Comparing Local Government Autonomy Across States

GWIPP Working Paper

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Abstract

Local autonomy is a term that is frequently employed in both academic and popular discussions of local government, but it is rarely defined conceptually in a careful way or operationalized and subject to empirical research. In this paper we present a working definition of "local government autonomy" based on dimensions fundamental to the concept, identify variables to operationalize those dimensions, utilize factor analysis to combine those variables into underlying component factors, and create an overall Local Government Autonomy index that can be used as a variable in future research. We also use cluster analysis to create a classification scheme for different forms of local government autonomy. Finally, by using our local government autonomy index and factors as independent variables in a regression model we find they are highly useful for predicating the consequences of related local finance research questions.

I. Introduction

Local autonomy is a term that is frequently employed in both academic and popular discussions of local government, but it is rarely defined conceptually in a careful way or operationalized and subject to empirical research. The term is often used synonymously with concepts such as local fiscal discretion, decentralization, and home rule, each of which, we argue below, capture different and only partially overlapping dimensions of the broader concept of local autonomy as we use the term.

Existing local autonomy research reflects the conceptual confusion over the meaning of the term. While there have been efforts to measure various aspects of these related concepts (sometimes referred to by the authors as "local autonomy"), there has been no effort to measure the broader concept of local government autonomy. And the differing treatment of local autonomy makes it highly difficult to compare and generalize across works.

Stephens (1974) created a Centralization Index for states which took an equally weighted average of three different measures: fiscal responsibility, the share of state and local public services funded by the state; service delivery, the share of services performed by the state for 15 major functions of government; personnel, the share of state and local government personnel employed by the state. He subsequently updated his data for periods between 1902 and 2002, showing a clear movement from state decentralization to

centralization (Stephens and Wikstrom, 2007). While useful for comparative purposes, Stephens' index only focuses on three aspects of local government autonomy.

In 1981, and again in 1993, the Advisory Commission on Intergovernmental Relations (ACIR), led by Joseph Zimmerman, created an index of "discretionary authority" through extensive studies of home rule and local government responsibility. The studies were based on legal research and a mailed questionnaire sent to the Governor, Attorney General, legislative research bureau officials, county association and municipal league in each state as well as non-governmental experts.

The 1981 ACIR report created indices of the discretionary authority of cities, counties, towns, villages, townships, and boroughs that ranked each state on a one to five scale based on staff analysis of the questionnaire responses with respect to the latitude given to localities in four areas: structure, defined by constitutional limitations on local action; functions, defined by the authority to provide various services; finances, defined as the latitude they have to raise revenue through taxation and debt; and personnel, defined as the authority to determine hiring, firing and pay practices. They then calculated an overall ranking of state discretionary authority. The 1993 ACIR report provided a comprehensive review of changes in state laws from the periods 1978 and 1990 for: altering boundaries and responsibilities, local elections, administrative operations and procedures, financial management, and personnel management. However, the report did not replicate the Discretionary Authority index.

In 2001, Dale Krane et. al. published *Home Rule in America*, a study which included descriptions of home rule conditions in all 50 states, provided by different authors responding to a common template. The authors of the individual state chapters covered setting, historical developments, structural features, functional responsibilities, fiscal autonomy, and state-local relationships. However, because of the ambiguity in the concepts that this paper seeks to address, the authors of the study discussed local autonomy features differently. While Krane created indices aggregating the author's treatment of various home rule features, the tables were sometimes incomplete, and Krane did not attempt to create an overarching index or ranking. Other authors have

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¹ They assigned different weights to the four types of discretionary authority (financial=4, functional=3, personnel=2, structural=1). But they do not provide explanation for this weighting. They only present the final rankings, not the state scores.

attempted to utilize Krane's data in subsequent studies of home rule but have needed to limit their sample to fewer than 40 valid states (see Geon and Turnbull, 2004).

International organizations have also examined or sponsored research related to local autonomy, with particular focus on fiscal decentralization. Examining data from OECD member nations, Blochliger and King (2006), for example, assess the fiscal autonomy of sub-central governments through seven indicators: share of tax revenue spent by sub-central governments, share of tax revenue over which sub-central governments have discretion, assessment levels, grants and non-earmarked grants as a share of tax revenue, ability to run deficits, ability to borrow, and a composite of the first two indicators. However, similar to the work of Stephens in the United States, discussed above, this index includes only the fiscal dimension of local autonomy.

The purpose of this paper is to report on research we are engaged in to measure empirically and compare local government autonomy across U.S. states. Drawing upon a conceptual framework developed to guide comparing systems of local governments across countries (Wolman, 2008), we present a conceptual definition of "local government autonomy" across U.S. states based on dimensions fundamental to the concept, identify variables to operationalize those dimensions, utilize factor analysis to combine our variables into underlying component factors, and create an overall Local Government Autonomy index that can be used as a measure in future state and local finance, and decentralization research.

II. Conceptually Defining Local Government Autonomy

As discussed above, local government autonomy has not been defined conceptually in a careful and consistent manner. We construct such a definition, building upon a related effort employed by one of the authors in a recent article. Wolman (2008) identified and defined conceptually nine important dimensions along which comparison of *systems of local governments* could occur, and which are substantively relevant because they relate to the essential functions of local government. Drawing upon these dimensions, we define local autonomy conceptually as a *system* of local government in which local government units have an important role to play in the economy and the intergovernmental system, have discretion in determining what they will do without

undue constraint from higher levels of government, and have the means or capacity to do so. We thus define local autonomy in terms of three dimensions, for some of which we also identify subdimensions as appropriate.

- **1.** Local Government Importance: A local government system in which local government is free to do what it wishes but has no possibility of doing anything important does not conform to our concept of local autonomy. In this dimension we define the importance of local governments relative to both the state economy and to higher levels of government. We seek to answer the questions:
 - Is local government important in that its actions affect the state economy?
 - Does local government play an important role in the intergovernmental system?
- **2.** Local Government Discretion: By local government discretion we mean the ability of local government to engage in activities as it sees fit, free from constraints imposed by the state government. There are three distinct subdimensions:
 - Structural and functional Responsibility and Legal Scope (state legal impositions on local government structure and functions);
 - Fiscal discretion limits (state imposed constraints on the ability of local government to raise revenues, to spend, and/or to incur debt); and
 - Unconstrained revenue (the amount of local revenue that local government can spend as it wishes rather than for a purpose set by other levels of government).
- 3. Local Government Capacity: Local government may have either or both importance and discretion, but neither of these may be relevant if the local government system does not have the means to accomplish its objectives. Local government capacity conceptually includes a broad range of attributes, including resource sufficiency and stability, professional skills, management competence, quality of service delivery, etc. However, we are able to operationalize only one aspect of the resource sufficiency concern the diversity of revenue sources, a measure of the stability of local government finance in the face of decline of one source of revenue:
 - Stability and diversity of revenue sources.

III. Operationalizing and Measuring Local Government Autonomy

We proceed as follows. For each of the above dimensions and their subdimensions, we identify multiple variables that, together, capture the meaning of the dimensions and subdimensions. Unless noted otherwise, our units are the 50 state systems of general purpose local governments, which includes all independent counties, municipalities, and town/township governments within a state, and excludes special purpose and school district governments, as identified by the U.S. Census bureau.² Our data is mostly from 2002, corresponding with the last available Census of Governments survey.

Once we have identified a set of three or more appropriate variables for each dimension and subdimension of local government autonomy, we perform a factor analysis of the variables in each of the subdimensions. Factor analysis is a data reduction technique that combines many related variables into a smaller number of "latent variables," each of which is uncorrelated with any other latent variable in the factor analysis Each such factor identified by the process has a specific correlation with each of the variables included in the analysis (this correlation is called the "factor loading" of the original variable on the factor). Each factor is then characterized by the variable(s) having the highest factor loading on it. The way in which the factors are identified assures that each factor is independent of (uncorrelated with) each of the other factors. (For technical description of the factor analysis techniques used, see appendix A.)

The retained factors are then converted into continuous variables and a factor score is calculated for each unit (in our case state systems of local governments) thus allowing us to rank the states and to examine their dispersion. We used these factor scores to construct the rank value for each state within each dimension. In Appendix C, we present the rank ordering of states for each factor, from most to least local government autonomy, as defined by the factor loadings of the variables within each subdimension.

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In the next section, we combine our disparate factors together to construct an *overall* Local Government Autonomy index. Methodologically, this task requires that we examine the factors' correlation to ensure they are suitable for index construction. In addition, we have to determine how to weight the relative importance of the various factors. In absence of theory, we assign an equal weighting to each of our three dimensions.

Next, we use a clustering technique to see how states group together across our three fundamental dimensions of local government autonomy. Whereas factor analysis combines variables that move together, the cluster analysis is an exploratory, mathematical technique to identify sets of states with similar features across our three dimensions of autonomy.

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Finally, we test the utility and significance of our measures by applying our local autonomy constructs as independent variables in a regression model to test the extent to which they can explain the variation among states' local property tax per capita and in local expenditures per capita. To do this we use our local government autonomy factors and index along with measures of state wealth, region, political attitudes, and political culture as control variables

Indicators, Variables, and Results for Dimensions and Subdimensions

Below we review the variables we used as indicators for each subdimension, along with relevant information about sources. For each subdimension we discuss factor analysis results and the variables most descriptive of the factors (i.e., the factor loading results), and present a ranking of states along each retained factor. The factor loading scores are presented in Appendix B and the state rankings for each factor in Appendix C.

