the main focus of this study, table 4 recasts the information in table 3, summarizing the results by degree of home rule. The pattern that emerges is pretty clear: 61% of states rejecting the MVM are Dillon's rule states while 64% of the states not rejecting the MVM are home rule states. Tallying by home rule status, approximately one half of the non-home rule states and three quarters of the home rule states do not reject the MVH. It appears that home rule states show stronger support for the MVM than do non-home rule states. We conclude that there is a greater tendency for counties under home rule to behave as if they are constrained to satisfy community demand as depicted by the median voter framework.

At this point we note that support for the MVM is overwhelmingly for Model B, the median voter model that allows for asymmetric income and grant effects on local spending. While several rationales for this asymmetry have been offered in the literature, we focus on one asymmetry source–voter fiscal illusion–and how it varies under home rule and Dillon's rule. Therefore, having discovered that home rule counties tend to operate on the median voter demand curve, the question becomes one of identifying *where* on the curve the counties operate; are they constrained to operate near the outcome most preferred by voters or do they successfully exploit fiscal illusion to expand operations beyond that point? We consider this issue in the next section.

4 Home Rule and Fiscal Illusion

4.1 The fiscal illusion model

This fiscal illusion model of local spending assumes that the public sector bureaucracy maximizes public output subject to meeting voters' demands. The essence of fiscal illusion, though, requires that voters do not know how much revenue the local government obtains higher government grants (Oates 1979, 1988, Turnbull 1998, Mitias and Turnbull 2001). This lack of information allows the local government to provide public services at lower perceived tax prices, so that voters end up supporting greater local spending than they would under perfect information. The framework presented here summarizes the misperception model developed in Turnbull (1998) with emphasis on its empirical implementation.

Define the following notation for the pivotal voter: E = local government spending; y = private goods spending by voter; m = voter's money budget before local tax; and s = voter's share of the local tax base. The voter's utility is given by the well-behaved utility function $u(E, y)$.

The total of the lump-sum intergovernmental grants received by the local government from higher level governments is G. In general, the voter's perceived marginal tax price of local spending is t, which can differ from the true marginal tax price s. Under our asymmetric information assumption, the voter does not observe the entire amount of intergovernmental grants received by the community. Let the aid perception parameter θ denote the proportion of grant receipts of which the voter is aware; $(1-\theta)G$ therefore is the amount that escapes the voter's notice. We assume $0 \leqslant \theta \leqslant 1$ so that $\theta = 1$ indicates full information (no fiscal illusion) and $\theta = 0$ indicates complete fiscal illusion. The voter's perceived tax bill for spending E is given by the voter's perceived share of total spending, tE, less the share of perceived intergovernmental aid, or

$$T^p = tE - s\theta G \tag{3}$$

The demand constraint on the output maximizing public bureaucracy is characterized by the pivotal voter's behavior under the perception constraints in t and θ reflecting the degree of fiscal illusion. The voter's problem is to maximize $u(E, y)$ subject to the perceived budget constraint $m = y + T^p$, or

$$\max_{E,y} u(E, y) \quad \text{s.t.} \quad y + tE = m + s\theta G \tag{4}$$

At the same time on the supply side of the model, the service providing government directly observes the entire amount of intergovernmental grants G. Following convention, the local government must satisfy a balanced budget constraint, which requires that the government raises local taxes of $E - G$. Since the individual pivotal voter's actual share of local taxes is s, assumed exogenous,[3] this means that the voter's actual tax bill is

$$T^a = s(E - G) \tag{5}$$

In order for the voter's misperception of the marginal tax price to persist, though, the voter's total perceived tax bill must equal the actual total tax bill in equilibrium.

[3] That is, the pivotal voter's property capitalizes any fiscal differentials at the same rate as other taxable property in the jurisdiction. This is a standard assumption.

