VARIATIONS IN LOCAL SERVICE DELIVERY:
EXAMINING THE EFFECTS OF STATE-LEVEL FACTORS ON LOCAL GOVERNMENT
CONTRACTING FOR SERVICES

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Introduction

The United States has experienced a long and eventful history of administrative reform and change. This history appears to be a product of the nation’s stateless legacy, which has kindled numerous efforts to augment, modify, and even reduce administrative capacity at all levels of government (Stillman, 1999). Administrative reforms in the United States have also been marked by a struggle over competing visions about the proper size and role of the state in a democratic society (Kaufman, 1969). For the last two decades, reform efforts in the United States have emphasized smaller and more efficient government through privatization, especially contracting for services or outsourcing (Savas, 2000; Hodge, 2000; Kelman, 2002; Donahue, 1989; Kettl, 1993).

Contracting for services is not a new approach or tool of governance, since its use among American governments predates the founding of the republic (Cooper, 2003; Nagle, 1992). Notable examples of contracting in the United States from the early 1800s include mail service and the manufacturing of weapons and other military equipment. The great expansion in the use of contracting for services is a much more recent development, however. Since the 1980s, we have witnessed a huge upsurge in contracting for services at all levels of government (Savas, 1987, 2000; Osborne and Gaebler, 1993; Hanrahan, 1983; Kettl, 1993). This trend was sparked in part by the rise to power of conservative political movements at home and abroad, as well as by poor economic conditions and the need to develop efficient service delivery alternatives in order to relieve fiscal stress.

Interestingly, some experts point to earlier periods as the start of the expansion of contracting for services in the United States. Salamon (1995) explains that prior to the 1960s, the responsibility for providing public services was shared among the voluntary sector and state and local government. With the influx of major federal funding for health and human services during the 1960s, the extent of contracting with the nonprofit sector increased significantly, a pattern that increased further during the 1970s (see also Linder and Rosenau, 2000). According to DeHoog and
Salamon (2002), “purchase-of-service contracting has long been a central feature of America’s human service delivery system, but it expanded massively during the 1960s and 1970s, especially in the Northeast and Midwest, where a longstanding tradition of government-nonprofit cooperation to address social and economic problems has long existed” (pp. 319-320). Kelman (2002) goes back even further, attributing the boom in contracting to the start of World War II and the growth of the defense and information technology industries during the 1950s. Today, by most indications, the use of contracting for services has become widespread in the United States, with privatization having become firmly entrenched in our system of governance (Kettl, 2002; Donahue, 2002; Kelman, 2002; Martin, 1999; Brudney, et al., 2005).

As the previous discussion indicates, contracting for services has been a common feature of the American local government landscape for some time now. Numerous studies and publications have addressed a variety of issues relating to local government contracting (see Greene, 2002; Rehfuss, 1989). Perhaps the most prominent stream of research on local government contracting is a set of empirical studies conducted during the 1980s and 1990s that explored the determinants of contracting for services at the local level. Although their findings have been somewhat mixed and inconclusive (Boyne, 1998), these studies have served to identify various sets of factors that account for the use of contracting by local governments, including fiscal stress, political and ideological factors, service supply and cost factors, and demographic changes in a community.

In this article, we set out to model the use of contracting for services by American local governments. We believe there is sound justification for furthering and improving this line of research. First, recent findings suggest that attitudes about privatization have changed since the 1980s, and that privatization has become less politically controversial and more accepted as a service delivery approach (Brudney, et al., 2005; Warner and Hebdon, 2001; Auger, 1999). Managerial factors, such as the ability to plan for and monitor contracting initiatives, may have trumped political concerns as determinants of contracting for services at the local level. We employ
the latest data from the 2002 International City/County Management Association’s alternative service delivery survey to explore some of these changes. Second, many of the previous studies of local government contracting relied on inadequate measures of competition, fiscal stress, and political and ideological forces (Boyne, 1998), and nearly all of these studies failed to include contract management capacity in their models (Brown and Potoski, 2003a, and Warner and Hebdon, 2001, are recent exceptions to this trend). We therefore draw on multiple sources of data and employ a greater variety of measures to develop a more fully-specified model of local government contracting. Finally, and most importantly, there is a growing awareness among public management scholars that managerial decision making is endogenous to the broader multi-level governance structure (Lynn, Heinrich, and Hill, 2001). Previous studies of local government contracting used data from a single level of analysis. In order to address this deficiency, we employ hierarchical linear modeling and data from two levels of analysis—the state and local level—to control for the effects of state-level contextual factors on local government decision making regarding privatization.

In the next section of the paper, we develop a theoretical model of local government contracting for services. The discussion then turns to the methodology employed in the analysis. The third section of the paper presents the findings. The paper concludes with a broader discussion of the findings and suggestions for future research on local government contracting for services.

Hierarchical Model of Local Government Contracting for Services

In developing a hierarchical model of local government contracting, we employ over three dozen independent and control variables grouped into the following eight categories: service supply and cost factors; public employee strength; fiscal factors; political and ideological factors; the overload hypothesis; government reform factors; managerial factors; and legal constraints. The independent and control variables are approximately evenly distributed between the state and local level of analysis. The data were gathered from a variety of sources, but primarily from the 2002
International City/County Management Association (ICMA) alternative service delivery survey, the US Census of Government finance and employment surveys, the 2000 US Census, and the Book of the States (Council of State Governments).

**Extent of contracting out**

Our dependent variable is the extent to which a local government relies on contracting for services as a service delivery arrangement. To measure our dependent variable, we use the responses to the 2002 ICMA alternative service delivery survey, which identifies the type of service delivery arrangement that was used by cities and counties to deliver sixty seven different services.

Our dependent variable is the total number of services that were provided through contracts with for-profit and non-profit providers and other governments.

Below we elaborate our hypotheses linking theoretically important independent variables to the extent of contracting out by local governments for the delivery of services. Table 1 presents the independent and control variables and their measures, the variables’ level of analysis (state or local), and their predicted association with contracting.

---- Place Table 1 about here ----

**Service supply and cost factors**

The promise of gains in efficiency and economy often is one of the driving forces behind the decision to contract out (Chi and Jasper, 1998; Savas, 2000; Greene, 2002; Sclar, 2000; Hodge, 2000; Kettl, 1993; Dilger, Moffett, and Struyk, 1997). Whether or not this promise is realized appears to depend in part on two factors: the level of competition and the cost of public sector labor.

