

Privatization and intermunicipal contracting: the US local government experience 1992–2007

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Abstract. Local government scholars are giving increasing attention to market solutions to urban service delivery. Intermunicipal contracting and privatization are two market approaches to reaching economies of scale. Using national data on over one thousand municipalities from across the United States for the 1992–2007 period, we explore the differences between intermunicipal contracting and privatization and assess how the use of these market approaches relates to efficiency, scale, and public engagement factors. Using probit models for each of four survey years (1992, 1997, 2002, 2007), we find these market solutions are only partial responses to the problem of regional coordination and exhibit important differences with respect to place, management, and political concerns. These market solutions exhibit limited efficiency, equity, and voice benefits.

Keywords: local government, privatization, intermunicipal contracting, rural, urban

Introduction

The challenge of coordinating service delivery across the metropolitan region has bedeviled local governments for more than a century. In the US there are over 39 000 units of multi-purpose local governments (US Census of Governments, 2007), and this creates challenges for service delivery both in reaching economies of scale and in promoting regional coordination (Holzer and Fry, 2011). Some European countries, such as Spain, face similar challenges, while countries such as the Netherlands and the UK tend to have more consolidated governments (Andrews and Entwistle, 2010; Bel et al, 2010a). Regional government is uncommon in the United States, and the need for coordination is typically addressed with market mechanisms by contracting with other governments (intermunicipal contracting) or to private firms (privatization) (Joassart-Marcelli and Musso, 2005; Warner, 2006).⁽¹⁾

The debate over regional government versus fragmentation has waged in the US for half a century. Support for regional government ebbs and flows with increased interest in the economic health of the metropolitan region and with concerns over possible efficiency gains from regionalization. While planners tend to support regional governance approaches (Norris, 2001; Swanstrom, 2001), support for localism is strong in the US

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⁽¹⁾ Privatization is commonly used in the US to refer to government contracting. It could also include service shedding, but we focus on services for which the city still assumes responsibility but the delivery mechanism is private.

(Briffault, 2000)—as in much of continental Europe (Bel et al, 2010a). From the early 1970s Bish and Ostrom (1973) argued that coordination and efficiency could be achieved through mechanisms such as intermunicipal contracting and the disadvantages of local jurisdictional fragmentation could be overcome without consolidation. This public choice approach was picked up by other scholars who confirmed the power of these voluntary market approaches as an efficient alternative to consolidation (Morgan and Hirlinger, 1991; Parks and Oakerson, 1993). However, more recent reviews question the equity and efficiency claims and point to the problem that jurisdictional boundaries create for community building (Frug, 1999; Lowery, 2000; Nelson and Foster, 1999; Warner, 2011a; Warner and Hefetz, 2002a).

In this paper we compare intermunicipal contracting and privatization to assess the performance of voluntary market solutions for public service delivery at the municipal scale in the US over the 1992–2007 period. We look at the two most common forms of local government contracting (to other governments and to for-profit firms) and assess their relationships to questions of efficiency, equity, and accountability. Our models give special attention to place, politics, and managerial characteristics. We look across all services, across metropolitan status, and over time. We find that both market alternatives provide only limited answers to these questions. Managers now recognize that both market alternatives need to be accompanied by additional mechanisms to enhance citizen voice—market forms of voice alone are not sufficient. While both market alternatives are more popular among rich suburban governments, among municipalities with higher poverty, cooperation is more common.

Literature review

International context

While the US local government experience is based on a competitive mechanism [the Tiebout (1956) model of community competition], Britain uses a two-tier model of regional government that coordinates service delivery and reduces negative spillovers, and much of continental Europe uses a cooperative approach where local governments are expected to collaborate on service provision to reach a regional scale (Bird and Slack, 2007). Regional coordination arrangements allow localities within a metropolitan region to respond to interlocal spillover of typically negative externalities. While some European experience shows that an upper tier of government is necessary to ensure the lowest level of externalities, especially in cases of using common resources such as water (Furlong and Bakker, 2010; Kuindersma and Boonstra, 2010; Sohn et al, 2009), others report that the market mechanism may work within an adequate regulation legal framework, where governments set rules of market exchange, but do not actively participate (Regan et al, 2011; Walker and Li, 2006; Webster and Lai, 2003). This, however, creates a governance paradox where heavier use of market mechanisms may require a wider regulation framework (Drewry, 2000).

The potential of market approaches

Both privatization and intermunicipal contracting can be seen as market attempts to address metropolitan service coordination challenges at an intermunicipal scale. Municipal contracts to other governments or private companies create a quasi-market for service delivery with one buyer—the city, which represents a broad set of public interests—and several potential sellers (other cities, private firms) who create a quasi-market for public goods. These market-oriented forms of regional coordination have the advantage of being relatively easy to implement (Parr et al, 2006). One advantage of this quasi-market is that it affords the opportunity to reach beyond the political boundaries which fragment the metropolitan region and achieve economies of scale without consolidated government (Anas, 1999; Bel and Fageda, 2008; Hebdon and Jalette, 2008; Parks and Oakerson, 1993). This enables the possibility of efficiency gains (Ferris and Graddy, 1991; Nelson, 1997; Savas, 1987).

