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Service Delivery in Rural Municipalities: Privatize, Cooperate, or Go It Alone?

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Alternative Methods of Service Delivery in Small and Rural Municipalities

Abstract: Choices in production and contracting arrangements for a wide range of services were studied using data from approximately 1,000 small, mostly rural municipalities from Illinois, New Hampshire and Wisconsin. Results suggest the use of both for-profit contractors and cooperative agreements with other governments correlate negatively with population. Small municipalities are less likely to use competitive bidding processes, compare costs between production options, or report that privatization produces savings. Median income, rural geography, and ideology show statistically-significant associations with contracting choices. Respondents generally consider themselves “satisfied” with services provided by contract, although satisfaction levels are lower than those associated with self-provision. Satisfaction associated with services provided by other governments is lower than satisfaction with services provided by private contractors, suggesting no tradeoff in service quality directly attributable to “for-profit” contractors.

Introduction

Many small and rural local governments face the stresses of economic downturns or stagnation and are struggling to maintain service levels. Other municipalities, amenity rich or within commuting distance to urban areas, cope with population growth and additional service demands. Local governments also face long-term declines in state and federal support and resistance towards expanding traditional revenue sources like property taxes or exploring new revenue sources like user fees and charges. These governments feel pressure to find more efficient ways to produce necessary services. One option receiving significant attention in urban settings is privatization, where a municipality uses competitive bidding to contract out production of services to for-profit firms. While this option has enjoyed success in larger and medium sized cities, it poses potential problems for smaller, rural communities. Producing public services by engaging for-profit firms requires clearly delineated, enforceable contracts, sufficient numbers of qualified contractors to allow competitive bidding, and managerial capacity to supervise contractor performance, which the smallest municipalities may lack.

If privatization through contracting with a for-profit firm is not feasible for the production of a particular service in a small municipality, a cooperative agreement to work jointly with a neighboring government to produce services might be an alternative.¹ Lackey et al. (2002, 138) argue that such agreements offer “increased local decision-making capacity, retention of local identity, increased access to external resources, economies of scale, cost-effectiveness, protection for resource-dependent economies, and greater political influence through strength in numbers.” Nonetheless, much of the literature perceives inter-governmental cooperation as a relatively rare event, with the exception of emergency services (Cigler 1994).

This study considers a full range of choices that small and rural municipalities face: providing services themselves, entering into an agreement with a profit or not-for-profit contractor, or entering into an agreement with another government or authority. Unlike most studies, which focus on specific services, our data cover 59 common municipal functions. By studying small and rural communities, a broad range of services, and a menu of different options for production of those services, we hope to shed light on some issues that are currently only incompletely understood. For example, the data can highlight the very different constraints faced by small and rural communities compared to their larger urban or suburban counterparts, and provide detailed insight into how factors like fiscal stress, prior experiences, and future expectations might shape production decisions. Analysis of the data can highlight how the choices of privatization and inter-governmental cooperation relate and provide insight into the relative outcomes of privatization and cooperative agreements. This study is among the first to examine the levels of satisfaction associated with different forms of service provision.

Background

Focusing on small municipalities is particularly interesting when considered from different theoretical perspectives relating to privatization. Bel and Fageda (2008), for example, classify most of the theoretical work as taking either a public choice, or transactions costs approach. The public choice approach can often be characterized by a “leviathan” view of government, which argues that government monopoly over public services leads to over production and inefficiency.² This view suggests that outsourcing the production of public services may not only be a sound management decision, but also a sound economic growth decision. The belief that governments tend towards inefficiency has helped bolster the New Public Management philosophy and management approach (Terry 2005; Hood 1995; Kettl

1997). The logic behind New Public Management is that government officials and managers need to be more entrepreneurial in their approach to service production. While the provisional decisions of which services to provide and how to pay for them remain within the political realm of elected officials, production decisions are more technical and more in line with the functioning of private businesses. As such, public administration can benefit from studying business concepts of customer service, total quality management and outsourcing (Lyons and Lowery 1989). One of the ramifications of this approach has been a rapid increase in exploring alternative service delivery options such as contracts with for-profit firms or non-profits and forming cooperative agreements with neighboring local governments for joint service delivery.

The adoption of New Public Management approaches has led to concerns that center on what Terry (2005) describes as the “hollowing of the state.” As governments increasingly rely on contracts with private providers, traditional public institutions are radically restructured. In the extreme, rather than managing personnel or organizing departments, public administrators are reduced to monitoring contracts. The concern is that, as public institutions are restructured around an expertise in managing private contractors, the ability to return to traditional arrangements will be difficult, even if the new contracts prove to be disadvantageous.

The transactions costs approach (e.g. Williamson 1979 and 1999) maintains that factors that affect transactions costs, like the ability to monitor and enforce contracts, determine the relative benefits of different forms of service provision. Much of the current work in New Public Management focuses on methods of developing, monitoring and enforcing contracts (Brown and Potoski 2003; Rornzek and Johnston 2005). Skeptics of public-private collaboration note that poor contract structure is a problem (Bloomfield 2006). Especially in smaller and more rural municipalities, much of the decision to “outsource” service production may hinge on the ability

to write and monitor enforceable contracts. In a series of studies looking at managerial capacity of smaller and rural governments, Honadle (e.g. 1981, 2001) finds that many of these governments are run by volunteers and a small staff of employees. The municipal clerk may have an associate's degree in accounting and the public works director spends the majority of her time plowing roads and filling potholes. Given the lack of professional or trained staff, smaller municipalities may be at a relative disadvantage in writing and monitoring enforceable contracts.

Other studies reinforce the conclusion that small communities face higher and different forms of transaction costs. Deller (1998) shows that the ability for smaller and rural local governments to enact and supervise contracts, which requires tasks like auditing, maintaining quality standards, and responding to cost overruns, is particularly limited. Brown and Potoski (2003, 154) argue that contract management is "a highly complex process requiring multiple types of expertise from public managers." The small municipalities studied here (over half with a population of under 5,000) might be unable to provide such a level of expertise. Terry (2005) and Brown, Potoski and Van Slyke (2006) show that even large units of government have difficulty negotiating, monitoring and enforcing contracts. It is likely that these challenges are magnified in smaller and rural local governments, so that these communities lack capacity to fully benefit from outsourcing provision responsibilities to private providers. Since lack of managerial capacity may make it difficult for the smallest municipalities to benefit fully from privatization, our work also considers the degree that such municipalities provide services through cooperative agreements between governments such as formal and informal agreements to lend each other support for emergency services.³

