

ASSESSING THE MANAGEMENT COSTS OF DELIVERING SERVICES UNDER ALTERNATIVE INSTITUTIONAL ARRANGEMENTS

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ABSTRACT. In this paper we assess the management costs of delivering services under alternative institutional arrangements. We develop an analytic framework based on transaction cost and public sector network theories to identify management costs public managers face in delivering services directly and via contract. Results from a survey of refuse collection managers in Ohio indicate that direct service provision carries higher management costs, though when combined with vendors' activities, contracting carries more monitoring costs. These results suggest two important contributions to knowledge and contract management practice. First, we develop an innovative approach to assessing management costs. Second, we use our framework to determine whether there are differences in management costs under alternative institutional arrangements that managers should take into account as they approach the "make or buy" decision.

INTRODUCTION

A fundamental decision confronts all governments – should a good or service be produced internally or purchased externally via contract? In the public sector, intense pressures to reduce costs have fueled an increase in the use of contracting (Greene, 1996). Some public sector procurement regulations even mandate that governments select the lowest cost bid, although more recent regulations allow consideration of

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other factors, such as vendors' past contract performance (Kelman, 2002). In this paper, we make the case that procurement decisions should be based not only on price and past performance, but must include systematic analysis of the management costs of producing services internally and via contract.

We draw on transaction cost and public sector network research to develop a simple framework for assessing the relative management costs of delivering services under alternative institutional arrangements. Our framework identifies the types of costs public managers face in delivering services directly and via contract. Transaction cost theory points to the importance of monitoring service delivery, while network theory highlights managing external relations with those outside the government. We then draw on a survey of municipal refuse collection managers in the state of Ohio to develop metrics for assessing the relative management costs under alternative institutional arrangements. About half of the sample of Ohio communities delivers household refuse collection via contract, while the other half delivers it directly. Because we also surveyed vendors who service contracting governments, we combine the results from governments that contract for refuse collection with the vendors that provide the service to assess the full management costs for some aspects of contract service provision.

Results from the survey indicate that direct service provision carries higher management costs, though when combined with vendors' management activities, contracting carries more monitoring costs. This pattern may hold for other management activities beyond monitoring, suggesting that future research evaluating contract management should take into the account the activities of both contracting governments and the vendors that execute the service. Our inquiry yields two important contributions to procurement knowledge and practice. First, we offer an innovative approach to assessing the management costs of delivering services under alternative institutional arrangements. Second, we use our framework to determine whether there are differences in management costs under alternative institutional arrangements that managers should take into account as they approach the "make or buy" decision.

IDENTIFYING MANAGEMENT COSTS

As a host of research has shown, governments' 'make or buy' decisions are based on a variety of factors, including costs, the salience

of the service, the degree of political support or opposition to contracting, and legal constraints on contracting (Carver, 1989; Ferris, 1986; Hirsch, 1995; Lavery, 1999; O’Looney, 1998). Mirroring this research, those offering advice to practitioners grappling with contracting decisions have focused, often quite narrowly, on whether contracting will lower costs (O’Looney, 1998). Missing from these analyses and prescriptions is an assessment of the management dimensions of delivering services under contract (Wise, 1990).

Recent scholarship has looked to address this deficit in contract management research (Gansler, 2002; Kelman, 2002; Lawther, 2002; Romzek & Johnston, 2002) by examining management across the phases of the contracting process: assessing the appropriateness of service for contracting; structuring and executing a competitive bid process; managing service delivery under contract; and taking steps to ensure a competitive market (Brown & Potoski, forthcoming). If governments do not possess adequate contract management capacity, contracting performance is likely to suffer (Brown & Brudney, 1998; Van Slyke, 2003). While some argue that the growth in public sector contracting has diminished governments’ management capacity – creating “hollow states” (e.g. Milward, Provan & Else, 1993) – others suggest a more variegated contract management landscape, in which some governments appear to have the tools needed for contract management, while others do not (Brown & Potoski, 2003a; 2003b). In sum, the literature on contract management is still in its nascence, both in terms of identifying the critical contract management capacities needed to ensure contract success, and in determining whether contracting governments in fact possess these capacities.