However, recent research on fragmented government shows that fragmentation leads to lower income growth (Nelson and Foster, 1999), and reviews of the literature on local government contracting do not find strong or consistent results on cost savings (Bel et al, 2010b; Boyne, 1998; Hirsch, 1995; Hodge, 2000).

Understanding city use of privatization and intergovernmental contracting requires attention to place, management, and political voice. Privatization has been widely promoted as an innovative and efficient approach to urban service delivery (Greene, 2002; Savas, 1987). One of the advantages of for-profit contracting is that it offers the opportunity to aggregate individual city decisions without deliberation. This is one source of market efficiency. But to reach a regional view, a deliberative mechanism may be necessary. Voluntary cooperative approaches may not produce equitable metropolitan governance (Frug, 2002). Problems of preference alignment arise both within cities and across cities (Lowery, 1998; 2000). Market approaches alone may not align these differences at the regional scale. Voluntary market approaches may have a lowest common denominator effect—addressing the easiest services and limiting focus to the parts of the region where benefits are greatest (Frug, 2002; Norris, 2001). In the US researchers have found a distinct suburban bias in both intermunicipal contracting and privatization (Joassart-Marcelli and Musso, 2005; Kodrzycki, 1994; Warner and Hefetz, 2002a; 2002b; 2003) which has intensified over time (Warner, 2006; 2009). This raises questions about the potential equity benefits of such market solutions.

Management and economies of scale

In the US market solutions are heralded by public choice theorists as improvements in efficiency, voice, and choice (Bish and Ostrom, 1973; Tiebout, 1956). Contracting with private vendors can increase efficiency, promote economies of scale, increase citizen choice, and promote economic development (Savas, 1987). Intermunicipal contracting offers another market alternative that keeps the service public. Through intermunicipal contracting, local governments retain public control and local identity in service delivery and still achieve the benefits of a larger market scale (Anas, 1999; Morgan and England, 1988; Parks and Oakerson, 1993; Warner and Hebdon, 2001). Intermunicipal contracting enables even small local governments to obtain economies of scale (Ferris and Graddy, 1991; Lavery, 1999; Morgan and Hirlinger, 1991; Warner, 2011b). Small rural governments have trouble attracting a market of competitive private suppliers, so a public market of cooperating governments offers a means to gain scale (Bel and Fageda, 2011; Kodrzycki, 1994; Warner, 2006; 2009).

Intermunicipal contracting is also quite common in Spain, another country with great local government fragmentation. Here, cooperative approaches are used to address the challenges of suboptimal local government size by combining intermunicipal contracting with privatization. Small rural communities in Spain cooperate to gain scale and then contract out jointly to private firms, thus exercising a stronger market position with private firms (Bel and Costas, 2006; Bel and Mur, 2009). This is less common in the US. A comparison of Spain and the Netherlands shows that the Netherlands focuses more on consolidation to gain scale rather than depending on a voluntary market of local government cooperation as a precursor to privatization (Bel et al, 2010a). The stronger consolidation focus of the Netherlands allows localities to enjoy economies of scale directly (Dijkgraaf and Gradus, 2008).

Both for-profit and intermunicipal contracting create critical transactions costs for local government managers. Several scholars have used a transactions costs framework to assess intermunicipal contracting in comparison with for-profit contracting and found important differences by service and by place (Brown et al, 2008; Hefetz and Warner, 2012; Levin and Tadelis, 2010; Nelson, 1997). Challenges with contract specification and monitoring are expected to be easier with intermunicipal contracts, but Marvel and Marvel (2007) find

managers may have more challenges monitoring contracts with other governments than with for-profit providers.

Management and political voice

The appeal of voluntary market solutions based on government contracting is that they may reduce the costs of political fragmentation and help preserve local voice. Localism is strongly supported in the US because it fosters a sense of control, promotes community identity, and enables diversity in local government services across the metropolitan landscape (Briffault, 2000). Both city governments and citizens are concerned about losing autonomy and voice in regional governance systems. Theoretically, market approaches to service delivery can enhance voice by giving more power to the consumer (Savas, 1987). However, empirical studies find consumer sovereignty quickly breaks down under contracting and voucher schemes (Hipp and Warner, 2008; Lowery, 1998; Warner and Gradus, 2011). Professional government managers recognize the need to balance citizen engagement with technical service delivery concerns, and this has led to new theoretical developments calling on a social choice and public values framework (Denhardt and Denhardt, 2003; Hebdon and Jalette, 2008; Hefetz and Warner, 2007; 2012; Nalbandian, 2005; Sager, 2001; Warner, 2008). However, contracting may be less responsive to local voice and erode local identity with the loss in local managerial control (Johnson and Molloy, 2009; Poister and Strieb, 1999).