Few studies look closely at the experiences of small municipalities using cross-sectional data. Research typically draws on the International City and County Management Association

surveys (e.g. Greene 1996; Ferris and Graddy 1986; Warner and Hefetz 2002), or the Census of Governments (e.g., Kodrzycki 1994; Lopez-de-Silanes, Shleifer and Vishny 1997). Such analyses have three central limitations. First, they lack detail in terms of history of service provision methods used. Contracts that have been in place for years are treated the same as newly adopted forms of provision. Today's characteristics might be used to explain patterns of decisions that were made years prior.⁴ Second, many studies use a dichotomous dependent variable often in the form of a yes/no response. This masks the continuous nature of many service-production arrangements. Municipalities may contract for road construction but retain maintenance responsibilities; some state mandated social services cannot be contracted out but supplemental services such as domestic abuse support services are contracted to non-profits. Forms of contracting also differ. Contracted services might be produced by another municipality or a for-profit firm. Third, and most relevant to our work, is that surveys of municipalities typically exclude municipalities of less than 10,000, or provide data only at the county level.⁵

Data

The research presented here uses survey data from approximately 1,000 municipalities in Illinois (IL), New Hampshire (NH), and Wisconsin (WI). All of the included municipalities are small, over a third have populations less than 1,000, and a significant proportion is rural. New Hampshire is a small, rural, somewhat conservative state with a long tradition of decentralized, local control. Illinois is dominated by a large metro area and therefore allows for insights into patterns of service production at the edge of the urban fringe. Wisconsin contains a heterogeneous mix of small and medium sized communities. While there are state specific characteristics that make each state unique, the only "oddity" might be the lack of a viable network of county governments in New Hampshire. In Illinois and Wisconsin the county is a

viable potential partner for many small and rural municipalities whereas this option is not available for New Hampshire municipalities. The classic example is contracting with the county sheriff department to provide law enforcement services to municipal residents.

Primary data for this study come from three separate municipal surveys in Illinois, Wisconsin, and New Hampshire. The first was the 1995 Illinois Municipal Privatization Questionnaire, which served as a model for the subsequent studies in WI (1997) and NH (2004). In each state, the survey was distributed jointly by researchers at one of the state's public universities and a local government association (Illinois Municipal League, Wisconsin League of Municipalities, and The NH Local Government Center). The IL survey produced 516 responses, the WI Survey produced 452 responses and the NH survey produced 138 responses, yielding response rates of 40%, 73%, and 59%, respectively. Johnson and Walzer (1996, 1998), Deller, Hinds, and Hinman (2001) and Girard et al. (2009) provide detailed descriptions of the survey design and implementation for each survey. Survey instruments followed identical formats across all three states; while the disparate timing of the three surveys makes it impossible to differentiate between state-specific and year-specific trends in the data, the survey instruments were administered with the ultimate intent of assembling a multi-state data set.

In addition to asking about fiscal health and background materials, the surveys focus on asking how each of 82 services is provided and the level of satisfaction (a 5 point Likert scale) with the service provision arrangement. Choices over service provision include "municipal provision" (either "entirely" or "in part"), "another government or authority," or "private" (either "for-profit" or "non-profit"). The survey also asks general questions about plans for future outsourcing, the government's role in providing services to other municipalities, experiences with privatization in nearby municipalities, and experiences with bidding and contracts.

A number of the 82 services are only rarely provided by municipalities across all three states. In such cases, respondents were instructed to not respond to the questions. To avoid drawing inferences from very small samples, we exclude 21 services that have less than a 40 percent response rate among completed surveys. Because our study focuses on the tradeoffs faced by small and rural municipalities, we also exclude data from municipalities with populations exceeding 50,000. The remaining data cover 1,083 municipalities and 59 services. After excluding non-responses for particular questions, this produces a data set with 36,605 municipality-service combinations. In addition to providing a descriptive summary of the survey results, we also use a multivariate analysis to identify effects of factors such as population, income levels, and fiscal stress on the decision to use alternative delivery options.

Descriptive Results

Characteristics of Municipalities. Fiscal stress, managerial capacity, and scale may influence the choices made by small and rural governments over the production of services. Table 1 shows that measures of fiscal health correlate with municipal size. The smallest governments are less likely to describe a revenue shortfall requiring a reduction in services, while larger municipalities are more likely to give a pessimistic view of the next five years. Ten percent of the largest municipalities anticipate service reductions.⁶ Smaller municipalities might feel less pressure to use external contracts to address short-term fiscal stress; when asked about future plans for privatization, the smallest local governments are least likely to consider expanding privatization.

[Table 1 here]

When municipalities do use private contractors, the process and outcomes differ significantly. The smallest municipalities are least likely to report comparing costs between public and private production methods, using a competitive bidding process, or generating a

sufficient number of bids from private contractors. Perhaps due to these reasons, respondents from smaller municipalities are also least likely to report that privatization produces cost savings. Write-in responses suggest that smaller, rural local governments appear to use privatization as a matter of practicality. Respondents described scenarios like hiring out tasks to avoid investments in equipment or the need to hire more than a portion of a specialist's time.

Patterns in the Production of Services. In table 2 we detail the patterns of how municipalities in our sample actually produce services. Because decisions over the form of service provision may relate to the degree that a service involves client contact, italics denote services where citizens might be particularly likely to interact with service providers. Local officials may view services that are more “out of sight out of mind” more suitable to contracting out.

[Table 2 here]

This descriptive information reveals a number of patterns. First, both privatization and cooperative agreements are quite common. For about half of the 59 services, one of these two forms of production is used by more than 20 percent of municipalities. Over 80 percent of surveyed municipalities rely on another government for production of at least one service, with programs for the elderly, delinquent tax collection, title record/plot map maintenance, animal shelter operation and tax billing processing most frequently provided through inter-governmental cooperation. Services provided by contract, either by a private contractor or another government, include nearly all the services likely to involve client contact.

These results also raise the question of whether cooperative agreements should be viewed as an alternative to privatization. While the descriptive results do not allow a formal test of this relationship, they indicate that many services frequently provided through cooperative agreements are also among the least frequently contracted to for-profit contractors. Ranking

services according to the proportion of municipalities employing a particular method of provision and deriving a rank correlation produces a Spearman correlation coefficient of -0.26 , significant at the 5 percent level. Services that are among the most frequently provided by private, for-profit contractors tend to be closer to the bottom of the list of services ranked according to the frequency that they are contracted to another government.

Responsibilities like management and training of first-responders (e.g. fire, police, emergency medical services) are frequently shared with other governments, but almost never delegated to private for-profit entities. It may be the case that in emergency situations first-responders are the “face of local government” and local officials want to retain tighter control over these services. In the last section of table 2 we identify services where privatization and contracting with other governments are both used significantly. For these 11 services, including tax assessing, insect/rodent control, and traffic signal maintenance, it is likely that many municipalities face a menu of provision options.

Results in table 3 give further insight into conditions under which a municipality is likely to enlist a private contractor or another governmental entity for production of a particular service. The analysis identifies the proportion of municipalities (by size) using a particular method of service production for a subset of approximately 30 services frequently produced either by private contractors or another government or municipality.⁷ Results indicate smaller municipalities are much more likely to use contracts with other governments, relative to their larger counterparts. For 26 of 33 services, the smallest municipalities use contracts with other governments more frequently than the largest. Privatization does not have a clear population trend: relationship between municipality size and proportion of governments relying on for-profit

contractors appears to vary by the type of service. For 14 of the 33 services identified in table 3, larger municipalities use private contractors more frequently than their smaller counterparts.