Equating (3) and (5) and solving for t, the perceived tax price in equilibrium must therefore satisfy the *consistency condition*

$$t = s\left(1 - (1-\theta)\left(\frac{G}{E}\right)\right) \tag{6}$$

Figure 1 depicts the complete model determining the equilibrium level of public service provision, perceived tax price, and taxpayer utility. When there is no fiscal illusion, the voter's perceived tax price equals the actual marginal tax price, s, which is the absolute slope of the actual budget line for the voter, cd. The vertical intercept of this line is $m + sG$ and the voter maximizes utility at E_1, where the indifference curve u^1 is tangent to cd. Under some degree of fiscal illusion, however, $\theta < 1$ and the voter's perceived marginal tax price is t, the absolute slope of the perceived budget constraint for the voter, ef. The vertical intercept of this line is $m + s\theta G$, which clearly must lie below point c. The consistency condition for equilibrium (that is, the condition that actual and perceived total taxes are the same for the voter) is fulfilled for the perceived tax price t that ensures the voter's indifference curve u^2 is tangent to the perceived budget constraint where the perceived constraint intersects the actual budget line, say at E_2. In terms of the diagram, condition (4) ensures the tangency of u^2 and the perceived budget line ef while the consistency condition (6) ensures that the tangency occurs where cd and ef intersect.

This graphical device also easily illustrates how a greater degree of fiscal illusion affects public spending. The equilibrium under perfect information is E_1 and the equilibrium under fiscal illusion $(1-\theta)$ is E_2 and clearly, $E_2 > E_1$.This is the over-spending effect of fiscal illusion referred to in the introduction: *fiscal illusion lowers the perceived tax price of additional spending and thereby leads to greater spending* (Turnbull, 1998).

This framework also illustrates how the expenditure model in the previous section can be modified to incorporate the effects of fiscal illusion. The expenditure function (2) is based on the model of public expenditure demand as a function of the voter's tax price, income, and the voter's share of community grants, etc., or $E = f(t, m, sG, N, D, H)$. To introduce fiscal illusion effects, simply replace the tax price and share of grants with the perceived tax price (6) and perceived share of grants

$(s\theta G)$ to get $E = f(t, m, s\theta G, N, D, H)$. In logarithmic form, we have the following expenditure model:

$$\ln E_i = \beta_0 + \beta_1 \ln t + \beta_2 \ln m_i + \beta_3 \ln(s_i\theta G_i) + \beta_4 \ln N_i + \beta_5 \ln D_i + \beta_6 \ln H_i + \varepsilon_i \quad (7)$$

Substituting the consistency condition (6) for t in the above to ensure that the voter's actual tax bill ends up matching his perceived tax bill in equilibrium, and rearranging, we obtain the estimating equation as

$$\begin{aligned} \ln E_i - \beta_1 \ln\left(1 - (1-\theta)\frac{G_i}{E_i}\right) &= \tilde{\beta}_0 + \beta_2 \ln m_i + \beta_1 \ln s_i + \beta_3 \ln s_i G_i + \beta_4 \ln N_i \\ &\quad + \beta_5 \ln D_i + \beta_6 \ln H_i + \varepsilon_i \end{aligned} \quad (8)$$

where $\tilde{\beta}_0 = \beta_0 + \beta_3 \ln\theta$. Since the dependent variable, E, appears in a highly nonlinear form on the left hand side of the above equation, we use an iterative MLE procedure to estimate the parameters as follows. Conditional on θ and β_1, construct the variable

$$z_i(\theta, \beta_1) = \ln E_i - \beta_1 \ln\left(1 - (1-\theta)\frac{G_i}{E_i}\right) \quad (9)$$

and estimate the equation

$$\begin{aligned} z_i(\theta, \beta_1) &= \tilde{\beta}_0 + \beta_2 \ln M_i + \beta_1 \ln s_i + \beta_3 \ln s_i G_i + \beta_4 \ln N_i \\ &\quad + \beta_5 \ln D_i + \beta_6 \ln H_i + \varepsilon_i \end{aligned} \quad (10)$$

using least squares. Repeating the procedure, search over values of θ and β_1 in (9) in order to maximize the likelihood function for (10). This method does not directly yield standard error estimates for θ and β_1, so the standard errors of these parameters are estimated using the bootstrap method.

4.2 Fiscal illusion estimates

Table 5 presents the fiscal illusion model estimates for models including state fixed effects. The results for models without state dummy variables are virtually identical and so are not reported for brevity. All of the parameter estimates fall within expected ranges and–save for the aid perception parameter–there is surprisingly little variation in the estimates across the pooled, urban and rural samples.