Prior research suggests governments with the council-manager form of government will be more likely to have higher levels of contracting as they have more professional exposure and are more able to manage political interests (Coate and Knight, 2011; Hefetz and Warner, 2012; Krueger and McGuire, 2005; Morgan and Hirlinger, 1991). Although some researchers suggest political opposition leads to lower levels of privatization (Eggers and O'Leary, 1995; Savas, 1987), others have found local government decision making to be more pragmatic as managers balance political and economic concerns (Hebdon and Jalette, 2008; Warner, 2008; Warner and Hebdon, 2001). It is important to differentiate political ideology from political interests. Local government studies in both the US and Europe have found that political interests are more salient than ideology in the decision on service delivery choices (Bel and Fageda, 2007; Fitch, 2007). Contrary to public choice arguments that market mechanisms alone offer an adequate avenue for expressing citizen voice, we argue that city managers must manage politics, voice, and technical contracting issues together. This requires explicit attention to citizen voice in a social choice framework (Hebdon and Jalette, 2008; Warner, 2008; Warner and Hebdon, 2001; Warner and Hefetz, 2008).

Metropolitan and socioeconomic structure

Public choice theory claims that citizens choose communities based on service and tax mix (Tiebout, 1956). However, more recent research in the US shows race and class are important signifiers that divide the metropolitan region (Lowery, 2000; Swanstrom, 2001; Troutt, 2000). If the same holds true when we study intermunicipal contracting and privatization, then the equity effects of such market solutions could be negative.

Research among US local governments has shown suburbs have lower government expenditures and enjoy higher income than metro areas or rural areas (Johnson et al, 1995; Reeder and Jansen, 1995; Warner and Pratt, 2005), and this may help explain higher rates of government contracting among suburbs (Hirsch, 1995; Kodrzycki, 1994; Warner, 2006; Warner and Hefetz, 2003). Frug (1999) argues that, when we conceptualize city services as 'club' goods, this privatized view of public services undermines the potential for regionalism despite fiscal disparities and common needs. If that were the case, municipal-scale market solutions could undermine the potential for regionalism rather than serve as a first step in addressing regional coordination challenges (Frug, 2002; Warner, 2011a).

Just as the level of privatization differs across metropolitan size and wealth (Ferris and Graddy, 1991; Warner and Hefetz, 2002a; 2002b; Kodryzcki, 1994; Warner, 2006; 2009), cooperative agreements between localities also face several transaction cost obstacles which stem from local differences in well-being and managerial capacity to engage in these mutual agreements (Feiock et al, 2009; Hawkins, 2010; Kwon and Feiock, 2010; Shreshta and Feiock, 2010; Warner, 2011b). The advantage of intermunicipal agreements in comparison with privatization is that redistribution of wealth across governments may be achieved by cooperation, whereas privatization is primarily focused on efficiency concerns. This has been found in the UK by Andrews and Entwistle (2010) and in the US in earlier work comparing suburbs and core cities (Warner and Hefetz, 2002a).

In this paper we explore the relationship between contracting—to public or to private entities—and these managerial, equity, and efficiency factors over time. We expand upon the public choice model to address transactions costs of contracting—especially as it relates to metropolitan structure, management, and monitoring—and we include a social choice perspective that gives explicit attention to managerial efforts to incorporate citizen voice and political factors in the contracting decision. We review how these transaction cost and social choice concerns have affected managers' level of privatization and cooperation over time. As experience with cooperation and privatization has matured and spread, our analysis shows the continued importance of management and monitoring, city size, and wealth on alternative service delivery choices.

Understanding local government contracting

US local governments have a long history with contracting. The International City County Management Association (ICMA) has surveyed city managers in the US regarding their use of alternative service delivery every five years, and we look at the data from 1992 to 2007. No other country has a consistent survey of local government service delivery over time. The ICMA (1992; 1997; 2002; 2007) surveys measure contracts to for-profit firms (privatization), other governments (intermunicipal contracting), nonprofit firms, and franchises. Nonprofits and franchises account for less than 5% of service delivery, so we focus our analysis on the two major alternatives to direct public delivery: privatization and intermunicipal contracting. Although public delivery remains the primary source of service delivery, privatization and intermunicipal contracting together account for about a third of all service delivery.