A promising next step is to compare management costs of service delivery under direct and contract service provision. As we discuss below, direct and contract service provision very likely require similar management tasks, although the shape and distribution of those tasks may vary by the mode of service provision. For example, the literature on contracting highlights the importance of negotiation as a critical contract management capacity (O’Leary, 1996). This is logical, given that contracting governments and vendors will likely bargain over the details of the contract, as well as issues that arise in the context of service delivery that are not covered in the contract. But governments that provide the service directly also engage in negotiation, albeit of a

different type. Public managers bargain with line employees about the types of tasks that are reasonable for them to perform.

In this paper we focus on two critical management tasks: monitoring service provision and performance, and managing external relations (e.g., with neighboring governments, contracted vendors). Two theories serve as the theoretical foundations for these management tasks: transaction cost theory, and public sector network theory, respectively. Below we use these theories to identify potential similarities and differences in management costs between direct and contracted service provision.

Monitoring Service Provision and Performance

Economic theories of organization, such as public choice, agency, and property rights theories, have largely championed contracting as a superior alternative to direct service provision because improved efficiency from competition lowers costs (e.g., Savas, 1974, 1977). Transaction cost theory, also with roots in economics, expands the calculus by modeling service production choices (whether internal or external via contract) as a function of both financial and management costs (Coase, 1937; Williamson, 1981; 1996). In deciding whether to contract, governments balance production costs against transaction costs – or management costs – associated with producing a service themselves or contracting for it. The sources of these transaction costs include:

- Service-specific characteristics such as asset specificity (the propensity for monopoly provision of the service) and ease of measurement (the ability of the manager or contracting organization to measure and monitor the employee's or vendor's activities and service outcomes);
- The competitiveness of the service market; and
- Goal incongruence between those producing and delivering the service to recipients (i.e., public sector employees or vendors) and those overseeing service delivery (i.e., public managers or contracting governments).

When transaction costs are low, government contracting is more attractive, while higher transaction costs indicate contracting is more costly and risky.

A key assumption of transaction cost theory is that in principal-agent relations, the agents, whether employees or vendors, are opportunistic, pursuing their self-interest with guile (Ghosal & Moran, 1996). Countering opportunism requires monitoring agents' performance (and sanctioning non-performance), whether agents are acting under direct provision or contracts. Such service monitoring can take different forms depending on the nature of the service. When service outcomes are easy to identify, as is the case with refuse collection, managers can save time and resources by restricting monitoring to tracking service outcomes. In such cases, the management costs of performing outcome monitoring should be similar across direct and contract service provision. Alternatively, when service outcomes are difficult to identify, monitoring is best focused on processes, such as agents' actions and work effort. In general, direct service provision is thought to be superior for this type of monitoring since public managers can watch their own employees' behavior more easily than contracting governments can audit vendor activities.

Managing Service Networks

In today's world, delivering public services requires managing and coordinating activities across a network of public, private and non-profit service delivery agents, even under direct service provision (e.g. Agranoff, 2003). Many of these networking activities are concentrated on the actual delivery of the service itself. For example, police and safety personnel from neighboring jurisdictions in a metropolitan area may synchronize their activities to reduce traffic jams during rush hour. Or, public health workers may share information with non-profit social service providers to ensure service recipients receive well-integrated services. Other network management focuses on maintaining the underlying structures that support network interactions. Networks are not self-organizing, but rather require some organization or group of organizations to assemble and manage them. Often this is done by a public agency (Agranoff & McGuire, 1999). Network maintenance involves developing and maintaining linkages between network participants and ensuring that information flows freely through the network.

Well functioning service networks are a boon to both governments providing services directly and to those that contract (Brown & Potoski, 2004). Networks channel information about new service delivery

practices and help coordinate services among governments. Thus, service delivery networks are likely to be useful to both contracting and direct service delivery governments. There is resounding consensus in the literature on contracting that successful contracting requires competitive markets (see e.g., Sclar, 2000). But markets, like networks, do not arise spontaneously, and are not self-governing. Consequently, contracting governments often turn to service delivery networks to build and support the service market by sharing information about vendors' prices and quality, and by stimulating competition by recruiting new vendors to the market. Contracting governments are likely to invest more energy in these market and network building and maintenance activities, particularly where local markets are less competitive.