[Table 3 here]

Satisfaction with Contracted Services. The survey asked respondents to indicate satisfaction with services, using a five point Likert scale, where responses range from “very satisfied” to “not satisfied.” In table 4 we report mean satisfaction levels, by form of service provision for each of the services shown in table 3. Nearly all response means are close to 3, indicating that respondents consider themselves “satisfied” with the services provided, regardless of the form of production. Production by the municipality’s own employees generally associates with the highest level of satisfaction. This may indicate that the various forms of contracting involve a tradeoff in terms of service quality and suggests that a desire for improved service quality is not a key motivation for privatization or intergovernmental cooperation.

[Table 4 here]

It is worth noting that the results may also simply reflect the bias of respondents, who may directly supervise production of services. Although respondents may favor their own employees, they are less likely to have systematic biases in relative satisfaction with other forms of service production. In particular, comparing satisfaction between services produced by other governments and those produced by private contractors offers some indication of whether the profit-motive of private contractors creates some systematic tradeoff in terms of quality. Based on raw data, satisfaction levels associated with services produced by other governments are roughly comparable to satisfaction levels with services produced by private contractors.

Multivariate Analysis Results

Multivariate analyses identify municipal characteristics that correlate to: (1) a municipality's current choices of service provision; (2) its plans to increase privatization; and (3) the relationship between choice of production method and reported satisfaction by local government officials. Regardless of the dependent variable, all estimations use as explanatory variables five sets of factors that we hypothesize will correlate to decisions over contracting: measures of scale, indicators of rural communities, measures of stress, a focus on efficiency, and a measure of local ideology. In addition, estimations include a vector of dummy variables capturing state-specific effects and, when appropriate, a full set of 58 service-specific indicator variables. Our dependent variables (decision to contract out, the likelihood to contract out in the future, and level of satisfaction) are discrete. Here traditional regression analysis is inappropriate and we use both logit and ordered probit estimators as necessary. Where our dependent variables vary by both service and municipality, we have about 36,000 observations and cluster standard errors.

Explanatory Variables. Measures of scale, which proxy for the constraints faced by the smallest municipalities, include population, population squared, and median income. The smallest or most impoverished municipalities, which cannot efficiently produce a full range of services, might have the most to gain from employing external contracts. These municipalities also face some of the largest obstacles towards using contracts effectively. Decisions might be made by elected officials rather than professional managers, who have specific training and may be better attuned to quality. We use Census Bureau's estimated population for the survey year (1995, 1997, and 2004). The 2000 census provides the source for the median income and population density measures. Even after controlling for scale, rural communities might be different from their urban counterparts. Geographic dispersion may make it harder for these communities to attract a sufficient number of bids from private contractors, or even to forge close contracts with

neighboring communities. We include two variables, population density, and a dummy variable that identifies municipalities that are close to an urban area.

Decisions to contract may be a response to fiscal stress or difficulty in providing services to growing populations. Two variables capture stress: an indicator variable that takes a value of one if the municipality reports “inadequate” revenues, and a measure of population growth (in percentage terms) derived from comparing the 1990 and 2000 Census population measures. An additional set of variables intends to capture the degree that municipal officials focus on efficiency. If municipalities routinely compare costs and use competitive bidding processes, this may indicate that these municipalities have implemented systems to control costs. Regressions also include the percentage of Republican voters in the previous gubernatorial election as an indication of local ideology. Only NH provides these data at a municipal level and we use county-level returns for WI and IL.⁸ Voting patterns, which correlate to privatization decisions in López-de-Silanes, Shleifer and Vishny’s (1997) county-level analysis, may reflect ideological predisposition towards private markets and against government provision.

The final independent variables are fixed-effects indicator variables for services and geographic regions. Service indicator variables, one for each of the 59 services, control for otherwise unobserved characteristics of the individual services (like the degree of client contact). We also experiment with replacing these 59 variables with a single indicator for services where citizens interact directly with providers. The geographic indicators identify the three states. We separately identify small municipalities within Cook County (which contains the City of Chicago) from the remainder of IL. It is important to note that the New Hampshire survey was completed much later than the others and there has been a significant increase in the degree of reliance on contracting in the past decade. The geography variables control for both state and

year, but the data do not allow us to distinguish the effect of geography from the effect of time. These geographic indicators also control for structural difference across states like laws, financing arrangements, and the presence of functioning county government, among others.

Relationship between Municipality Characteristics and Service Production: Pooled Model.

Our first set of estimations considers the relationship between characteristics of a municipality and the choice of a particular form of service production (table 5). Coefficient signs are consistent across specifications. The correlation between municipal attributes and the tendency to contract out services does not particularly depend upon how the form of contracting is defined. The types of municipalities that enter into contracts with private contractors also enter into agreements with other governments. Population correlates negatively with contracting decisions. The smallest municipalities do appear to have the most to benefit from scale, scope and flexibility offered by external contracts, a finding consistent with Kodrzycki (1994, 32) that patterns in privatization are largely “bottom up.” Our results indicate that this conclusion extends to even the smallest municipalities, though the relationship appears to be nonlinear. Median income correlates positively to all forms of contracting.

[Table 5 here]

Although the coefficient of population density is always statistically insignificant, the indicator for municipalities within a Metropolitan Statistical Area supports the conclusion that rural municipalities provide fewer services using outside contracts. Furthermore, the combined effect of population and MSA in these estimations indicate that outside contracts may be particularly attractive option for smaller cities in (or on the fringes of) metropolitan areas. Such municipalities are small enough to benefit from the scale economies that outside contracts offer.

At the same time, they have access to a large number of potential collaborators, both other governments and a significant pool of private contractors.

Fiscal stress, population growth, or current fiscal management practices are not strongly correlated to contracting decisions. Coefficients on fiscal stress, population growth, and use of competitive bidding processes all have insignificant (5 percent level) associations with use of contracts. Municipalities that compare costs between public and private production, however, are less likely to use private contractors. While contrary to our hypothesis, this finding is consistent with earlier observation that respondents appear to use privatization as a matter of practicality, rather than as a general cost-saving strategy. Our measure of ideology reinforces the conclusion that contracting decisions, particularly those with for-profit contractors are driven by more than a focus on efficiency. Ideology matters; it is positively associated with the use of for-profit contractors as well as contracting, broadly defined. Kodrzycki (1994) finds lower rates of privatization in New England, which are not replicated in our results. The omitted state, NH, shows a propensity to use private, for profit contractors more commonly than WI or most of IL.⁹

Municipalities might be more reluctant to cede provision responsibility for services involving direct contact with citizens; we re-estimate the three models using a single indicator variable for “high-contact” services identified in italics in table 2. Signs and significance levels for coefficients on other explanatory variables (population, income, stress, etc.) are unchanged in this specification (not shown). The coefficient on the variable measuring high contact, shown separately at the bottom of the table, is positive and strongly significant. Municipalities in this sample are more likely to contract out services involving direct contact with clients.