Savas (1987, 2000) argues that competition during the bidding process is the most important determinant of success (see also Greene, 2002). Competition among providers enhances efficiency by keeping bidders honest and compelling them to minimize their price; it also encourages providers to deliver the best quality of service possible. Insofar as competition can improve the chances for success in contracting, our measures of competition should be positively correlated with
the extent of contracting at the local level (see Morgan, Hirlinger and England, 1988; Ferris, 1986; Greene, 1996a). It is important to note, however, that some research suggests that stability in contractual relationships can contribute as much to successful contracting as competition (Smith and Lipsky, 1993; Smith, 1996; Smith and Smyth, 1996; Provan and Milward, 1995). Stable, long-term relationships help to ensure continuity in service delivery, while competition can cause volatility and disruptions. In our model, we include four measures of competition at the state and local level: the total number of business establishments in a state (busicap); the state population in 2002 (pop2002); a dichotomous ICMA survey indicator of insufficient supply of competent private providers (q5a_7); and the local jurisdiction’s population (totalpop).

The cost of public sector labor also has been found to influence the use of contracting out (Ferris, 1986; Kodrzycki, 1994). As the cost of public sector labor increases due to higher wages and nonwage costs, agencies should face greater pressures to contract out. Labor costs create opportunities for cost savings through privatization, as labor consumes a considerable portion of a local government’s budget (Rehfuss, 1989; Donahue, 1989; Greene, 2002). To capture the cost of public sector labor, we use two variables: the ratio of average state government salary to average private sector salary (stwagegate) and the ratio of average local government salary to average private sector salary (locwagerate); the second variable is measured using data aggregated at the state level. Non-wage labor costs are strongly influenced by union activity and are generally higher in the public sector (Ferris, 1986). Thus, we also include a dummy variable for states where public employees have the right to bargain collectively (colbargain). We expect these three measures of public sector labor costs to be positively correlated with the extent of local government contracting.

Public employee strength

The fear of lay-offs and lower wages and benefits has made public employees and their unions ardent opponents of privatization (Fernandez, Lowman, and Rainey, 2005; American Federation of State, County, and Municipal Employees, 2004; Fernandez and Smith, 2005).
forthcoming; Greene, 2002; Savas, 2000; Lavery, 1999). Several studies point to the ability of public unions to influence the decision to contract for services (Ferris and Graddy, 1986; Becker, Silverstein and Chaykin, 1995; Chandler and Feuille, 1991).

Boyne (1998b) reviewed a number of studies that used labor union coverage and the ratio of public employees to total population as measures of the power of public employees to oppose privatization (e.g., Ferris, 1986; Ferris and Graddy, 1986; Morgan, Hirlinger and England, 1988; Miranda, 1992). He concludes, “a majority of the tests of employees per capita point toward a negative relationship with contracting out. The evidence on unionization is much more mixed but suggests that, on balance, this variable also has a negative effect on service contracting” (Boyne, 1998b, p. 157). We include in our model three measures of public employee strength at the state and local level: state government full-time equivalent employment per capita ($stftecap$); local government full-time equivalent employment per capita ($capfte$); and a dichotomous ICMA survey indicator of opposition to privatization among line employees in a local government ($q5a_3$). We expect these three measures of public employee strength to be negatively correlated with our dependent variable.

**Fiscal factors**

As we noted previously, the potential for reducing the cost of public service delivery is a frequently cited reason for contracting out (Greene, 2002; Dilger, Moffett, and Struyk, 1997; Van Slyke and Hammonds, 2003; Apogee Research, 1992)\(^1\). This potential for cost savings should be particularly appealing to public agencies experiencing fiscal stress. Indeed, most studies seeking to identify the determinants of contracting out have included one or more measures of fiscal stress (Ferris, 1986; Ferris and Graddy, 1986; Morgan, Hirlinger, and England, 1988; Chandler and Feuille, 1994; Kodrzycki, 1994; Warner and Hebdon, 2001). While some studies have found a positive correlation between fiscal stress and the extent of contracting out, Boyne (1998b) asserts
that overall, “the evidence provides little support for the view that fiscal stress is a significant constraint on decisions to contract out” (p. 152).

In our model, we include a variety of measures at the state and local level to account for both the revenue and fiscal burden side of the fiscal stress problem. At the state level, we use per capita income in 2001 \((p\text{income}_0)\) and the ratio of state own-source revenue to the sum of total intergovernmental and own-source revenue \((strevrat)\). The first of these variables is a proxy measure of state fiscal capacity and should be negatively correlated with the extent of contracting out, while the second variable represents fiscal burden and should be positively correlated with the extent of contracting out. At the local level, we include the following three measures of fiscal stress: the ratio of local property tax revenue to sum of intergovernmental revenue and property tax revenue \((fburden)\); per capita total short-term debt outstanding at end of fiscal year \((capsdebt)\); and a factor score created from three dichotomous ICMA survey indicators of perceived fiscal stress \((x1_{fs})\). The first two of these variables measure fiscal burden and should be positively correlated with the extent of contracting out. Perceived fiscal stress should be positively correlated with the dependent variable as well.

**Political and ideological factors**

Research suggests that a variety of political and ideological factors influence the decision to contract out, such as citizens’ preferences for the size and role of government, and the political ideology and partisanship of citizens and elected officials. Political pressure for a smaller and less active government is likely to result in more contracting for services (Boyne, 1998b). Conversely, three population subgroups have been hypothesized to favor a larger role for government and thus to oppose privatization of service delivery: blacks, the elderly, and individuals with low income (Ferris, 1986; Ferris and Graddy, 1986; Morgan, Hirlinger, and England, 1988; Morgan and Hirlinger, 1991; Miranda, 1992; Thompson and Elling, 2000). Our model includes measures of the percentage of a local government’s population that is black \((blackpop)\) and that is sixty five years of
age and older ($pop65$), as well as the percentage of households receiving public assistance income in a local jurisdiction ($pasincpop$). We expect these three local level variables to be negatively correlated with our dependent variable.