All in all, the above discussion suggests important similarities and some differences in how contracting and direct delivery governments manage service delivery. Effectively managing service delivery requires similar activities and skills, whether via contract or direction provision. Governments must monitor the performance of their own employees and those of contract workers using methods such as surveying service recipients or directly observing service outcomes and processes. Where services are more easily measured, such as the case with refuse collection, direct and contracting governments should engage in comparable levels of monitoring; for difficult to measure services, where governments must rely on monitoring process activities rather than outcome measures, contracting governments are likely to engage in more monitoring. Managers must stay on top of developments in their area to learn the state of the art service delivery practices, and to benchmark the quality of their government services against their neighbors. While both contracting and direct service providers can gain such valuable information from service delivery networks, contracting governments have more to gain from these institutions because their service delivery stems more directly from them. Consequently, contracting governments are more likely to invest energy and resources in building and maintaining service delivery networks and markets.

METHODS

To gauge governments' management practices, we conduct an in-depth study of a commonly provided local government service – refuse collection. With relatively easily measured outcomes and production

assets that are not prohibitive to acquire and can be put to alternative uses, particularly in larger metropolitan areas, refuse collection is a prime candidate for contracted service provision. Indeed, during the late 1960s and 1970s, refuse collection was essentially the test case for how contracting can improve service provision (Savas, 1977). Consequently, many local governments in the United States contract for this basic service.

From May through June of 2004, The Ohio State University Survey Research Center conducted a telephone survey of public service directors for all cities in the state of Ohio with populations over 15,000. The population of cities was constructed using the 2000 U.S. Census, and public service directors were identified through an internet search of websites or direct phone calls to city halls. Of the 111 such cities, 105 participated in the survey, for a healthy response rate of 95%. The survey asked a variety of questions about the delivery of refuse collection services to individual households, including questions about various management activities. Interviews lasted less than 10 minutes on average. Of the 105 respondents, 30% deliver refuse collection services directly (i.e. entirely through city employees), while 54% rely on a contract or a franchise with a private vendor or a non-profit organization. For governments that contracted for refuse collection, interviewers asked respondents to identify a contact name and phone number for the vendor. The Ohio State University Center for Survey Research then conducted follow-up interviews with these vendors. Of the 57 vendor contacts identified, 40 participated in the survey, for a response rate of 71%. The Appendix reports the descriptive statistics for the full sample. While Ohio cities are not strictly a representative sample of U.S. cities, they are a good place for beginning our study. The cities range in population from 15,237 to 711,470, including Cincinnati, an older commerce-dependent city with a declining population, and Columbus, a relatively newer city with a more diverse economic base and growing population. The state has a minority population of 15% (11.5% African American), and a median income of \$40,956. Nationally, the minority population is 25% (12.3% African American) and the national median income is (\$41,994). While our study should have some applicability outside of Ohio, future research in other contexts would be valuable.

The survey included a series of questions about how these governments deliver and manage residential refuse collection services. In the results below, we present managers' responses to these questions,

comparing contracting and direct provision governments. To put result values in a common metric, we report standardized values per 10,000 population. Reported p-values indicate the statistical significance of differences between these two types of governments.

RESULTS

Overall, the survey results shed important light on the management costs of delivering refuse collection services. The results indicate that there are important differences in management costs between direct and contract provision for refuse collection services for municipalities in the State of Ohio. In general, direct service provision governments perform more managerial activities than governments that contract for these services, although when we include the contract vendors' activities in our analyses, communities with contract service perform more monitoring activities.

Table 1 reports the number of government employees per 10,000 population by three categories of personnel – line workers, managers, and administrative staff. As to be expected, direct service providers employ significantly more line workers – including trash collectors, drivers and sorters – than contracting governments. On average, direct service providers employ 8.5 full-time employees per 10,000 population, compared to only .68 for contracting governments. Direct service provision governments also employ more managers and administrative

TABLE 1
Number of FTEs by Type of Employee per 10,000 Population:
Direct vs. Contract Service Provisions
 (N = 28 Direct Provisions, 57 Contract Provisions)

Type of Employee	Direct	Contract	p-value
Line workers, including trash collectors, drivers and sorters	8.50	.68	.000
Managers, including supervisors, route managers and contract managers	.85	.17	.000
Administrative and secretarial employees, including secretaries, data management staff, and billing and accounting staff	.74	.37	.032

staff than contracting governments. On average, direct service providers employ .85 managerial FTEs and .74 administrative FTEs per 10,000 population, compared to .17 managerial FTEs and .37 administrative FTEs for contracting governments. These differences between employment practices of direct service providers and contractors are all significant at $p < .05$. In sum, contracting governments not only hire fewer line workers, but also have fewer managerial and administrative staff than those that deliver the service directly.

