

Contracting and Sector Choice Across Different Types of Municipal Services

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Abstract

This paper presents an explanation for service contracting patterns in cities based on the characteristics of goods and services and the extent of political and administrative uncertainty in city leadership. Turnover in executive leadership can affect the ability of local government to negotiate contracts, make credible commitments to suppliers, and faithfully uphold and enforce contracts once they are in force. When such transaction costs resulting from turnover are high, contracting out becomes less likely. The results show that both city manager turnover and certain service types significantly reduce the likelihood of service contracting, particularly with private for-profit providers.

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Whether organizations should contract out for goods and services or produce them internally (i.e., the make or buy decision) has intrigued scholars of public agencies and private firms for decades (Coase 1937). Most explanations for vertical integration in private firms emphasize transaction costs incurred in negotiating, monitoring, and enforcing a contract or agreement. New institutional scholars expanded this framework. They view that the organization of transactions within firms rather than relying on the open market is contingent upon the relative costs of internal and external transactions (Williamson 1975). If the cost of negotiating and enforcing contracts between firms is high, firms will have an incentive to organize production by themselves, rather than seek out to external suppliers.

Governments, like firms, desire efficient production, but production efficiencies in governments can be lost when transaction costs are high, just as they can in private firms. The argument is that the service contracting and the sector to which contracts are assigned are dependent upon the type of policy and the stability of the administrative environment within which the contracting process is managed. Certain classes of policies entail considerable monitoring and measurement costs that make contracting with private agents problematic. In addition, uncertainty resulting from an unstable administrative environment reduces the ability of a local government to negotiate contracts, make credible commitments to suppliers, and enforce contracts.

Two problems stand out in the literature on transaction costs and municipal contracting. First, although administrative turnover and the characteristics of goods have both been linked to contracting problems, they have not been examined together in any systematic way. Second, empirical works typically neglected decision choices involved across different providers for the supply of contracted services that are associated with different policy types.

The empirical analysis estimates city contractor choices with a model that includes executive turnover as a measure of uncertainty in the administrative environment and indicators of various policy types that characterize city services. The findings reveal that transaction costs limit the gains to be achieved in contracting out services, particularly to private agents.

This study advances the existing literature on municipal contracting on two fronts. It explicitly brings policy types into the contracting choice analysis. Earlier works have focused primarily on either functional classification of goods (Ferris and Graddy 1986, 1988; Stein 1990, 1993; Jossart-Marcelli and Musso 2005) or their characteristics (Nelson 1997, Brown and Potoski 2003) overlooking the possible affect of different policy types on the nature of contracting choices. It also introduces stability of the administrative environment, previously unexamined management variable, in the model of municipal contracting. The study then combines both policy typologies and uncertainty of administrative environment in a single model for a rigorous test of their effects controlling for other better known factors such as community heterogeneity, availability of service providers, and bureaucratic resistance.

The article discusses how transaction costs influence contracting choice followed by how service differences captured by widely known policy typologies influence contracting sector choices. Data, variables, measures, and model are explained next. It then discusses the findings. Finally, the conclusions as well as the limitations and implications for future research are highlighted.

Contracting, Transaction Costs, and Sector Choice

Transaction cost theory has been extensively used in explaining the contracting choices of municipal services (Stein 1990; Nelson 1997; Brown and Potoski 2003a, 2003b).

The theory suggests that the actors will choose a governance form that minimizes the

transaction costs associated with the exchange (Williamson 1975). Governance forms could be a market or a unified firm, or numerous intermediate hybrid-type forms such as long-term contracts, reciprocal investment, and franchising (Williamson 1991). Transaction costs are information, negotiation, monitoring, and enforcement costs of contract (Feiock, 2007). Following this logic, cities may organize production in-house or choose to contract with private for-profit providers, non-for-profits, or other governments for the supply of services. In doing so, they compare the transaction costs of each alternative governance form associated with the exchange and choose the alternative that minimizes such costs.

Identifying potential providers and determining their competencies involve search costs. There are also costs associated with the contract negotiation as it demands preparation of contract documents and advice from legal experts. The potential opportunism of providers also demands monitoring of the contract performance during its implementation. This can involve costs ranging from setting up of a process and system of feedback to renegotiation or readjustment, if any, during the implementation. Finally, cities may face potential legal disputes requiring arbitration or litigation to safeguard the terms of the contract.