While we cannot formally test if some underlying set of characteristics determine both privatization and contracts with other governments, the data appear consistent with this

hypothesis. Types of services contracted with other governments typically differ from the types of services privatized, arguing that they are not direct substitutes. At the same time, municipal features that correlate to privatization decisions correlate similarly with the decision to engage in contracts with other governments.

Relationship between Municipal Characteristics and Plans for Future Privatization:

Cross-Sectional Model. An important limitation of cross-sectional results like those reported in table 5 is the potential for endogeneity. All variation in the model comes from differences between municipalities; we do not observe the decision within a municipality to change provision of any particular service. Results from such cross-sectional estimation can be biased if explanatory variables are causally linked to past production decisions. Current fiscal stress and administrative practices like comparing costs or using competitive bids may associate with prior procurement and production decisions. This limitation cannot be fully mitigated without long-duration panel data. For this reason, results from the pooled cross-sectional model should be viewed as indications of correlation, rather than evidence of causality.

Data used here offer a dependent variable less likely to raise issues of endogeneity, thus allowing stronger causal inferences. Survey respondents are not only asked about current practices, but also about future plans. The second set of empirical models estimate focus on if the municipality plans to increase privatization in the future. Here, we measure fiscal stress both in terms of current and expected future stress controlling for prior privatization experiences. We first use expected stress, based on the hypothesis that future plans are based on expected future conditions. In a separate estimation we include current stress, to allow for the possibility that plans for future privatization are a reaction to current conditions. To control for a municipality's existing experiences, we add an index variable based on number of services privatized. While

using plans to increase privatization as a dependent variable has the benefit of reducing the likelihood of bias, the model also has limitations. We now focus exclusively on privatization, instead of the full menu of production options. In addition, the dependent variable elicits information about general privatization plans rather than information about specific services. The results for this analysis are provided in the first two columns of table 6.

[Table 6 here]

The population coefficient estimate is positive and significant, while the squared population term has a negative and significant coefficient. This concave relationship may reflect more sophisticated planning processes of larger municipalities. High-growth areas are more likely to plan increases in privatization. Indicators for rural counties, self-reported fiscal stress, sensitivity to costs, and ideology all have statistically insignificant relationships with plans to increase privatization. It may be that either the question about increasing privatization or the explanatory variables are too general to identify specific patterns in privatization decisions. The weak relationship between plans to contract and measures of fiscal stress is particularly surprising. Perhaps local governments see themselves as needed to provide jobs and therefore choose not to enter into new contracts at times when a private sector contraction is taking place. It is also possible that the results are consistent with a long-run equilibrium. Municipalities have already chosen their optimal bundle of production choices based on observable characteristics of municipalities, and plans for future changes represent largely idiosyncratic variations to specific and otherwise unobservable changes at the local government level.

Relationship between Forms of Service Provision and Satisfaction. While the results presented in table 5 and the left columns of table 6 identify factors associated with different forms of service production, they provide no indication of perceived quality. To gain insight into this

question, we estimate an ordered probit model to identify the relationship between municipal characteristics and satisfaction, controlling for the service and form of service provision. Table 6, column 3, reports results using the full set of indicator variables. The last column uses a single indicator to capture the effect of services with a great deal of client contact.

The majority of control variables have statistically insignificant relationships with satisfaction. The measure of fiscal stress and the indicator for services involving client contact both have negative and significant coefficients. The variables of most interest are the last four, which measure satisfaction with form of service production relative to “private, for profit,” the omitted group. As suggested by analysis presented in table 4, satisfaction with “your employees entirely” is higher than satisfaction with any other form of service production. Furthermore, the difference between “private for profit” and “other government or authority” is statistically significant at the 1 percent level. This result suggests that, in a comparison that avoids the bias respondents have for their own employees, private contractors offer comparable or better quality service relative to their public counterparts.

Conclusions

Despite extensive literature examining options in the delivery of public services, few studies focus on smaller and rural municipalities. This research addresses this shortcoming. Using survey data from three states, we document that even the smallest municipalities use a range of provision methods, including contracting with for-profit private firms, non-profit organizations, and other governments. Even in a sample of communities with population less than 10,000, contracting in all its forms is a “bottom-up” phenomenon negatively associated with population. Nonetheless, small municipalities face significant constraints, especially insufficient bids. This is notable because a necessary condition for outsourcing to be effective is sufficient

number of entities competing for the contract. When such a critical mass of competing entities is not present, outsourcing may be an unrealistic or a less preferred option. When facing very few bids, the ultimate check on monopoly pricing is the ability of a local government to deliver the service itself. It is perhaps not surprising then, that smaller municipalities are less likely to report cost savings associated with private contracts.

Since survey data do not directly suggest how small, rural local governments overcome the challenges of administering public-private contracts, we cannot directly test the hypothesis that transactions costs are too high for small and rural municipal officials and administrators to effectively write, monitor and enforce service contracts. We can observe that while municipalities frequently work together to produce services, they do not seem to cooperate in development and management of outside contracts. When NH survey respondents were asked if bordering municipalities had privatized services, a majority answered “don’t know.” Only three of 138 surveyed NH municipalities indicated that decisions of their neighbors had an effect on their own decision to privatize services. Of those, one cited learning from another municipality’s experience and two referred to combining their needs to collectively bid out a contract.

Small municipalities might benefit by expanding from collaboration in production of services to collaboration in managing external contracts, if only by sharing information with other municipalities. More sophisticated collaboration would involve multi-community contracts for service production; these might justify the expense of setting up competitive bidding processes to generate sufficient numbers of bids, and allow communities to consolidate oversight expenses and other costs. In IL and WI smaller municipalities may join together and approach the county for help in writing requests for bids, soliciting, monitoring and enforcing contracts.

The potential for greater use of ad hoc collaborative arrangements may be a salient issue for the smallest municipalities. It seems unlikely that benefits of collaborative agreements have been fully exploited regionally. The fact that local government officials are not influenced by, or even aware of the actions of neighboring municipalities, is an indicator of this. Lackey, Freshwater and Rupasingha (2002, 149) find that “isolation can be a major impediment to local government cooperation.” Structural or legal barriers, and traditional protection of powers can contribute to this isolation. Meanwhile, many municipalities report significant fiscal stress. Therefore, collaboration is generating increased attention as a cost-saving, efficiency enhancing option, especially if there are too few private suppliers to provide true competition. Here small neighboring municipalities could agree to support each other as is commonly done with protective services where municipal employees work together to produce services to jointly contracting with private for profit firms or non-profit agencies. The use of policy and planning networks can facilitate this (Leroux and Clark 2007; Thurmaier and Wood 2002).

In spite of the constraints and limits of collaboration, small communities seem to manage well. The smallest communities are least likely to report severe fiscal stress or to expect to reduce future services. Although contracting decisions may not always be part of an overall cost-savings strategy, these municipalities effectively use contracts to produce specific and specialized services they cannot produce themselves. While reported satisfaction associates slightly negatively to population, respondents in small and rural municipalities generally indicate that they are “satisfied” with services received. Estimation results suggest that satisfaction with private contractors exceeds satisfaction reported with services produced by other governments.