Dimension 1: Local Government Importance

To determine the relative importance of states' local governments we identified five fiscal, economic, and personnel variables that measure importance in the state economy and in the intergovernmental system. The fiscal measures include: local general purpose own-source revenue as a share of all state and local general purpose revenue, and the ratio of local general purpose government direct expenditures as share of all federal, state and local general purpose direct expenditures. The economic measure we use is local purpose direct expenditures as a share of gross state product. For the importance of public employment, we use two measures: local government employment as a percent of all employment in the state and local employment as a share of state and local public employment.³

The factor analysis yields two component factors. The factor loading table (see Appendix B, Table 1) shows that the three fiscal and economic factors combine to create the first factor, which accounts for about 54% of variance in the model once the factors are rotated to control for shared variance. And the personnel variables load strongly into the second factor, which account for another 33% of variance in the data. With less than 13% of cumulative variance lost in the creation of these factors we can be confident that they are strong factors.

This exploratory process suggests that we can create two strong and unique latent measures of local government importance. The first factor loads strongly with our three fiscal and economic measures of importance. We label this factor: *Importance of Local Government Outputs, Revenue, and Expenditure in the State Economy and Intergovernmental System*. The second factor is strongly associated with the two personnel variables and we name the factor: *Importance of Local Public Employment in the State Economy and Intergovernmental System*.

We then convert these factors into variables and use the factor scores to present the rankings of these factors by state in Appendix C (see Tables 1 and 2). The state rankings suggest that local governments in New York, Tennessee, North Carolina, respectively, are amongst the most important in terms of the importance of their fiscal activities in the state economy and intergovernmental system. Conversely, Delaware,

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³ These variables are reliably recorded from 2002 Census of Governments statistics. The gross state product denominator comes from 2002 Bureau of Economic Analysis statistics. Personnel data are for all local governments (including school districts and special districts).

Vermont, and West Virginia, respectively, have local governments that rank lowest in importance of local government in the state economy and intergovernmental system.

Similarly, analysis of the importance of local personnel factor suggests that local public employment may be most important to the economies of Wyoming, Texas, and Mississippi, respectively. While local government employment is less important in Hawaii, Rhode Island, and Delaware, respectively.

Dimension 2: Local Government Discretion

Subdimension 1: Degree of Local Government Structural and Functional Responsibility and Legal Scope

As discussed earlier, the most extensive study of local government responsibility in the United States was conducted by Joseph Zimmerman through the Advisory Commission on Intergovernmental Relations (ACIR) and last updated in 1993. Since ACIR dissolved, however, there have been few comprehensive reviews of the degree of home rule states permit. But the Krane et. al. (2002) study of *Home Rule in America* created appendix tables comparing the states on local government structural and functional responsibilities. We use the Krane appendixes to construct three ordinal variables measuring aspects of home rule.

First, we use Krane's measures of structural home rule, by which they mean the basic "power to create a new local government," including incorporation, annexation and extraterritoriality jurisdictions (p. 472). We adapt this structural home rule measure, which assigns each state an ordinal ranking of none, limited, structural, or broad. Next, we use Krane's data to measure functional home rule, or the extent to which local governments decide what policies and functions to engage in and notions of "impunity" from state legislative interference. We use their four level functional home rule classification consisting of broad functional, functional, limited functional, or none.⁴

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⁴ There were a few places where the Krane table required interpretation. For Alaska we interpret the "Broad 'liberal construction'" notation as broad structural and functional home rule. We consider Idaho's "Only home rule 'police powers'" to be limited functional. We interpret "charter writing authority only" in Nebraska to be limited structural. We consider South Dakota's "Fordham approach with few limits/devolution powers" to be limited functional and structural as the chapter indicates the structural right to form local governments has existed since 1969 but is rarely exercised and functional incorporation is allowed under strict state guidelines. West Virginia is denoted as "Very limited structural" and we keep this

We also used Krane's data to construct a variable that measures the range of municipal authority for handling key government services. For each state, the variable counts the number of responsibilities municipal governments perform for the categories of: city public health, city public works, city social services, and city public school management (other key municipal functions were excluded because they were performed by virtually all municipal governments). A state whose municipal governments are responsible for all four of these services, for example, would have high levels of local discretion.

Finally, since much of the Krane study looked at the application of functional and structural home rule features, we also include Richardson's assignment of Dillon's rule states. Dillon's Rule, as laid out by John Forrest Dillon in an 1868 case, asserts that:

"Municipal corporations owe their origin to, and derive their powers and rights wholly from, the legislature. It breathes into them the breath of life, without which they cannot exist." 5

Strict interpretations of Dillons Rule serve to limit the ability of local government to engage in behavior not explicitly permitted by the state. Richardson found that most states (31) retained at least some aspects of a formal Dillon's Rule legal structure limiting local government home rule.⁶

The factor analysis of these variables yielded one valid factor explaining 43% of variance and which we termed *Local Government Structural and Functional Responsibility, and Legal Scope*. The factor loading scores show that the structural home rule, lack of Dillon's rule, number of municipal functions and functional home rule all load highly into a single factor (see Appendix B, Table 2).

The distribution of factor scores for our home rule and local government responsibilities (see Appendix C, Table 3) shows that Alaska, Utah, Massachusetts, and

as limited structural. Finally, when a structural functional assignment was made in the table we disregard other qualifying text. All data are for municipal governments as there are several missing cases for county data.

⁵ Clinton v Cedar Rapids and the Missouri River Railroad, (24 Iowa 455; 1868).

⁶ A strong majority of states (40) were deemed structural home rule states, and most states (46) were found to have functional home rule. On the other hand, the Richardson study found most states (31) retained the Dillon's rule legal structure. We use the Richardson ranking, rather than other sources, as they the timing of the data roughly corresponds with the Krane study and our other 2002 measures.

⁷ We raised the Eigenvalue cutoff here to 1.1 in order to create one theoretically relevant local autonomy factor.

New Mexico have the most discretion, respectively. And, Vermont and New Hampshire have among the least home rule and local responsibilities based on our four ordinal constructs of home rule.

Subdimension 2: Fiscal Discretion Limits on Local Governments

We use a combination of the ACIR study and previous GWIPP research for the Lincoln Institute of Land Policy to show how different types of state legal limits on fiscal activities of local governments can be combined into composite factors measuring different levels of local discretion across states. We have variables related to property assessment limits, property tax limits, revenue/expenditure limits, and a measure of states' imposing debt limits on local governments.

Our property assessment limits is a dichotomous variable. We create a six point scale to rank the severity of both property tax limits and limits on revenue and expenditures. In both cases having no limits indicates the most fiscal discretion, limits with council majority override is next highest, followed by the need for a stronger supermajority council override, followed by limits which residents can override with a simple majority referendum then a by a supermajority referendum, and states with limits and no provision for overrides have the least fiscal discretion on our scale. These three variables are based on data compiled for the *Significant Features of the Property* Tax project being conducted by GWIPP with the collaboration and funding of the Lincoln Institute of Land Policy. The debt limits variable, based on ACIR (1993) data, is a three point scale proxy variable, where we rank whether states impose limits on municipalities, counties, both, or neither.

These four variables yield two factors with Eigenvalues greater than one, explaining 57% of the variance among the data; with the first factor accounting for 33% of variance and the second for 24% of overall variance. The factor loadings show that the first factor loads highly with property tax rate limits, revenue/expenditure limits, and debt limits and we label it *Tax, Spending and Debt Limits*. The second factor is associated with lack of assessment limits and we label it *Assessment Limits* (see

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⁸ Our final variables only used one ACIR measure, but it should be noted there may be reliability issues with this 1993 data.

Appendix B, Table 3). (In both cases positive factor loadings imply the lack of such limits.)

The separation of these variables into factors suggests that states with strong tax, spending, and debt limits on local governments tend to lack assessment limits. Analysis of our state factor scores (see Appendix C, Tables 4 and 5) shows that Tennessee, Florida, and Connecticut have among the fewest *Tax*, *Spending*, *and Debt Limits* and the highest scores for this factor. Delaware, Indiana, and Alaska have amongst the most limits and lowest scores. On our *Assessment Limit factor*, Tennessee, Florida, and Connecticut have the highest scores (fewest limits), whereas Delaware, Alaska, and Indiana have the lowest scores.

Subdimension 3: Local Government Unconstrained Revenue

We employ three variables to measure local government unconstrained revenue. The three related variables (described below) examine the relationship between own-source funds and local general purpose revenue. In other words, the variables measure how much money local governments take in on their own as theory predicts that own-source revenue should be less restricted:⁹

- 1) Local general revenue from own-source taxes and current charges as a percentage of all local general revenue;
- Revenue from local own-source taxes, and total federal, state and local intergovernmental (unrestricted) general support as a percentage of all local general revenue;
- 3) Total local general revenue from local own-source taxes, current charges, and general purpose (unrestricted) intergovernmental support as a percentage of all local general revenue.

These variables yield one latent factor that explains 74% of the variance in the model and which we term the *Unconstrained Local Revenue* factor (see Appendix B, Table 4). The factor score rankings (see Appendix C, Table 6) show that local

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⁹ In all cases data are from the 2002 Census of Governments, using general purpose local governments (which exclude school districts and special district local governments); higher percentages indicate greater local revenue discretion.

government in South Dakota, Vermont, and Maine have high levels of relatively unconstrained revenue from own-source taxes, unrestricted grants and local fees; conversely, Michigan and California have the lowest degree of unconstrained revenue. When considering these results it is important to remember that the factor only represents ratios of own-source revenues to general revenues, and not the aggregate ability to raise funds, so states with high rankings do not necessarily spend more locally, in fact several of the top-ranked states have relatively limited public sectors.