The aid perception parameter reported in the first column for the pooled sample indicates that counties behave as if their voters only perceive 79% of the intergovernmental grants actually received by the locale. The remaining 21% is misinterpreted by voters in terms of a lower perceived tax price, which by itself–as indicated in Figure 1–leads to greater county spending. Looking at the subsamples, the perception parameter estimates imply greater fiscal illusion for urban counties than for rural counties. These estimates serve as a benchmark when examining how they will vary under differing home rule regimes below.

The rationale for restricting home rule is that it restrains the local Leviathan from expanding spending beyond what taxpayers would otherwise support. In order to get an idea about how fiscal illusion varies with the degree of home rule, we first estimate the fiscal illusion model (8) for each state in our sample. Table 6 summarizes the aid perception estimates (all of which are significantly different from both zero and one), grouped by home rule category. The estimates range from 0.35 (Kansas) to 0.91 (Oregon). The averages and ranges of values are remarkably similar for both the strong home rule and the strong non-home rule states. There is some variation across the weak home rule and weak non-home rule states, but the pattern is not clear.

In order to get a better picture of how fiscal illusion is affected by the degree of home rule, we group all of the non-home rule states (strong and weak) and home rule states into two separate samples. We then re-estimate the fiscal illusion model (8) for these samples as well as their urban and rural county subsamples. Table 7 reports the results for the state dummy variable models. (The models without state dummy variables yield similar results.) Overall, we find a significantly lower perception estimate for home rule states, 0.77, than for non-home rule states, 0.81. A greater degree of home rule apparently allows county governments to more thoroughly exploit voter fiscal illusion, thereby expanding county spending.

Table 7 also reports the estimates for the urban and rural subsamples of each home rule category. The patterns observed for the perception parameter estimates across these subsamples reveals that the differences in fiscal illusion across home rule regimes for the pooled samples is being driven by the difference between urban and rural counties in the non-home rule category. Home rule and non-home rule urban counties behave as if their voters have the same fiscal illusion but home rule rural counties behave as if their voters have greater fiscal illusion than non-home rule rural counties. Whatever the constraint on county behavior being imposed by Dillon's rule, it appears to only affect rural counties. Something in the urban environment appears to override the effects of Dillon's rule (restricting home rule) on fiscal illusion. Whether this can be attributed to horizontal competition or vertical overlapping jurisdiction effects is not known. In any event, the rural county results portray a picture consistent with the Leviathan view; restricting home rule reduces the power of the locale to exploit voter fiscal illusion, which by itself constrains the size of the local government.

5 Conclusion

This study examined how home rule affects local governments' ability to meet their community demands and further whether or not home rule increases the opportunity for local governments to expand spending beyond the level most preferred by voters. Interpreting home rule as a relaxation of external constitutional constraints imposed on local governments opens up alternative hypotheses regarding how home rule affects local government behavior and performance. The Cox specification test applied to counties in 38 states reveals that 61% of the states rejecting the median voter model are Dillon's rule states while 64% of the states not rejecting the median voter model are home rule states. These results support the hypothesis that home rule increases the propensity of counties to behave as if constrained to satisfy community demand as depicted by the median voter framework. The results also reveal different behavior patterns for urban and rural counties. Partitioning the data by government size, however, does not reveal any clear differences between large and small counties in these states.

Our analysis of home rule relating to fiscal illusion finds that counties in home rule states exhibit significantly greater fiscal illusion than do those in Dillon's rule states. A greater degree of home rule apparently allows county governments to more thoroughly exploit voter fiscal illusion, a conclusion consistent with the Leviathan view of local government. Interestingly, this result appears to be driven mainly by rural rather than urban counties.

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Table 1. Category of Different Home Rule States

Category (38)	States
Strong HR state (12)	CO, KS, LA, MO, MT, ND, OH, OR, SC, SD, UT, WI
Weak HR State (9)	AR, CA, FL, GA, IA, IL, IN, MD, NY
Weak Non HR State (8)	AL, KY, MI, MS, NJ, PA, TN, WA
Strong Non HR State (9)	ID, MN, NC, NE, NM, OK, TX, WV, WY