Kodrzycki (1994) used the percentage of a local government’s general non-educational expenditures that went to human services (measured as public welfare spending plus spending on health and hospitals) as a measure of citizens’ preferences for governmental services; her results indicate a strong negative relationship between this variable and the use of contracting out. Thus, we include in our model a measure of state government spending on public welfare as a percentage of total state government general expenditures ($stdgwelf$) and the same measure for local governments spending ($locdgwelf$); the second variable is measured using data aggregated at the state level.

To capture the political climate in the state, we include in our model a measure of the ratio of Democratic to Republican state legislators ($legdemo$). For over two decades, modern conservative political movements in the United States, the United Kingdom and elsewhere have advocated privatization as a means for reducing the size of the public sector, curbing the power of the state, and making public bureaucracy more productive and competitive (Savas 2000; Sclar, 2000; see also Breaux, et al., 2002). Thus, we expect this measure to be negatively correlated with the extent of contracting out, even though some recent findings indicate no relationship between political partisanship and the dependent variable (Brudney, et al., 2005; Warner and Hebdon, 2001). Finally, our model includes two local level measures of political opposition to privatization. These measures are dichotomous ICMA survey indicators of opposition to privatization from citizens ($q5a_1$) and from elected officials ($q5a_2$). Both should be negatively correlated with the extent of contracting out.

**Overload hypothesis**
Significant shifts in the size of a population can impact the extent to which a local government relies on contracting for services (Greene, 2002). Rapid population growth can overload a local government’s service delivery capacity, prompting public officials to make increasing use of contracting out to meet the growing demand for services, particularly when governments face hiring constraints. Rapid population growth also could strain the fiscal capacity of government, making privatization, with its potential for greater efficiency, a more appealing option. Empirical tests of this hypothesis have been mixed (see Greene, 2002; Kodrzycki, 1994). To test the overload hypothesis, we include in our model a measure of the change in the population of a jurisdiction from 1998 to 2002 (popch9802).

Reform factors

Privatization is often adopted as part of a broad reform or reinvention initiative aimed at making government more efficient, effective, and responsive (Ingraham, 1997; Kettl, 2000; Barzelay, 2001; Brudney, et al., 2005). The literature also suggests that local jurisdictions are influenced by state and local governments to adopt similar types of structures and practices (Rainey, 2003). In our model, we include three measures of the intensity of administrative reform at the state level to account for the influence of the state’s reform climate on local governments. These variables include whether or not state government implemented state performance funding in 1997 (Jordan and Hackbart, 1999) (perfund); whether or not state government reforms were incremental or wholesale in 1998 (The Council of State Governments 1998-99) (extreform1); and a measure of the range of performance information collected for managing for results (Moynihan, 2001) (mfr2000). We expect these three variables to have a positive influence on the extent of contracting out at the local level.

Managerial factors

To be successful, contracting for services must be managed well; doing so requires a variety of administrative skills and activities (Rainey, 2003; Moe, 1996). Contracting out creates potential
agency problems such as adverse selection and moral hazard that result from information asymmetry and opportunism (see Sclar, 2000). To curb these problems and help ensure success, local governments need to develop contract management capacity to plan privatization initiatives, manage the solicitation process, and monitor contractor performance (Savas, 2000; Sclar, 2000; Kettl, 1993; Rehfuss, 1989; Brown and Potoski, 2003a, 2003b). We include in our model three measures of contract management capacity at the local level. The first measure, representing ex ante analysis and planning efforts ($x5_{fs}$), is a factor score created from dichotomous ICMA survey indicators of whether or not the local government identified successful privatization initiatives in other jurisdictions, established a citizens’ advisory committee on privatization, and hired consultants to study the feasibility of privatization. The second measure captures contract monitoring capacity ($x9_{fs}$) and is a factor score created from dichotomous ICMA survey indicators of whether or not the local government evaluated citizen satisfaction, cost, and compliance with standards to evaluate private service delivery, and whether or not it employed citizen surveys, monitoring of citizen complaints, field observations, and analysis of data and records to evaluate private service delivery. The third is a measure of external stakeholder involvement ($x14_{fs}$), a factor score created from dichotomous ICMA survey indicators of whether or not the following external stakeholders were involved in studying the feasibility of privatization: potential service providers; professional consultants; service recipients/customers; managers in other local governments; citizen advisory committees; and state agencies, leagues, and associations. We expect these variables to be positively correlated with the extent of contracting out.

Managing privatization successfully also appears to require that public managers take steps to reduce employee opposition to privatization and to reduce legal barriers to privatization (Fernandez, Lowman, and Rainey, 2005; Fernandez and Smith, 2005 forthcoming; ICMA, 1992; Savas, 2000). Our model includes a measure of efforts to reduce public employee opposition to privatization ($x6_{fs}$), a factor score created from dichotomous ICMA survey indicators of whether
or not the local government allowed public employees to compete with the private providers during the bidding process and developed programs to minimize the effects of privatization on displaced employees. We also include a measure of efforts to reduce legal barriers to privatization \( (x_7fs) \), a factor score created from dichotomous ICMA survey indicators of whether or not the local government recommended changes in state and local law to ensure success in implementing privatization. We expect these two variables to be positively correlated with our dependent variable.

Finally, we control for the effects of a policy to adopt privatization only to add service delivery capacity rather than to replace public employees \( (x_8fs) \). This variable is measured using a factor score created from dichotomous ICMA survey indicators of whether or not the local government applied private alternatives to new services and to growing services.

**Legal constraints**

Since the early twentieth century, many state governments have exercised their constitutional powers to regulate municipalities’ taxing, borrowing, spending, and financial administration (Rubin, 1998). Despite changes such as home rule movements during the 1970s, the basic structure remained almost unchanged or was enhanced. Some states even devised uniform guidelines for budget preparation and required state approval of local budgets; others took on more legal responsibilities, such as state tax and expenditure limits, to review local budgets (Rubin, 1998; Brown and Potoski, 2003). As of 2003, for example, twenty eight states imposed Tax and Expenditure Limitations (TELs) on county governments (Mullins, 2003). We assume that without a clear exploration of such legal contextual constraints imposed by states on local governments’ fiscal decision making, local government contracting patterns cannot be fully explained.