Dimension 3: Local Government Capacity

As noted previously, local government capacity conceptually includes a broad range of concerns related to resource sufficiency, professional competence, quality of service delivery, etc. Unfortunately, we are able to operationalize only one aspect of the resource sufficiency concern—the diversity of revenue sources, a measure of the stability of local government in the face of decline of one source of revenue.

Subdimension 1: Diversity of Revenue Sources

Our final dimension is a measure of the range of local financing options available. This construct assumes that local governments with more revenue sources have more revenue stability as a change to one source will have a smaller net effect.

To measure revenue stability we constructed three variables. First, there are two diversity indices that measure the heterogeneity of local revenue sources. A high ratio indicates the state's local governments draw similar revenue from the range of sources selected in the index, whereas a low score indicates bias for select inputs. For example, if a state's local governments receive 90% of their revenue from property tax and 10% percent from everything else, this heterogeneous arrangement would have a low diversity score.

We constructed two diversity indices, one that measures the variation among five types of own-source revenue streams (property tax, general sales tax, selective sales tax, income tax, and current charges), and a second more comprehensive diversity index that measures the same variables with the additions of federal and state unrestricted intergovernmental aid. Finally, we created a scale measure of the number of our four

local purpose taxes that account for more than 1% of own-source revenue. The final measures are: 10

- 1. Diversity index of local property, general sales, selective sales, and income tax, and current charges;
- 2. Diversity index of federal and state intergovernmental grants, and own-source property, sales, selective sales, income tax, and current charges; and
- 3. Number of local tax sources (property, sales, selective sales, income) accounting for more than 1% of local own-source revenue.

Factor analysis allows us to combine these variables into a single diversity measure that controls for and explains 86% of the variance among the variables. We label our composite factor *Diversity of Local Revenue Sources* (see Appendix B, Table 5).

The factor scores (see Appendix C, Table 7), suggest that Missouri, New York, and Ohio, respectively, have the broadest, most heterogeneous selection of revenue sources to draw from. Conversely, Connecticut, Rhode Island, and Maine appear to be highly reliant on one or two dominant income streams.

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¹⁰ Data are all from 2002 Census of Governments using general purpose local governments (which exclude school districts and special district local governments).

IV. Creating a Local Autonomy Index

This exploratory factor analysis process reveals how relevant variables explaining different dimensions of local autonomy can be consolidated into seven latent root factors. These factors can be thought of as super variables that consolidate the features of 20 measures, while retaining much of the variance in the datasets. As summarized below, these factors all explain different aspects of our three initial dimensions of importance: Local Government Importance, Local Discretion, and Local Government Capacity.

Local Government Importance

- 1. Importance of Local Government Outputs, Revenue, and Expenditure in the State Economy and Intergovernmental System
- 2. Importance of Local Public Employment in the State Economy and Intergovernmental System

Local Discretion

- 3. Local Government Structural and Functional Responsibility, and Legal Scope
- 4. Tax, Spending And Debt Limits
- 5. Assessment Limits
- 6. Unconstrained Local Revenue

Local Government Capacity

7. Diversity of Local Revenue Sources

We next merge these constructs together to create a single index of local autonomy that incorporates all of the dimensions and sub-dimensions we have discussed. The creation of such an index poses two challenges: we want to ensure that none of the seven factors that we have identified above are themselves highly correlated with any of the other factors so that our final index does not in effect "double-count" any of them, and we need to decide how to weight the relative importance of the various factors. We can determine if the factors are suitable for index construction through analysis of their correlation matrix, but there are no objective criteria for weighting our factors.

With respect to possible collinearity of any of our factors with each other, we know that factors derived from the same factor analysis are uncorrelated with each other by definition. But, it is possible that some of our factors derived from separate factor analyses are highly correlated. However, the correlation matrix shows that most of our factors have low or modest correlations with each other (see Appendix D, Table 1.) As these factors have acceptably low levels of correlation and are all created with

standardized variables with approximately the same range, the factors are suitable for creating an overall index of local autonomy.

In the absence of theory, there is no objective way to assign weighting to the various factors. Thus, equal weighting is the default position. But equal weighting of what? We considered different ways to weigh the factors according to their importance, including the default option of weighing each factor equally. Ultimately, since we began with three dimensions of local autonomy, we decided to construct an index that weighs each of the three dimensions equally. This implies assigning each of the two factors under the importance of local government dimension a weight of 0.5 and each of the four factors under the local discretion dimension a weight of 0.25, while the diversity of revenue sources factor is assigned a weight of 1.0.¹¹ As we have no reason to believe any one dimension is theoretically more important than any other dimension, this method assigns equal importance to each of our four initial dimensions regardless of how many factors we identified within each dimension.

Below, we present the ranking of states for the overall Local Government Autonomy index, from most to least autonomy, based on our variables and weighting of factors. The number to the right is a factor score and the difference between factor scores is a relative indicator of the difference between states' local autonomy. The table shows that New York, Tennessee, Kansas, and Ohio have among the most local autonomy, respectively. On the other end, Delaware, West Virginia, Connecticut, and Rhode Island local governments have among the least autonomy from higher levels of government.

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¹¹ Actual factor weighing multipliers are: F1-2*.166, F3-6*.083, F7*.33

Overall local autonomy ranking, with each dimension weighted equally

Over	all local autonomy i	ranking, with
1	New York	0.845
2	Tennessee	0.681
3	Kansas	0.62
4	Ohio	0.599
5	Louisiana	0.52
6	Missouri	0.477
7	Maryland	0.475
8	Wyoming	0.464
9	Texas	0.438
10	Illinois	0.39
11	Alabama	0.388
12	Florida	0.378
13	Colorado	0.295
14	Virginia	0.262
15	South Carolina	0.201
16	Utah	0.191
17	New Mexico	0.191
18	Arizona	0.172
19	North Carolina	0.131
20	Mississippi	0.129
21	Georgia	0.129
22	Iowa	0.124
23	Nevada	0.103
24	Alaska	0.098
25	Pennsylvania	0.085
26	California	0.043
27	Indiana	0.015
28	South Dakota	0.006
29	Nebraska	0.004
30	Massachusetts	-0.022
31	Oklahoma	-0.033
32	Washington	-0.073
33	Wisconsin	-0.121
34	Michigan	-0.175
35	Oregon	-0.22
36	Idaho	-0.25
37	New Jersey	-0.255
38	Arkansas	-0.258
39	Kentucky	-0.331
40	Montana	-0.337
41	North Dakota	-0.381
42	Minnesota	-0.389
43	Maine	-0.446
44	New Hampshire	-0.544
45	Hawaii	-0.544
46	Vermont	-0.703
47	Rhode Island	-0.703
48	Connecticut	-0.728
49	West Virginia	-0.769
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Index Comparison

How does our Local Government Autonomy index compare with other similar or related measures? As discussed earlier, previous efforts to empirically compare state local government systems have either focused narrowly on a few aspects of local autonomy, or have not attempted to create an overarching index of their findings. Due to the later limitation, we can not compare our findings with 1993 ACIR study or the 2002 Krane collection. The 1981 ACIR Discretionary Authority rankings could theoretically be compared with our index, but they do not provide data for the states, and the 22 year time lag would make the results unreliable. However, we can compare our index with the Stephens (2007) State Centralization Index.

Stephens' calculates a State Centralization Index based on three measures: the percentage of state and local services paid for at the state level; service delivery responsibility as measured by expenditure for public services at the state as opposed to the local level; and the proportion of state and local full-time equivalent government employment at the state level. When we compare the standardized inverse of this index (which we call Stephens' Decentralization Index, see Appendix C, Table 8), we find a modest personian correlation of .673 and a Spearman's rho rank order correlation of .620 with our Local Government Autonomy index.

The rank order correlation indicates that the two indices agree on about 2/3 of the general distribution of autonomy/decentralization, but that the state-to-state rankings are highly different. Indeed, only two states ranked in the top ten for both the Local Government Autonomy and Stephens' Decentralization indices (New York and Tennessee), although eight of 10 states are in the bottom quintile for both indices.

We conclude that our index is a better and more conceptually robust measure of what is meant by "local government autonomy." Indeed, our index accounts for not only the fiscal responsibility, service delivery and personnel measures of state centralization (all of which are captured in our local government importance dimension), but also measures of the local government discretion and local government capacity dimensions.

V. Creating Local Autonomy Classifications

The index we have created enables us to create a score for and to rank states with respect to their degree of local government autonomy. In this section we use cluster analysis to create typologies or classification schemes that places states into groups according to different types of local autonomy, i.e., it places in a group states that our similar to each other with respect to local autonomy and different from those in other groups. To give a simple example and to illustrate how the groups created by cluster analysis differ from the rankings on the local autonomy index that we have created, some states may have high values on the first dimension of local autonomy and low values on the second dimension, while other states may have low values on the first and high values on the seconds. These states might all have very similar values and rankings on our index, since we weight the dimensions equally. However, cluster analysis would assign those two types of states into two separate groups.

