

PRIVATIZATION AND THE ARRANGEMENT OF CITY SERVICES

Robert M. Stein*

ABSTRACT

Contemporary research on service delivery has been preoccupied with the issue of privatization. Specifically, the concern has been with whether a governmental or non governmental entity is more effective and efficient in delivering publicly provided goods and services. In this paper I offer an alternative perspective on service delivery which examines the full array of institutional arrangements used by municipal governments to deliver different goods and services. I relate these choices to characteristics of individual goods and services and derive a simple thesis. The way governments arrange for service delivery is a function of the scope and content of their service responsibilities. Different goods and services are more effectively and efficiently provided by different modes of service arrangement. The question is not whether one sector is more widely used than another, but rather whether governments have effectively matched their service responsibilities with the appropriate method of service arrangement.

SINTEESIS

La investigación contemporánea en relación a la provisión de servicios ha estado preocupada del problema de la privatización. Específicamente, la preocupación se ha centrado en si un organismo de gobierno y uno privado resulta más efectivo y eficiente en proveer bienes y servicios proporcionados públicamente. En este trabajo el autor ofrece una perspectiva alternativa relativa a la provisión de servicios que examina la amplia gama de configuraciones institucionales usadas por los gobiernos municipales para proporcionar distintos bienes y servicios. El autor relaciona estas alternativas con las características de los bienes y servicios individuales y deriva una tesis simple. La forma en que los gobiernos se organizan para proporcionar servicios es una función del alcance y contenido de los servicios que comprometen. Se proporcionan diferentes bienes y servicios en forma más eficaz y eficiente de acuerdo a las distintas modalidades para proporcionarlos. El problema no radica en que un sector sea utilizado en forma más amplia que otro, sino más bien en si los gobiernos han realmente equiparado los servicios que han comprometido con el método más adecuado de organización de los servicios.

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1. INTRODUCTION

The way municipal governments arrange for the delivery of their service responsibilities has generated an extensive debate over the appropriate role that government should play in producing these goods and services. Savas (1987) and others (Butler, 1985; Stevens, 1984) have argued that private vendors and not governments are invariably more efficient and effective producers of the goods and services provided by municipal governments. These researchers have marshaled empirical evidence which shows that private sector service producers are superior (i.e., more efficient) to public sector producers of the same goods and services (cf. Borcharding et al., 1982). For Savas (1987:3) the preferred service delivery choice is privatization: "the action of reducing the role of government, or increasing the role of the private sector, on an activity or in the ownership of assets." This choice, however, may be premature.

Others researchers have suggested that the service producer may be less significant than the mode of service delivery used by the city (e.g., contracting, vouchers, subsidies, direct municipal production). Ferris (1988) demonstrates that service contracting with both private and public vendors is superior to direct municipal service production. Stein (1990) further shows that municipal service contracts with other governments (e.g., overlapping counties) is more efficient than service contracts with private for-profit vendors. Moreover, Stein (1990: 160-96) finds that the efficiency gains of service contracting vary significantly with the type of good or service produced and the mode of service arrangement. The evidence from these studies suggests that the observed relationship between service efficiency and sector location may be spurious and a function of either the mode of service arrangement and/or attributes of the service. Given these recent findings in the literature we need to consider whether sector location is the only relevant determinant and criteria for assessing service efficiency. The relevant issue in the debate about efficiency of municipal services is not whether government or private

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entities are more widely used than the other but whether governments have matched their service responsibilities with the appropriate method of service arrangement.

I define service arrangement in terms of the modes of service delivery that governments choose for each of their service responsibilities, and relate these choices to characteristics of individual goods and services. My thesis is simple. The way governments arrange for the delivery of their service responsibilities is a function of the scope and content of their service responsibilities. Different goods and services present cities with different challenges. Consequently, different strategies are needed to overcome these obstacles to the delivery of different goods and services. The empirical issue examined in this paper is whether there is an observable relationship between the attributes of different municipal service responsibilities and the method cities employ for the delivery of these service responsibilities. Confirmation of this relationship is penultimate to explaining the efficiency of different modes of service arrangement (c.f. Stein:1990:ch. 7).

A typology of alternative modes of municipal service arrangement is presented in section 2. A discussion in sections 3 and 4 of Ostrom and Ostrom's (1977) and Peterson's (1981) policy typologies identifies the underlying rationale (i.e., policy traits) for assigning functional responsibilities to specific modes of service arrangement. The Ostroms specify two conditions –jointness of consumption and exclusion– which partially define the level of externalities accompanying the public delivery of a specific good or service. Peterson suggests that the attributes of jointness and exclusion produce a strong predisposition for cities to provide certain goods and services and an aversion to the delivery of other goods and services. Sections 5 and 6 present a test of the central hypothesis with data on service arrangement collected from a sample of U.S. cities in 1982 and 1988.