We control for two levels of TELs. A state level TEL refers to legal restrictions imposed on state government budgets, while a local level TEL is a restriction imposed solely on local governments (Shadbegian, 2003). Previous studies (Shadbegian, 2003, 1999; Mullins and Joyce, 2003).
1996) using public finance data indicate that state and local TELs have been shifting the fiscal responsibilities of localities to state governments, with more stringent TELs showing stronger impacts. Following Mullins and Joyce (1996), we combine two categories of local TELs for counties and municipalities, potentially binding and non-binding, into a local tax and expenditure limit \((tel)\). At the state level, we control for the effects of a state revenue limit \((strevlim)\) and a state expenditure limit \((stexplim)\).

Local TELs tend to have a negative effect on local revenues and expenditures while stimulating state direct expenditures and grants to local governments. The negative effect on local revenues might drive local governments to seek out cost-saving measures, thus resulting in a positive correlation between local TELs and the extent of local government contracting. However, additional grant funding from the states may offset or even overcompensate for the revenue shortfall caused by the local TELs. We must therefore allow for the possibility of no relationship or even a positive one between local TELs and the extent of local government contracting.

Shadbegian (2003) has shown that state level TELs have a negative impact on state grants to local governments. Thus, we expect \(strevlim\) and \(stexplim\) will also exert a positive effect on the extent of contracting out by local governments as they seek cost savings to compensate for reduced revenues.

Other legal requirements for fiscal austerity by state governments, such as a constitutional and/or statutory balanced budget requirement, might curtail overall state spending. For the similar reasons indicated above, we include in our model the variable \(legbbr\), which represents a requirement for the state legislature to pass a balanced budget. Some studies suggest that a balanced budget requirement is strongly linked to a state’s fiscal health (Poterba, 1994, 1996). Thus, we might expect \(legbbr\) to be negatively correlated with the extent of contracting out. Conversely, insofar as a balanced budget requirement reflects fiscal stringency, we could expect a positive relationship between \(legbbr\) and the dependent variable.
Finally, we control for the effects of legal restrictions on contracting out at the local level ($x12_fs$). This variable is measured using a factor score created from two dichotomous ICMA survey indicators of whether or not the local government experienced restrictive labor contracts/agreements and other legal constraints on the adoption of contracting for services.

**Hierarchical Linear Modeling and Data**

During recent decades, public programs and policies have increasingly been implemented through multi-actor and multi-level governance structures. Based on their review of over eight hundred articles published from 1990 to 2001, Hill and Lynn identified several sets of hierarchical interactions that compose any U.S. public governance regime (Hill and Lynn, 2005; see also Ewalt, 2004; Hill, 2004; Heinrich and Fournier, 2004; Selden and Sowa, 2004). For example, a governance regime may be composed of “citizen preferences and interests expressed politically, public choice expressed in enacted legislation or executive policies, and discretionary organization, management, and administration” (Hill and Lynn, 2005, p. 176). Variables embedded in any one level of the governance hierarchy both influence and are influenced by variables at other levels of the hierarchy (Hill and Lynn, 2005). We therefore adopt a hierarchical, two-level approach to explaining patterns in local government contracting for services that accounts for the influence of state level contextual forces on local decision making about privatization..

We employ hierarchical linear modeling techniques (HLM) to examine the interaction between the variables pertaining to the individual local governments and those characterizing the broader aggregates or higher-level contextual factors affecting local government decision making (Heinrich and Lynn 2000, p. 81; Hox, 1995, pp. 1-7). The 2002 ICMA survey responses and other local level data constitute individual (Level I) variables. To explore the impact of contextual (Level II) variables on each local government’s decision to contract out, we further constructed the characteristics of the political, fiscal, and legal environments of states within which local governments carry out their functional responsibilities.
In hierarchical linear modeling, each level in the nested data structure is formally specified by its own sub model (Heinrich 2002, 2000, pp. 84-85).\(^8\) We further develop an unconditional means model to check whether there is clustering in our dependent variable across states (Singer 1998; Steenbergen and Jones, 2002; Snijders and Bosker, 1994).\(^9\) The unconditional means model indicates that there is a statistically and practically significant variation in the state level measures of contracting out.\(^10\) The intra-state correlation coefficient is \(0.01667 \approx 1.8644/(1.8644 + 110.01)\), which is likely to inflate Type I error (Steenbergen and Jones, 2002). Furthermore, disaggregation of higher-level variables into lower-level variables is likely to increase the sample number of the former and result in more frequent rejection of the null hypothesis than the nominal \(p\)-value, suggesting to us the need to use HLM (Hox, 1995, p. 4-5; Hox and Kreft, 1994).

As elaborated above, the data for empirical test of the model come from a variety of sources. All of the data are for the year 2002, unless specified otherwise. The 2002 alternative service delivery survey, administered by ICMA, is the data source for our dependent variable and several independent and control variables. This ICMA sample consists of 985 municipalities and 298 counties. Although the response rate for the 2002 ICMA survey was approximately 24%, respondents were quite similar to non-respondents in terms of size of population, geographic region, and metropolitan status, a finding which should allay fears of non-response bias and strengthen the generalizability of our analysis.\(^11\)

**Results**

In this section, we report the results of our multi-level explanatory model of local government contracting for services. The average local government in our sample contracts out 10.8 services of 67 total services, with a standard deviation of 10.5. Local governments in the sample ranged in the number of contracted services from a low of 0 to a high of 58. More than eighty percent of local governments in the sample contracted out at least one service.
Table 2 presents the statistical estimation of our model based on hierarchical linear modeling along with the exact level of statistical significance for each variable. Overall, the results show that management factors, service supply and cost factors, political and ideological factors, and legal constraints influence the extent to which local governments contract for services, with the influence of these factors often times in the anticipated direction. Moreover, local-level variables as well as state-level variables exert influence on local government contracting for services, indicating that local decision making about service delivery alternatives is endogenous to the broader context of governance. We examine the results in greater detail below.