Cluster analysis is a mathematical technique that groups cases (states) with respect to their similarity on the set of variables used. Cluster analysis starts with all cases (states for our purposes) as separate groups and proceeds to create clusters of cases that are most like one another. Since cluster analysis continues to assign cases to clusters until there is just one cluster, there is no single "correct" solution, and the number of groups created for a clustering analysis is somewhat subjective. Selection of the most appropriate number of groups is guided by the purposes of the analysis (particularly the number of groups that it makes sense to work with), partly by theory and/or intuition based on knowledge of the cases in the data set, and partly by observing obvious break points where the percentage of between group variance relative to within group variance declines substantially.¹²

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¹² Of the available hierarchal clustering procedures, we selected Ward's method, which seeks to minimize the sum of squares of between clusters. The cluster analysis starts with as many clusters as observations (50) and at each stage calculates the Euclidian square distance between potential cluster groupings and links the nearest groups, until all 50 states are combined, or we decide to stop clustering. There are no objective "rules" for determining where to stop clustering (Alenderfer and Blashfield 1884). However, we do considered the agglomeration coefficients, which measure the distances between cluster groups, as large distances between clusters is a good indicator of differences between groups.

As an illustration of how we can create local government typologies through cluster analysis we focus first on the dimension of local discretion (dimension 2), then on our overall Local Government Autonomy construct.

Local Government Discretion Cluster Analysis

We perform a cluster analysis utilizing the 11 variables included in the three subdimensions of local discretion which are 1) local government structural and functional responsibility, 2) fiscal discretion limits imposed on local governments, and 3) local government unconstrained revenue. We choose a cluster analysis solution that yields six groups of states and characterize each group by their scores on the variables.

1. Low legal discretion, strict fiscal limitation, unconstrained local revenue states

(7 states)

Alabama

Delaware

Idaho

Indiana

Nebraska

Nevada

West Virginia

This group of seven relatively small states has low levels of formal legal autonomy and has strict fiscal limitations (with the exception of generally lacking assessment limits). However they also have above average levels of measures of unconstrained local revenue (own-source revenue as a share of general revenue).

2. High legal autonomy, strict fiscal limits (7 states)

Alaska

Arkansas

Colorado

Iowa

Montana

New Mexico

Ohio

This group of seven states has very high levels of structural and functional home rule and lacks strong Dillon's rule. But they also have high levels of fiscal limits imposed by states and slightly below average unconstrained revenue. These appear to be mostly southwestern and western states where legal local constitutional autonomy has called forth strict state imposed fiscal limitations.

3. Average overall discretion states (9 states)

Arizona

Connecticut

Florida

Georgia

Oklahoma

Oregon

Tennessee

Texas

Washington

This group of 9 states is difficult to label as they have mixed indicators of home rule and fiscal discretion, and slightly above levels of own-source revenue. Taken together these states cluster together because their scores fall near the mean for all 11 variables considered.

4. *High overall discretion states* (12 states)

Illinois

Kansas

Louisiana

Maine

Massachusetts

Mississippi

Missouri

New Jersey

South Carolina

South Dakota

Utah

Wyoming

This group of 12 states has high overall levels of local government discretion. Their mean scores fall above average for all indicators, except the imposition of debt limits on cities and counties, where they are only slightly below average.

5. Low structural and functional autonomy, low fiscal limitation and high unconstrained revenue states (6 states)

Hawaii Maryland New Hampshire Rhode Island Vermont Virginia

This group of 6 states has low average scores for all measures of local government home rule authority (structural, functional and Dillon's rule), yet high scores for our measures of fiscal limits and own-source revenue share, particularly for our measures of lack of property tax and revenue/expenditure limits. This group may be the converse of group 2 in that these states appear to have low legal autonomy but, perhaps as a consequence state governments and/or voters have not felt it necessary to impose fiscal limitations on them.

6. Moderate structural and functional legal autonomy, strict fiscal limitations, low unconstrained revenues. (9 states)

California

Kentucky

Michigan

Minnesota

New York

North Carolina

North Dakota

Pennsylvania

Wisconsin

This group of nine states can be characterized by above average use of fiscal limitations on local governments and extremely low levels of own-source local revenue as a share of general revenue. They also tend to be Dillon's Rule states, but nonetheless have a relatively high level of functional and structural home rule. It is

also noteworthy that they have among the lowest scores for measures of own-source revenue as a share of general revenue.

Overall Local Government Autonomy Cluster Analysis

We also conducted a cluster analysis of the three separate dimensions of local government autonomy: local government importance, local government discretion, and local government capacity, using the average of the factor scores within each of the three dimensions as the three variables in the cluster analysis.

Based on our inspection of the cluster table we identified five reasonably distinct groups of states:

1. Diverse revenue with average importance and discretion (11 states)

Alabama

Alaska

Arizona

Illinois

Louisiana

Missouri

New Mexico

Ohio

Pennsylvania

Utah

Washington

This group of 11 states has the highest average scores for diversity of revenue sources, yet they fall slightly below the mean for the factors in our dimensions of local government discretion and local government importance in the state system.

2. Low local autonomy (8 states)

Arkansas

Idaho

Kentucky

Michigan

Minnesota

North Dakota

Oregon

Wisconsin

This group of eight states has moderate, but below average scores for all three dimensions of local autonomy. They score the lowest for our measure of local government discretion across the five clusters.

3. *Moderate local autonomy* (20 states)

California

Colorado

Florida

Georgia

Indiana

Iowa

Kansas

Maryland

Mississippi

Nebraska

Nevada

New York

North Carolina

Oklahoma

South Carolina

South Dakota

Tennessee

Texas

Virginia

Wyoming

This large group of 20 states has above average scores for diversity of revenue sources and local government importance, and they fall around the mean for our measure of local government discretion.

4. Low revenue diversity, high local discretion (9 states)

Connecticut

Maine

Massachusetts

Montana

New Hampshire

New Jersey

Rhode Island

Vermont

West Virginia

This group of nine states is notable for having among the lowest diversity of revenue sources scores (reliance on property tax), yet they also have our highest average scores for local government discretion (which includes structural/functional autonomy and the lack of fiscal limits). For local government importance they fall slightly below the mean.

5. *Intergovernmental importance laggards* (2 states)

Hawaii Delaware

These two states have average overall levels of local government discretion (for home rule, fiscal limits, and unconstrained revenue) and slightly below average diversity of revenue sources. But they are notable for being extreme low outliers in our measures of local government importance in the state economy and intergovernmental system.

VI. Using Local Autonomy as an Explanatory Variable

In the final section of the paper we demonstrate how researchers can use our local autonomy scores in models to explore the impact of local autonomy on important outcomes. We do this by examining the impact of local autonomy on per capita local property tax revenues and per capita local expenditures.

We begin by running regression tests with a set of control variables. Then we add our overall local autonomy measure constructed in the previous section. Finally we drop the overall measure and include in a single model all of the uncorrelated local autonomy factors with the control variables.

Control Variables

Both property taxes raised and expenditures made should be functions, ceteris paribus, of income (the higher the income, the greater the ability to raise revenues through taxation),

need (the greater the need, the more likely tax revenues will be raised to finance needed expenditures), policy preferences (the more liberal the policy preferences in an area, the greater the property tax and expenditure per capita), and partisanship (the more Democratic an area, the higher property tax and expenditure per capita. In addition, we add regional variables to the model in order to control for other omitted variables that vary regionally.

Our income variable measurement is straightforward. We use the Bureau of Economic Analysis per capita personal income measure for 2002 to control for relative differences in income among the states. For need, we use a measure of poverty keyed to children, since child poverty relates to education, a particularly important local service. We use 2005 Census data to measure the percentage of children who live below the poverty line in each state. We use the four Census regions as dummy variables with the West region as the excluded (reference) variable. ¹³

Finally, we created the public opinion measures by using aggregated CBS News/New York Times national polls to construct average ideological and partisanship indices for the years 1993-2003, replicating Erikson, Wright and McIver's methodology in *Statehouse Democracy* (1993). We took a ten-year average of public opinion, rather than a specific year, in order to achieve a valid N for each state subset of the national polls.¹⁴ The partisanship index is the difference between self-reported Democrats and Republicans, excluding independents.¹⁵

Methodology and Regression Results

First we analyze the correlation of our explanatory variables (see Appendix D, Tables 2 and 3). The matrix confirms that there is a low level of correlation between our factors and the control variables described above. We have previously shown that our seven

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¹³ Western states are accounted for by the excluded states from the other three regions.

¹⁴ As the surveys are weighted proportionally to the national population we include more than 20,000 responses from California and as few as 435 from Wyoming—which we believe is large enough to be representative of Wyoming's sparse and homogenous population. The CBS News/New York Times surveys use a random telephone area code methodology that eliminated problems with oversampling specific areas. And they limit their respondents to registered voters. As Erickson et al. (1993) noted if their surveys are not strictly representative, they "tilt slightly towards what might be called the 'active electorate.'"

¹⁵ The data does not include information for Alaska and Hawaii.

final factors are not correlated. We conclude that although there is moderate correlation among a few of the control variables and among some of the control variables and local autonomy factors, none of the correlations is high enough to merit concern.

We next run regression tests to determine how well our control measures alone predict variation in property tax per capita and expenditures per capita. We then run an additional regression model with our local autonomy index factor. Finally, we run yet another model in which we add each of the seven local autonomy factors to the control variables (but excluding the overall local autonomy index) to see which, if any, of the factors are significant ¹⁶ as an explanator of either or both local property tax revenue per capita and local expenditures per capita.