ICMA's sample frame includes all cities with a population of over 10 000 and counties with a population of over 25 000 and an additional sample of one in eight smaller municipalities. The survey covers sixty-seven local services in seven broad areas (public works, public safety, public utilities, health and human services, parks and recreation, culture and arts, and support functions). The ICMA survey also asks city managers a battery of questions regarding ideology, politics, fiscal stress, monitoring and contract specification, and citizen participation. We focus our analysis on the 1992–2007 period (the most recent available data). We supplement this survey with data on income, poverty, and population from the Census of Population and Housing for 1990 and 2000 and the American Community Survey (US Bureau of the Census, 1990; 2000; 2009),⁽²⁾ and government expenditures from the US Bureau of the Census' Census of Governments: State and Local Government Finances for 1992, 1997, 2002, and 2007.

We see in table 1 that for-profit contracting grew slightly from 15% in 1992 to 19% in 1997 but then dropped back to 17% of all service delivery in 2002. This suggests city managers were open to experimenting with privatization, especially after Osborne and Gaebler's popular book, *Reinventing Government*, was released in 1992, but that the experimentation

⁽²⁾ The US Census of 2010 did not ask questions regarding income and poverty. Instead, the US Census now conducts the American Community Survey and computes rolling averages for five-year increments. We use the 2005–09 averages as our estimate for income and poverty for 2007.

Table 1. Model variables, US cities and counties.

Variable	1992		1997		2002		2007	
	mean	SD	mean	SD	mean	SD	mean	SD
Number of services provided by place ^a	41.5	12.1	34.3	13.8	35.3	10.6	35.4	13.2
Number of services provided via cooperation ^a	7.9	6.7	5.2	6.2	4.4	5.4	5.7	7.1
Number of services provided via for-profit contract ^a	6.7	5.1	6.4	5.8	6.2	5.6	5.9	5.6
Percentage cooperation over provision ^a	18	13	15	18	11	12	16	19
Percentage for-profit over provision ^a	15	10	19	17	17	14	17	18
Population size ^b	63 607	163 108	66 995	175 778	83 627	211 500	71 246	183 011
Total local government expenditures per capita, US\$1000, deflated 2000 = 100 ^c	1.0915	0.844	1.022	0.936	1.036	0.796	1.250	0.939
Per capita income, US\$, deflated 2000 = 100 ^b	21 050	8 795	20 673	8 469	23 263	9 722	22 123	9 261
Percentage persons below poverty level ^b	11.6	7.9	11.8	8.0	11.5	7.3	0.13	0.08
Efficiency/monitoring index ^a	0.32	0.29	0.32	0.29	0.30	0.30	0.27	0.29
Voice index ^a	0.14	0.17	0.14	0.17	0.14	0.17	0.11	0.016
Internal opposition index ^a	0.18	0.27	0.19	0.28	0.17	0.27	0.15	0.026
External fiscal pressures, including restrictions on raising taxes ^a	0.38	0.49	0.30	0.46	0.28	0.45	0.26	0.44
State or federal mandates tied to intergovernmental financing ^a	0.12	0.32	0.07	0.26	0.05	0.22	0.05	0.21
Change in political climate—decreased role for government ^a	0.14	0.34	0.16	0.37	0.09	0.28	0.07	0.21
Dummy for council-manager ^a	0.64	0.48	0.62	0.49	0.56	0.50	0.61	0.49
Dummy for suburbs ^b	0.53	0.50	0.51	0.50	0.50	0.50	0.53	0.50
Municipal type, county/town, county = 1 ^a	0.18	0.39	0.21	0.41	0.22	0.41	0.20	0.40
Sample size (valid <i>N</i>)	1414		1418		1034		1415	

^a From ICMA (1992; 1997; 2002; 2007).
^b From US Bureau of the Census (1990; 2000; 2009)
^c From US Bureau of the Census (1992; 1997; 2002; 2007) (\$1000).

led to some readjustment based on managerial learning over the decade. The ICMA surveys measure intermunicipal contracting, and we see in table 1 that the average use of intermunicipal contracting dropped over time from 18% in 1992 to 11% in 2002, but then rose again to 16% in 2007. These trends motivate our comparison between the two alternatives over time. The large size and stratified sampling techniques of the ICMA data make comparison possible across metropolitan status. Prior research on the ICMA data shows that privatization is most common among suburbs (Joassart-Marcelli and Musso, 2005; Warner, 2006; 2009; Warner and Hefetz, 2002a; 2002b; 2003). We differentiate core metropolitan municipalities from outlying suburban municipalities using Office of Management and Budget criteria.⁽³⁾ The ICMA data show that over the last decade metro core cities' use of privatization caught up to the suburban level by 2002, but then declined again in 2007 (see table 2). For rural areas, by contrast, the use of private contracts grew only between 1992 and 1997 but never caught up to the suburban level. Rural privatization rates fell from 1997 to 2002 and in 2007 were quite similar to metropolitan levels. Intermunicipal contracting levels followed a similar pattern with highest use by suburbs. The difference is that rural areas exhibited higher rates of intermunicipal contracting than the metro core up to 1997, but this difference disappeared in 2002 and then reemerged in 2007. Rural use of cooperation is more similar in level and ranking to suburban levels.