Table 2 reports the number of hours in an average week direct and contracting governments dedicate to various management tasks per 10,000 population. Direct service providers engage in significantly more management activities than contracting governments for all the activities ($p < .05$). In general, the direct governments' higher management activities are not surprising because public managers in direct providing governments have significantly more employees to manage. For example, public managers in governments that directly provide refuse collection services spend an average of 10.80 hours per week on managing employees, compared to only 2.04 hours per week for managers in contracting governments. Public managers for direct service providers also spend more time managing service provision than public managers in contracting governments – an average of 7.19 hours per 10,000 population to only 1.99 hours. Similarly, public managers for direct providers spend about twice as much time as public managers for

TABLE 2
Hours in Average Week Dedicated to Management Tasks per 10,000
Population: Direct and Contract Service Provisions

Type of Management Task	Direct	Contract	p-value
Managing employees (n = 28 direct, 56 contract)	10.80	2.04	.000
Managing service provision (n = 26 direct, 57 contract)	7.19	1.99	.000
Administrative duties (n = 28 direct, 57 contract)	6.19	3.32	.044
Managing external relations (n = 26 direct, 55 contract)	3.21	1.14	.018
Responding to citizen complaints (n = 27 direct, 57 contract)	6.09	3.43	.044

contracting governments on administrative duties – 6.19 hours versus 3.32 hours respectively. These last two results are not surprising given that public managers in direct service provision governments are directly tasked with refuse collection activities and the complementary administrative responsibilities (e.g., billing, accounting, record keeping).

Perhaps somewhat surprising are the differences in the other two management activities. On average, public managers in governments that internally provide refuse collection services spend 3.21 hours a week managing external relations, while public managers in contracting governments spend just over an hour a week on these activities. This finding is contrary to our initial expectation that because contracting governments have more vested in a competitive market, they would report higher levels of external activities in an effort to keep the market competitive. Public managers in direct service provision governments also spend more time responding to citizen complaints – 6.09 hours a week as compared to 3.43 hours a week. We did not expect to see any difference in this area, particularly since the majority of contracting governments in our sample instruct citizens to contact the government directly about a complaint rather than the vendor. These differences may simply be the result of the disparity in the number of managers – direct service provision governments have more managers and so they spend more time on all tasks. We explore differences in these last two measures – monitoring activities and external relations activities – in more detail below.

Monitoring Activities

Table 3 reports the average number of times per year that public managers engage in four important types of service monitoring activities. It is important to note again that refuse collection is a type of service that provides the opportunity for outcome measurement, rather than limiting managers to directly monitoring the activity of those actually collecting refuse where direct providers would seem to have a monitoring advantage. Consequently, we expect to see little difference in monitoring activity across the two modes of service delivery. Surprisingly, this is the case for only two of the four monitoring activities. Public managers in direct and contracting governments monitor and track citizen complaints and conduct citizen surveys at about the same rates ($p > .05$).¹ However, public managers in governments that

TABLE 3
Times Engaged in Monitoring Activities per Year:
Direct vs. Contract Service Provisions

Monitoring Activity	Direct	Contract	p-value
Conduct survey of citizen satisfaction with refuse collection (n = 31 direct, 56 contract)	2.32	.61	.096
Monitor and track citizen complaints (n = 31 direct, 57 contract)	106.87	109.54	.919
Randomly spot-check refuse collection and informally monitor cleanliness of community streets (n = 29 direct, 55 contract)	139.55	85.11	.026
Formally track which streets and houses are periodically missed by refuse collection staff (n = 31 direct, 54 contract)	127.58	49.25	.001

directly provide refuse collection service engage in a higher degree of the other monitoring activities. Public managers in direct service provision governments are more likely to randomly spot-check refuse collection – 139.55 times per year versus 85.11 – and formally track which streets and houses are periodically missed – 127.58 times versus 49.25 times ($p < .05$). In sum, the data reported in Table 3 suggests that public managers in direct service provision governments are much more aggressive at monitoring than managers in contracting governments.