2. MODES OF SERVICE ARRANGEMENT

Table 1 identifies ten alternative institutional arrangements for the delivery of municipal service responsibilities. The columns identify the components of service delivery. Planning "is the process of deciding on the quality and level of service provided to the community." (Sonneblum et al.,1977). The planning stage is where the content of a policy is defined, which in turn shapes the policy choices made at succeeding stages of service delivery. Financing is the process of raising moneys to cover the cost of service production. Choices about financing address the basic question of who pays and how. The key issue at this stage in the service delivery process is how the method of financing alters the citizen's benefit to cost ratio. Financing arrangements must avoid the potential dangers that arise from an extreme mismatch between benefits received and costs paid. Financing is more than the determination and assignment of costs; it is the assignment of costs relative to benefits.

Production is defined as the combining of inputs (capital, labor, and entrepreneurial skills) resulting in a finished good or service and the distribution of the finished good or service. The scale of production (i.e., population and geographic size) and the available technologies are key factors in identifying the arrangement for production. In many instances the comparative advantage for the production of a specific good or service lies with a private vendor. The scale of production for private producers is often, but not always, more flexible than the jurisdictional borders that define the scale of production for a governmental unit. Since the jurisdictional boundaries for municipal governments are fixed, production by an entity other than the municipality may be economically advantageous for those goods and services associated with variable scale economies.

The availability of competitive markets for service production is another important factor influencing choices for municipal service production. The number of service vendors/producers available to a municipal government defines market competition, which is negatively related to the price charged for finished goods and services. Sufficient market competition should price some goods and services below the cost at which a municipal government could produce the same good or service. There are of course many non economic conditions which shape production mode choices. The distribution of goods and services is most salient to production choices when the good or service is subject to significant costs of usage. Delivery of certain goods and services imposes significant transaction costs on some of the intended beneficiaries. Subsidized mass transit and out-patient health programs require that the potential recipient incur significant costs to consume these services. These costs (e.g., information, transportation, etc.) may prevent some individuals, including those most in need, from receiving the good or service. Effective and efficient service delivery may require service arrangements that reduce the costs of distributing finished goods and services to intended beneficiaries.

Each row in Table 1 identifies a unique mode of service arrangement, defined by the mix of municipal responsibility for planning, financing, producing and distributing a specific good or service. Cell entries identify the role of the municipal government in each stage of service delivery. This role takes on two basic forms: (1) the government substitutes itself for another vendor and directly produces and distributes the desired good or service or (2) the municipal government alters the relationship between a vendor (private or public) and the consumer. This latter policy mechanism is identified in the policy literature as the regulatory mode, and is directed at altering or controlling the behavior of individuals in order to achieve a specific policy outcome. The major distinction between modes of service arrangement is whether the municipal government takes a regulatory or traditional role in arranging for the service. Empirically, the distinction between regulatory and traditional service modes is a function of the scope and content of municipal responsibility for different phases of service delivery. Traditional service modes have the government assuming responsibility for the planning and financing of the service activity. Only responsibility for production is shared with or assigned to

another entity. When governments adopt regulatory service modes they assume only partial responsibility for planning and financing and assign responsibility for production and distribution to other governmental units or private vendors.

2.1. Traditional modes of service delivery

Most researchers conceive of municipal functional responsibility as a condition where the city assumes responsibility for all phases of service delivery. Even direct service arrangement, however, does not preclude the possibility that specific phases of service delivery may involve other entities, as in the case of intergovernmental aid transfers for specific municipal services.

When a government enters into a formal contractual agreement with another entity for the production of a specific good or service, the government relinquishes responsibility for decisions about converting inputs into policy products. The contract can be entered into with a private for-profit firm, a nonprofit entity or, another governmental unit. In the latter case, the contractual agreement is termed an intergovernmental service agreement. This latter relationship should not be confused with the situation where another government (e.g., county) has responsibility for the delivery of a service to citizens residing in an underlying or overlapping municipal jurisdiction. Governments often contract for the production of part of a service responsibility. Solid waste collection is a common example of a joint service contract. Here the municipal government retains partial responsibility for service production, often in a specific geographic area and, contracts for service production and delivery in the remaining portion of its service area. A mix of municipal and contracted service production may be advantageous for a number of reasons. First, it allows the municipality to maximize economies of scale by dividing its service areas into optimally sized production plants, and assigning production to those vendors (itself and other entities) that can maximize efficiency. Joint contracting preserves a competitive market for contracting by avoiding reliance on any one contractor or set of contractors (Williamson, 1985). By retaining some capacity for service production, municipal governments can return to (or at least threaten to return to) a direct mode of service arrangement if the contractor's performance deteriorates.

2.2. Fiscal regulatory modes of service delivery

A franchise is an exclusive or non-exclusive license to a private firm to provide a particular service within a specified geographical area. The franchise is a regulatory power of the municipal government. Here the municipal government defines the level and cost of the service to be provided to a citizen by a private vendor. Unlike a service contract, the government retains authority only over the planning of the policy, relinquishing responsibility for financing, producing and

distributing to the private vendor. The latter activities are subject to municipal review and oversight. Each recipient pays the vendor directly for the service, removing the municipality from direct financing of the service.