Table 2 also reports per capita income levels by metro status, and we see a similar pattern with highest levels in suburbs, followed by metro levels, and then the lowest income levels in rural municipalities. This pattern confirms findings of other scholars that privatization is more common among richer municipalities, while cooperation is common among both richer suburbs and poorer rural municipalities (Andrews and Entwistle, 2010; Warner, 2006; 2009; Warner and Hefetz, 2002b; 2003). The lower use of cooperation among metro core municipalities may be because they have already captured economies of scale for most services.

Table 2 also includes data on local government expenditures by metro status. We find that the level of current expenditures was flat in real terms from 1992 to 2002 but increased significantly in 2007. Prior research has found a U-shaped curve of expenditures with higher expenditures for rural governments (the cost of sparsity) and higher expenditures for metro core governments (the cost of congestion) (Holzer and Fry, 2011; Johnson et al, 1995; Reeder and Jansen, 1995; Warner, 2001; 2006). Our data confirm these results. Suburbs have consistently lower expenditures due to their medium density and lower level of social needs.

Public administration theory suggests that form of service delivery will vary by service characteristics (Stein, 1990). Easy-to-specify services will be more likely to be delivered privately, while more complex services with a high degree of public interest will be more likely to be delivered through intermunicipal contracting as this permits a higher degree of community control and engagement (Hebdon and Jalette, 2008; Stein, 1990; Warner and Hebdon, 2001). The ICMA data show privatization levels are highest in public works, public utilities, and support functions—services that are easy to specify. Intermunicipal contracting is highest in health and human services and culture and arts—services that generate a higher level of public interest (Warner, 2011b). This would suggest that the potential for citizen input into the service delivery process would be higher under intermunicipal contracting.

In our models we look at average levels of cooperation and privatization across the full set of local government services to test a broader theoretical framework that includes place characteristics, managerial characteristics, and political voice factors. Beyond a simple public choice approach, we test the importance of transaction cost and social choice factors.

⁽³⁾ Core cities have 40% of their residents working in the central city of the Metropolitan Statistical Area and employment residence ratios of at least 0.75. All other metropolitan cities are classified as outlying-suburban. Nonmetropolitan towns are classified as rural.

Table 2. Service delivery, income, and expenditure by metro status (as percentage of provision level) US cities and counties (sources: ICMA, 1992; 1997; 2002; 2007; US Bureau of the Census, 1990; 1992; 1997; 2000; 2009).

Survey year	Cooperation			Privatization		
	rural	suburb	metro core	rural	suburb	metro core
1992	16 ^a	19 ^b	15 ^a	12 ^a	16 ^c	14 ^b
1997	15 ^b	16 ^b	12 ^a	16 ^a	20 ^b	18 ^b
2002	10 ^a	12 ^b	10 ^a	12 ^a	18 ^b	18 ^b
2007	16 ^b	17 ^b	12 ^a	15 ^a	20 ^b	15 ^a
	Average per capita income, US\$			Expenditure per capita, US\$		
	rural	suburb	metro core	rural	suburb	metro core
1992	15 971 ^a	24 704 ^c	18 856 ^b	1 201 ^b	981 ^a	1 238 ^b
1997	15 904 ^a	24 324 ^c	18 641 ^b	1 089 ^a	959 ^a	1 081 ^a
2002	17 939 ^a	27 058 ^c	21 498 ^b	1 115 ^b	927 ^a	1 177 ^b
2007	17 160 ^a	25 467 ^c	20 547 ^b	1 370 ^b	1 096 ^a	1 509 ^c

Notes: Duncan post hoc ranking of subgroup means; $\alpha = 0.05$; *F*-test found all variables significantly different ($\square < 0.05$) by metro status; in US \$1000 deflated 2000 = 100.

^a Lowest.

^b Middle.

^c Highest.

The model

In this paper we compare intermunicipal contracting and privatization among US municipalities. We include rural, suburban, and metro core communities to test results across the full spectrum of local governments, and we include data on contracting from across the 1992–2007 period. We are interested in how these alternative market forms of service delivery—intermunicipal contracting and privatization—are related to place, management, and political factors. Do results vary across the urban–rural continuum, and what does this suggest about management and socioeconomic conditions? We are also interested in testing how these factors vary across time during the 1992–2007 period. We construct a probit model of the level of intermunicipal and for-profit contracting and assess the importance of place (urban structure and scale, socioeconomic characteristics), management (professional manager, monitoring), and political voice (citizen voice, opposition, and political climate). Summary statistics for the dependent and independent variables are provided in table 1.