Our initial regression tests show that our control variables were appropriate. The Adjusted R² scores show that the test measures explain more than 74% of the variance in local property tax per capita, and 44% of the variance in expenditures per capita. Property tax per capita is significantly related to the variables Midwest, Northeast, democratic partisanship, and per capita personal income at the .10 confidence level. Regarding our controls for expenditures per capita, significance tests shows that Northeast, South, per capita personal income, and percentage of children below the poverty line are all related to the dependent variable at the .10 confidence level (see Appendix D, Tables 4 and 5).

Taken together, all six of our control variables are significant predictors of either property tax per capita, or expenditures per capita at a .10 confidence level. The Northeast and per capita personal income are significant predictors for both dependent measures, and in both cases per capita personal income is the strongest predictor (.0001 confidence level).

We next test to see if, after controlling for the variables described above, our overall local autonomy rankings are significant predictors of local property tax per capita or expenditures per capita. The regression test shows that the three-dimension equal weighting of our local autonomy factors is significantly related to expenditures per capita (.01 confidence level). The adjusted R² increases from 0.444 in the model with only the control variables to 0.567 after adding the overall local autonomy score. However, the

 $^{^{16}}$ As this is an exploratory study, we use p < .10 as our criteria of significance.

overall local autonomy index is not statistically significant in the property tax per capita model and the adjusted R^2 does not increase (see Appendix D, Tables 6 and 7).

We next drop the overall local autonomy score from our regression models and add the seven test factor variables to see which factors, if any, are significant predictors of per capita personal property tax revenue and per capita expenditures as well as how much additional variation our factors allow us to explain.

For the local property tax per capita test, we find that four of our seven factors are significant. Importance of Local Government Output, Revenue, and Expenditure in the State Economy and Intergovernmental System (.015), Importance of Local Public Employment (.001), Home Rule and Local Government Responsibility (.019), and Diversity of Revenues (.0001) are all significant predictors of states' average property tax rate. The addition of the seven factors increases the Adjusted R² from 0.741 with the control variables only to 0.838 (see Appendix D, Table 8).

For the local expenditures per capita model, three of our factors were significant predictors. The importance of Local Government Output, Revenue, and Expenditure in the State Economy and Intergovernmental System (.059) and Importance of Local Public Employment (.0001) were again significant predictors. The Tax, Spending, and Debt Limits variable was also significant (.088) for predicting variation in local expenditures per capita across states. With these additional factor-variables, the model's predictive ability, as expressed through the Adjusted R² increases nearly 30 percentage points, from .444 to .739 (see Appendix D, Table 9).

In total five of our seven factors proved to be significant predictors of our dependent measures. These results suggest that in addition to contributing to the creation of a local autonomy index, our factors are important measures in and of themselves as they are substantively related to key decentralization research questions.

VII. Discussion and Suggestions for Future Research

The imprecise and inconsistent treatment of the concept of local autonomy in public policy research and popular debates has created ambiguity over the meaning—making it highly difficult for social scientists to empirically compare work on the topic.

Drawing from Wolman's (2008) conceptual framework for classification of local government systems, we have defined "local autonomy" as a system of local governments which (1) have an important impact on their larger economy and intergovernmental system; (2) have the discretion to engage in fiscal, functional and organizational activities with out restraints from higher levels of government; and (3) have the capacity or means to achieve their policy and governance preferences.

In this paper we have used factor analysis, a Local Government Autonomy index derived from it, cluster analysis, and regression analysis to empirically compare state systems of local government autonomy in U.S. states. We have also demonstrated that our measures are more useful than existing studies for explaining variance in local government autonomy. The 20 variables presented in this paper capture much of the differences in state local government systems across our three dimensions local autonomy.

Some of the measures work better than others—we point out a few areas where we rely on proxy variables or were not able to operationalize—but overall, our seven latent factors capture much of the meaning of our four dimensions and corresponding subdimensions of local autonomy.

Our overall Local Government Autonomy index is not perfect. The ranking is subject to the limits of our variables. In some dimensions we have a healthy range of factors to draw upon, and in others we have a single composite factor. However, the index is a useful tool for understanding the relative rankings and differences among states for our dimensions of local autonomy, and it captures more aspects of autonomy than existing rankings. Despite our rankings, states are not unidimensional with respect to our measures of local autonomy. A state may be high on one of the dimensions and low on others and this may vary among states. We have used cluster analysis to create a classification scheme that groups states with similar patterns of local autonomy.

Finally, we put the utility of our Local Government Autonomy indexes to the test by incorporating them as variables in models to explain per capital local property tax revenues and per capita local expenditures. We found that our overall local autonomy measure was significant in the per capital local expenditure model (though not the per capital local property tax revenue model) and that several of the individual local

autonomy factors were significant in each of the models. Furthermore, the inclusion of these variables added substantially to the amount of variance explained compared to the model with control variables only.

These results suggest that the degree of local autonomy has a real impact on some important local fiscal outcomes. It also suggests some directions for future research. The Local Government Autonomy index we have created can be utilized as a test variable to model the effect of local government autonomy or its various dimensions on other fiscal or non-fiscal outcomes, or it can be employed as a control variable in models. The groups created through cluster analysis can similarly be used as nominal variables in multi-variate analysis to explore whether states with similar patterns of local autonomy behave similarly with respect to fiscal outcomes.

Researchers may also adapt and refine our local autonomy measures. They may choose to use the overall index we have created through equal weighting, or apply new weights of their own choosing, or use any one or more of the factors if they capture a particular dimension of local government autonomy they are more interested. We recognize that the index can be further developed. The local capacity dimension is admittedly weak since it is captured through only one indicator of a relatively diverse dimension. Additional effort will be directed at developing more robust measures.

Finally, regardless of our specific results in this paper, researchers can use the methodology we have employed here as a means of deriving indices for local government autonomy in contexts other than the United States (or where different types of data are available) or, for that matter, as a means of constructing indices for multi-dimensional concepts similar to local government autonomy.

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Appendix A: Factor Analysis Technical Description

Principal component factor analysis is a data reduction technique that reduces the number of variables into a smaller set of unique factors that reflect underlying (latent) relationships among the variables in each of the factors. Factor analysis can be either exploratory or, if it tests a previously stated hypothesis, confirmatory. We employ exploratory factor analysis as we do not have any a priori notions of how our variables load into factors.

For each dimension we determined that our selected variables were fit for factor analysis since they meet both the Kaiser-Meyer-Olkin Measure (KMO) measure of sampling adequacy and the Bartlett's Test of Sphericity. The KMO statistic predicts (from 1.0 to 0.0) how likely the data is to factor well. Our dimensions all exceed or are near the minimal .5 KMO adequacy standard. The Bartlett's test tells us the confidence level at which we can reject the null hypothesis that the model is an invalid identity matrix, or that the factors are created by mere chance. Below are the scores for model fit scores for our six factor analysis tests.

Sub-Dimension/Dimension	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Bartlett's Test of Sphericity (Sig.)
1. Local Government Importance	0.578	0.0001
2. Degree of Accountability	0.485	0.103
3. Local Government Structural and Functional Responsibility, and Legal Scope	0.599	0.008
4. Fiscal Discretion Limits on Local Governments	0.474	0.017
5. Local Government Unconstrained Revenue	0.623	0.0001
6. Diversity of Local Revenue Sources	0.725	0.0001

Appendix B: Factor Loadings and Eigenvalues

The exploratory Principal Component Factor analysis test assigns factor "loadings" to each variable, for different component factors. The first factor derived is the one explaining the most variance and succeeding factors explain less and less of the variance until all variance is accounted for. Factors explaining little of the variance may be substantively meaningless.

Since each variable in the factor analysis has a potential variance of 1.0, the total amount of variance in the model is equal to the number of variables. The percentage of total variance explained by each factor is termed its "eigenvalue." The Eigenvalue>1 is the standard measure for determining the default cutoff for creating new factors. (Eigenvalues <1 are excluded because they account for less variation than exists in each variable.) In our selection of factors, we choose only those factors with Eigenvalues greater than 1.1.

Below is a summary of our Eigenvalues, percent of variance explained, and cumulative variance explained for all or our retained factors. While some of our factors account for more variance than others, we consider all of our factors to be of equal strength for our purposes as they all satisfy our eigenvalue criteria and come from data that is fit for factor analysis.

Sub-Dimension/Dimension	Retained Factor	Initial Eigenvalues	% of Variance Explained	Cumulative % of Variance Explained
Local Government Importance	Local Government Outputs, Revenue, and Expenditure in the State and Intergovernmental System	2.69	53.86	53.86
	2. Importance of Local Public Employment in the State and Intergovernmental System	1.70	33.97	87.83
2. Local Accountability	3. Direct Participation Democratic Accountability	1.47	36.73	36.73
	4. Representative Democratic Accountability	1.27	31.76	68.49
3. Local Government Structural and Functional Responsibility, and Legal Scope	5. Local Government Structural and Functional Responsibility, and Legal Scope	1.73	43.14	43.14
4. Fiscal Discretion Limits on Local Governments	6. Tax, Spending And Debt Limits	1.65	33.03	33.03
	7. Assessment Limits	1.25	24.93	57.96
5. Local Government Unconstrained Revenue	8. Unconstrained Local Revenue	2.22	74.16	74.16
6. Diversity of Local Revenue Sources	9. Diversity of Local Revenue Sources	2.59	86.43	86.43

Factors can be "rotated" to ensure that each of the factors in unrelated to the other factors. We use an oblique Varamax rotation of our factor loadings to minimize the correlation between factors and maximize the unique variance of each factor. Dimensions with one factor are not rotated as there is no variance to separate.