These costs arise due to bounded rationality and potential opportunism of actors in transactions (Williamson 1981). Boundedly rational actors have limited capacity to gather or process information regarding all potential costs involved in exchange. Actors may also behave opportunistically – what Williamson (1975) calls “self-interest with guile” – to appropriate larger share of the gains from the contract. Consequently, actors are tempted to incorporate these contingencies into the contract *a priori*. Hence, the presence of both bounded rationality and potential opportunism increases transaction cost of a contract. However, the extent and variability of transaction cost of a contract depend on the degree of

uncertainties in the administrative environment and the characteristics exhibited by different policy types associated with various contracting choices faced by the cities.

Administrative Turnover and Contracting Choice

Although there has been considerable interest in what factors account for the turnover among city managers and chief administrative officers (DeSantis, Glass, and Newell 1992; DeHoog and Whitaker 1990; Whitaker and DeHoog 1991; Feiock and Stream 1998; Feiock et al. 2001), little progress has been made to explore as to how turnover might affect contracting choices. Contracting involves a city's relations with external actors. Political and administrative upheavals in the city's leadership result in uncertainty in the administrative environment and, therefore, reduce its ability to negotiate contracts, make credible commitments to the suppliers, and faithfully uphold and enforce contracts once they are in force (Clingermayer and Feiock 2001). Uncertainty regarding the city's expectations and its credibility of commitment can make doing business with cities risky for the external providers (McManus 1991). Such uncertainties are likely to increase with higher turnover of the executives. Contractual exchange is only likely if both the municipality and the external provider consider the transaction to be in their interest. The exchange is less likely if either side is suspicious of the other party's credibility of commitment to the terms of the contract. In addition, new leadership may not be satisfied with the existing contractual terms they were not part of and may demand re-negotiation.

Organizations generally delegate powers to executives for policy implementation (Milgrom and Roberts 1990). In cities with council-manger government, managers have broad executive powers in policy formulation and implementation. Although the executive decision making lies in the elected mayor in the case of mayor-council form of government, a

significant amount of administrative authority is delegated to the appointed administrators to manage city business. These administrative executives manage the contracting process from contacting the providers to actual contacting and controlling the contract. Frequent changes in administrative environment increase uncertainty for external providers resulting into greater uncertainty in the contractual relationships. Faced with administrative turnover, the city officials also may not be willing to enter into agreements for lengthy periods that would lock them into specified quantity, quality, or the mode of service delivery. Cities may prefer more open-ended and flexible contracts that would enable them to adapt service provisions, but such contracts impose transaction costs upon suppliers. Besides, the suppliers could demand substantial premia in order to compensate for the increased risk. If so, the cost savings that contracting is said to provide would quickly evaporate (Sappington and Stiglitz 1987). Thus, the external contracting may be less likely under these conditions.

Uncertainty in the political structure of cities also affects the stability of the administrative environment. Changes in the council composition not only make aggregation of community preference difficult, they can also mean division and conflict over policy leading to insecurity for both the administrators and external providers about the expectations of the council. Partition and disputes in the council may also motivate some council members to remove administrative barriers such as to do away with the administrator in order to push their individual agenda for political credit claiming.

The effect of administrative turnover on contracting decisions is more direct. First, the turnover of council seats is less frequent than that of managers as council members are elected for fixed terms, incumbents are typically reelected, and term limits are not the norm. Second, contracting involves standard procedures. Once a policy decision is made by the council regarding service provision, the organization and efficient delivery of the service become

more of a managerial responsibility. Finally, while the uncertainty due to council turnover is broad-based, the impact of administrative turnover on service delivery is more immediate.

Contracting with private firms is different from outsourcing from other units of government or non-profit providers because the incentive for opportunistic behavior is usually much higher when private, profit-seeking firms are involved. In private firms the residual claimants (owners) are, in principal, in control with important implications for how managers will be constrained to react to any gaps in contractual structure. Where managers' rewards are strongly linked to organizational performance, it may offer incentives for efficiency; but it may also motivate them to cut corners in various ways, including limiting access to services or allowing more costly aspects of service quality to decline. Units of government or non-profit organizations that contract with municipal governments to provide services receive no profits to distribute to their members. Some slack or excess resources may be retained by such organizations, but this should not provide the same "high-powered incentives" to act opportunistically (Frant 1996).

Moreover, while transaction cost problems can be troublesome for cities pursuing any kind of external service delivery, these difficulties may be less severe when service responsibility is given to the non-profits. Contracting for services with non-profits generally involve complimentary activities with potential for economies of scope compared to the contracting with for-profits. This reduces transaction costs as activities are shared to deliver final products or services. Because non-profits are less influenced by high-power incentives than the for-profits, the potential risk of opportunism and contract monitoring costs are likely to be lower. Therefore, administrative turnover is expected to have less influence on non-profit contracting than with the for-profit contracting.