A subsidy represents a supply-side approach to the arrangement of municipal services. Payments by government are made to producers, either individuals or organizations to allow services to be delivered at a lower price, higher level, or at an enhanced level of quality. Unlike the franchise, where the potential number of service recipients is large (e.g., garbage collection), subsidies are often directed at service activities where the number of service recipients is small (e.g., paratransit for the handicapped).

Vouchers represent a demand-side approach to the service delivery of goods and services. The consumer obtains a promissory note for payment which they exchange for the desired good or service through private market purchases. The supplier turns the voucher into the municipal government for reimbursement, thus completing the arrangement process. Vouchers operate much like subsidies, except that the object of support is the consumer rather than the supplier. By directing support to the consumer, vouchers take on a number of forms and can vary in their level of reimbursement as a function of the consumer's need and ability to pay. Policy control is maintained by prohibiting the sale (or resale) of the voucher. Vouchers afford consumers a greater voice in the service delivery process and extends production to potentially competitive markets where unit prices may be below those associated with municipal service production. Most importantly, vouchers and subsidies provide an effective means of targeting financial and service support to specific populations (e.g., needy and indigent citizens).

In order to finance the delivery of publicly produced goods and services, municipal governments are authorized by their state governments to levy various taxes. The use of this taxing authority can provide an alternative mode of service arrangement. Providing tax rebates, exemptions, differals and, credits can provide strong incentives to private vendors to increase their level of production, reduce their costs and even alter the content and quality of their outputs. By not taxing or changing the frequency and method of taxation, governments can provide a supply-side incentive for private vendors to alter their productive behavior to conform with the policy goals of the city.

2.3. Nonfiscal regulatory modes of service delivery

Municipal governments can employ a variety of non-tax incentives to induce service vendors to comply with city policies. Zoning regulations and other regulatory ordinances can be relaxed, effectively reducing the cost of doing business for many service vendors. "Local governments can entice suppliers back into the market by waiving, reducing or redefining unnecessary and unrealistic regulations."

(ICMA,1982:7) What constitutes unnecessary and unrealistic regulations is the subject of considerable debate among different constituencies.

Independent of fiscal incentives, many citizens freely provide their services to government for the delivery of a wide range of services benefiting other non volunteers. Though government facilitates volunteerism through the provision of infrastructure (e.g., vans for meals on wheels programs, playgrounds for basketball leagues), the source of volunteer activity is individual altruism, since the service producer does not receive any financial gain from such productive activity.

Often confused with volunteerism are self-help or coproduction programs where individuals, neighborhood groups or community associations undertake actions that reduce the level of government activity that would otherwise be required to fulfill service demands. Unlike volunteerism which relies on individual altruism, the producer and beneficiary of self-help production are the same. A neighborhood crime prevention program is a common example of this type of service arrangement. The citizens who produce this service also benefit from this arrangement with a minimal level of spillover beyond the neighborhood. Self-help arrangements can reduce externalities associated with municipal service production by retaining all service production in the geographical area where it is produced. Moreover, the efficiency gains achieved by supplementing central city service production do not necessarily come at the expense of service equity. The level of services produced by individuals and neighborhoods reduces the demand these citizens are likely to place on the city government, conceivably freeing resources for use in neighborhoods unable to bear the costs of coproduction.

3. ATTRIBUTES OF GOODS

The failure of vendors, both private and public, to optimally produce specific goods and services derives from two traits associated with all functional responsibilities: exclusion and jointness of consumption. Ostrom and Ostrom (1979) demonstrate that the interaction of these two traits identifies four different types of goods and services, each requiring different institutional arrangements for their efficient service delivery.

Exclusion occurs when buyers of a good or service can be denied consumption or use of the product by producers at a relatively low cost. The absence of exclusion can lead to the production of externalities: "when the actions of one individual confers benefits or imposes costs on another individual for which no fee can be charged or no recompense collected." (Heilburn, 1987:122)

Jointness of consumption exists when one person's consumption of a good or service does not diminish the consumption of that particular good by another person(s). Goods which diminish with their consumption lack jointness of use, and

possess the trait of subtractability. Most goods and services possess some degree of subtractability: at some level of consumption one additional person's consumption of a good subtracts from any other person's consumption of that good. The level, or threshold at which subtractability increases is defined as congestion, and can drastically affect the provision of goods and services. As cities grow, public roadways which had bestowed equal access to all residents can no longer provide adequate service to all citizens without significantly impairing service levels of other citizens (e.g., traffic delays).

Goods and services can be initially characterized by the two extreme conditions of jointness and exclusion. Goods for which exclusion is feasible and that possess a significant degree of subtractability are defined as private goods (e.g., food, health care, housing) and can be expected to be produced by private markets. The other extreme, where goods are characterized by joint/nonsubtractable usage, and non exclusion, defines a collective good (e.g., national defense, pollution control). Between the extreme of private and collective goods exist toll goods and common pool resources. Toll goods have joint use but feasible means of exclusion. Movie theaters, libraries, cable TV are common examples of these goods. Private vendors can arrange for the delivery of these goods (e.g., entrance fees to movie theaters) and further regulation (e.g., no drinking or smoking in the theater) can ensure that subtractability does not diminish usage and enjoyment of the good or service for some users. For common pool resources exclusion is difficult, but consumption by one user may diminish consumption by other users. The issue of service arrangement for common pool resources is how to manage and conserve a resource for which private markets are inadequate. This is achieved by employing institutional arrangements that price access to the common pool resource, and thus convert the flow or product of the common pool resource into a private good (e.g., charging fees for ambulatory and emergency medical services).