The factor loadings of a factor are the correlation of each of the variables in the factor analysis with the factor. The variable(s) that load highest on the factor provide insight into what the factor may best be described as representing. Below, we present the factors and factor loadings for each factor the factor analyses we conducted.

Factors and Factor Loadings

Table 1. Factors and factor loadings for Local Government Importance

Variable	Factor Loading		
	Local Government Outputs, Revenue, and Expenditure in the State and Intergovernmental System	Importance of Local Public Employment in the State and Intergovernmental System	
Zscore: Local own-source revenue as a % of state and local general revenue	.870	.318	
Zscore: Local direct expenditures as share of GSP	.947	.116	
Zscore: Local government employment (including school and special districts) as % of all employment in the state	.003	.920	
Zscore: Local government direct expenditures as % of all federal, state and local direct expenditures	.975	.030	
Zscore: Percent of public employment at the local government level (including school and special districts)	.298	.858	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 3 iterations.

Table 2. Factors and factor loadings for Local Government Structural and Functional Responsibility and Legal Scope

and Legal Scope			
Variable	Factor loading		
	Local Government Structural and Functional Responsibility, and Legal Scope		
Zscore Municipal Structural home rule 0=none 1=limited structural 2=structural 3=broad structural	.698		
Zscore Municipal Functional 0=none 1=limited functional 2=functional 3=broad functional	.607		
Zscore: Number of municipal functional responsibilities (0-4; public health, public works, social services, and school mgt)	.513		
Zscore: Lack of Dillon's rule state 2=no Dillon's rule 1=Dillon's rule sometimes 0=Dillon's rule state	.779		

Extraction Method: Principal Component Analysis.

a 1 components extracted.

Table 3. Factors and factor loadings for Fiscal Discretion Limits on Local Governments

Variables	Factor Loading		
	Tax, Spending And Debt Limits	Assessment Limits	
Zscore: Debt limits imposed on local governments, 1=cities and counties, 2=one or other, 3=none (ACIR 1993)	.724	.040	
Zscore: State specifies purpose for which local debt may be incurred, 1=no, 0=yes (ACIR 1993)	082	722	
Zscore: Assessment Limits 1=none, 0=some (Bing 2005)	077	.816	
Zscore: Property Tax rates Limits, 0=limits, no override, 1=referendum w supermajority override, 2=limits with referendum override, 3=limits w council majority override, 4=limits w council override, 5=no limits	.756	.150	
Zscore: Revenue/expenditure limits, 0=no limits, no override, 1=referendum w supermajority override, 2=limits with referendum override, 3=limits w council supermajority override, 4=limits with council majority override, 5=no limits	.736	188	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 2 iterations.

Table 4. Factors and factor loadings for Local Government Unconstrained Revenue

Variables	Factor loading
v at lables	Unconstrained Local Revenue
Zscore: Local own-source revenue from taxes and current charges as % of all general revenue (Census of Gov 2002)	.891
Zscore: Revenue from local own-source taxes, and total federal, state and local intergovernmental (unrestricted) general support as % of all general revenue	.751
Zscore: Total local general revenue from own-source taxes, current charges, and general purpose (unrestricted) intergovernmental support as % of all general revenue (Census of Gov 2002)	.931

Extraction Method: Principal Component Analysis.

a 1 components extracted.

Table 5. Factors and factor loadings for Diversity of Local Revenue Sources

Variables	Factor loading
v ariables	Diversity of Local Revenue Sources
Zscore: Diversity index of local taxes (property, general sales, selective sales, and income) and current charges as % of local own-source revenue	.956
Zscore: Diversity index from federal and state intergovernmental grants, own-source taxes (property, sales, selective sales, income), and current charges as % of general revenue	.921
Zscore: Number of local tax sources (property, sales, selective sales, income) accounting for more than 1% of local own-source revenue	.912

Extraction Method: Principal Component Analysis.

a 1 components extracted.

Appendix C: Factor Scores and Autonomy Rankings

We converted each retained factor into a variable that provides a score (factor score) for each unit or state. A factor score for a unit of analysis (in our case a state system of local governments) is derived for a factor by first calculating the relative weight of each of the variables' factor loadings, multiplying the resulting relative weight for each variable by the value of the actual variable for the unit, and then summing the result.

The tables below display the rank ordering of states along each dimension based on their factor score (right column). High scores indicate more autonomy based on the opperationalization of the variables within the dimension.

Table 1. Local Government Outputs, Revenue, and Expenditure in the State and Intergovernmental System, from highest to lowest

1	New York	2.761	26	New Hampshire	-0.136
2	Tennessee	2.725	27	Oregon	-0.179
3	North Carolina	1.94	28	Washington	-0.324
4	Maryland	1.811	29	Illinois	-0.354
5	Nevada	1.512	30	Mississippi	-0.381
6	Virginia	1.185	31	Texas	-0.429
7	Rhode Island	1.149	32	Utah	-0.471
8	Massachusetts	1.123	33	Georgia	-0.502
9	Connecticut	1.044	34	Wyoming	-0.507
10	California	0.689	35	Nebraska	-0.53
11	Florida	0.613	36	Oklahoma	-0.561
12	Colorado	0.319	37	Pennsylvania	-0.58
13	Indiana	0.304	38	Alabama	-0.595
14	Wisconsin	0.287	39	Missouri	-0.679
15	Arizona	0.277	40	South Dakota	-0.713
16	Michigan	0.265	41	Idaho	-0.743
17	Minnesota	0.255	42	North Dakota	-0.802
18	Ohio	0.25	43	Kentucky	-0.852
19	Alaska	0.176	44	New Mexico	-0.956
20	Louisiana	0.047	45	Montana	-1.02
21	Maine	0.02	46	South Carolina	-1.034
22	Kansas	-0.039	47	Arkansas	-1.135
23	Iowa	-0.052	48	West Virginia	-1.582
24	New Jersey	-0.085	49	Vermont	-1.673
25	Hawaii	-0.117	50	Delaware	-1.719

 $\label{thm:conditional} \textbf{Table 2. Importance of Local Public Employment in the State and Intergovernmental System, from highest to lowest } \\$

0					
1	Wyoming	1.81	26	South Dakota	0.117
2	Texas	1.5	27	Michigan	0.077
3	Mississippi	1.253	28	Kentucky	0.07
4	New York	1.21	29	Wisconsin	0.063
5	Kansas	1.112	30	Arkansas	-0.028
6	California	0.815	31	Virginia	-0.041
7	Georgia	0.75	32	Oregon	-0.044
8	Ohio	0.614	33	North Carolina	-0.051
9	Illinois	0.608	34	Minnesota	-0.078
10	Alabama	0.582	35	West Virginia	-0.138
11	Louisiana	0.566	36	Vermont	-0.202
12	Idaho	0.528	37	Pennsylvania	-0.206
13	Nebraska	0.515	38	New Hampshire	-0.228
14	Oklahoma	0.507	39	Tennessee	-0.245
15	Florida	0.433	40	Washington	-0.331
16	South Carolina	0.381	41	Maryland	-0.482
17	Arizona	0.356	42	Massachusetts	-0.562
18	Iowa	0.235	43	Nevada	-0.653
19	New Mexico	0.235	44	Alaska	-0.845
20	Missouri	0.215	45	Utah	-0.928
21	Maine	0.194	46	North Dakota	-0.94
22	Colorado	0.171	47	Connecticut	-1.042
23	Montana	0.142	48	Rhode Island	-1.195
24	New Jersey	0.142	49	Delaware	-2.202
25	Indiana	0.124	50	Hawaii	-4.886

 $\label{thm:conditional} \textbf{Table 3. Local Government Structural and Functional Responsibility, and Legal Scope, from highest to lowest } \\$

1	Alaska	2.355	26	Wyoming	-0.133
2	Utah	1.784	27	New York	-0.133
3	Massachusetts	1.517	28	Missouri	-0.133
4	New Mexico	1.517	29	Kentucky	-0.133
5	Ohio	1.251	30	Arizona	-0.337
6	Montana	1.251	31	Georgia	-0.538
7	Kansas	1.225	32	Minnesota	-0.602
8	Colorado	1.162	33	Wisconsin	-0.602
9	Iowa	1.148	34	Oklahoma	-0.604
10	New Jersey	1.048	35	South Dakota	-0.679
11	South Carolina	0.984	36	Alabama	-0.718
12	Louisiana	0.959	37	West Virginia	-0.807
13	California	0.895	38	Pennsylvania	-0.871
14	Oregon	0.779	39	North Carolina	-0.871
15	Illinois	0.692	40	Rhode Island	-0.871
16	Texas	0.667	41	Indiana	-0.882
17	Tennessee	0.488	42	Virginia	-1.072
18	Florida	0.426	43	Delaware	-1.072
19	Maine	0.4	44	Nebraska	-1.073
20	Arkansas	0.4	45	Washington	-1.073
21	North Dakota	0.134	46	Hawaii	-1.137
22	Mississippi	-0.069	47	Idaho	-1.441
23	Connecticut	-0.071	48	Vermont	-1.543
24	Michigan	-0.133	49	Nevada	-1.543
25	Maryland	-0.133	50	New Hampshire	-1.809