Taxonomies of Policy Types

While there are numerous ways by which governmental activities can be classified, several typologies have been specifically linked to service delivery choices (see Stein 1993). These include distinction between regulatory and non-regulatory activities (Lowi 1964, 1972), excludability and jointness of consumption (Ostrom and Ostrom 1977), and net benefit/cost to the median taxpayer (Peterson 1981).

The distinction between regulatory and non-regulatory activities is common in policy studies (Lowi 1964). Regulatory actions involve government coercion and tend to have immediate impact on individuals (Stillman 2004). Hence, services requiring regulatory compliance such as zoning, building inspection, or traffic control under regulatory policies. Services that do not fall under the regulatory category are non-regulatory activities. Since regulatory services employ governmental coercion, they often impose substantial administrative or compliance costs on firms and individuals. These costs are generally concentrated while the benefits are diffused over many constituents; thus, regulatory activities often generate conflict and pose high bargaining costs (Wilson 1980). Because of the conflicting nature of the regulatory services, they are less likely to be contracted out by the cities than the non-regulatory services. The value conflict involved in such policies may particularly militate against the involvement of non-profit organizations in service delivery (Clingermayer and Feiock 1990).

A second typology classifies goods and services based on the extent to which they have attributes of excludability and jointness of consumption (Ostrom and Ostrom 1977). Generally, a good or service is nonexcludable when it is impossible or impractical to exclude others from the consumption of the service. Jointness of consumption occurs when all citizens enjoys the benefits of the service without reducing the benefits to others; that is, the addition

of a new individual does not reduce the availability of the benefits for others. Community policing service is an example of non-excludability and jointness of consumption. All residents in the community enjoy the benefit of community policing without reducing the benefits for others. It would be extremely costly to exclude one resident from the use of such benefit. Goods and services such as water supply or garbage pick up that are excludable and do not involve jointness of consumption are often fall under 'private goods', and can generally be provided in private markets. Nevertheless, governments may be called upon to provide such goods when the distributive impact of market allocations is not politically satisfactory. Private goods are likely to be provided by the for-profit sector. However, when risk of defection or potential opportunism of the provider is too high due to the monopoly nature of the public goods market such as in sanitary sewer or water supply, cities may prefer other governments for these services or produce in-house rather than contracting out in the private market.

When exclusion is costly and jointness of consumption is present, services have the characteristics of public or collective goods calling for government involvement to ensure adequate provision. Some goods permit exclusion but maintain jointness of consumption such as community parks, roads, or beaches. These are 'toll' goods and may be provided by either private or public market. Goods that are 'common pool resources' such as ground water extraction or public health involve rivalry in consumption but do not allow easy exclusion. Since geographically concentrated small group of individuals consume most common pool resource goods, politicians may find contracting out such goods to non-profits more attractive because non-profits are generally locally based and more responsive to the preference of the local constituents. Contracting out to other governments or for-profit sectors would face more opposition as these delivery agents may be less responsive to the constituents' preference and,

hence, likely to be less politically attractive. Finally, goods and services such as crime prevention, fire protection, or public information that are non-excludable and have jointness of consumption are collective or public goods. The delivery of these goods will be dominated by direct municipal delivery (Stein 1993).

The third service typology follows Paul Peterson's classification of services (Peterson 1981) as developmental, allocational, and redistributive based on whether the median taxpayer's benefits cost ratio resulting from provision of a service is positive (developmental), negative (redistributive) or roughly zero (allocational). Peterson argued that cities compete for residents and investment in order to maintain their tax bases and gain sufficient revenue to sustain government operations. In order to attract investment, cities make use of development services to lure new investment or to expand existing investments in the community. These include provision of physical infrastructure facilities and services that directly benefit the business and high income taxpayers.

Governments must also carry out basic services such as police, fire, or street maintenance that are of regular housekeeping nature that fall under allocational services. These services do not necessarily have substantial developmental or redistributive consequences. Further, Peterson argues that cities rarely undertake redistributive programs such as provision of health or welfare services because they might drive away new investment, or encourage existing investment to migrate to areas with less antagonistic business climates. However, due to controversial nature of the redistributive services, cities may choose non-direct service mode to fulfill this responsibility (Stein 1993). Extending Peterson's argument, it is predicted that the developmental services will be organized in-house rather than provided externally as they are politically attractive than the redistributive services. Cities are indifferent about allocational services; but if they are contracted out, it is

more likely with the non-profit providers because of the greater heterogeneity of preferences for these services. When examined from the perspective of cities' preference in providing developmental, allocational and redistributive services, Peterson's classification provides a rank ordering of cities' preferences to provide particular types of services.