Place: urban structure and scale

The main promise of market delivery alternatives is that they will promote regional efficiency by permitting fragmented communities to reach economies of scale in a voluntary system that offers more flexibility than regional government. We know that suburbs use higher levels of both inter-governmental and for-profit contracting, and we include a suburb dummy to see if we can differentiate suburbs from metro core and rural places after controlling for other factors. We also include population as a control for community size because larger communities may be expected to engage market alternatives more effectively than small communities. Finally, we include a dummy for county as this is the highest scale of local government in the US and as such has greater latitude for both intermunicipal contracting

and privatization. For socioeconomic variables we include per capita income (in constant US \$2000) and percent poverty from the US Census of Population and Housing. Because we know that suburbs use higher levels of contracting, the suburb dummy helps differentiate income effects from suburban effects.

Management

Use of market alternatives requires professional capacity. We control for this with a dummy variable indicating whether a government has a council-manager form of government or not. Over half of the sample has professional managers. To measure costs, we use current local government expenditures per person (in constant US \$2000) from the US Census of Governments. We expect both forms of contracting to be associated with lower expenditures in part because managers who experiment with alternative forms of service delivery are likely to be more interested in reducing costs.

Table 3. Index components and means, US cities and counties (source: ICMA, 1992; 1997; 2002; 2007).

Index	Mean			
	1992	1997	2002	2007
<i>Efficiency/monitoring index</i>	0.32	0.32	0.30	0.27
internal attempts to decrease costs of service delivery	0.62	0.60	0.49	0.44
evaluating cost	0.42	0.40	0.40	0.37
monitoring compliance with delivery standards specified in contract	0.34	0.38	0.39	0.35
allowed government to compete in the bidding process	0.11	0.16	0.12	0.09
proposed implementation of private alternatives on a trial basis	0.16	0.14	0.12	0.11
Cronbach α	0.69	0.69	0.70	0.71
<i>Citizen voice index</i>	0.14	0.14	0.14	0.11
active citizen group favoring privatization	0.05	0.05	0.03	0.02
opposition from citizens	0.15	0.14	0.12	0.11
evaluation of feasibility by service recipients/consumers	0.08	0.10	0.08	0.05
evaluation of feasibility by citizen advisory committees	0.16	0.15	0.12	0.08
established a citizens' advisory committee on private alternatives	0.06	0.05	0.05	0.03
surveyed citizens during implementation	0.05	0.08	0.08	0.06
kept the service complaint mechanism in-house	0.13	0.11	0.15	0.09
monitoring citizen satisfaction after implementation	0.29	0.28	0.32	0.26
conducting citizen surveys after implementation	0.09	0.12	0.14	0.13
monitoring citizen complaints	0.31	0.29	0.34	0.29
Cronbach α	0.66	0.69	0.72	0.72
<i>Internal opposition index</i>	0.18	0.19	0.17	0.15
opposition from elected officials	0.18	0.20	0.18	0.15
opposition from local government line employees	0.26	0.28	0.23	0.19
opposition from departments heads	0.14	0.15	0.12	0.11
restrictive labor contracts/agreements	0.13	0.15	0.13	0.15
Cronbach α	0.71	0.71	0.72	0.69

Note: These indices were created by summing positive responses to component questions and dividing by the total number of questions in the index: $\sum f_i/N$, where $f = 1$ if checked yes to question and 0 if not, and $i = 1, 2, \dots, N$ for questions.

To ensure cost savings, it is necessary to monitor both intergovernmental contracts and private contracts. We measure the level of monitoring with an index based on answers to five ICMA survey questions regarding: desire to reduce costs, monitoring service quality, monitoring costs, allowing competitive bidding, and experimentation with alternatives (Cronbach's $\alpha > 0.69$ for each of the four years).⁽⁴⁾ Monitoring is critical to ensure effective contracting, but the majority of US local governments do not monitor their contracts. We expect monitoring to be higher with higher levels of contracting, especially if managers want to secure any cost savings (see table 3).

Political voice

We analyze whether communities which give more attention to maintaining avenues for citizen participation in the service delivery process have higher levels of contracting (Morton et al, 2008). We differentiate citizen voice, internal opposition, and external political climate. Our index for citizen voice (based on Warner and Hefetz, 2002a) includes answers to ten questions from the ICMA survey that address mechanisms for public participation, external opposition, citizen involvement in evaluation, serving on committees, citizen surveys, monitoring citizen satisfaction, and monitoring complaints. The components measuring citizen satisfaction and monitoring citizen complaints are the most commonly reported elements in the index. This index measures the extent to which city managers give attention to citizen voice in the service delivery process (Cronbach's $\alpha > 0.66$ for each of the four years). The average level of the voice index does not change much over the decade.