Table 2. County Expenditure Function Estimates

	ALL Pooled				HR				Non HR			
	MVM A	MVM B	AVM C	AVM D	MVM A	MVM B	AVM C	AVM D	MVM A	MVM B	AVM C	AVM D
Taxshare	-.3559**	-.5988**	-1.1758**	-1.3258**	-.3237**	-.6146**	-1.3939**	-1.3733**	-.4063**	-.6215**	-.9294**	-1.2278**
	(.0204)	(.0210)	(.1166)	(.1022)	(.0257)	(.0276)	(.1407)	(.1221)	(.0323)	(.0325)	(.1936)	(.1717)
	[-17.38]	[-28.38]	[-10.08]	[-12.97]	[-12.55]	[-22.22]	[-9.90]	[-11.24]	[-12.55]	[-19.09]	[-4.80]	[-7.15]
Income	.7400**		1.0071**		.8784**		1.0511**		.6173**		.9902**	
+Taxshare*Grant	(.0514)		(.0650)		(.0690)		(.0836)		(.0765)		(.1001)	
	[14.38]		[15.49]		[12.72]		[12.56]		[8.06]		[9.89]	
Income		.6047**		.9716**		.7356**		.9992**		.4730**		.9507**
		(.0471)		(.0560)		(.0608)		(.0718)		(.0719)		(.0866)
		[12.83]		[17.32]		[12.09]		[13.90]		[6.57]		[10.97]
Taxshare*Grant		.3219**		.3367**		.3889**		.3870**		.2813**		.3061**
		(.0123)		(.0124)		(.0186)		(.0188)		(.0168)		(.0561)
		[26.14]		[27.05]		[20.90]		[20.53]		[16.73]		[17.80]
Population	.6298**	.3750**	-.2141	-.3746**	.6640**	.3675**	-.4302**	-.4113**	.5781**	.3446**	.0236	-.2905
	(.0267)	(.0262)	(.1169)	(.1023)	(.0342)	(.0341)	(.1429)	(.1238)	(.0414)	(.0403)	(.1966)	(.1691)
	[23.53]	[14.28]	[-1.83]	[-3.66]	[19.37]	[10.77]	[-3.01]	[-3.32]	[13.96]	[8.54]	[0.12]	[-1.71]
Pop. Density	-.1088**	-.0576**	-.1700**	-.1135**	-.1549**	-.0829**	-.1976**	-.1258**	-.0649*	-.0248	-.1435**	-.0966**
	(.0190)	(.0172)	(.0195)	(.0172)	(.0243)	(.0217)	(.0246)	(.0216)	(.0293)	(.0269)	(.0307)	(.0272)
	[-5.71]	[-3.34]	[-8.68]	[-6.57]	[-6.37]	[-3.82]	[-8.03]	[-5.80]	[-2.21]	[-0.92]	[-4.66]	[-3.54]
Herfindahl	.9701**	.9669**	1.0091**	1.0011**	1.1315**	1.0825**	1.1405**	1.0872**	.7955**	.8174**	.8691**	.8925**
	(.0386)	(.0355)	(.0401)	(.0351)	(.0479)	(.0423)	(.0490)	(.0426)	(.0620)	(.0561)	(.0653)	(.0576)
	[25.10]	[27.90]	[25.16]	[28.51]	[23.62]	[25.57]	[23.26]	[25.48]	[12.82]	[14.57]	[13.30]	[15.48]
Adj R-square	0.9359	0.9486	0.9306	0.9469	0.9491	0.9604	0.9464	0.9596	0.9208	0.9353	0.9116	0.9313
F-value	779.57**	961.37**	716.31**	928.79**	894.49	1119.68**	847.41**	1095.19**	576.57**	683.49**	511.20**	640.86**
Obs.	2197	2196	2197	2196	1174	1173	1174	1173	1018	1017	1018	1017

Note: All models include constant term and state dummies and all variables are log form except state dummies.
Std. Error in ( ) and t-statistics in [ ].
MVM A and MVM B: median tax share and income variables
AVM C and AVM D: average tax share and income variables
* Significant at the 5% level ** Significant at the 1% level

Table 3. MVM and Degree of Home Rule (HR)