Methodology

The impacts of executive turnover and policy types associated with municipal services on contracting choices were tested using data from International City/County Management Association's (ICMA's) Profile of Alternative Service Delivery Approaches for the years 1988 and 1992¹. Not only did ICMA surveys for this period have higher response rates than subsequent surveys, the study period reflects one of the most dynamic stages in the design of alternative service delivery arrangement. These two data sets are drawn from responses obtained from the city officials to the survey questions that asked whether the respondent's municipality provided particular services and, if so, how those services were delivered. The analysis covers all municipalities with 25,000 or above population in 1985 that were included in each of the two surveys giving the sample size of 234 cities. These data were supplemented with information from various editions of the Municipal Yearbook and County and City Data Books. All fifty-three services reported in both the 1988 and 1992 surveys that exhibited variance in production unit were examined. The unit of analysis is city by service, and the data for this purpose were pooled by city and service.

The dependent variables in the model are polychotomous; that is, the dependent variables were classified into four categories representing the service contracting choices for fifty three services classified into policy types. The four choice categories were in-house production, contracting with other governments, contracting with non-profits, and contracting

with for-profit firms. The analysis estimated the probabilities that a city would contract out service production to each of these choice categories². We employed multinomial logit model which is considered appropriate when responses are a set of discrete choices measured by a nominal scale. The reference choice in the analysis is in-house production.

Independent variables

The model included measures of policy types, administrative uncertainty, and other socio-economic and political characteristics of communities and government workforce that have been linked to contacting patterns. Three indicators of policy types were created to capture the ideas of policy types based on the policy typologies discussed above representing all the services included in the analysis. A binary variable distinguishes regulatory, coded 1, and non-regulatory services, coded 0. The categorization of services based on excludability and jointness of consumption is a set of dichotomous dummy variables corresponding to private goods, public goods, and common pool resource goods. Finally, Peterson's ordinal classification of services was coded as redistributive (0), allocational (.5), and developmental (1) to represent the degree of preference for these policies by the cities.³

Administrative turnover was operationalized as the number of new chief administrative officers in the sample cities for the period 1984 to 1990 reported in the Municipal Yearbooks. These include managers in the manager form of city government and chief administrative officer in the mayoral form of city government. Examination of turnover patterns revealed that over half (54.7 percent) of the cities had at least one new manager and fourteen percent had two or more new managers during the period.

The analysis includes several control variables. First, heterogeneity in community characteristics results in diversity in community preferences for services affecting contracting

choices as they represent the unique needs of particular groups in the community. The homogeneity of city residents was operationalized in terms of their racial and economic profile. This is measured by the percentage of city population that is white represented racial homogeneity, and the percentages of population living below the federal poverty line measured economic homogeneity.

Second, the size of the provider market is an important predictor of external contracting choice (Nelson, 1997; Brown and Potoski, 2003, Feiock, et. al., 2003) because larger market such as the metropolitan area indicates greater availability of alternative service providers. The size of the provider market is measured by a dichotomous variable denoting whether a city is located within a metropolitan area or not. Increased service demands resulting from larger and growing cities also make external contracting more likely. To account for the effect of the demand side of the market, city size and population growth were included in the analysis. While the city size is measured by the 1986 city population, the growth of the cities is operationalized by the change in population between 1980 and 1986 as a proportion of 1980 population.

Third, opposition to contracting often comes from municipal employees because they fear job losses. The stronger the employee unions, the greater the constraints a city faces in its ability to contracting out. The percentage of the unionized state municipal workforce was included to measure the potential bureaucratic opposition to external contracting. Following previous studies (Feiock, et. al. 2003), the number of full-time public employees measured in per 10,000 population was also added as an additional variable indicating opposition to outsourcing. But this may also capture the bureaucratic capacity to supply services in-house; if so, the greater the number of full-time employees, the lower will be the likelihood of external contracting.

Fourth, a city's contracting decisions are also affected by its prior experience with the provision of particular services and the scope of its total service delivery. Hence, cities providing more services will be more likely to contract because it promises to reduce overall service provision costs. This prediction was tested with a service responsibility indicator that counts the number of services provided by a city in 1987 as indicated in the Census of Government Finances (Clingermayer and Feiock 1990). A dummy variable indicating whether or not particular services were provided in 1988 was also added to test the expectation that the newly adopted services are more likely to be contracted.