The externalities associated with municipal service delivery of excludable and subtractable goods and services provides a strong disincentive for municipalities to assume responsibility for these goods and services. Peterson (1981) refers to excludable and subtractable goods as redistributive because they result in the redistribution of wealth from productive capital and labor to dependent persons. According to Peterson the externalities created by municipal expenditures on redistributive goods and services result in the flight of productive capital and labor. In order to avoid a diminution of the city's tax base, Peterson hypothesizes that cities avoid responsibility for redistributive goods and services (e.g., health, welfare, housing and hospitals). Conversely, Peterson expect cities to actively pursue developmental policies (e.g., roads and highways) and allocational policies (police and fire) that generate economic resources (i.e., tax base) that benefit the entire community without creating excessive externalities (i.e., income redistribution).

Service delivery of each type of good presents a different set of problems for a governmental unit, particularly for municipalities. The negative externalities

produced by municipal service responsibility for nonexcludable goods and services varies with the specific institutional arrangement employed to fulfill this type of service responsibility. Municipal service delivery of non collective and redistributive goods and services through general revenues produces externalities for those individuals (e.g., wealthier citizens) who may significantly undervalue the good or service. The key to municipal service arrangement is the proper match between benefits received and costs paid by each individual consumer, particularly for the public provision of private and toll goods. Identifying the location in the service delivery process where inefficiencies occur can help to identify alternative institutional mechanisms for efficient and equitable service arrangements.

For collective and some allocational and developmental goods and services inefficiencies are likely to arise from the absence of the appropriate scale of production. A solution for this problem requires more than an alternative arrangement for financing service delivery. Production agreements with vendors who can vary the size of their production plant is one alternative means of service production that municipal governments use to remedy the inefficiencies which result from an inadequately sized production plant. The appropriate scale of production varies with the production attributes of the good or service (Stigler: 1962:144-145; Hirsch, 1964).

4. SERVICE ARRANGEMENT AND POLICY ATTRIBUTES

The ten alternative modes of service arrangement vary in their suitability for each type of functional activity. The delivery of collective, allocational and some developmental goods are most likely to be dominated by direct municipal arrangement. Their traits of nonexclusion and nonsubtractability make the production of collective, allocational and some developmental goods quite problematic for any private vendor. Even contractual arrangements for the production of collective goods are problematic because of the difficulty of unambiguously pricing the good or service. Common property resources are likely candidates for direct municipal service delivery. The subtractability of these goods and services enables governments to convert common pool resources into private goods, once exclusion is achieved by the government. This is achieved by appropriating the flow of the common pool (e.g., emergency medical services) and setting a price for the sale of the resource. Vouchers, franchises and some contractual arrangements are common service modes for toll goods. The municipal government awards an exclusive or limited license to a vendor(s) to sell the regulated good to individuals residing in the municipality. This enables those who undervalue the toll good to avoid its consumption and any contribution to the municipal delivery of the good.

Private and redistributive goods are unlikely candidates for a traditional mode of service delivery. The exclusiveness and subtractability of private goods and

services make a non direct service mode a more efficient and equitable service arrangement. In the case of private and toll goods there are ample opportunities for consumers to pay individually for the delivery of the good or service. Moreover, these financing mechanisms (e.g., user fees, vouchers, subsidies) can be finely tuned to a desired or tolerable level of income redistribution. Substituting a collective tax with a subsidy, voucher, franchise or user fee, allows municipal governments to closely match individual preferences for these goods or services with the recipient's willingness and ability to pay for the service.

I expect that municipal governments that choose to provide their citizens private and redistributive goods (e.g., health, hospital and welfare services) will choose a non direct service mode to fulfill this responsibility. A non direct mode for these redistributive goods and services will significantly curtail the municipality's responsibility for direct financing. This should lessen the nonequivalence produced by a collective tax for the delivery of a good which bestows concentrated and exclusionary benefits. Conversely, a direct mode of service arrangement will be modal for collective service responsibilities, specifically those with significant jointness of consumption and limited opportunities for exclusion.

5. DATA

Between March and June, 1982, the International City Management Association (ICMA) conducted a survey of municipal governments to determine "what services cities provide and how these services are delivered to citizens." (ICMA, 1982:3). Respondents in each city were asked to identify from among 64 functional activities those their community provided¹. The respondent was further asked to identify the specific mode and/or modes of service arrangement used for each functional responsibility. The choices include the modes of service delivery listed in Table 1 and, a multiple category that includes functions arranged by two or more modes of service arrangement. Officials in the same sample of cities were surveyed again in 1988 about the scope and arrangement of their municipality's service responsibilities.² Approximately one-third of the cities surveyed in 1982 and 1988 responded to both surveys (N=667). The analysis examines the distribution of service arrangements by policy category, and the change in the arrangement of service responsibilities by policy type. The latter analysis specifically identifies the mode of service arrangement used to assume new services responsibilities between 1982 and 1988.