State	Total Counties	Sample Counties	Degree of HR	Reject MVM?				
				State	Non-MSA	MSA	Small Population*	Large Population*
AL	67	43	Weak non HR	No	No	Yes	No	No
AR	75	55	Weak HR	Yes	No	Yes	No	No
CA	57	57	Weak HR	Yes	Yes	No	Yes	Yes
CO	62	37	Strong HR	No	No	No	Yes	No
FL	66	66	Weak HR	No	No	No	No	No
GA	157	154	Weak HR	Yes	Yes	No	Yes	Yes
IA	99	63	Weak HR	Yes	Yes	No	No	No
ID	44	23	Strong non HR	No	No	-	No	-
IL	102	72	Weak HR	Yes	No	No	No	No
IN	91	89	Weak HR	No	No	No	Yes	No
KS	105	104	Strong HR	Yes	Yes	Yes	No	Yes
KY	119	112	Weak non HR	No	No	No	No	No
LA	61	26	Strong HR	No	No	Yes	Yes	No
MD	23	23	Weak HR	No	No	No	Yes	-
MI	83	82	Weak non HR	Yes	Yes	No	No	No
MN	87	46	Strong non HR	Yes	No	No	No	No
MO	114	54	Strong HR	Yes	Yes	No	No	No
MS	82	35	Weak non HR	Yes	Yes	-	Yes	Yes
MT	54	38	Strong HR	No	No	-	No	No
NC	100	100	Strong non HR	Yes	Yes	Yes	Yes	Yes
ND	53	45	Strong HR	No	No	-	No	No
NE	93	93	Strong non HR	No	No	-	Yes	No
NJ	21	20	Weak non HR	Yes	-	Yes	Yes	Yes
NM	33	27	Strong non HR	Yes	Yes	-	Yes	No
NY	57	56	Weak HR	No	Yes	Yes	Yes	Yes
OH	88	51	Strong HR	No	No	No	No	No
OK	77	46	Strong non HR	Yes	Yes	Yes	Yes	Yes
OR	36	29	Strong HR	No	No	No	No	Yes
PA	66	54	Weak non HR	Yes	No	No	No	Yes
SC	46	46	Strong HR	No	Yes	Yes	No	Yes
SD	64	37	Strong HR	Yes	Yes	-	Yes	Yes
TN	93	88	Weak non HR	Yes	Yes	Yes	Yes	Yes
TX	254	157	Strong non HR	No	No	No	No	No
UT	29	28	Strong HR	No	No	-	No	Yes
WA	39	38	Weak non HR	No	No	No	No	No
WI	72	72	Strong HR	No	Yes	No	Yes	No
WV	55	54	Strong non HR	Yes	No	Yes	Yes	Yes
WY	23	23	Strong non HR	No	No	-	Yes	Yes

* Population partitions vary by state and are determined by using switching regressior

Table 4. MVM Test and Degree of Home Rule

Degree of Home Rule	States Rejecting MVM (34% of Total)	States Not Rejecting MVM (66% of Total)
Strong Non-HR	NC, NE, NM, OK, WV	ID, TX, WY
(Column %)	(38%)	(12%)
[Row %]	[63%]	[38%]
Weak Non-HR	MS, NJ, TN	AL, KY, MI, MN, PA, WA
(Column %)	(23%)	(24%)
[Row %]	[33%]	[67%]
Weak HR	CA, GA	AR, FL, IA, IL, IN, MD, NY
(Column %)	(15%)	(28%)
[Row %]	[22%]	[78%]
Strong HR	KS, MO, SD	CO, CA, ND, OH, OR, SC, UT, WI
(Column %)	(23%)	(36%)
[Row %]	[25%]	[75%]

Table 5. Estimated Fiscal Illusion Models for Pooled Samples

	Pooled	MSA	Non-MSA
Taxshare	-0.5900**	-0.5000**	-0.5800**
	(.0297)	(.0196)	(.0153)
	[-19.80]	[-25.46]	[-37.75]
Income	0.6291**	0.6060**	0.5942**
	(.0480)	(.0781)	(.0643)
	[13.08]	[7.75]	[9.24]
Taxshare*Grant	0.3070**	0.3537**	0.2837**
	(.0110)	(.0197)	(.0135)
	[27.77]	[17.87]	[20.96]
Population	0.3867**	0.5054**	0.3894**
	(.0174)	(.0266)	(.00226)
	[22.14]	[18.98]	[17.17]
Pop. Density	-0.0610**	-0.0266	-0.0615**
	(.0171)	(.0268)	(.0222)
	[-3.56]	[-0.99]	[-2.77]
Herfindahl	0.9882**	0.7635**	1.0713**
	(.0353)	(.0636)	(.0416)
	[27.93]	[11.99]	[25.37]
Aid perception (θ)	0.7900**	0.7600**	0.7900**
	(.0075)	(.0170)	(.0086)
(θ = 0)	[104.78]	[44.65]	[91.22]
(θ = 1)	[-27.85]	[-11.87]	[-24.24]
SSE	266.5302	54.9785	191.4597
Sample size	2243	652	1591

Note: All models include constant term and state dummy varaibles.
Standard error is ( ) and t-statistics in [ ].
* Significant at the 5% level ** Significant at the 1% level
t-statistics for taxshare and aid perception calcuated from bootstrap standard error.