Finally, previous studies indicate that citizens' ideological preferences for contracting out municipal services affect contracting choices (Jossart-Marcelli and Musso 2005; Feiock, et. al. 2003). The percentage of the countywide vote for the 1992 Republican presidential candidate was included to represent citizens' political preference for contracting.⁴

Results and Discussion

Table 1 provides the results of the multinomial logit estimation. It reports the relative risk ratios (RRR) from the estimation⁵. This provides a meaningful method of comparing the propensity to contract out a municipal service to each of the alternative options⁶. A RRR coefficient greater than one indicates the independent variable increases the likelihood of a particular type of external delivery choice over in-house production. A RRR less than one indicates a variable reduces the likelihood of external supply (i.e. a tendency toward in-house production). For example, in Table 1, the RRR for manager turnover on contracting with nonprofit organizations is 0.860. The odds of contracting with nonprofits rather than providing the service in-house are multiplied by 0.860, thus each manager change between 1983 and 1990 reduced the odds of contracting out services to a nonprofit provider by 14

percent. An RRR of 1 indicates that the variable has neutral effect on the likelihood of contracting out to a particular service provider.

Table 1 About Here

Table 2 below summarizes the main findings with respect to the administrative turnover and policy types.

Table 2 about here

Consistent with the previous studies (Feiock, et. al. 2003), the results show that the administrative turnover reduces the likelihood of all forms of external contracting. In the case of contracting with other governments, although the effect is not significant when, it is in the expected direction. The effect is statistically significant and quite large when contracting out to both non-profit and for-profit providers. While each turnover of the city executives reduced the likelihood of contracting out to nonprofits by fourteen percent, the effect was about twelve (11.7) percent in case of for-profit firms. This supports the proposition that the executive turnover increases the transaction costs of contracting and affects the ability of the cities to make credible commitments to external providers.

The analysis provides mixed findings with respect to the effect of policy types on contracting preference. The regulatory and non-regulatory distinction was found to have important consequences. The regulatory service category is significant for the other government and nonprofit providers. The RRRs for these two providers show that while cities prefer to contract out the regulatory service to other governments (RRR = 1.25), they would rather favor in-house production of these services over contracting out to the non-for-profits (RRR = 0.451). As discussed earlier, these differences may be the result of the value conflict inherent in the regulatory policies that tend to concentrate costs or benefits in some small segment of the society (Lowi 1964). Nonprofit organizations that provide regulatory services

may be interested in producing the services because of their stake in one side of the value conflict. If so, the transaction costs resulting from the risks of delegating coercive authority to nonprofit providers that advocate one side of a policy with inherent value conflict (Ferris and Graddy 1986) make them less attractive.

The impact of private goods on contracting choices is statistically significant for all three external providers. However, the RRRs of below one for all these providers indicate that cities prefer to produce private goods in-house rather than contracting them out. Generally, private goods are good candidates for contracting out unless the contracting costs and uncertainties are too prohibitive. This departure from the expectations suggests that the role of municipal governments in delivering private goods should be evaluated in terms of both service provision and production responsibilities. The fact that a city is responsible for the provision of a specific private good suggests the dissatisfaction of the community with the market allocation of the service based perhaps on some equity or distributional considerations. The private market delivery might have endangered the equity goals motivating public provision in the first place.

The results support the expectation with respect to the public goods. Cities generally prefer in-house provision of public goods rather than contracting out. For the common pool resource goods, while cities prefer to supply in-house rather than contracting out to other governments and for-profit providers, there is a strong tendency to contract out to the non-for-profits. Since geographically concentrated groups consume most common pool resource goods, the expected political support from the core constituency encourage local officials to contract locally based nonprofits for the delivery of such goods. This also indicates the delivery agent's motivations to be responsive to constituents' preferences. The same locally based interests would most likely oppose contracting out to other governments or profit

seeking firms that may be less responsive to the local preferences. Finally, in the case of Peterson's policy typologies, the RRRs are below one for all three external providers⁷. This suggests that the developmental services are more likely to be provided in-house, and redistributive services are more likely to be contracted out. Allocational services are likely to be contracted out to profit-seeking firms.

Heterogeneity is significant mainly for not-for-profit contracting choices. Similar to previous studies (Feiock, et. al. 2003), while the effect of white on cities' choice between in-house supply and for-profit contracting was found to be neutral, a positive effect was found between white and contracting with the not-for-profit sector. Similarly, the poverty has a positive effect on contracting out to non-profit organizations. Cities with lower income residents typically have more nonprofit organizations. Greater competition among the nonprofit service providers might have made not-for-profit sector a better choice in terms of lower costs of contracting. It is also plausible that this variable captures the unique demand such as health and safety needs of poor residents for which nonprofit organizations have competitive advantage over other governments or for-profit sectors in delivering such services.

Cities located in metropolitan areas were found to be more likely to contract out services to profit-seeking firms than cities not located in metropolitan areas suggesting that metropolitan areas offer more service provider options, including for-profits. Similarly, as expected, larger and growing cities were more likely to contract out services as these cities look for external providers to meet the growing service demand of their residents. While large cities preferred contracting with both the non-profit and for-profit firms, growing cities were more inclined to utilize the for-profit sector.