¹ See Appendix for a listing of these programs.

² The joint contract mode of service delivery is excluded from the analysis because the 1988 survey did not query respondents about this mode of service delivery.

TABLE 1

**ALTERNATIVE INSTITUTIONAL ARRANGEMENTS
FOR MUNICIPAL SERVICE DELIVERY**

Service Mode	Planning	Financing	Producing	Distributing
Traditional				
Direct	+	+	+	+
Contract	+	+	O	O
Joint Contract	+	+	+/O	+/O
Regulatory				
Voucher	+	+	O	O
Subsidy	+	+	O	O
Tax Incentives	+	+	O	O
Franchise	+	/O	O	OO
Volunteers	+	O	O	O
Self-help	+	O	O	O

Note: + Government has an active role; O government does not have an active role; +/O government has a limited role.

6. DATA ANALYSIS

6.1. Aggregate findings

Table 2 reports the proportion of total municipal service responsibilities provided by each mode of service arrangement for the years 1982 and 1988. Since the size of a community is closely related to the scope of its functional repertoire (Liebert, 1974; Dye and Garcia, 1978), I have reported these figures for the entire sample and by population size.

First, it is noteworthy that the scope of functional responsibility (i.e., percent of services provided by each city) for this sample of cities declined 10 percent between 1982 and 1988, with the average municipality devolving obligation for seven goods and services during this six year period. The change in the scope of municipal service responsibility has been observed and discussed in the urban policy literature (Farnham, 1986; Peterson, 1981; Stein, 1982; Dye and Garcia, 1978). Increasing demand for services by a growing dependent population, the erosion of municipal fiscal capacity, and the loss of federal and state assistance are among the

most influential determinants of this change.³ As contemporary pressures on the service repertoires of municipal governments mount, (e.g., declining intergovernmental revenues) there is a greater need to identify new strategies to cope with these challenges. Alternatives to direct service arrangement provide a potential means of coping with these pressures.

TABLE 2

MEAN PROPORTION OF CITIES USING SERVICE MODES BY OSTROM AND OSTROM'S POLICY CATEGORIES: 1982, 1988

	1982	1988	1982	1988	1982	1988	1982	1988
Responsible	56.1	44.6	52.9	50.8	80.7	58.4	79.9	69.6
Direct	33.6	43.3	47.7	55.0	50.0	71.4	59.1	53.1
Contract	50.3	36.9	33.7	21.7	32.7	15.4	31.2	33.0
Franchise	3.0	3.4	7.0	7.5	1.8	3.4	1.2	1.9
Subsidy	2.0	2.0	2.1	3.9	3.9	4.2	.5	3.3
Voucher	.1	.5	.2	.9	.2	.4	.1	.5
Volunteer	1.4	5.4	3.6	7.6	5.9	5.9	1.6	3.8
Self-help	.6	2.1	1.0	1.2	.3	.3	.5	1.4
Tax Incentive	.3	1.5	.1	.7	.2	.5	.1	.7
Multiple	6.7	1.3	4.4	1.3	6.4	.5	5.4	1.9

The devolution of municipal services varies with city size. Cities under 10,000 in population experienced on average a 14 percent decline in service responsibilities, while cities over 250,000 in population experienced only a 2 percent decline. Moreover, the scope of municipal service responsibility increases with city size. One might have expected to observe greater service devolution in communities with greater service responsibilities. In fact the opposite is observed. The greatest decline in service responsibility was experienced by cities with the fewest service responsibilities.

The means with which municipal governments arrange for the delivery of their service responsibilities remained relatively stable between 1982 and 1988. During this period the mean proportion of services arranged by individual modes did not change more than five percent. There are some notable exceptions to this pattern. Cities over 250,000 experienced a significant decline in the mean percent of functions arranged directly by the municipal government and significant increases

³ Intergovernmental revenues to cities declined significantly over the 1980s. In 1980 federal and state intergovernmental aid to cities represented 59.2 percent of total city revenues from own sources. In 1989 this figure had fallen to 45.5 percent (ACIR, 1990:61). The growth in own source municipal revenues did not keep pace with the loss in intergovernmental revenues.

in the incidence of tax incentive, subsidy and volunteer modes of service arrangement. More importantly, the evidence reported in Table 2 demonstrates that nearly half of the service repertoire of municipal governments is planned, financed, produced or delivered with the active participation of an entity or entities other than the municipal government. The belief that municipal service responsibility means solely direct service delivery is unsupported. To the contrary, the findings reported in Table 2 point to a varied use of service delivery across all sizes of municipalities.

Direct service delivery remains the modal form of municipal service arrangement. On average, municipal governments employed a direct mode of service arrangement for 57 percent of their functional responsibilities in 1982. This figure rose slightly in 1988 to 60 percent. The main alternative to a direct municipal service arrangement is the service contract. An average of 30.2 percent of all municipal service responsibilities were either totally or partially contracted out to other governments, private firms, or neighborhood associations in 1982. This figure declined slightly to 28.4 percent in 1988. This pattern is observed in all cities, except those with populations over 250,000, where the proportion of services contracted remained unchanged at 36 percent.