---- Place Table 2 about here ----

As noted previously, a wide literature shows that contract management capacity is crucial for successful privatization, by allowing governments to plan effectively for and administer the contracting process and by helping public managers regulate the behavior of contractors. Like Brown and Potoski (2003a), our findings indicate that local governments consider contract management factors seriously when making decisions about contracting out. Ex ante analysis and planning capacity, $x_{5_fs}$, is positively correlated with the extent of contracting out ($p < 0.06$). Local governments that observe successful contracting initiatives in other jurisdictions and that hire consultants to help plan for a transition to external service delivery contract out more services than other local governments. Contract monitoring capacity, $x_{9_fs}$, is also positively correlated with the extent of contracting out ($p < 0.0001$). Local governments with strong monitoring capacity contract out a greater number of services, probably because they are in a better position to control quality of service and ongoing costs and to reduce the incidence of shirking and other forms of opportunistic behavior. In addition, external stakeholder involvement ($x_{14_fs}$) is positively correlated with the extent of contracting out ($p < 0.02$). Local governments that involve a larger number of external stakeholders, such as service providers, service recipients and citizens groups, and other public agencies, in their contracting initiatives contract out a larger number of services. By involving these
external stakeholders, local government officials can learn more about the needs of citizens, market conditions, and service delivery technologies; the involvement of external stakeholders may also help to lend legitimacy to external service delivery. Three other management variables, efforts to reduce employee opposition to privatization and \( x_6 \), a production capacity-adding strategy \( x_8 \), and efforts to reduce legal barriers \( x_7 \) fail to achieve statistical significance at the \( p < 0.10 \) level and appear to have little if any effect on the decision to contract out.

Interestingly, the three variables representing public employee strength in our model also fail to achieve statistical significance. While public employees and public sector unions remain ardent opponents of privatization (Fernandez, Lowman, and Rainey, 2005; Fernandez and Smith, 2005 forthcoming), this opposition does not appear to influence the extent to which local governments rely on contracting for services, perhaps because only on some occasions is it sufficient to block privatization initiatives. Also, public sector unions have experienced mixed success when it comes to mounting effective legal challenges to privatization (Fernandez, Lowman, and Rainey, 2005). Finally, employee and union opposition to privatization may exert a greater influence on the decision to contract out specific services, such as in the area of public safety, rather than across a wide range of services (Thornton, 2004).

The model includes seven service supply and cost variables to examine the effects of competition and public sector labor costs on local government contracting for services. Let us focus first on the issue of competition. Two proxy measures for competition, the state population in 2002 \( pop_{2002} \) and the local jurisdiction’s population in 2002 \( totalpop \), have positive coefficients \( p < 0.0001 \). These findings support the mainstream argument that greater competition improves the chances for success in contracting and therefore encourages local governments to rely more on this form of privatization. Conversely, the results show that local governments rely less on contracting for services when there are greater numbers of business establishments in a state; they also show that local governments rely on contract for services to a slightly greater extent when public
managers report an insufficient supply of competent service providers. The coefficients for total number of business establishments per capita in a state \((busicap)\) and for insufficient supply of competent private providers \((q5a_7)\) are negative \((p < 0.07)\) and positive \((p < 0.07)\), respectively. This latter set of findings supports the counter-argument made by some experts that stability and continuity contribute more to success than competition, which can create service disruptions and be costly and difficult to foster. Local government managers may feel more secure contracting out a service when competition is among a small number of competent providers who can be trusted and who have performed adequately in the past. An alternative explanation to the negative relationship between these two measures of competition and the extent of contracting is that lower levels of competition influence local governments to contract out more in order to strengthen thin markets. In short, the findings about the relationship between competition and the extent of contracting for services are mixed.

We find that the cost of public sector labor, in terms of both wages and fringe benefits, does not exert influence on the extent of local government contracting. Neither the ratio of average state government salary to private sector salary \((stwagerate)\) nor the ratio of average local government salary to average private sector salary \((locwagerate)\) achieves statistical significance at the \(p < 0.10\) level. The variable measuring whether or not public employees have the right to bargain collectively \((colbargain)\) also fails to achieve statistical significance in the model \((p < 0.33)\).

Most studies aimed at explaining patterns in local government contracting have included measures of fiscal stress at the local level, even though these measures often fail to account for any of the variation in local government contracting (Boyne, 1998). Brown and Potoski (2003a) found that general revenue per capita is negatively correlated with external service delivery, and Brudney, et al.’s (2005) study found some evidence of fiscal stress at the state level influencing contracting for services among state agencies. Our model includes five measures of fiscal stress, two at the state level and three at the local level. At the state level of analysis, the ratio of state own-source
revenue to the sum of total intergovernmental and own-source revenue ($strevrat$), which is a measure of fiscal burden, does not achieve statistical significance at the $p < 0.10$ level. Moreover, the results show that fiscal stress at the local-level has no apparent effect on the extent of local government contracting for services. We included two indicators of local fiscal burden in the model: ratio of local property tax revenue to sum of intergovernmental revenue and property tax revenue ($fburden$) and per capita total short-term debt outstanding ($capsdebt$). We had hypothesized that as fiscal burden rises, the demand for smaller government would increase, resulting in more contracting in order to reduce the cost of service delivery. Both variables, however, fail to achieve statistical significance at the $p < 0.10$ level. An ICMA survey indicator of perceived fiscal stress ($x1_fs$) also fails to achieve statistical significance in the model ($p < 0.54$) (see also Hefetz and Warner, 2004). Finally, however, per capita personal income ($pincome0$), which is an indicator of state fiscal capacity, is in the opposite direction than what was expected. Per capita personal income exerts a positive impact on local government contracting ($p < 0.07$). It appears that citizens with higher income levels generally prefer smaller government and more efficient service delivery.

As indicated in the literature review, a variety of political and ideological factors can influence the extent to which local governments rely on contracting out. Three population subgroups have been hypothesized to favor a larger role for government and, thus, to oppose privatization of service delivery: blacks, the elderly, and individuals with low income. The results show, however, that the percentage of the population that is black ($blackpop$), the percentage of the population that is 65 years and older ($pop65$), and the percentage of households receiving public assistance income ($pasincpop$) all have coefficients that fail to achieve statistical significance at the $p < 0.10$ level. This finding is contrary to some previous research (e.g., Thompson and Elling, 2000; Miranda, 1992). A more direct measure of opposition to privatization, citizen opposition to privatization ($q5a_1$), measured using an ICMA survey indicator, does achieve statistical
significance in the model ($p < 0.04$), and the coefficient is in the anticipated direction. At the local level, direct citizen opposition to privatization results in less contracting for services. The other two variables measured using ICMA survey indicators, external political pressures for privatization ($x2a_{fs}$) and opposition from elected officials ($q5a_{-2}$), fail to achieve statistical significance at the $p < 0.10$ level in the model.