Table 6. Aid Perception Estimates by State

Strong Non-HR		Weak Non-HR		Weak HR		Strong HR	
ID	.74	AL	.87	AR	.84	CO	.84
MN	.88	MI	.85	CA	.89	KS	.35
NE	.71	MS	.81	FL	.79	LA	.46
NM	.79	NJ	.71	GA	.62	MO	.63
NC	.86	TN	.87	IA	.75	MT	.79
OK	.81	WA	.84	IL	.81	ND	.81
PA	.84			IN	.64	OH	.83
TX	.47			KY	.61	OR	.91
WV	.37			MD	.87	SC	.71
WY	.60			NY	.77	SD	.63
						UT	.77
						WI	.80
Average	.70		.83		.76		.71
Range	[.37, .88]		[.71, .87]		[.61, .89]		[.35, .91]

Table 7. Estimated Fiscal Illusion Models for Home Rule and Non Home Rule Subsamples

	Pooled		HR		Non HR	
	HR	Non HR	MSA	Non MSA	MSA	Non MSA
Taxshare	-0.6000**	-0.6100**	-0.5900**	-0.5500**	-0.4700**	-0.6300**
	(.0169)	(.0193)	(.0277)	(.0184)	(.0789)	(.0255)
	[-35.37]	[-31.48]	[-21.24]	[-29.80]	[-12.66]	[-24.69]
Income	0.7659**	0.4956**	0.7935**	0.6742**	0.4195**	0.5152**
	(.0627)	(.0725)	(.0946)	(.0866)	(.1286)	(.0938)
	[12.21]	[6.83]	[8.38]	[7.78]	[3.26]	[5.49]
Taxshare*Grant	0.3676**	0.2682**	0.4533**	0.3167**	0.3022**	0.2623**
	(.0157)	(.0156)	(.0267)	(.0188)	(.0291)	(.0193)
	[23.39]	[17.09]	[16.92]	[16.83]	[10.36]	[13.56]
Population	0.3806**	0.3622**	0.3821**	0.4377**	0.5646**	0.3214**
	(.0217)	(.0275)	(.0324)	(.0284)	(.0433)	(.0352)
	[17.48]	[13.15]	[11.78]	[15.38]	[13.01]	[9.11]
Pop. Density	-0.0838**	-0.0316	-0.0202	-0.1276**	-0.0180	-0.0005
	(.0215)	(.0267)	(.0331)	(.0283)	(.0450)	(.0500)
	[-3.89]	[-1.18]	[-0.61]	[-4.50]	[-0.40]	[-0.01]
Herfindahl	1.1092**	0.8352**	0.8864**	1.1956**	0.5763**	0.9307**
	(.0434)	(.0571)	(.0762)	(.0511)	(.1065)	(.0687)
	[25.53]	[14.62]	[11.66]	[23.39]	[5.41]	[13.54]
Aid perception	0.7700**	0.8100**	0.7700**	0.7700**	0.7700**	0.8200**
	(.0109)	(.0126)	(.0159)	(.0105)	(.0265)	(.0138)
(theta = 0)	[70.01]	[64.09]	[48.15]	[72.67]	[28.97]	[59.26]
(theta = 1)	[-16.42]	[-15.03]	[-10.57]	[-15.95]	[-8.65]	[-13.00]
SSE	112.3314	148.8963	24.8960	77.1225	28.5523	110.7008
Sample size	1202	1041	366	836	286	755

Note: All models include constant term and state dummy varaibles.
Standard error is ( ) and t-statistics in [ ].
* Significant at the 5% level ** Significant at the 1% level
t-statistics for taxshare and aid perception calcuated from bootstrap standard error.

Figure 1. The Effect of Fiscal Illusion on Equilibrium Spending