The remaining alternative service modes rarely dominate the service repertoire of municipal governments. On average they represent the method of service delivery for less than 15 percent of a city's functional responsibilities. The immodest use of non contracting modes of service arrangement, however, should not be taken as evidence that these modes of service arrangement have an insignificant effect on other the character of municipal service arrangements or the scope and content of a city's functional repertoire. These effects must be assessed empirically before rendering a judgment about the efficacy of small rates of non contracting modes of service arrangement.

6.2. Sector Location

If the sector location of a service producer is a core dimension of service delivery, an empirical analysis should confirm a single bipolar dimension to the relationship among the different modes of service arrangement employed by municipal governments. A principal components analysis of service modes provides a direct test of this hypothesis. Principal components analysis summarizes the interrelationships among a number of measured variables (e.g., modes of service arrangement), and identifies common groupings of variables known as factors. In addition to identifying one or more dominant factors (e.g., private versus public sector service delivery) among the modes of service arrangement, there should be a strong pattern to the interrelationships among modes of service arrangement. If we follow Savas' ranking of service vendors by degree of privatization (1987:88) we should observe one of two empirical findings. Two significant factors, one private and one public might be identified. Here, each service mode should be

positively related to one factor (i.e., either public or private sector) and negatively related to the other factor. Alternatively, we might observe one significant factor with differently signed loading for mode of service arrangement. Both findings would confirm a private/public sector dimension to municipal service arrangement.

TABLE 3a

FACTOR ANALYSIS OF SERVICE MODES: 1982

Mode	Factor 1	Factor 2	Factor 3	Factor 4
Direct	-0.928	-0.144	-0.208	-0.114
Contract	0.959	-0.061	-0.178	-0.099
Franchise	0.047	0.21	0.094	0.792
Voucher	0.041	0.484	0.082	-0.566
Subsidy	-0.163	0.538	-0.14	0.284
Volunteer	0.099	0.732	-0.051	0.063
Self-help	0.05	0.737	0.184	-0.101
Tax Incentive	0.124	0.305	0.395	0.022
Multiple	-0.082	-0.14	0.904	0.018
% Variance	312	9.31	8.91	8.9
Eigenvalue	1.9	1.8	1.1	1

TABLE 3b

Mode	Factor 1	Factor 2	Factor 3	Factor 4
Direct	-0.848	-0.189	-0.147	-0.206
Contract	0.882	0.106	0.086	-0.174
Franchise	0.098	0.202	0.688	0.039
Voucher	0.07	-0.064	0.788	-0.086
Subsidy	-0.134	0.703	0.230	
Volunteer	0.429	0.633	0.043	-0.122
Self-help	0.255	0.737	-0.08	-0.028
Tax Incentive	0.275	-0.092	-0.042	0.614
Multiple	-0.301	0.005	-0.008	0.745
% Variance	332	6.1	211	7.2
Eigenvalue	1.9	1.5	1.21	

A principal components analysis of the proportion of municipal service responsibilities assigned to each mode in 1982 and 1988 is reported in Tables 3a and 3b. The findings fail to confirm the existence of a private/public dimension to municipal service delivery. Four significant factors are identified in each year, rather than one or two significant factors. Moreover, the factor loading for each mode of service arrangement fails to identify a unique public or private sector interpretation for any of the four factors. Factor one appears to be defined by the traditional mode of municipal service delivery, witness the strong negative loading for the direct mode, and the equally strong positive loading for the contracting mode of service arrangement. Voucher, subsidy, volunteer and self-help modes have their largest loadings on the second factor, suggestive of a regulatory dimension of service arrangement. Factor three is defined by a multiple mode of service provision and tax incentives. Factor four is defined by the franchise. With the exception of the voucher mode, the principal components analysis of 1988 service arrangements produces the same results reported for 1982. The findings for both years seem more closely aligned with the typology of service delivery reported in Table 1. There is little support for either an exclusive or non-exclusive private/public dimension to municipal service delivery. Given these findings, there is good reason to reconsider the theoretical and empirical utility of defining service delivery in terms of the sector location of producers.

6.3. Service arrangement by policy

Table 4 reports the mean proportion of cities employing each mode of service arrangement by private, toll, common pool and collective goods and services. Consistent with earlier hypotheses, the arrangement of collective goods and services in 1982 is dominated by a direct service mode. Conversely, the arrangement of private goods and services is dominated by a non direct mode of service arrangement, most often a contract. A direct service arrangement for toll and common pool goods and services occupies a middle position between collective and private goods and services.

In 1988 the proportion of services directly arranged increased for private, toll and common goods, and declined slightly for collective goods and services. Conversely, the mean proportion of services arranged with a contract mode dropped for private, toll and common pool goods and services, and increased slightly for collective goods and services. In spite of these changes, a direct mode of service arrangement continues to be the dominant mode of service arrangement for collective and toll goods and services, while non direct modes of service arrangement, most often the contract, dominate the provision and production of private goods and services.