Municipal workforce unionization was not found to be significant in affecting the external service delivery choices. The size of the workforce, on the other hand, displayed significant relationships with all the three forms of contracting choices. The estimated RRRs were only slightly below one ($RRR = .999$) indicating a small reduction in the likelihood of in-house supply over external choices of delivery. Cities with a high number of employees manifest greater internal capacity to produce services; thus, there may be less a need for external contracting. This may very well result in greater bureaucratic resistance for external contracting. Furthermore, the cities with greater number of service responsibilities were more likely to contract out with for-profit providers than cities that have fewer service responsibilities. This supports the argument that cities use contracting to reduce overall costs of operations that are generally greater in full service municipalities. The republican support decreased the likelihood of contracting out with other governments and non-profit sectors. Finally, external contracting decisions were not found to be guided by whether the service in question was old or new.

Conclusion

This study leads to some salient conclusions. Policy types matter in contracting choices. Cities take into account the nature and type of policy reflected by the service in question when they make contracting choice decisions. This suggests that policy types make external contracting expensive for some policies and advantageous for other policies. For example, regulatory services are unlikely to be contracted out to nonprofit organizations. Some localities may be unwilling to contract out these services because of the risks of delegating coercive authority (Ferris and Graddy 1986). Cities generally do not contract out public goods because the costs of monitoring and curtailing of potential opportunism of

external contracting are too high (Brown and Potoski, 2003). In addition, some local leaders may not wish to contract out public services that are inherently governmental in nature because doing so would limit their ability to claim credit for services such as police or fire for which the communities attach prestige value. This also applies to Peterson's developmental services that are supplied in-house because the political transaction costs of external contracting is too high even though the developmental services are not inherently governmental as in the case of the public goods.

The results regarding the executive turnover are even more compelling. While previous studies showed that the effect of the administrative turnover may vary with the type of services (Feiock, et. al. 2003), this research revealed that the cities experience less external contracting with increase in the administrative turnover irrespective of the types of policies or services. The administrative turnover creates an unstable administrative environment due to uncertainty and credibility of commitment for all parties involved in the contracting. As a result, external contracting becomes a more expensive and risky choice, especially with the for-profit or nonprofit organizations. This kind of privatization failure has been characterized as 'contract failure' (Lamothe and Lamothe 2006). If contract failure seems likely, in-house service delivery may be the best strategy for the cities.

The analysis of municipal contracting choices points to the importance of institutional, political, policy, and administrative environments for understanding the efficiency of alternative policy delivery choices confronting municipal governments. It also suggests the usefulness of transaction cost based explanations for political decision-making (Stein 1990). However, further refinements may be needed to better understand the dynamics of municipal contracting in an interactive environment. First, future works should translate the various policy typologies and their underlying concept, possibly with some measure of statistical

reliability, to other service areas and to cities of population less than 25,000. Second, explicit modeling of the relationship between the political and administrative turnover is also warranted. It will further enhance our understanding of the effect of the administrative environment in contracting choices. Moreover, effect of the administrative turnover with respect to the form of government may also shed highlight on different contracting choice dynamics as administrative turnover may be more susceptible to uncertainties with the council-manger form of government than that of the mayor-council form of government. Finally, considering the importance of the citizens' political ideology in service delivery choices, a more direct measure of city residents' political preference would prove useful.

Notes

¹ The response rates for the 1988 and 1992 surveys were 40.2 percent (N = 1,311) and 36.7 percent (N = 1,220) respectively. ICMA surveys typically have low response rates.

² It is assumed that all three modes of contracting choices are discrete and are available to all municipalities in order not to violate the independence of irrelevant alternative assumptions (see Alvarez and Nagler 1998).

³ While there is some subjectivity in the assignment of services to policy categories, the results are robust to alternative coding. While changes in assignment of any particular service effects the magnitude of the estimated coefficients, the signs and statistical significance of policy effects remain unchanged.

⁴ Ideology is measured at the county rather than the municipal level because election results are reported at the county level. While cities and their suburbs may have different voting patterns there is not any municipal level ideology measure available for all of the units. Despite this limitation, the county voting patterns have been used as measure of ideology in previous studies.

⁵ A single equation model was estimated because the three service classifications measure three distinct theoretical concepts. This assertion was tested by examining interrelations among service classifications with an ordinal measure of association, the symmetric lambda statistic. Virtually no relationship between the service sector classifications was found which suggests that they should be analyzed in the same model. Because symmetric lambda is a non-directional measure of association, it requires no assumptions about the direction of causal relationship between two variables. The Peterson variable was coded as three dichotomous dummy variables so that it will be in the same unit of measurement as the other two service classifications. An ordinal measure of association was also used to test the relationship among the service classifications, and the results do not change.