The model included three political and ideological variables at the state level of analysis. The coefficient for the ratio of Democrats to Republicans in the state legislature ($legdemo$) fails to achieve statistical significance ($p < 0.25$); thus, partisanship at the state level appears to have no effect on local government contracting. To test for the effects of citizens’ preferences for governmental services, we included measures of state government spending on public welfare as a percent of direct general expenditures ($stdgwelf$) and statewide local government spending on public welfare as a percent of direct general expenditures ($locdgwelf$). Local government spending on public welfare as a percent of direct general expenditures has a negative influence on the extent of contracting for services by local governments ($p < 0.09$), a similar finding to Kodrzycki’s (1994). Local governments in states where a larger share of local spending goes to public welfare services seem to prefer more direct governmental service provision than local governments in other states. State government spending on public welfare as a percent of direct general expenditures, however, has no apparent effect on local government contracting for services ($p < 0.91$).

Although our findings seem partially consistent with some previous findings, they run counter to other more recent empirical studies. For example, Brudney, et al. (2005) found no relationship between political and ideological factors and state government contracting and conclude that state level privatization decisions are moving into a decidedly more pragmatic plane transcending ideological and party lines (see also Warner and Hebdon, 2001; Auger, 1999). What might explain, then, our results showing that citizen opposition to privatization and citizens’ preferences for local public welfare spending have an impact on the extent of local government contracting? At the local
level, closer proximity between citizens and policymakers could cause the latter to be more responsive to political pressure from the former. As some research has shown, governments at the lower tier of the federalist structure are more responsive to voters than those at higher levels (Turnbull and Mitias, 1999). Although local governments are subject to financial and legal control from state governments, ample evidence suggests that direct democracy remains vital at the local level (Rubin, 1998).

We included in our model three state level variables to test for the effects of state government reform efforts on local government contracting. A recent study of government contracting that employed hierarchical modeling found that state agencies in states with a favorable view toward government reform relied more on contracting for services than other state agencies (Brudney, et al., 2005). Our findings, however, show that a state’s reform climate has little apparent effect on local government contracting. Implementation of state performance funding in 1997 (perfund), whether state government reforms were incremental or wholesale in 1998 (extreform1), and the range of performance information collected for managing for results by state governments (mfr2000), all fail to achieve statistical significance at the $p < 0.10$ level.\textsuperscript{13}

We tested the overload hypothesis using the variable popch9802, population change from 1998 to 2002. The coefficient is not statistically significant ($p < 0.85$). Thus, the findings fail to show that significant shifts in the size of a population affect the extent of local government contracting for services.

Finally, we examine the effects of legal constraints on local government contracting for services. Localities are highly subject to legal and institutional pressures from state governments. Most previous studies of local government contracting, however, did not pay adequate attention to the legal environment surrounding local governments, except for a few recent studies that explored the impact of institutional variables on local contracting. For instance, Brown and Potoski (2003a) found that state-imposed tax limits are positively correlated with external service delivery.
To control for the effects of state and local legal requirements for fiscal administration and of restrictive labor contracts, we developed five variables. Unlike previous studies, we included more detailed indices of legal institutions. Binding and non-binding TELs (tax and expenditure limits) for counties and municipalities (\textit{tel}) fail to achieve statistical significance at the $p < 0.10$ level in the model. Local TELs generally have a negative fiscal impact on local governments, encouraging them to reduce costs through privatization. The drive to economize, however, appears to be offset by additional grant funding from the states to localities, thus resulting in no relationship between local TELs and the extent of local government contracting.\textsuperscript{14}

Considering the fact that almost half of all local revenues come from state governments (Bahl, 2004), state legal institutions pertaining to fiscal matters should exert some effect on local fiscal conditions. State-level TELs tend to have a negative effect on state grant funding to localities (Shadbegian, 2003). We therefore expected that two state-level TELs, state revenue limit (\textit{strevlim}) and state expenditure limit (\textit{stexplim}), would be positively correlated with local government contracting. The results show some support for this proposition. The coefficient for state revenue limit (\textit{strevlim}) is positive ($p < 0.02$). Local governments experiencing a reduction in funding due to state revenue limits appear to be seeking cost savings through contracting out in order to make up for reduced revenues. Conversely, a state expenditure limit (\textit{stexplim}), as well as a balanced budget requirement at the state level (\textit{legbbr}), have no apparent impact on the extent of local government contracting for services ($p < 0.68$ and $p < 0.99$, respectively).

We also tested for the influence of restrictive labor contracts on contracting out (\textit{x12_fs}) and found no relationship between such restrictions and our dependent variable ($p < 0.92$).

\textbf{Discussion and Conclusion}

This study developed and tested an integrated model of local government contracting for services. Based on a review of the voluminous literature in this domain, we created an explanatory model that incorporates all major proposed determinants of this important phenomenon. The model
includes not only determinants of contracting at the local level, as characteristic of the bulk of this research, but also, following the perspective of Hill and Lynn (2005) and others (for example, Ewalt, 2004; Hill, 2004; Heinrich and Fournier, 2004; Selden and Sowa, 2004), factors measured at the state level to capture the larger context of governance in which cities and counties are embedded. To test this formulation empirically, we employ a suitable statistical technique, hierarchical linear modeling (HLM), which can estimate effects at multiple levels of analysis. In this case, we hypothesized effects at both the state and local level. Our analysis and its results justify the decision to use hierarchical linear modeling, as nearly half of the statistically significant variables in the model are state level variables, indicating that decision making about service delivery alternatives is endogenous to the broader context of governance.

A number of hypotheses drawn from the literature on local government contracting were supported empirically by the results of the statistical estimation, although others were disconfirmed. This conclusion to the research might well have been anticipated. The literature on contracting extends for more than two decades; it demonstrates varying degrees of methodological sophistication, including a wide variety of models, sampling techniques, and indicators; and it mostly has considered a single level of analysis (i.e., the local level). In addition, over the past several decades, political and administrative developments may have altered the relative importance of various predictors of local government contracting for services. Too, because most researchers have concentrated on only a subset of explanatory variables of particular interest to them and have varied in their use of control variables, findings can be highly unstable from one study to the next. In the present study, by contrast, we have endeavored to specify a full model that takes into account state level contextual factors as well as local level determinants of contracting, and to test it with HLM statistical techniques. Thus, the results present one of the most comprehensive examinations of contracting for services by American local governments.
Some of the most noteworthy findings of the study concern the role of local government management capacity and political factors on contracting for services. The results show various indicators of contract management capacity are positively correlated with the extent of local government contracting. They intimate that contract management capacity is seen as a determinant of success in contracting for services, by reducing the danger posed by principal-agent problems and allowing local governments to retain more control over the service delivery process. Contrary to some recent research but consistent with other studies, our results show also that politics and ideology still play an important role in the decision to contract out. We found that opposition from citizens negatively affects the use of contracting out by local governments. Local governments that earmark a larger share of their spending for public welfare services also rely more on direct service provision and less on privatization.