We measure an internal opposition index separately from citizen voice. The opposition index is the sum of positive answers to questions concerning opposition from employees, department heads, elected officials, and restrictive labor agreements (Cronbach's $\alpha > 0.69$ for each of the four years). We see that opposition rises with the rise in contracting in 1997 and then falls back in 2002. We also include three measures of external political climate and state rules: fiscal pressure, state mandates regarding intergovernmental finance, and attitudes regarding a change in political climate to reduce the role of government (see table 1). The percentage of governments reporting external fiscal pressures falls slightly over the decade, as do those reporting state mandates tied to intergovernmental financing. But the political climate variable shows an interesting pattern—rising from 1992 to 1997 and falling from 1997 to 2007. As experience with privatization matures, it appears political ideology (measured by the political climate variable) is less of a factor in city managers' decisions. Although the average value of the citizen voice index is stable over the decade, we expect citizen voice to be more associated with contracting over time as managers realize that market choice is not a sufficient substitute for political voice and participation. We expect political opposition and political climate to have less of an effect on contracting over time. Fiscal stress and intergovernmental financing would be expected to lead to more contracting. An interesting question is whether these political variables will have a stronger effect on intermunicipal contracting or on for-profit contracting.

Results

We create two probit models—one for the level of intermunicipal contracting and the other for the level of for-profit contracting. A probit model controls the level of contracting by the level of service provision.⁽⁵⁾ From table 1 we see that the average number of services

⁽⁴⁾ This index and the other indices used in this paper are created by summing positive responses to component questions and dividing by the total number of questions in the index. $\sum f_i / N$, where $f = 1$ if checked yes to question and 0 if not, and $i = 1, 2, \dots, N$ for questions.

⁽⁵⁾ A probit transformation uses the inverse value of the cumulative standard normal distribution and produces predictions within the [0, 1] range. A simple ordinary least squares procedure would predict results outside the [0, 1] range.

provided has dropped from forty two to thirty five over the decade and the average level of intermunicipal contracting has dropped from eight services to six, and for-profit contracting has dropped from seven to six services. But the standard deviations show large variation in both service provision levels and levels of contracting across municipalities. The purpose of our models is to explain local government propensity to outsource the delivery of public services subject to local circumstances. We use a repeated cross-section analysis to maintain sample size.⁽⁶⁾

Our population variable shows intermunicipal contracting is more common in municipalities with lower population. We hypothesized that smaller communities would use intermunicipal contracting to achieve economies of scale, while larger cities would not require intermunicipal contracting to obtain such economies of scale. While the public market of intermunicipal contracting appears to be favored by smaller places, privatization, by contrast, is more common among larger municipalities, from 1997 onward (see table 4).

Our place variables confirm that market solutions are more common in suburbs. Our suburb dummy is significant in all model years except for privatization in 1992. Suburbs represent a competitive market of moderate-sized localities and thus are the most favored community type for market solutions. Thus, as an answer to the challenge of both reaching economies of scale and promoting regional service coordination, market solutions appear to privilege suburbs.

Finally, we see that counties are more likely to engage in intermunicipal contracting as expected given their position in the local government hierarchy as a level of government more capable of promoting integration and regional intermunicipal contracting. Counties were less likely to privatize in 1992, 1997, and 2007, but we see no difference in 2002. Counties were more likely to engage in intermunicipal cooperation after 1992. This suggests a learning process where counties determined that they could benefit from intermunicipal contracting over time and found more scope for cooperation than privatization.

Evidence on government expenditures shows that privatization was higher in communities with lower expenditures. We also see higher levels of intermunicipal contracting among communities with lower expenditures except for 2002. The size of the expenditure effect is especially small in the 2007 models. Although this result suggests that communities that privatize or cooperate more spend less, it also suggests that cost savings may erode over time. This may be because the earliest communities to experiment with these alternative service delivery forms are in the best position to extract cost savings. As alternative service delivery reform ripples through communities and across services, areas with higher costs may join in. Or it could be because both private contractors and other municipalities look for municipalities with lower costs with which to contract. Once these municipalities are in the contract network, the next market challenge is to expand services to higher cost municipalities. These results are consistent with cross-national research on cost savings in privatization, which has found that savings erode over time (Bel et al, 2010b; Dijkgraaf and Gradus, 2007). Similarly, studies of intermunicipal cooperation have found limited cost savings due to increased professionalization (Holzer and Fry, 2011). This trade-off between enhanced service quality and cost savings must be considered when assessing alternative service delivery, as cost saving is not the only goal that city managers express (Bel and Warner, 2009).

We see that higher levels of monitoring are associated with higher rates of privatization in all four model years. But the story of intermunicipal contracting is more complex. In 1992 and 1997 municipalities with higher levels of intermunicipal contracting did not

⁽⁶⁾ About 40% of the sample is the same across any two surveys, and 243 places answered the first three surveys, while only 151 places answered all four surveys.

Table 4. Probit model results for US cities and counties (source: authors' analysis).

