COMPARING LOCAL GOVERNMENT AUTONOMY ACROSS STATES*

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INTRODUCTION

LOCAL AUTONOMY IS A TERM THAT IS FRE-quently 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, captures 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 (see Stephens, 1974; United States Advisory Commission on Intergovernmental Relations [ACIR], 1981, 1993; Krane et al., 2000; Blochliger and King, 2006; and Stephens and Wikstrom, 2007), 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.

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" 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.

CONCEPTUALLY DEFINING LOCAL GOVERNMENT AUTONOMY

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 government 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. Below we elaborate on each of the three dimensions.

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 activities affect the state economy?

- Does local government play an important role in the intergovernmental system?

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).

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 in the face of decline of one source of revenue:

- Stability and diversity of revenue sources.

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 (2002b). Our data are mostly from 2002, corresponding with the last available Census of Governments.

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 in Wolman, McManmon, Bell, and Brunori, 2009).

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 use these factor scores to construct the rank value for each state within each dimension.[1]

Finally, 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.

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).[2]

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 a 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 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.[4]

Dimension 2: Local Government Discretion

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

The most extensive study of local government responsibility in the United States was conducted by Joseph Zimmerman through the ACIR and last updated in 1993. Since ACIR dissolved, however, there have been few comprehensive reviews of the degree of autonomy 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 (2000) measures of structural home rule, by which they mean the basic "power to create a new local government," (p. 472) including incorporation, annexation and extraterritoriality jurisdictions. 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.[5]

We also used Krane's (2000) 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 (2000) study looked at the application of functional and structural home rule features, we also include Richardson's et al. (2003) assignment of Dillon's rule states.

The factor analysis of these variables yielded one valid factor explaining 43 percent of variance and which we termed *Local Government Structural and Functional Responsibility, and Legal Scope*.[6]

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.[7] 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 6-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 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.[8] The debt limits

variable, based on ACIR (1993) data, is a 3-point scale proxy variable, where we rank whether states impose limits on municipalities, counties, both, or neither.

These four variables yield two factors and 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*.[9]

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:[10]

1. Local general revenue from own-source taxes and current charges as a percentage of all local general revenue;
2. 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 percent of the variance in the model and which we term the *Unconstrained Local Revenue* factor.[11]

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, two of which are diversity measures constructed using the Herfindahl index methodology. The measures are:[12]

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 percent of local own-source revenue.

Factor analysis allows us to combine these variables into a single diversity measure that controls for and explains 86 percent of the variance among the variables. We label our composite factor *Diversity of Local Revenue Sources*.[13]

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. These factors all explain different aspects of our three initial dimensions of importance: Local Government Importance, Local Discretion, and Local Government Capacity.

We next merge these constructs together to create a single index of local autonomy that incorporates all of the dimensions and subdimensions 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.

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.[14] 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 fac-

Overall local autonomy ranking, with each dimension weighted equally

Rank	State	Factor Score	Rank	State	Factor Score
1	New York	0.845	29	Nebraska	0.004
2	Tennessee	0.681	30	Massachusetts	-0.022
3	Kansas	0.62	31	Oklahoma	-0.033
4	Ohio	0.599	32	Washington	-0.073
5	Louisiana	0.52	33	Wisconsin	-0.121
6	Missouri	0.477	34	Michigan	-0.175
7	Maryland	0.475	35	Oregon	-0.22
8	Wyoming	0.464	36	Idaho	-0.25
9	Texas	0.438	37	New Jersey	-0.255
10	Illinois	0.39	38	Arkansas	-0.258
11	Alabama	0.388	39	Kentucky	-0.331
12	Florida	0.378	40	Montana	-0.337
13	Colorado	0.295	41	North Dakota	-0.381
14	Virginia	0.262	42	Minnesota	-0.389
15	South Carolina	0.201	43	Maine	-0.446
16	Utah	0.191	44	New Hampshire	-0.544
17	New Mexico	0.191	45	Hawaii	-0.685
18	Arizona	0.172	46	Vermont	-0.703
19	North Carolina	0.131	47	Rhode Island	-0.728
20	Mississippi	0.129	48	Connecticut	-0.753
21	Georgia	0.129	49	West Virginia	-0.769
22	Iowa	0.124	50	Delaware	-0.982
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			

tor scores is a relative indicator of the difference between states' local autonomy.

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 without 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 and a Local Government Autonomy index derived from it to empirically compare state systems of local government autonomy in U.S. states. The 20 variables presented in this paper capture much of the differences in state local government systems across our three dimensions of 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 three 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 rely on 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 and typologies.

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 fiscal or non-fiscal outcomes, or it can be employed as a control variable in models.

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 in which 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.

Notes

[1] 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 dimension or subdimension. See Appendix C in Wolman et al. (2009).

[2] The factor loading scores are presented in Appendix B and the state rankings for each factor in Appendix C (Wolman et al., 2009).

[3] These variables are recorded from U.S. Census Bureau (2002a). The gross state product denominator comes from the U.S. Department of Commerce (2002). Personnel data are for all local governments (including school districts and special districts).

[4] See Appendix C (Tables 1 and 2) Wolman et al. (2009).

[5] 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 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.

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

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

[8] See Lincoln Institute of Land Policy.

[9] See Appendix B, Table 3 in Wolman et al. (2009). In both cases positive factor loadings imply the lack of such limits.

[10] In all cases data are from the U.S. Census Bureau (2002a), using general purpose local governments (which exclude school districts and special district local governments); higher percentages indicate greater local revenue discretion.

[11] See Appendix B table 4 in Wolman et al. (2009).

[12] Data are all from U.S. Census Bureau (2002a) using general purpose local governments (which exclude school districts and special district local governments).

[13] See Appendix B, Table 5 in Wolman et al. (2009).

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

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