TABLE 4

**MEAN PROPORTION OF CITIES USING SERVICE MODES BY
OSTROM AND OSTROM'S POLICY CATEGORIES: 1982, 1988**

	Private		Toll		Common Property		Collective	
	1982	1988	1982	1988	1982	1988	1982	1988
Responsible	56.1	44.6	52.9	50.8	80.7	58.4	79.9	69.6
Direct	33.6	43.3	47.7	55.0	50.0	71.4	59.1	53.1
Contract	50.3	36.9	33.7	21.7	32.7	15.4	31.2	33.0
Franchise	3.0	3.4	7.0	7.5	1.8	3.4	1.2	1.9
Subsidy	2.0	2.0	2.1	3.9	3.9	4.2	0.5	3.3
Voucher	0.1	0.5	0.2	0.9	0.2	0.4	0.1	0.5
Volunteer	1.4	5.4	3.6	7.6	5.9	5.9	1.6	3.8
Self-help	0.6	2.1	1.0	1.2	0.3	0.3	0.5	1.4
Tax Incentive	0.3	1.5	0.1	0.7	0.2	0.5	0.1	0.7
Multiple	6.7	1.3	4.4	1.3	6.4	0.5	5.4	1.9

TABLE 5

**MEAN PROPORTION OF CITIES EMPLOYING SERVICE MODES BY
PETERSON'S POLICY CATEGORIES: 1982, 1988**

	Developmental		Allocational		Redistributive	
	1982	1988	1982	1988	1982	1988
Responsible	69.5	59.6	87.8	78.2	41.9	35.1
Direct	55.2	57.5	56.3	63.8	24.4	32.7
Contract	32.1	28.7	29.7	24.0	58.9	42.1
Franchise	6.6	7.0	0.8	2.3	0.5	0.5
Subsidy	0.4	1.1	2.1	0.9	5.1	9.3
Voucher	0.1	0.4	0.2	0.6	0.1	1.1
Volunteer	0.3	1.2	4.9	6.1	1.8	8.2
Self-help	0.3	0.9	0.8	0.6	0.8	3.1
Tax Incentive	0.1	0.7	0.1	0.3	0.3	2.0
Multiple	4.6	2.3	4.4	1.1	8.0	0.8

Table 5 reports the mean proportion of cities employing each service mode for Peterson's (1981) developmental (roads and highways), allocational (police and fire) and redistributive (health, welfare, housing and hospitals) service categories. Again,

the distribution of service modes vary in the expected direction with each of Peterson's functional categories. On average 70 percent of developmental services in 1982 were provided directly by the municipal government, with contracting chosen by approximately one-third of the municipal governments. As expected, a direct mode of service arrangement dominates allocational service responsibilities. The mean percent of allocational services arranged directly by the municipality grew from 43 percent in 1982 to 63 percent in 1988. The arrangement of redistributive services is not dominated by municipal governments. Less than a third (32 percent) of cities with responsibility for any social service are directly responsible for the delivery of these redistributive goods and services. A wide range of alternative service modes are employed by cities fulfilling their social service responsibilities. On average 45 percent of the cities reporting responsibility for a social service in 1988 employed a contract for the production of these service responsibilities.

Peterson argues that municipal governments cannot assume significant responsibility for redistributive social services without incurring significant economic and political problems (i.e., the flight of productive capital and labor). In spite of supporting evidence, some cities persist in their provision of redistributive goods and services. The question is how? A partial answer is provided above. Municipal governments with functional responsibility for social services overwhelmingly employ non direct methods for the provision and production of these services. If alternatives to a direct service mode for social services were not available to municipal governments and a direct mode of service arrangement was not viable, the scope of municipal functional responsibility for social services would likely drop from an average of five redistributive services per city to only one per city.

Thus far our analysis has focused on the static relationship between the scope and content of municipal service responsibility and the mode of service arrangement for two points in time (i.e., 1982 and 1988). The observed differences in the distribution of service modes by policy type are net of both assumptions and devolutions in service responsibility. Another and potentially stronger means of testing the thesis that service arrangement is a function of the scope and content of service responsibility is to examine the mode of service arrangement for functional responsibilities assumed between 1982 and 1988. The expectation is that collective and common pool goods and services will be assumed with a direct mode of service arrangement, while toll and private service responsibilities will be assumed through a non direct mode.

Table 6 reports the mean proportion of cities employing different modes of service arrangement for newly assumed functional responsibilities by Ostrom and Ostrom's four policy categories. On average, 50 percent of newly assumed collective goods and services were arranged directly by the municipal government.

Among cities adopting responsibility for private goods and services on average only a third were assumed with a direct mode of service arrangement. The assumption of common pool and toll goods and services occupy a middle ground between these

two extremes. The assumption of responsibility for toll goods and services is dominated by a non direct mode of arrangement (41.8%), while the assumption of common pool goods and services is almost evenly divided between direct (48.6%) and non direct modes of service arrangement.