⁶ For the set of service delivery alternatives (s), the relative risk ratio (RRR) for an alternative service delivery category (j of s) and an independent variable (x) equals the amount by which the predicted odds favoring j over direct city provision (the base category of s) are multiplied, per a one unit increase in x, with all other factors being equal.

⁷ Estimates with the Peterson categories operationalized with a set of dummy variables yielded similar results.

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Table 1: Multinomial Logit Estimates of Contractor Choice of Cities ^a

Variable	Other overnment (n=1342)		Nonprofit Provider (n=460)		For-Profit Provider (n=1250)	
	RRR	Z	RRR	Z	RRR	Z
Provided in 1988	1.002 (0.013) ^b	0.199	0.978 (0.022)	-0.944	0.977 (0.014)	-1.577
Percent White	0.998 (0.002)	-0.371	1.017** (0.005)	3.522	1.00* (0.003)	1.808
Below Poverty	1.010 (0.007)	1.511	1.044** (0.010)	4.290	0.997 (0.007)	-0.331
Manager Turnover	0.956 (0.043)	-0.979	0.860* (0.066)	-1.953	0.883** (0.042)	-2.585
SMSA	0.947 (0.051)	-0.985	0.956 (0.084)	-0.504	1.210** (0.069)	3.322
Service Responsibility	1.002 (0.003)	0.699	0.998 (0.006)	-0.187	1.008** (0.004)	2.103
Public Unionization	0.993 (0.004)	-1.485	0.999 (0.007)	-0.078	1.001 (0.004)	0.371
Public Employees	0.999** (.00039)	-3.884	0.999** (.00055)	-2.523	0.999** (.000031)	-2.668
1992 Republican Vote	0.977** (0.004)	-5.227	0.983* (0.007)	-2.251	0.997 (0.004)	-0.457
Population Change	1.439 (0.555)	0.944	0.780 (0.508)	-0.381	2.219** (0.868)	2.037
1986 Population	0.960 (0.034)	-1.120	1.092* (0.060)	1.612	1.135** (0.038)	3.716
Regulatory Service	1.253** (0.105)	2.697	0.451** (0.077)	-4.168	1.089 (0.091)	1.023
Private Good	0.702** (0.061)	-4.001	0.095** (0.018)	-12.31	0.309** (0.028)	-12.94
Public Good	0.645** (0.0554)	-5.097	0.470** (0.055)	-6.449	0.479** (0.037)	-9.368
CPR Good	0.643* (0.147)	-1.920	2.543** (0.554)	4.281	0.545** (0.138)	-2.380
Peterson Classification	0.202** (0.021)	-14.04	0.381** (0.061)	-5.979	0.517** (0.0546)	-6.256

Number of Observations 9070
 Log Likelihood Function -8207.23
 Chi-Square 926.98

* significant at 0.10 level with a two tailed test

** significant at 0.05 level with a two tailed test

^a The toll good variable dropped due to collinearity.

^b Numbers in parentheses are standard errors.

Table 2: Summary of Propositions and Findings

Main variables of interest	Expected impact on contracting sector choices	Main findings
Administrative Turnover	Reduction in the likelihood of external contracting	Reduction in the likelihood of contracting out with for-profit and non-profit providers. The result is not significant in the case of contracting out with other governments.
Policy types:		
Regulatory service	Less likelihood of contracting out	Decrease in the likelihood of contracting out with non-profit providers, and increase in the likelihood of contracting out with other governments. In the case of for-profit provider, the result is insignificant.
Private goods	Increase in the likelihood of for-profit production or other governments	Decrease in external contracting; that is, cities prefer in-house production.
Public goods	Decrease in the likelihood of external contracting	Reduction in the likelihood of contracting out.
CPR goods	Preference for contracting out to non-profit providers	Increase in the likelihood of contracting out with non-profits. Decrease in the likelihood of contracting out with other government and for-profits.
Developmental services	Preference for in-house production	Increase in the likelihood of in-house production.