These differences in monitoring activity are in part a function of the larger number managers employed by direct service provision governments. Still, it is likely that our simple comparison is somewhat unfair, since many refuse collection contracts require the vendor to engage in performance monitoring and reporting. A more accurate comparison would include the activities of contracting governments and the vendors. Consequently, we asked vendors the same questions about the degree to which they engage in the same set of monitoring activities and then paired their responses with the government they serve.² Table 4 reports the results.

The results in Table 4 present a very different picture than the results in Table 3. When comparing just the governments, direct service

TABLE 4
Times Engaged in Monitoring Activities per Year:
Direct and Contract Service and Vendor Provisions

Monitoring Activity	Direct	Contract & Vendor	p-value
Conduct survey of citizen satisfaction with refuse collection (n = 31 direct, 40 contract)	2.32	3.95	.229
Monitor and track citizen complaints (n = 31 direct, 40 contract)	106.87	208.58	.000
Randomly spot-check refuse collection and informally monitor cleanliness of community streets (n = 29 direct, 40 contract)	139.55	191.68	.001
Formally track which streets and houses are periodically missed by refuse collection staff (n = 31 direct, 40 contract)	127.58	200.43	.000

providers conduct more monitoring than contracting *governments*. When the *vendors'* own monitoring activities are added to the analysis, we see that contracting communities engage in significantly *more* monitoring. Vendors and contract governments track citizen complaints, conduct more random spot-checks of refuse collection, and track more frequently which streets and houses are periodically missed. Clearly, contract service arrangements involve more monitoring on the part of governments and vendors.

External Relations Activities

Table 5 reports the average number of times managers engaged in a range of external relations activities in a year. These external relations help maintain the service delivery network, the web of formal and informal relations among governments, vendors and other community stakeholders. While Table 2 suggests that managers in direct service provision governments spend more time on external relations activities, findings in Table 5 indicate managers in contracting governments are engaged in their external service delivery network and market at about

TABLE 5
Amount of External Management Activities per Year:
Direct and Contract Service Provisions

External Management Activity	Direct	Contract	p-value
Discussed refuse collection practices for households with neighboring governments (n = 27 direct, 57 contract)	4.78	5.49	.621
Requested help or advice on contracting and managing relations with vendors from neighboring governments (n = 28 direct, 56 contract)	1.00	2.13	.165
Invited potential vendors from outside the geographic area to visit your community and study the possibility of bidding on a future contract (n = 28 direct, 56 contract)	1.07	1.68	.285
Partnered with a neighboring government or another organization on joint refuse collection projects such as testing a new type of collection technique (n = 29 direct, 56 contract)	1.31	1.21	.893
Discussed vendors' service quality and costs with neighboring governments (n = 28 direct, 57 contract)	3.68	4.51	.498

the same level as direct service providers. This suggests that public managers under both service delivery approaches have much to gain from maintaining service delivery networks and markets. For example, public managers in contracting governments discussed refuse collection practices for households with neighboring governments at about the same rate as public managers in direct service provision governments, 5.49 a year compared to 4.78 times a year ($p > .05$). Similarly, public managers in both types of governments requested information about contracting from neighboring governments, invited potential vendors from outside the geographic area to visit the community and study the possibility of bidding on a future contract, and partnered with a neighboring government or another organization on joint refuse collection projects. Public managers in both circumstances even reported equivalent numbers of times they discussed vendors' service quality and

costs with neighboring governments. Again, this is not surprising given that these are all activities that in part help bolster the service delivery network and provide valuable benchmarking information for direct and contracting governments. Whether a city delivers refuse collection via contract or directly, its public managers benefit from knowing more about the service practices, successes, failures and innovations in neighboring governments. Indeed, social networks, often lying outside of formal market structures, are the conduits for diffusing innovative ideas and practices (Agranoff & McGuire, 1998; Lipnack & Stamps, 1994; Mossberger & Hale, 1999).

Service Performance

Our inquiry so far begs the question of whether differences in managerial capacity make a difference in terms of performance. Quite possibly, contracting governments suffer no loss in service quality given the reduction in management capacity, which would suggest that direct service provision governments are dedicating too many managerial resources. As a preliminary attempt to assess whether differences in managerial capacity make a difference in terms of the quality of service delivery, Table 6 reports differences in two rough performance measures across direct and contract service provision in our sample – manager rating of the quality of refuse collection and the number of citizen complaints.