The results of the analysis show that legal constraints on taxing and spending in part explain patterns in local government contracting. Specifically, we found that a state tax and expenditure limit results in more contracting for services at the local level. This finding suggests that such limits reduce the flow of funding to local governments, which then spurs local governments to rely more on contracting out in an effort to reduce service delivery costs.

Some notable hypotheses could not be confirmed, however. For example, local governments do not appear to respond to opportunities to reduce the cost of public sector labor by contracting out more services. Also, neither the climate for administrative reform at the state level, significant shifts in the population of a local jurisdiction, or fiscal stress appear to have much if any influence on local government decision making about contracting out. Local governments experiencing fiscal stress may not have sufficient resources to develop the contract management capacity to allow them to contract out effectively. Just as surprising were the results showing no relationship between public employee strength and local government contracting. Public employee
opposition generally does not appear to dissuade local decision makers from privatizing public services.

The study’s findings regarding the effects of competition were mixed and inconclusive. While measures of population, serving as proxies for competition, were positively correlated with the extent of local government contracting, two other measures of competition had coefficients indicating the opposite relationship, thus running counter to the prevailing orthodoxy of privatization. The negative relationship between some measures of competition and local government contracting suggests that with a smaller pool of providers, local government managers may be able to develop more knowledge, trust, and experience with each of the providers and, thus, feel more confident in contracting out a service. In addition, working with fewer providers may foster shared understanding and mutual expectations in the government-provider relationship, leading to more stability and better performance. Conversely, as we speculated above, it is also possible that local governments may contract out as a deliberate strategy to build the market of competitive providers. In short, researchers may have overestimated the salutary effects of competition, and future studies are need to examine what sort of competitive (or non-competitive) environments are more or less conducive to contracting.

Another potentially promising direction for future research involves developing separate explanatory models for each of the various alternative service delivery arrangements. We may find a weaker relationship between contract management capacity and contracting with for-profit providers and public agencies, since contracting with these types of organizations may reduce the risk of principal-agent problems and thus lessen the need for contract administration (see Cooper, 2003). Other independent variables in our model may have varying effects on the use of different alternatives to in-house service delivery, as well.

In sum, we believe that our hierarchical, two level model of local government contracting holds considerable potential for explaining this complex phenomenon. Given the great interest in
contracting for services by practicing administrators and academic researchers alike, enquiry in this area will undoubtedly continue. We believe that the present analysis can help to inform the debate.
References


Shadbegian, R. J. 1999. The Effect of Tax and Expenditure Limitations on the


Table 1. Independent variables and measures (for year 2002 unless specified otherwise)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Level of Analysis</th>
<th>Hypothesized Association</th>
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<tr>
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<td>Total business establishments in a state</td>
<td>State</td>
<td>+</td>
</tr>
<tr>
<td>pop2002</td>
<td>State population</td>
<td>State</td>
<td>+</td>
</tr>
<tr>
<td>colbargain</td>
<td>Right to collective bargaining</td>
<td>State</td>
<td>+</td>
</tr>
<tr>
<td>stwagerate</td>
<td>Ratio of state government salary to private sector salary</td>
<td>State</td>
<td>+</td>
</tr>
<tr>
<td>locwagerate</td>
<td>Ratio of local government salary to private sector salary (data aggregated at state level)</td>
<td>State</td>
<td>+</td>
</tr>
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<td>totalpop</td>
<td>Local population</td>
<td>Local</td>
<td>+</td>
</tr>
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<td>Local</td>
<td>-</td>
</tr>
<tr>
<td>stftecap</td>
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<td>State</td>
<td>-</td>
</tr>
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<td>Local</td>
<td>-</td>
</tr>
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<td>Local government FTE employment per capita</td>
<td>Local</td>
<td>-</td>
</tr>
<tr>
<td>stdgwelf</td>
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<td>-</td>
</tr>
<tr>
<td>locdgwelf</td>
<td>Local spending on public welfare</td>
<td>State</td>
<td>-</td>
</tr>
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<td>-</td>
</tr>
<tr>
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<td>Percent of population that is 65 years old and over</td>
<td>Local</td>
<td>-</td>
</tr>
<tr>
<td>blackpop</td>
<td>Percent of population that is black</td>
<td>Local</td>
<td>-</td>
</tr>
<tr>
<td>pasincpop</td>
<td>Percent of households receiving public assistance income</td>
<td>Local</td>
<td>-</td>
</tr>
<tr>
<td>q5a_1</td>
<td>Opposition from citizens</td>
<td>Local</td>
<td>-</td>
</tr>
<tr>
<td>x2a_fs</td>
<td>External political pressures for privatization</td>
<td>Local</td>
<td>+</td>
</tr>
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<td>q5a_2</td>
<td>Opposition from elected officials</td>
<td>Local</td>
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</tr>
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<td>Local</td>
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</tr>
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</tr>
<tr>
<td>( \text{mfr2000} )</td>
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<td>( \text{extreform1} )</td>
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<tr>
<td>( x_{5\ fs} )</td>
<td>Ex ante analysis and planning</td>
<td>Local</td>
<td>+</td>
</tr>
<tr>
<td>( x_{6\ fs} )</td>
<td>Efforts to reduce employee opposition</td>
<td>Local</td>
<td>+</td>
</tr>
<tr>
<td>( x_{7\ fs} )</td>
<td>Efforts to reduce legal barriers</td>
<td>Local</td>
<td>+</td>
</tr>
<tr>
<td>( x_{8\ fs} )</td>
<td>Production capacity-adding strategy</td>
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<td>+</td>
</tr>
<tr>
<td>( x_{9\ fs} )</td>
<td>Contracting monitoring capacity</td>
<td>Local</td>
<td>+</td>
</tr>
<tr>
<td>( x_{14\ fs} )</td>
<td>External stakeholder involvement in feasibility study</td>
<td>Local</td>
<td>+</td>
</tr>
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<td>( \text{tel} )</td>
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<td>+/-insig.</td>
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<tr>
<td>( \text{strevlim} )</td>
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</tr>
<tr>
<td>( \text{stexplim} )</td>
<td>State expenditure limit</td>
<td>State</td>
<td>+</td>
</tr>
<tr>
<td>( \text{legbr} )</td>
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<td>State</td>
<td>+/-</td>
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<td>( x_{12\ fs} )</td>
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<td>Local</td>
<td>-</td>
</tr>
<tr>
<td>( \text{popch9802} )</td>
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</tr>
<tr>
<td>Variable</td>
<td>Description</td>
<td>Coefficient</td>
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</tr>
<tr>
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<td>Intercept</td>
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<td>0.4163</td>
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**Level I (Local)**