References

Agranoff, Robert and Michael McGuire. 2004. Another Look at Bargaining and Negotiating in Intergovernmental Management. *Journal of Public Administration Research and Theory* 14(4): 495-512.

- Bel, Germà and Xavier Fageda. 2008. "Reforming the Local Public Sector: Economics and Politics in Privatization of Water and Solid Waste." *Journal of Economic Policy Reform* 11(1): 45-65.
- Bloomfield, Pamela. 2006. The Challenging Business of Long-Term Public-Private Partnerships: Reflections on Local Experience. *Public Administration Review* 66(3): 400-11.
- Boettke, Peter. 2008. Maximizing Behavior & Market Forces: the Microfoundations of Spontaneous Order Theorizing in Gordon Tullock's Contributions to Smithian Political Economy. *Public Choice* 135(1-2): 3-11.
- Brown, Trevor L. and Matthew Potoski. 2003. Contract-Management Capacity in Municipal and County Governments. *Public Administration Review* 63(2): 153-64.
- Brown, Trevor L., Matthew Potoski and David Van Slyke. 2006. Managing Public Service Contracts: Aligning Values, Institutions, and Markets. *Public Administration Review* 66(3): 323-31.
- Casas-Pardo, Jose. and Miguel Puchades-Navarro. 2001. "A Critical Comment on Niskanen's Model." *Public Choice* 107(1-2): 147-67.
- Cigler, Beverly A. 1994. Pre-conditions for Multi-Community Collaboration. In *Towards an Understanding of Multicommunity Collaboration*, edited by Beverly A. Cigler, A.C. Jansen, V.D. Ryan and J.C. Stabler, 53-74. Washington D.C.: USDA/ERS.
- Deller, Steven. C. 1998. Local Government Structure, Devolution, and Privatization. *Review of Agricultural Economics* 20(1): 135-54.
- Deller, Steven. C., David G. Hinds, and Donald L. Hinman. 2001. Local Public Services in Wisconsin: Alternatives for Municipalities with a Focus on Privatization. Department of Agricultural and Applied Economics Staff Paper No. 441, University of Wisconsin – Madison. 52pp.
- Fase, Martinus M. G. and Cornelius C.A. Winder. 1999. Baumol's Law and Verdoorn's Regularity. *De Economist* 147(3): 277-91.
- Ferris, James M. and Elizabeth Graddy. 1986. Contracting out: For what? With whom? *Public Administration Review* 46(4): 332-44.
- Girard, Peter, Robert D. Mohr, Steven C. Deller, and John M. Halstead. 2009. Public-Private Partnerships and Cooperative Agreements in Municipal Service Delivery. *International Journal of Public Administration* 32(5): 370-92.
- Greene, Jeffrey D. 1996. How Much Privatization? A Research Note Examining the Use of Privatization by Cities in 1982 and 1992. *Policy Studies Journal* 24(4): 632-40.
- Honadle, Beth W. 1981. A capacity-building framework: A search for concept and purpose. *Public Administration Review* 41(5): 575-80.
- . 2001. Theoretical and Practical Issues of Local Government Capacity in an Era of Devolution. *Journal of Regional Analysis and Policy* 31(1): 77-90.
- Hood, Christopher. 1995. The New Public Management in the 1980s: Variations on a Theme. *Accounting, Organizations and Society*, 20(2-3): 93-109.

- Jang, HeeSoun. 2006. Contracting Out Parks and Recreation Services: Correcting for Selection Bias Using a Heckman Selection Model. *International Journal of Public Administration* 29(10-11): 799-818.
- Joassart-Marcelli, Pascale and Juliet Musso. 2005. Municipal service provision choices within a metropolitan area. *Urban Affairs Review* 40(4):492-519.
- Johnson, Robin A. and Norman Walzer. 1996. Competition for city services: Has the time arrived? Privatization in Illinois Municipalities. Macomb, IL, Illinois Institute for Rural Affairs.
- . 1998. Efficiency in County Government: The Role of Intergovernmental Agreements and Privatization. Macomb: IL Institute for Rural Affairs.
- Kettl, Donald F. 1997. The Global Revolution in Public Management: Driving Themes, Missing Links. *Journal of Public Policy Analysis and Management* 16(3): 446-462.
- Kodrzycki, Yolanda. 1994. Privatization of Local Public Services: Lessons for New England. *New England Economic Review* May-June, 31-46.
- Lackey, Steven .B., David Freshwater and Anil Rupasingha. 2002. Factors Influencing Local Government Cooperation in Rural Areas: Evidence for the Tennessee Valley. *Economic Development Quarterly* 16(2): 138-54.
- Leroux, Kelly and Jared B. Carr. 2007. Explaining Local Government Cooperation on Public Works: Evidence from Michigan. *Public Works Management & Policy* 12(1): 344-58.
- Lopez-de-Silanes, Florencio A., Andrei Shleifer, and Robert W. Vishny. 1997. Privatization in the United States. *RAND Journal of Economics* 28(3): 447-71.
- Lyons, William E. and David Lowery. 1989. Governmental Fragmentation Versus Consolidation: Five public-choice myths about how to Create Informed, Involved, and Happy citizens. *Public Administration Review* 49(6): 533-43.
- Niskanen, William A. 1971. *Bureaucracy and Representative Government*. Chicago, IL: Aldine.
- Rornzek, Barbara S. and Jocelyn M. Johnston. 2005. State Social Services Contracting: Exploring the Determinants of Effective Contract Accountability. *Public Administration Review* 65(4): 436-49.
- Terry, Larry D. 2005. "The thinning of administrative institutions in the hollow state." *Administration and Society*. 37(4): 426-44.
- Thurmaier, Kurt and Curtis Wood. 2002. Interlocal Agreements as Overlapping Social Networks: Picket-Fence Regionalism in Metropolitan Kansas City. *Public Administration Review* 62(5): 585-96.
- Warner, Mildred and Amir Hefetz. 2002. Applying Market Solutions to Public Services: An Assessment of Efficiency, Equity and Voice. *Urban Affairs Review* 38(1): 70-89.
- Williamson, Oliver E. 1979. Transaction Cost Economics: The Governance of Contractual Relationships. *Journal of Law and Economics* 22(Oct): 233-61.
- . 1999. Public and Private Bureaucracies: a Transaction Cost Economics Perspective. *The Journal of Law, Economics, and Organization* 15(1): 306-42.