Table 4. Tax, Spending and Debt Limits, from highest to lowest

1	Tennessee	2.711	26	Wyoming	-0.282
2	Florida	1.964	27	Minnesota	-0.412
3	Connecticut	1.889	28	Michigan	-0.412
4	Vermont	1.785	29	Colorado	-0.412
5	New Hampshire	1.785	30	Arizona	-0.412
6	Virginia	1.541	31	Wisconsin	-0.516
7	Maryland	1.067	32	Montana	-0.516
8	Maine	1.053	33	Illinois	-0.516
9	Massachusetts	1.053	34	Nevada	-0.516
10	South Carolina	0.964	35	South Dakota	-0.521
11	Hawaii	0.964	36	Utah	-0.526
12	Texas	0.898	37	Washington	-0.662
13	Kansas	0.719	38	Nebraska	-0.681
14	Rhode Island	0.475	39	Idaho	-0.76
15	Georgia	0.32	40	North Dakota	-0.765
16	New Jersey	0.231	41	Missouri	-0.765
17	Mississippi	0.231	42	Iowa	-0.901
18	North Carolina	0.216	43	New Mexico	-0.901
19	Alabama	0.216	44	California	-0.911
20	Oregon	0.071	45	Ohio	-1.005
21	West Virginia	-0.028	46	Kentucky	-1.005
22	New York	-0.178	47	Arkansas	-1.399
23	Oklahoma	-0.178	48	Alaska	-1.503
24	Pennsylvania	-0.193	49	Indiana	-1.503
25	Louisiana	-0.272	50	Delaware	-1.503

Table 5. As	ssessment L	imits.	from	highest	to	lowest
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	,	9			
1	New Jersey	1.281	26	North Carolina	0.446
2	Mississippi	1.281	27	Alabama	0.446
3	Rhode Island	1.194	28	South Dakota	0.427
4	Kansas	1.108	29	Nebraska	0.285
5	Maine	1.072	30	Utah	0.149
6	Massachusetts	1.072	31	Pennsylvania	0.113
7	South Carolina	1.022	32	Wyoming	0.063
8	Hawaii	1.022	33	Maryland	-0.759
9	Virginia	0.9	34	Iowa	-0.904
10	Ohio	0.877	35	New Mexico	-0.904
11	Kentucky	0.877	36	Connecticut	-0.967
12	Vermont	0.814	37	Minnesota	-1.076
13	New Hampshire	0.814	38	Michigan	-1.076
14	Idaho	0.791	39	Colorado	-1.076
15	Wisconsin	0.705	40	Arizona	-1.076
16	Montana	0.705	41	Tennessee	-1.175
17	Illinois	0.705	42	Washington	-1.268
18	Nevada	0.705	43	Arkansas	-1.287
19	Louisiana	0.619	44	Georgia	-1.335
20	West Virginia	0.533	45	Texas	-1.457
21	North Dakota	0.513	46	California	-1.46
22	Missouri	0.513	47	Oregon	-1.527
23	Alaska	0.494	48	New York	-1.719
24	Indiana	0.494	49	Oklahoma	-1.719
25	Delaware	0.494	50	Florida	-1.751

Table 6. Unconstrained Local Revenue, from highest to lowest

1	South Dakota	1.835	26	Nebraska	0.195
2	Vermont	1.442	27	Washington	0.175
3	Maine	1.356	28	Louisiana	0.063
4	Alabama	1.254	29	Massachusetts	0.061
5	Hawaii	1.184	30	West Virginia	0.055
6	South Carolina	1.062	31	New Mexico	0.036
7	Georgia	1.059	32	Arkansas	0.024
8	Missouri	1.051	33	Montana	-0.008
9	Texas	0.979	34	Iowa	-0.066
10	Kansas	0.892	35	Maryland	-0.218
11	Wyoming	0.676	36	Arizona	-0.767
12	Utah	0.673	37	Ohio	-0.772
13	Connecticut	0.595	38	Tennessee	-0.823
14	Idaho	0.568	39	Wisconsin	-0.877
15	Rhode Island	0.53	40	Virginia	-1.002
16	Mississippi	0.523	41	Oregon	-1.091
17	Delaware	0.517	42	New York	-1.106
18	Nevada	0.499	43	Minnesota	-1.212
19	New Hampshire	0.488	44	North Dakota	-1.3
20	Illinois	0.471	45	Pennsylvania	-1.315
21	Colorado	0.432	46	Kentucky	-1.419
22	Oklahoma	0.431	47	Alaska	-1.564
23	Florida	0.411	48	North Carolina	-2.016
24	New Jersey	0.29	49	Michigan	-2.063
25	Indiana	0.239	50	California	-2.446

Table 7. Diversity of Local Revenue Sources, from highest to lowest

1	Missouri	1.498	26	Indiana	0.244
2	New York	1.348	27	Michigan	0.218
3	Ohio	1.285	28	Virginia	0.128
4	Pennsylvania	1.206	29	Nevada	0.096
5	New Mexico	0.992	30	North Dakota	0.069
6	Louisiana	0.92	31	South Dakota	0.052
7	Alabama	0.874	32	North Carolina	0.009
8	Arizona	0.845	33	South Carolina	-0.073
9	Washington	0.807	34	Hawaii	-0.08
10	Maryland	0.778	35	Oregon	-0.113
11	Utah	0.751	36	Kentucky	-0.191
12	Illinois	0.711	37	Wisconsin	-0.216
13	Alaska	0.679	38	Idaho	-0.436
14	Wyoming	0.668	39	Minnesota	-0.436
15	Colorado	0.618	40	Mississippi	-0.531
16	Tennessee	0.52	41	Delaware	-0.618
17	Texas	0.514	42	Montana	-0.931
18	Iowa	0.461	43	Massachusetts	-1.262
19	Oklahoma	0.439	44	West Virginia	-1.395
20	Georgia	0.387	45	New Jersey	-1.501
21	Arkansas	0.361	46	New Hampshire	-1.769
22	Florida	0.356	47	Vermont	-1.802
23	California	0.355	48	Maine	-2.407
24	Kansas	0.352	49	Rhode Island	-2.493
25	Nebraska	0.335	50	Connecticut	-2.621

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1	Nevada	1.742	26	Louisiana	0.03
2	Florida	1.477	27	Oregon	-0.052
3	Arizona	1.44	28	Idaho	-0.151
4	Colorado	1.418	29	South Dakota	-0.167
5	Tennessee	1.313	30	Mississippi	-0.173
6	Nebraska	1.287	31	Oklahoma	-0.276
7	New York	1.085	32	Maryland	-0.276
8	Georgia	1.074	33	South Carolina	-0.287
9	Texas	1.03	34	Utah	-0.302
10	California	0.964	35	New Jersey	-0.305
11	Indiana	0.939	36	North Dakota	-0.324
12	Illinois	0.717	37	New Hampshire	-0.451
13	Alabama	0.585	38	Massachusetts	-0.477
14	Minnesota	0.569	39	Kentucky	-0.72
15	Washington	0.562	40	New Mexico	-0.962
16	North Carolina	0.508	41	Montana	-0.965
17	Michigan	0.428	42	Connecticut	-1.013
18	Wyoming	0.418	43	Arkansas	-1.018
19	Kansas	0.414	44	Maine	-1.058
20	Wisconsin	0.406	45	Rhode Island	-1.216
21	Missouri	0.402	46	West Virginia	-1.373
22	Ohio	0.336	47	Alaska	-1.665
23	Virginia	0.301	48	Vermont	-1.718
24	Iowa	0.193	49	Delaware	-1.771
25	Pennsylvania	0.152	50	Hawaii	-3.069

Appendix D: Correlation and Regression Outputs

Table 1. Correlation of factors

	F1	F2	F3	F4	F5	F6	F7
F1: Local Government Outputs, Revenue							
and Spending in the Intergovernmental							
System and State Economy	1.00						
F2: Importance of Local Public							
Employment in the State and							
Intergovernmental System	0.00	1.00					
F3: Local Government Structural and							
Functional Responsibility, and Legal Scope	0.04	0.21	1.00				
F4: Tax, Spending, and Debt Limits	0.36	-0.08	-0.13	1.00			
F5: Assessment Limits	-0.22	-0.22	-0.11	0.00	1.00		
	0.20	0.05	0.15	0.26	0.26	1.00	
F6: Unconstrained Local Revenue	-0.39	-0.05	-0.15	0.26	0.26	1.00	
F7: Diversity of Revenue Sources	0.08	0.28	0.23	-0.41	-0.37	-0.24	1.00

Table 2. Correlations of dependent variables with control variables and indices

Table 2. Correlations of dependen	iit varias	nes with	Control	variabic	s and m	uices			
	Revenue per capita	Expenditure per capita	South	Midwest	Northeast	Partisan Index	Income	Poverty	Local dimension autonomy index
Local property tax revenue per capita	1.00								
Local direct expenditures per capita	0.44	1.00							
South	-0.48	-0.31	1.00						
Mid West	0.13	0.12	-0.39	1.00					
Northeast	0.63	0.02	-0.32	-0.26	1.00				
Political opinion partisanship (Democratic) index	-0.06	0.06	0.47	-0.23	0.16	1.00			
Per capita personal income in thousands	0.75	0.50	-0.33	-0.04	0.53	0.23	1.00		
Percentage of children below the poverty line	-0.55	-0.25	0.55	-0.22	-0.26	0.35	-0.67	1.00	
Local dimension autonomy index (dimensions equal weight)	0.03	0.30	0.02	0.48	-0.26	-0.24	-0.15	0.06	1.00