Appendix A: Taxonomies of Policy Types

Classification of Services

<u>Service Category</u>	<u>Regulatory</u>	<u>Ostrom</u>	<u>Peterson</u>
Residential Solid Waste	REGULATORY	TOLL	ALLOCATIONAL
Commercial Solid Waste	REGULATORY	TOLL	DEVELOPMENTAL
Solid Waste Disposal	NON-REGULATORY	TOLL	ALLOCATIONAL
Street Repair	NON-REGULATORY	PUBLIC	DEVELOPMENTAL
Street/Parking Lot Cleaning	NON-REGULATORY	PUBLIC	ALLOCATIONAL
Snow Plowing	NON-REGULATORY	PUBLIC	ALLOCATIONAL
Traffic Signal-Install/Maintenance	NON-REGULATORY	PUBLIC	ALLOCATIONAL
Parking Meter Maintenance	NON-REGULATORY	PRIVATE	ALLOCATIONAL
Tree Trim/Plants In Public Areas	NON-REGULATORY	PRIVATE	DEVELOPMENTAL
Maintain/Administer Cemeteries	NON-REGULATORY	PRIVATE	REDISTRIBUTIVE
Inspection Code Enforcement	REGULATORY	PUBLIC	DEVELOPMENTAL
Operate Parking Lots/Garages	NON-REGULATORY	PRIVATE	DEVELOPMENTAL
Operate Bust Transits System	NON-REGULATORY	TOLL	REDISTRIBUTIVE
Crime Prevention/Patrol	NON-REGULATORY	PUBLIC	ALLOCATIONAL
Policy/Fire Communications	NON-REGULATORY	PRIVATE	ALLOCATIONAL
Fire Prevention/Suppression	REGULATORY	PUBLIC	ALLOCATIONAL
Emergency Medical Service	NON-REGULATORY	CPR	ALLOCATIONAL
Ambulance Service	NON-REGULATORY	CPR	ALLOCATIONAL
Traffic Control/Parking Enforce	REGULATORY	PUBLIC	ALLOCATIONAL
Vehicle Towing & Storage	NON-REGULATORY	PRIVATE	ALLOCATIONAL
Sanitary Inspection	REGULATORY	PUBLIC	DEVELOPMENTAL
Insect/Rodent Control	REGULATORY	PUBLIC	ALLOCATIONAL
Animal Control	REGULATORY	PUBLIC	ALLOCATIONAL
Operation of Animal Shelters	NON-REGULATORY	TOLL	ALLOCATIONAL
Operation of Day Care Facilities	NON-REGULATORY	PRIVATE	REDISTRIBUTIVE
Child Welfare Programs	NON-REGULATORY	TOLL	REDISTRIBUTIVE
Programs for the Elderly	NON-REGULATORY	TOLL	REDISTRIBUTIVE
Operation/Manage Hospital	NON-REGULATORY	CPR	REDISTRIBUTIVE
Public Health Programs	NON-REGULATORY	PUBLIC	REDISTRIBUTIVE
Drug/Alcohol Treatment Programs	NON-REGULATORY	TOLL	REDISTRIBUTIVE
Mental Health Programs/Centers	NON-REGULATORY	TOLL	REDISTRIBUTIVE
Prison/Jails	NON-REGULATORY	CPR	ALLOCATIONAL
Operate Homeless Shelters	NON-REGULATORY	CPR	REDISTRIBUTIVE
Operate/Maintain Recreation Area	NON-REGULATORY	CPR	DEVELOPMENTAL
Parks Landscaping/Maintenance	NON-REGULATORY	CPR	DEVELOPMENTAL
Operate Convention Center	NON-REGULATORY	PRIVATE	DEVELOPMENTAL
Operate Culture/Arts Programs	NON-REGULATORY	TOLL	DEVELOPMENTAL
Operate Library	NON-REGULATORY	TOLL	DEVELOPMENTAL
Operate Museums	NON-REGULATORY	TOLL	DEVELOPMENTAL
Buildings/Grounds Maintenance	NON-REGULATORY	CPR	ALLOCATIONAL
Building Security	NON-REGULATORY	TOLL	ALLOCATIONAL
Payroll	NON-REGULATORY	PRIVATE	ALLOCATIONAL
Tax Bill Processing	NON-REGULATORY	PRIVATE	ALLOCATIONAL
Tax Assessing	NON-REGULATORY	PRIVATE	ALLOCATIONAL
Data Processing	NON-REGULATORY	PRIVATE	ALLOCATIONAL
Collect Delinquent Taxes	NON-REGULATORY	PRIVATE	ALLOCATIONAL
Title Records/Plat Map Maintain	REGULATORY	PRIVATE	ALLOCATIONAL
Legal Services	NON-REGULATORY	PRIVATE	ALLOCATIONAL
Secretarial Services	NON-REGULATORY	PRIVATE	ALLOCATIONAL
Personnel Services	NON-REGULATORY	PRIVATE	ALLOCATIONAL
Public Relations/Public Info	NON-REGULATORY	PUBLIC	DEVELOPMENTAL
Operate Paratransit System	NON-REGULATORY	TOLL	REDISTRIBUTIVE
Operate Airports	NON-REGULATORY	TOLL	DEVELOPMENTAL