Table 1 – Survey Responses by Municipality Size

	“Small” (pop. < 1000)	“Medium” (1000- 5000)	“Large” (pop. >5000)	IL	WI	NH	Total (un- weighted)
<i>Rate the current fiscal condition of your municipality</i>							
Adequate revenue and able to reduce taxes	13%	17%	19%	12%	21%	15%	16%
Adequate revenue, but not able to expand services	63%	57%	56%	61%	59%	52%	59%
Inadequate revenue, but not reducing services	21%	22%	19%	22%	19%	22%	21%
Inadequate revenue, reducing services	3%	4%	5%	4%	2%	10%	4%
<i>What are the financial prospects of your municipality over the next five years</i>							
Adequate revenue and able to reduce taxes	10%	16%	14%	11%	16%	15%	14%
Adequate revenue, but not able to expand services	63%	55%	55%	59%	60%	50%	58%
Inadequate revenue, but not reducing services	20%	19%	21%	22%	19%	19%	20%
Inadequate revenue, reducing services somewhat	6%	9%	10%	8%	5%	16%	8%
<i>In the next five years, will your town:</i>							
Increase privatization	3%	12%	37%	18%	13%	11%	15%
Remain the same	61%	52%	34%	52%	48%	55%	51%
Decrease privatization	1%	2%	0%	1%	0%	2%	1%
Don’t Know	35%	35%	29%	29%	39%	31%	33%
<i>Has privatization or contracting resulted in cost savings?</i>							
Yes, in all instances	12%	15%	19%	17%	15%	7%	15%
Yes, in some instances	55%	62%	72%	56%	69%	63%	62%
No	34%	23%	9%	27%	17%	30%	23%
<i>Does your municipality compare costs between services provided by a public agency and a private entity (fraction “yes”)</i>							
	68%	72%	81%	68%	80%	69%	73%
<i>Are municipal contracts with private firms bid competitively? (fraction “yes”)</i>							
	87%	88%	94%	89%	91%	84%	89%
<i>Have a sufficient number of private contractors bid on most municipal services? (fraction “yes”)</i>							
	75%	77%	81%	78%	81%	63%	77%
<i>Does your municipality provide services for other governments by contract? (fraction “yes”)</i>							
	12%	21%	49%	23%	27%	25%	25%
Number of respondents	414	392	277	505	441	137	

Table 2 – Distribution of Service provision (all three states)

Services typically provided exclusively by municipal employees	<i>Respon- ses</i>	<i>Municipal Employees Entirely</i>	<i>Municipal Employees in part</i>	<i>Another Govern ment or Authority</i>	<i>Private, for profit</i>	<i>Private, not for profit</i>
Building security	498	78.5%	10.0%	3.6%	7.6%	0.2%
Building/grounds maintenance	880	72.8%	20.0%	0.3%	6.5%	0.3%
Payroll administration	940	92.0%	4.2%	0.9%	3.0%	0.0%
Personnel services	645	90.9%	6.7%	0.8%	1.7%	0.0%
<i>Public relations/information</i>	544	79.4%	16.2%	2.2%	1.7%	0.6%
Secretarial services	748	92.7%	5.4%	0.9%	1.1%	0.0%
Snowplowing sanding	1029	77.1%	11.0%	4.1%	7.4%	0.5%
Street repair/maintenance	1017	45.8%	40.5%	3.4%	9.9%	0.2%
<i>Traffic control/parking enforcement</i>	724	83.7%	6.63%	8.7%	1.0%	0.00%
Water distribution	860	83.1%	7.44%	4.5%	4.2%	0.70%
Services frequently privatized						
Vehicles, not emergency or heavy equipment	596	58.7%	28.7%	1.7%	10.7%	0.2%
<i>Bill collection</i>	617	69.4%	15.9%	1.8%	12.8%	0.2%
Building security	474	62.7%	13.7%	8.4%	15.0%	0.2%
Commercial solid waste collection	765	7.2%	4.1%	2.4%	85.8%	0.7%
Fleet management/vehicle maint	708	52.4%	35.0%	0.6%	11.4%	0.6%
Heavy equipment	592	55.6%	27.2%	1.7%	15.2%	0.3%
Inspection/code enforcement	717	70.3%	13.5%	4.0%	11.7%	0.4%
Labor relations	546	59.2%	23.3%	2.6%	14.8%	0.2%
Legal services	848	12.1%	7.0%	4.2%	75.6%	1.1%
Recycling	862	12.3%	9.0%	8.6%	66.7%	3.4%
<i>Residential solid waste collection</i>	919	15.3%	2.2%	2.7%	79.2%	0.5%
Street light operation	842	19.2%	10.3%	8.0%	60.2%	2.3%
Street parking lot cleaning	736	73.1%	12.2%	2.3%	11.7%	0.7%
Street sweeping	828	71.4%	5.0%	5.1%	18.0%	0.6%
Tree trimming/planting	832	34.0%	40.3%	1.6%	22.8%	1.3%
Utility billing	886	76.7%	6.2%	2.8%	14.0%	0.2%
<i>Utility meter reading</i>	847	73.7%	5.8%	3.7%	16.5%	0.4%
<i>Vehicle towing and storage</i>	613	10.8%	5.7%	7.2%	75.7%	0.7%
<i>Yard waste collection</i>	697	38.0%	19.7%	2.0%	39.2%	1.1%

Note: *italics* denote services likely to involve direct contact between service providers and citizens

Table 2 – Distribution of Service provision (cont).

	<i>Respon- ses</i>	<i>Municipal Employees Entirely</i>	<i>Municipal Employees in part</i>	<i>Another Govern ment or Authority</i>	<i>Private, for profit</i>	<i>Private, not for profit</i>
Services frequently provided through cooperative agreements						
<i>Animal control</i>	786	43.8%	17.9%	28.5%	6.4%	3.3%
<i>Crime prevention/patrol</i>	909	73.5%	12.2%	13.6%	0.4%	0.2%
Data processing	627	72.2%	14.0%	10.5%	3.2%	0.0%
<i>Delinquent tax collection</i>	749	31.6%	9.5%	57.4%	0.8%	0.7%
Fire communication	772	36.3%	10.6%	47.2%	0.9%	5.1%
Fire prevention/suppression	767	51.4%	9.8%	32.9%	0.5%	5.5%
Fire training	749	26.2%	25.6%	39.8%	2.3%	6.0%
<i>Operation and maintenance of recreation facilities</i>						
<i>Operation of libraries</i>	810	70.7%	12.3%	13.2%	1.5%	2.2%
<i>Operation of libraries</i>	655	52.2%	6.3%	37.9%	0.5%	3.2%
Parks landscaping/maint.	856	69.3%	13.2%	11.0%	5.5%	1.1%
Police communication	813	41.3%	15.9%	39.9%	1.5%	1.5%
Police training	766	28.6%	27.8%	37.9%	3.5%	2.2%
<i>Programs for the elderly</i>	436	7.8%	13.1%	62.8%	3.4%	12.8%
<i>Recreation services</i>	741	61.3%	17.7%	15.9%	1.1%	4.0%
Sanitation inspection	529	34.6%	14.7%	46.9%	3.0%	0.8%
Sewage collection	806	78.7%	6.5%	10.5%	4.0%	0.4%
Sewage treatment	781	71.6%	5.5%	17.5%	4.9%	0.5%
Tax billing processing	787	37.9%	11.3%	48.4%	1.9%	0.5%
Water treatment	808	75.6%	5.8%	12.3%	5.4%	0.9%
Services with a broad mix of provision options						
<i>Ambulance service</i>	844	29.5%	3.8%	35.6%	19.2%	11.97%
<i>Animal shelter operation</i>	556	9.7%	5.2%	50.5%	18.2%	16.4%
<i>Cemetery admin/maint</i>	510	49.2%	9.0%	13.5%	12.2%	16.1%
<i>Emergency medical service</i>	821	33.4%	8.2%	37.5%	10.2%	10.7%
Emergency vehicles	625	44.2%	25.4%	15.2%	12.6%	2.6%
Insect/rodent control	457	25.8%	13.8%	27.6%	31.9%	0.9%
Sludge disposal	596	43.5%	9.40%	20.1%	25.2%	1.85%
Solid waste disposal	838	10.1%	5.1%	10.5%	72.8%	1.4%
<i>Tax assessing</i>	805	22.6%	7.5%	34.4%	35.2%	0.4%
Title record/plot map maint	646	15.9%	13.6%	55.4%	14.2%	0.8%
Traffic signal install/maint	576	32.1%	20.1%	25.3%	22.0%	0.3%