Table 3. Correlations of depende	Cable 3. Correlations of dependent variables with control variables and factors														
	Revenue per capita	Expenditure per capita	South	Midwest	Northeast	Partisan Index	Income	Poverty	Ŧ	F2	F3	F4	F5	F6	F7
Local property tax revenue per capita	1.00														
Local direct expenditures per capita	0.44	1.00		_											
South	-0.48	-0.31	1.00		-										
Mid West	0.13	0.12	-0.39	1.00		_									
Northeast	0.63	0.02	-0.32	-0.26	1.00		_								
Political opinion partisanship (Democratic) index	-0.06	0.06	0.47	-0.23	0.16	1.00		_							
Per capita personal income in thousands	0.75	0.50	-0.33	-0.04	0.53	0.23	1.00								
Percentage of children below the poverty line	-0.55	-0.25	0.55	-0.22	-0.26	0.35	-0.67	1.00		-					
F1: Outputs, Revenue and Spending in the Intergovernmental System and State Economy	0.38	0.44	-0.02	-0.09	0.19	0.18	0.46	-0.18	1.00		-				
F2: Local Public Employment in the State and Intergovernmental System	0.09	0.40	0.12	0.13	-0.10	-0.15	-0.19	0.37	0.00	1.00					
F3: Structural and Functional Responsibility, and Legal Scope	0.14	0.27	-0.09	0.02	-0.12	0.02	-0.01	0.11	0.04	0.21	1.00		-		
F4: Tax, Spending, and Debt Limits	0.27	-0.20	0.25	-0.34	0.42	0.05	0.28	-0.11	0.36	-0.08	-0.13	1.00		-	
F5: Assessment Limits	0.11	-0.37	-0.12	0.12	0.19	-0.20	-0.09	-0.10	-0.22	-0.22	-0.11	0.00	1.00		_
F6: Unconstrained Local Revenue	0.01	-0.43	0.04	-0.08	0.12	-0.23	-0.11	0.01	-0.39	-0.05	-0.15	0.26	0.26	1.00	
F7: Diversity of Revenue Sources	-0.42	0.32	0.11	0.22	-0.59	-0.07	-0.26	0.18	0.08	0.28	0.23	-0.41	-0.37	-0.24	1.00

Table 4: Local property tax per capita regression coefficients with control variables

Coefficients^a

		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	-1509.099	530.749		-2.843	.007
	South 1=South 0=not South	39.351	88.463	.053	.445	.659
	Mid West 1=Mid West 0=not Mid West	225.550	78.235	.278	2.883	.006
	Northeast 1=Northeast 0=not Northeast	390.503	94.674	.434	4.125	.000
	Political opinion partisanship (Democratic) index, average 1993-2003	-11.844	3.926	367	-3.016	.004
	Per capita personal income in thousands (BEA 2002)	65.737	12.541	.807	5.242	.000
	Percentage of children below the poverty line, 2005	18.569	10.600	.260	1.752	.087

a. Dependent Variable: Local property tax revenue per capita, 2002

Note: F Test=23.377; Sig.= 0.000; Adj R2=0.741

Table 5: Local expenditures per capita regression coefficients with control variables

Coefficients^a

		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	-2616.096	1608.725		-1.626	.112
	South 1=South 0=not South	-737.799	268.135	478	-2.752	.009
	Mid West 1=Mid West 0=not Mid West	-122.045	237.133	073	515	.610
	Northeast 1=Northeast 0=not Northeast	-1036.680	286.962	556	-3.613	.001
	Political opinion partisanship (Democratic) index, average 1993-2003	-2.876	11.901	043	242	.810
	Per capita personal income in thousands (BEA 2002)	169.636	38.014	1.006	4.462	.000
	Percentage of children below the poverty line, 2005	72.171	32.128	.488	2.246	.030

a. Dependent Variable: Local direct expenditures per capita, 2002

Note: F Test= 7.26; Sig.= 0.000; Adj R2= 0.444

Table 6: Local property tax per capita regression coefficients with controls and overall index Coefficients^a

		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	-1481.544	586.061		-2.528	.016
	South 1=South 0=not South	38.240	90.043	.051	.425	.673
	Mid West 1=Mid West 0=not Mid West	224.237	79.976	.276	2.804	.008
	Northeast 1=Northeast 0=not Northeast	393.990	100.311	.438	3.928	.000
	Political opinion partisanship (Democratic) index, average 1993-2003	-11.681	4.208	362	-2.776	.008
	Per capita personal income in thousands (BEA 2002)	65.101	13.795	.799	4.719	.000
	Percentage of children below the poverty line, 2005	18.046	11.616	.253	1.553	.128
	Overall 3 Dimension weighting	8.702	73.943	.010	.118	.907

a. Dependent Variable: Local property tax revenue per capita, 2002

Note: F Test= 19.558; Sig.= 0.000; Adj R2=0.734

Table 7: Local expenditures per capita regression coefficients with controls and overall index

Coefficients^a

		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	-414.314	1548.361		268	.790
	South 1=South 0=not South	-826.576	237.891	536	-3.475	.001
	Mid West 1=Mid West 0=not Mid West	-227.015	211.295	135	-1.074	.289
	Northeast 1=Northeast 0=not Northeast	-758.045	265.018	407	-2.860	.007
	Political opinion partisanship (Democratic) index, average 1993-2003	10.105	11.116	.151	.909	.369
	Per capita personal income in thousands (BEA 2002)	118.871	36.447	.705	3.261	.002
	Percentage of children below the poverty line, 2005	30.310	30.690	.205	.988	.329
	Overall 3 Dimension weighting	695.278	195.355	.398	3.559	.001

a. Dependent Variable: Local direct expenditures per capita, 2002

Note: F Test= 9.803; Sig.= 0.000; Adj R2= 0.567

Table 8: Local property tax per capita regression coefficients with controls and factors

Coefficients^a

		Unstandardized Coefficients		Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	-528.633	504.117		-1.049	.302
	South 1=South 0=not South	92.901	96.465	.125	.963	.342
	Mid West 1=Mid West 0=not Mid West	213.637	66.861	.263	3.195	.003
	Northeast 1=Northeast 0=not Northeast	319.845	103.794	.355	3.082	.004
	Political opinion partisanship (Democratic) index, average 1993-2003	-7.457	3.984	231	-1.872	.070
	Per capita personal income in thousands (BEA 2002)	45.042	11.819	.553	3.811	.001
	Percentage of children below the poverty line, 2005	-3.894	10.187	055	382	.705
	F1: Local Government Outputs, Revenue and Spending in the Intergovernmental System and State Economy	76.749	30.038	.221	2.555	.015
	F2: Importance of Local Public Employment in the State and Intergovernmental System	144.687	39.489	.290	3.664	.001
	F3: Local Government Structural and Functional Responsibility, and Legal Scope	59.084	23.918	.158	2.470	.019
	F4: Tax, Spending, and Debt Limits	-55.629	37.355	155	-1.489	.146
	F5: Assessment Limits	-10.311	26.061	029	396	.695
	F6: Unconstrained Local Revenue	25.731	26.747	.071	.962	.343
	F7: Diversity of Revenue Sources	-135.680	32.253	388	-4.207	.000

a. Dependent Variable: Local property tax revenue per capita, 2002

Note: F Test=19.7; Sig.= 0.000; Adj R2= 0.838

Table 9: Local expenditures per capita regression coefficients with controls and factors

Coefficients^a

			lardized cients	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	817.885	1324.684	2010	.617	.541
	South					
	1=South	-375.379	253.485	243	-1.481	.148
	0=not South					
	Mid West	101 705	475.000		4 004	000
	1=Mid West 0=not Mid West	-191.735	175.693	114	-1.091	.283
	Northeast					
	1=Northeast	-341.230	272.743	183	-1.251	.219
	0=not Northeast	0111200	2.2			
	Political opinion					
	partisanship (Democratic)	5.718	10.469	.086	.546	.588
	index, average 1993-2003	3.710	10.403	.000	.540	.500
	Per capita personal					
	income in thousands	93.742	31.057	.556	3.018	.005
	(BEA 2002)	33.742	31.037	.550	3.010	.003
	Percentage of children					
	below the poverty line,	-12.471	26.768	084	466	.644
	2005					
	F1: Local Government					
	Outputs, Revenue and					
	Spending in the Intergovernmental System	154.195	78.931	.214	1.954	.059
	and State Economy					
	,					
	F2: Importance of Local					
	Public Employment in the					
	State and	536.795	103.765	.519	5.173	.000
	Intergovernmental System					
	F3: Local Government					
	Structural and Functional	0.400	00.040		000	000
	Responsibility, and Legal	-2.482	62.849	003	039	.969
	Scope					
	F4: Tax, Spending, and	-172.155	98.158	231	-1.754	.088
	Debt Limits F5: Assessment Limits					
	F5: Assessment Limits F6: Unconstrained Local	-78.840	68.482	108	-1.151	.258
	Revenue	-100.849	70.285	134	-1.435	.160
	F7: Diversity of Revenue					
	Sources	37.072	84.753	.051	.437	.665

a. Dependent Variable: Local direct expenditures per capita, 2002

Note: F Test= 11.236; Sig.= 0.000; Adj R2= 0.739