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<td>Opposition from local government line employees</td>
<td>0.1059</td>
<td>0.1919</td>
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<td>capfte</td>
<td>Local government FTE employment per capita</td>
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<td>0.1393</td>
</tr>
<tr>
<td>pop65</td>
<td>Percent of population that is 65 years old and over</td>
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<td>blackpop</td>
<td>Percent of population that is black</td>
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<td>q5a_2</td>
<td>Opposition from elected officials</td>
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<td>0.1303</td>
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<td>x1_fs</td>
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**Level II (State)**

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<td>Right to collective bargain</td>
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<td>Ratio of local government salary to private sector salary (data aggregated at state level)</td>
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<td>State government FTE employment per capita</td>
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<td>stdgwelf</td>
<td>State spending on public welfare as a percent of state direct general expenditures</td>
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<tr>
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<td>Per capita personal income</td>
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<td>0.4349</td>
</tr>
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<tr>
<td>-2 Res Log Likelihood</td>
<td>3,244.2</td>
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</tbody>
</table>
1 Kent (1998) has documented the use of privateers during the 16th century reign of Elizabeth I as even earlier evidence of contracting out overseas.

2 As Boyne (1998) notes, population size also has been used in many studies as a measure of scale economy to test the hypothesis that cities with smaller populations are more likely to contract out than larger ones. The results, however, have been mixed and inconsistent with the scale hypothesis.

3 Where exactly do the savings from contracting lie? According to Rehfuss, private contractors are able to lower their labor costs by offering lower wages and fringe benefits, by hiring employees for fewer hours, and by hiring younger employees. Kettl (1993), after observing patterns in state and local government contracting during the 1980s and 1990s, concluded that contractors were able to reduce costs through more flexible use of the workforce, lower wages, and lower fringe benefits. “With so much of state and local spending concentrated on personnel costs, any argument to reduce that spending inevitably is an argument to reduce the number of employees as well” (1993, pp. 161-162).

4 This finding is not surprising, given the assertion made by advocates of privatization that privatized service delivery is nearly always more efficient (Savas 1987, 2000), even though the empirical evidence to support this claim is somewhat mixed (see Hodge, 2000; Sclar, 2000).

5 Interestingly, Greene (2002) also suggests that a sharp decline in population can cause an increase in the use of contracting out due to fiscal strain caused by a shrinking economy and tax base.

6 Missing values are replaced with the average value.

7 The examples are property tax levy limit, general revenue or expenditure increases limit, overall and specific property tax rate limitations, and limits on assessment increases.

8 The Level I submodel is specified as follows (Singer 1998; Heinrich 2000, 84-85; Hox 1995, 10-23; Littell, Milliken, Stroup, and Wolfinger 1996, 135-169, 253-266):

\[ Y_{ij} = \beta_{0j} + \gamma_0 X_{ij} + \ldots + \gamma_0 W_{ij} + \gamma_0 X_{ij} + u_{ij} \]

\[ Y_y = \beta_{0j} + \gamma_0 W_{ij} + \ldots + \gamma_0 W_{ij} + u_{ij} \]

Equation (2) indicates that the intercept in the Level I submodel (\( \beta_{0j} \)) is a function of the intercept (the state level measure of contracting out, \( \gamma_0 \)), Level II predictors (\( W_{ij} \) ... \( W_{ij} \)), and random variance across states (\( u_{ij} \)). By combining Equation (1) and Equation (2), we have the following random intercept and fixed slope model:

\[ Y_{ij} = \gamma_0 + \gamma_0 W_{ij} + \ldots + \gamma_0 W_{ij} + \gamma_0 X_{ij} + \ldots + \gamma_0 X_{ij} + u_{i} + r_{ij} \]

Equation (3) indicates that the intercept in the Level I submodel (\( \beta_{0j} \)) is a function of the intercept (the state level measure of contracting out, \( \gamma_0 \)), Level II predictors (\( W_{ij} \) ... \( W_{ij} \)), and random variance across states (\( u_{ij} \)). By combining Equation (1) and Equation (2), we have the following random intercept and fixed slope model:

\[ Y_{ij} = \gamma_0 + \gamma_0 W_{ij} + \ldots + \gamma_0 W_{ij} + \gamma_0 X_{ij} + \ldots + \gamma_0 X_{ij} + u_{ij} + r_{ij} \]

This model was run without the assumption of the Poisson error distribution. The results obtained from the Poisson model showed almost similar findings for this unconditional means model when converted into raw numbers.

10 The variance in the state level measure in Equation (4) is 1.8644 (p = 0.0673). The variance associated with local governments in Equation (4) is 110.01 (p < 0.0001).

11 We should note that local governments in the West and Northeast are somewhat overrepresented and underrepresented, respectively, among ICMA survey respondents. Similarly, urban local governments were slightly overrepresented among ICMA survey respondents compared to independent local governments in rural areas.

12 Kloha, Weissert, and Kleine (2005) point out that simple average spending and taxation measures may not accurately or objectively measure fiscal need. This may help to explain these null findings.

13 Brown and Potoski (2003a) examined the role of isomorphic pressures on local government contracting in 1997 and found that the council-manager form of government was more likely to engage in contracting out. Data on the specific type of local government, however, was not available for 2002.

14 The coefficient is negative and approaches statistical significance (p < 0.12). This may offer evidence that local TELs actually put localities in a better fiscal condition, thereby discouraging localities from trying to reduce costs through privatization. Local TELs may be generating more revenues in the form of state grant funding for local governments than the shortfall they cause in local revenues.