We can offer some evidence, albeit not the strongest conceivable, that direct service provision governments provide higher service quality than contracting governments. There is a statistically significant difference between the two modes of service provision for the second performance measure – ratings by public managers of the quality of refuse collection in their community. On a scale of 1 to 10, with 1 meaning “very poor quality” and 10 meaning ‘very high quality,’ respondents from direct service provision governments rated the quality of refuse collection in their community a 9.23 on average, while respondents from contracting governments reported a 8.53 on average ($p < .05$). The statistically significant difference provides support for the claim that the additional investment by direct service provision governments results in better quality service. Alternatively, one might argue that while the difference is statistically significant, it may not be substantively significant – both scores lie well to the positive end of the

TABLE 6
Refuse Collection Performance Measures:
Direct and Contract Service Provisions

Performance Measure	Direct	Contract	p-value
Quality of refuse collection on scale of 1 to 10 with 1 meaning “very poor quality” and 10 meaning “very high quality” (n = 31 direct, 57 contract)	9.23	8.53	.003
Average number of citizen complaints per week per 10,000 population (n = 31 direct, 57 contract)	1.75	1.76	.983

continuum – and consequently contracting governments do not suffer a noticeable drop in service quality by outsourcing. The measure is crude and perhaps not sufficiently nuanced to capture the differences of interest. Future research needs to connect differences in investments in managerial capacity with more objective measures of service quality (e.g., service recipient measures of service quality).

There is no apparent difference in the average number of citizen complaints per week per 10,000 population across the two modes of service provision – 1.75 versus 1.76. ($p > .05$).³ Findings about citizen complaints are interesting given that, as discussed above, public managers in direct service provision arrangements indicated that they spent more time on average responding to citizen complaints than public managers in contract service provision arrangements (see Table 2), even though public managers in both types of government monitored and tracked citizen complaints appropriately the same number of times per year (see Table 3). We suspect that this is because public managers in direct service provision governments must take action to resolve the complaints (e.g. tasking a crew with driving back to a location to collect missed trash and following through with the employees to ensure that the task was completed). Public managers in contracting governments can delegate this responsibility to the vendor through a simple telephone call.

CONCLUSION

Taken together, the results indicate that governments that provide refuse collection services directly have higher management costs than

governments that contract for these services. In line with our initial expectations, direct service provision governments employ more managerial staff and devote more managerial hours to a variety of tasks than contracting governments – managing employees, managing service provision, and administrative duties. Direct service delivery requires managers and managerial activity. However, public managers in direct service provision governments also engaged in tasks where we expected public managers in contracting governments to be more active – monitoring vendor performance and managing external relations – more often or at the same rate. Public managers in direct service provision governments engage more frequently in monitoring service performance than public managers in contracting governments. Public managers in both direct and contracting governments engage in roughly equal amounts of external relations activities. One interpretation of these results is that they are consistent with recent studies that find that when governments outsource, they not only reduce their direct service capacity, but also diminish their managerial capacity (e.g., Brown & Brudney, 1998; Van Slyke, 2003).

The findings can also be interpreted differently. In terms of monitoring, when vendor and government responses are combined, public managers in contracting governments conduct significantly more monitoring than public managers in direct service provision governments, although not directly. Instead, they “buy” monitoring activity by specifying in the contract that vendors undertake the monitoring tasks and then report the outcomes of their monitoring. This is not to say that public managers in contracting governments abdicate their monitoring responsibilities, but rather that for a service like refuse collection, with easily identifiable outcome measures, public managers can delegate the bulk of monitoring activity to the vendor, as suggested by our discussion of managers’ management of citizen complaints. In terms of managing external relations, all public managers – those in direct service provision governments and contracting governments – need quality information about which service delivery practices work and which do not, information that can be extracted from the service delivery network. In addition, in line with the recent work of Hefetz and Warner (2004), service delivery is a dynamic process with governments changing their service delivery modes over time. Direct service provision governments may decide to outsource refuse collection and enter the market at a later date, while contracting governments may decide to

internalize service provision. Consequently, public managers in both types of institutional arrangements have incentives to engage in external relations activities that draw them into the market and the service delivery network. In short, the state may be 'hollow' in terms of direct service delivery capacity, but it is not 'hollow' in terms of managerial capacity. Public managers may be becoming both 'smart buyers' (Kettl, 1993) and 'smart managers' of contracted service provision.