TABLE 6

MEAN PROPORTION OF CITIES ADOPTING NEW SERVICES BY MODE OF SERVICE ARRANGEMENT AND OSTROM AND OSTROM'S POLICY CATEGORIES: 1982-88

	Collective	Common	Toll	Private
Assumed 1982-88	5.3	5.7	7.2	5.8
Direct	50.8	48.6	41.8	33.1
Contract	38.7	34.4	25.0	42.9
Franchise	1.1	1.4	13.4	4.4
Subsidy	3.2	5.4	4.0	3.2
Voucher	0.7	1.3	0.5	0.8
Volunteer	3.1	4.9	8.0	6.0
Self-help	0.9	1.1	1.6	2.3
Tax Incentive	0.5	0.3	0.9	2.8
Multiple	0.8	0.5	1.4	1.5

TABLE 7

MEAN PROPORTION OF CITIES ADOPTING NEW SERVICES BY MODE OF SERVICE ARRANGEMENT AND PETERSON'S POLICY CATEGORIES: 1982-88

	Developmental	Allocational	Redistributive
Assumed 1982-88	5.6	4.8	7.8
Direct	44.6	51.5	29.1
Contract	36.1	41.7	47.6
Franchise	11.8	2.1	0.4
Subsidy	1.1	1.3	8.2
Voucher	0.3	0	1.7
Volunteer	1.5	1.9	7.4
Self-help	0.6	0.1	3.1
Tax Incentive	1.8	0	1.9
Multiple	1.8	1.3	0.2

The distribution of service modes for functional responsibilities assumed between 1982 and 1986 for Peterson's three policy categories are reported in Table 7. A majority (51.5%) of newly adopted allocational services were assumed with a direct mode of service arrangement. On average the adoption of new developmental programs was executed with a non direct modes of service arrangement, with only 45 percent of newly assumed developmental services directly arranged by the municipal government. As expected, when a city assumes responsibility for a redistributive good or service it is most likely to employ a non direct mode of service arrangement. On average, 71 percent of the cities adopting redistributive service responsibilities between 1982 and 1986 employed either a service contract or another non direct mode of service arrangement.

7. SUMMARY

The character and functional distribution of alternative modes of service arrangement present a much different picture of municipal governance than is portrayed in many American government and Public Administration texts. Rather than a unidimensional mode of service provision and production dominated by the municipal government I find that service responsibility is facilitated through a large number of non direct modes of service arrangement. The institutional arrangements for service provision and production are more dissimilar than similar across the repertoire of municipal functional responsibility. The service mode used is closely related to the character of the functional responsibility, evidence that municipal governments possess and exercise significant discretion in their efforts to fulfill the service demands of their constituencies.

Cities facilitate their assumption of responsibility for redistributive/private services by employing non direct modes of services arrangement. These alternative service modes mitigate the negative externalities associated with a direct service arrangement for redistributive goods and services. Moreover, the findings show that non direct service modes increases the scope of municipal responsibility for redistributive services by 43 percent. The service modes adopted by cities with significant social service responsibilities suggest that decision makers in these cities are aware of the potential threat this service commitment poses for their city's economic well being.

APPENDIX

Functional Components of Ostrom and Ostrom's Policy Typology

Collective

- Street Repair
- Street parking
- Traffic Sign
- Tree trimming
- Code Inspection
- Airports
- Street Lights
- Crime prevention
- Police/Fire communications
- Fire Prevention
- Traffic control
- Sanitary inspection
- Rodent inspection
- Animal control
- Animal shelters
- Public health

Collective

- Emergency medical services
- Ambulance
- Park facilities

Private

- Residential Solid Waste
- Commercial Solid Waste
- Solid waste disposal
- Parking Meter
- Sludge disposal
- Utility Readings
- Utility Billings
- Vehicle tow
- Day care
- Child welfare
- Elderly programs
- Public housing
- Hospitals
- Drug rehabilitation
- Mental health
- Operation of recreation

Toll

- Snow plowing
- Cemeteries
- Parking lots
- Bus transit
- Paratransit
- Electricity
- Gas
- Water distribution/treatment
- Sewerage collection/treat.
- Recreation services
- Convention centers
- Cultural arts
- Libraries
- Museums

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SINTESES

Este trabajo analiza las condiciones de viabilidad que hacen del primer principio de la ley de los mercados que regula los intercambios, como requisito los atributos que hacen que la asignación de recursos sea eficiente. Luego analiza por qué el análisis de la política en muchos países se ha desplazado desde la liberalización para generar mayor eficiencia, medidas que al mismo tiempo la reducción de servicios públicos disponibles a los hogares de menores ingresos. El trabajo analiza la experiencia en los países de política de liberalización y en desarrollo, especialmente en la eliminación de restricciones administrativas sobre la oferta, especialmente en relación al sector, la privatización y el desarrollo de infraestructuras, así como el desarrollo de instituciones privadas, tanto para mejorar servicios que los propietarios o productores, y en relación a los grupos. Finalmente, se analiza el control de calidad de servicios. El trabajo llega a la conclusión de que el texto ha hecho un aporte importante para reducir el papel de las instituciones administrativas, abordar dificultades tecnológicas que tienden a generar una participación gubernamental reducida.