Note: *italics* denote services likely to involve direct contact between service providers and citizens.

Table 3 – Rates of privatization or Cooperative Arrangement, by town size for select services (conditional on providing service)

	Another Government or Authority			Private, for profit		
	“Small” (pop. < 1000)	“Medium” (pop. 1000-5000)	“Large” (pop. >5000)	“Small” (pop. < 1000)	“Medium” (pop. 1000-5000)	“Large” (pop. >5000)
Ambulance service	51.9%	36.1%	15.6%	21.4%	16.8%	19.8%
Animal control	40.2%	24.1%	22.1%	7.8%	3.5%	8.7%
Animal shelter operation	67.6%	51.8%	37.1%	15.1%	15.5%	23.4%
Cemetery admin/maint	17.3%	13.3%	9.6%	12.0%	11.1%	14.1%
Commercial solid waste collection	4.1%	2.2%	0.5%	81.0%	86.7%	90.4%
Delinquent tax collection	65.3%	51.5%	56.2%	0.0%	0.7%	2.0%
Emergency medical service	55.9%	38.0%	17.9%	10.3%	8.1%	12.7%
Emergency vehicles	30.0%	15.9%	4.4%	10.2%	16.8%	10.0%
Fire communication	60.6%	55.0%	26.3%	1.8%	1.0%	0.0%
Fire prevention/suppression	49.8%	36.9%	13.3%	1.3%	0.3%	0.0%
Fire training	48.8%	43.2%	26.5%	2.5%	2.2%	2.1%
Legal services	6.1%	4.0%	2.4%	81.9%	79.1%	63.7%
Operation of libraries	47.6%	31.9%	39.1%	0.7%	0.3%	0.5%
Police communication	56.6%	43.3%	22.0%	3.2%	1.2%	0.4%
Police training	59.1%	33.8%	26.9%	3.6%	2.2%	5.1%
Recycling	13.6%	7.6%	4.6%	59.3%	66.8%	74.3%
Residential solid waste collection	4.7%	2.5%	0.4%	77.4%	81.8%	78.2%
Sanitation inspection	60.5%	44.2%	40.8%	4.7%	3.5%	1.5%
Sewage Treatment	9.5%	14.7%	30.1%	2.0%	5.0%	7.9%
Sludge disposal	11.6%	15.8%	31.8%	29.0%	24.2%	23.4%
Solid waste disposal	12.1%	8.2%	11.7%	69.9%	74.0%	74.5%
Street light operation	8.3%	9.8%	5.3%	78.8%	54.1%	44.7%
Street repair/maintenance	6.9%	1.9%	0.7%	18.3%	5.4%	4.5%
Street sweeping	11.7%	3.3%	1.5%	25.2%	16.0%	14.3%
Tax assessing	30.4%	28.8%	47.7%	41.7%	42.5%	16.2%
Tax billing processing	45.8%	45.1%	56.2%	2.8%	1.6%	1.4%
Title record/plot map maintenance	63.9%	53.9%	49.2%	15.2%	17.4%	9.1%
Traffic signal installation/maintenance	16.9%	27.8%	27.3%	12.7%	13.9%	33.3%
Tree trimming/planting	2.3%	1.6%	0.8%	30.8%	18.3%	20.2%
Utility billing	2.2%	2.5%	4.0%	19.7%	11.7%	9.5%
Utility meter reading	2.7%	3.6%	4.9%	21.9%	14.1%	13.0%
Vehicle towing and storage	18.2%	5.2%	2.5%	65.7%	73.3%	84.0%
Yard waste collection	3.2%	1.9%	1.2%	33.9%	32.4%	50.4%

Table 4 – Satisfaction levels with select services

	<i>Municipal Employees Entirely</i>	<i>Municipal Employees in part</i>	<i>Another Government or Authority</i>	<i>Private, for profit</i>	<i>Private, not for profit</i>
Ambulance service	4.5	3.8	4.2	4.0	4.4
Animal control	3.9	3.6	3.4	3.7	
Animal shelter operation	3.7		3.6	3.8	3.9
Cemetery admin/maint	3.2	2.8	2.9	2.9	3.1
Commercial solid waste collection	4.4	3.8		4.0	
Delinquent tax collection	4.3	3.9	3.9		
Emergency medical service	4.5	4.1	4.1	4.0	4.3
Emergency vehicles	3.4	2.9	3.1	2.9	
Fire communication	4.3	4.1	4.1		4.3
Fire prevention/suppression	4.4	4.1	4.1		4.4
Fire training	4.4	4.2	4.1		4.2
Legal services	4.2	4.0	4.4	4.1	
Operation of libraries	4.3	4.2	4.2		
Police communication	4.3	4.0	3.9		
Police training	4.2	4.2	4.1		
Recycling	4.2	4.0	4.1	4.1	
Residential solid waste collection	4.4			4.1	
Sanitation inspection	4.2	3.7	3.6		
Sludge disposal	4.3	4.2	3.9	4.0	
Solid waste disposal	4.3	3.9	3.8	4.1	
Street light operation	4.4	4.0	4.1	4.1	
Street repair/maintenance	4.1	3.9	4.2	4.1	
Street sweeping	4.2	3.6	3.8	3.8	
Tax assessing	4.5	4.0	3.5	4.1	
Tax billing processing	4.5	4.3	3.9		
Title record/plot map maintenance	4.2	3.7	3.9	3.9	
Traffic signal installation/maintenance	4.3	4.0	3.9	3.9	
Tree trimming/planting	4.1	3.9		4.0	
Utility billing	4.4	4.0		4.1	
Utility meter reading	4.3	3.9	3.8	4.1	
Vehicle towing and storage	4.2	3.6	3.8	3.9	
Yard waste collection	4.3	3.8		3.9	

Notes: Satisfaction measured according to a 5 point Likert scale. Mean satisfaction levels suppressed if fewer than 30 respondents reported using the provision method.