Our analysis carries some important implications for practitioners considering contracting for services and organizing their own service management operations. In terms of the "make or buy" decision, our results suggest that for services like refuse collection, governments achieve savings through contracting by reducing direct line employees, as well as managers. However, our results suggest that governments have retained some capacity to perform critical monitoring and external activities. Also, by including information on vendors' activities, our analyses indicate that, in some cases, governments are able to 'buy' management activities (such as monitoring) that they would otherwise have to perform themselves, particularly if they include relevant reporting requirements in contracts. It is important to note that there likely are limits to this tactic based on the nature of the service in question. Other services resist the easy identification of outcome measures enjoyed by refuse collection (e.g., social services); public managers in contracting governments may have a harder time specifying meaningful reporting requirements in these circumstances and consequently subject themselves to the risk of contract failure if they significantly reduce managerial capacity. In general, public managers in contracting governments can economize, though not eliminate, their contract management activities. Indeed, it is important that public managers maintain substantial management capacity 'in house' when contracting, because such capacity is generally necessary to ensure vendors comply with contract specifications and ensure overall service quality. Our outcome results, albeit with poor measures, suggest some slippage in performance as a result of outsourcing and diminished managerial capacity.

Our inquiry also suggests several important directions for future research. First, our analysis in this paper has been confined to refuse collection services. Elsewhere, we have presented a theoretical framework and quantitative indicators of the transaction and management costs associated with delivering a broad range of services

(Brown & Potoski, forthcoming). Future research should investigate these services in more detail as we have begun here with refuse collection. And of course, future research should be extended across types of governments and geographic areas. Second, our inquiry has focused on two management tasks: monitoring and managing external relations. There are several other contracting phases, each with their own management imperatives. Finally, future research should focus on developing and using accurate outcomes measures, notwithstanding our modest efforts here. Outcome measures have been the “holy grail” of contracting and management research for some time. Our sense is that the stumbling block in this area has been the high cost rather than the difficulty in obtaining quality outcome measures. Nonetheless, outcomes are too important to be neglected in contracting research.

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NOTES

1. Respondents were asked to estimate the number of times they engaged in each monitoring activity per year. Given that there are 260 working days in a year, we recoded all responses above this figure as 260.
2. Combining the two values often resulted in values above 260 days per year; as we did with the unaltered monitoring values, we recoded all responses above this figure as 260.
3. We should note, however, that this number excludes complaints that vendors receive and do not pass on to the government. We are not able to extract additional complaints from our data. In our survey, vendor managers reported they receive an average of one complaint per week per 10,000 population. Given that most refuse collection contracts in our sample require that vendors report citizen complaints to governments and that citizens are instructed to contact the government directly, we assume that for the most part these complaints duplicate complaints reported by governments.

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APPENDIX Sample Description

Appendix Table 1 reports the sample distribution across the mode of service provision. Of the 105 respondents, 30% deliver refuse collection services directly (i.e. entirely through city employees), while 55% rely on a contract or a franchise with a private vendor or a non-profit organization. No governments engaged in contracts or franchises with another government, while 4% of the sample jointly provided the service with city employees and a contract or franchise with another organization. Around 11% of the sample does not offer the service. Appendix Table 2 reports the sample distribution across population categories. The bulk of the respondents (over 84%) are communities

with populations less than 50,000. All of Ohio's major metropolitan governments participated in the study, except one – Cleveland. Finally, Appendix Table 2 reports the sample distribution by type of government. Just under a third of the sample has the council-manager form of government, while over two-thirds have the mayor-council form of government. One respondent has the board or commission form of government. Given the extremely high response rate, we are confident that our sample reflects the population of local governments in Ohio.

APPENDIX TABLE 1
Refuse Collection Delivery Mode, Sample Distribution

Service Delivery Mode	Count	%
Entirely through city employees	31	30
Entirely through a contract or franchise with a private vendor	57	54
Entirely through a contract or franchise with a non-profit organization	1	1
Entirely through a contract or franchise with another government	0	0
Jointly provided by city employees and a contract or franchise with another organization	4	4
City does not offer service	12	11
Total	105	100

APPENDIX TABLE 2
Population Categorization, Sample Distribution

Population	Count	%
15,000 – 24,999	54	51
25,000 – 49,999	34	33
50,000 – 99,999	12	11
100,000 +	5	5
Total	105	100
Type of Government	Count	%
Council-Manager	30	29
Mayor-Council	74	70
Board/Commission	1	1
Total	105	100