Table 5: Forms of Service Provision. Logit Model

	<i>Private, for profit</i>	<i>Another government or Authority</i>	<i>Other than “Your Employees Entirely”</i>
Population (thousands)	-0.034*** (3.34)	-0.081*** (7.12)	-0.049*** (5.08)
Population squared	0.0003 (1.23)	0.001*** (5.12)	0.001*** (3.15)
Median Household inc	0.005** (2.19)	0.007*** (3.59)	0.009*** (4.51)
Population density	0.019 (0.54)	-0.005 (0.15)	-0.025 (1.00)
MSA dummy	0.176** (2.24)	0.099 (1.15)	0.134* (1.91)
Current stress	-0.031 (0.45)	-0.103 (1.37)	0.008 (0.13)
Population growth	0.001 (0.97)	0.002* (1.95)	0.001 (1.08)
Compares costs	-0.149** (2.25)	0.042 (0.56)	0.004 (0.07)
Competitive bids	0.007 (0.07)	-0.120 (0.95)	-0.085 (0.97)
% Repub	0.019*** (4.02)	-0.001 (0.27)	0.010** (2.28)
IL – Cook County	-0.208 (1.00)	1.632*** (6.68)	0.601*** (3.21)
IL – Other	-0.538*** (3.15)	1.715*** (8.76)	0.469*** (3.29)
WI	-0.653*** (4.32)	0.840*** (4.82)	-0.141 (1.11)
High-contact service	0.381*** (14.94)	0.583*** (19.80)	0.481*** (19.44)

Logit Coefficients. N=36,605. Each estimation at top of table includes 59 control variables for individual services. Coefficients for “high-contact service” come from separate estimations that use a single indicator for services involving citizen contact. Absolute value of z statistics in parentheses (clustered standard errors). * significant at 10%; ** significant at 5%; *** significant at 1%

Table 6: Plans to Increase Privatization (Logit); Satisfaction with Provision (Ordered Probit)

	<i>Plans Increase</i>	<i>Plans Increase</i>	<i>Reported Satisfaction</i>	<i>Reported Satisfaction</i>
Population (thousands)	0.227*** (6.76)	0.227*** (6.82)	-0.014 (1.41)	-0.014 (1.46)
Population squared	-0.004*** (5.11)	-0.004*** (5.15)	0.0005* (1.78)	0.0004* (1.82)
Median household income	-0.004 (0.61)	-0.003 (0.48)	-0.001 (0.48)	-0.001 (0.56)
Population density	0.045 (0.46)	0.040 (0.41)	-0.007 (0.19)	-0.008 (0.23)
MSA dummy	0.138 (0.53)	0.129 (0.49)	0.037 (0.56)	0.033 (0.50)
Future fiscal stress	0.054 (0.23)			
Current fiscal stress		0.106 (0.44)	-0.287*** (4.65)	-0.287*** (4.68)
Population growth	0.006** (1.96)	0.006* (1.86)	0.001 (1.12)	0.001 (1.07)
Compares costs	0.477* (1.78)	0.399 (1.51)	0.012 (0.18)	0.010 (0.15)
Competitive bids	-0.540 (1.64)	-0.565* (1.73)	0.124 (1.41)	0.120 (1.38)
% Republican	0.003 (0.22)	0.005 (0.31)	0.003 (0.67)	0.003 (0.66)
Number of services privatized	0.031 (1.19)	0.027 (1.05)		
IL – Cook County	0.630 (1.01)	0.623 (1.00)	-0.236 (1.24)	-0.238 (1.27)
IL – Other	0.568 (1.03)	0.573 (1.05)	-0.232* (1.65)	-0.240* (1.73)
WI	0.750 (1.49)	0.720 (1.44)	-0.041 (0.32)	-0.043 (0.34)
High-contact service				-0.062*** (4.95)
“Your employees entirely”			0.404*** (11.02)	0.361*** (12.14)
“Your employees in part”			-0.025 (0.65)	-0.082** (2.43)
“Another govt or authority”			-0.112*** (2.66)	-0.110*** (3.14)
“Private, not for profit”			0.094 (1.34)	0.117* (1.74)
Observations	862	878	31,310	31,310

Column 3 includes full set of 59 control variables for individual services; column 4 includes indicator for services involving citizen contact. Absolute value of z statistics in parentheses (clustered standard errors for ordered probits). * significant at 10%; ** significant at 5%; *** significant at 1%.

Notes

1. Here we refer to a cooperative agreement as any arrangement for another government or authority to provide a service. Such an arrangement may, but does not have to, be in the form of a partnership with an even two-sided cooperative process and joint resource contributions.
2. Versions of this hypothesis include Niskanen's Law, Tullock's Law, and Baumol's Law. Niskanen's Law maintains that government bureaucrats maximize their own personal objectives of increasing authority, controlling more personnel, and administering larger budgets. These objectives necessitate larger and inefficient government (Niskanen 1971; Casas-Pardo and Puchades-Navarro 2001). Tullock's Law maintains that the lack of competitive market forces and the power of Adam Smith's Invisible Hand introduce bureaucratic waste into the public arena (Boettke 2008). Baumol's Law argues that, since the public sector lacks profit motivations, there is little incentive for government to innovate in the name of increasing efficiencies (Fase and Winder 1999).
3. The possibilities for such collaboration are much broader, however, and only a few authors (Lackey, Freshwater, and Rupasingha 2002; Agranoff and McGuire 2004) provide in-depth discussions of collaboration. Furthermore, Warner and Hefetz (2002) point out that the literature generally does not jointly consider cooperation and privatization as differing options for service production.
4. Jang (2006) discusses this and other potential sources of selection bias, and then uses a Heckman Selection model to mitigate the problem.
5. A number of case studies focus on smaller communities. Particularly relevant are Lackey et al. (2002), who study cooperation among counties in Tennessee, and Jossart-Marcelli and Musso (2005), who undertake an extensive study of "make or buy" decisions for a set of southern California cities.
6. Because the surveys reflect conditions from different years and the summary statistic is an unweighted mean, this result might be driven by changing economic conditions. The same pattern (smallest towns least likely to report inadequate revenues) holds for both WI and NH. IL does not show notable correlation between population and measures of fiscal stress.
7. We select services provided by at least 500 municipalities and where at least 20% of municipalities providing a service choose to do so through a contract with either a for-profit firm or another government or municipality.
8. A township may include parts of several villages (municipalities). If a village crosses a township line, we use a weighted average based on the number of 2006 polling stations in each township.
9. This finding, in conjunction with Kodrzycki's result, may mean some New England communities are catching up in terms of contracting trends (recall that the NH survey was implemented several years after the IL and WI data had been collected). Differing conclusions might also be driven by differences between the larger municipalities observed by Kodrzycki and the smaller municipalities observed here, or by differences in the way "privatization" is measured. We do find support for Kodrzycki's finding when using the broader measure of external contracts, like agreements with other governments or even any service that is provided in a way other than the municipality's "employees entirely."