Parameter	Intermunicipal cooperation (estimated)			Privatization (estimated)		
	1992	1997	2002	2007	1992	1997
ln(population)	-0.031*	-0.056*	-0.046*	-0.078*	0.005	0.033*
Suburb dummy	0.158*	0.135*	0.194*	0.120*	0.021	0.111*
County dummy	0.020	0.124*	0.231*	0.126*	-0.159*	-0.175*
Total local government expenditure per capita	-0.056*	-0.083*	-0.018	-5.2×10^{-5} *	-0.052*	-0.023*
ln(per capita income)	0.075*	-0.032	0.048	0.040	0.167*	0.045
Percent poverty	0.006*	0.003	0.005*	0.383*	-0.004*	-0.007*
Efficiency/monitoring index	0.015	-0.123	0.166*	-0.105*	0.204*	0.307*
Voice index	0.088	0.435*	0.017	0.316*	0.086	0.037
Internal opposition index	-0.148*	-0.117*	0.037	0.026	-0.004	0.039
External fiscal pressures	-0.018	0.038*	-0.090*	-0.043	-0.006	0.028
State or federal mandates	0.013	0.084*	0.019	0.003	0.067*	0.018
Change in political climate	0.030	-0.028	-0.055	-0.209*	0.035	0.003
Council-manager dummy	0.045*	0.074*	0.076*	0.083*	0.041*	-0.043*
Intercept	-1.411*	-0.248	-1.631*	-0.880	-2.699*	-1.670*

* Significant at $p < 0.05$.

engage in significantly more monitoring. They may have assumed that, because these were intergovernmental contracts, internal forms of performance management still applied. However, by 2002 we see that higher monitoring is associated with higher rates of intermunicipal contracting. But in the 2007 model municipalities with less monitoring cooperate more. This may reflect a learning curve. In the early part of the decade public managers did not realize the necessity of a formal monitoring system for intergovernmental contracts. As cooperation rates fell to 2002, managers learned of the need to monitor—even their intergovernmental contracts. But in 2007, with the dramatic expansion in cooperation, we find that higher monitoring rates did not keep up. In fact, those places that monitor more, cooperate less. Monitoring is difficult and important in cooperation as well as in privatization, but the sanctions are lower powered, which makes monitoring intergovernmental contracts more difficult (Marvel and Marvel, 2007). For privatization, managers were consistent in their recognition of the need to monitor.

Our poverty and income variables were used to test for socioeconomic effects. We see that municipalities with higher income used more intermunicipal contracting in 1992, but this effect disappears in the subsequent models. For privatization, by contrast, higher income communities engage in more contracting in all model years except the 1997 model. On poverty, we find that communities with higher poverty were more likely to have higher levels of intermunicipal contracting (except for 1997) but lower levels of privatization (in 1992, 1997, and 2002). These results provide some evidence for a positive equity effect of intermunicipal contracting and a negative equity effect of privatization.

The results for management and political voice also suggest a managerial learning process over time. During the entire period professional managers used more intermunicipal contracting. Professional managers were also more likely to privatize, except in 2007. Regarding attention to citizen voice, our models suggest city managers are beginning to learn that political and deliberative forums for citizen voice are still needed even when using market approaches to service delivery. Intermunicipal contracting was associated with more attention to citizen voice in 1997 and 2007. For the privatization models, attention to voice is significant in the 2002 and 2007 models. Public choice theory predicts that market-based consumer voice will be sufficient—but these results suggest that market voice alone is not sufficient. As managers gain experience with contracting, they realize that attention to citizen voice, under both cooperative agreements and privatization, is still necessary. This gives support to our social choice theoretical approach.

Regarding political opposition, we see that higher internal opposition leads to lower levels of intermunicipal cooperation in the early years (1992 and 1997) but is not a significant factor in the later years. This suggests that, as managers and labor became more familiar with intermunicipal contracts, they were able to ensure their interests were met. For privatization a very different story unfolds. Internal opposition is not significant in the early model years. For the first time in 2002, internal opposition is higher among places that privatize more, but by 2007 this effect disappears. This suggests that managers are learning how to manage internal opposition.

External fiscal pressures were a driver for cooperation in 1997 and for privatization in 2007, but they were related to less cooperation in 2002. State and federal mandates promoting intergovernmental finance led to more cooperation in 1997 but had no effect in other model years. For privatization the results show a shift over time: state mandates lead to higher privatization in 1992 (early in the reform) but lower privatization in 2002 (when managers were more experienced with the reform). Political climate is not significant in any model year (except the 2007 cooperation model where places reporting a climate for a decreased role of government had lower cooperation rates). These results suggest that political ideology is not

a determining factor. What we see here is evidence of pragmatic city managers who balance technical, political, and place characteristics. These results confirm other empirical work that has found local government managers are pragmatic (Bel and Fageda, 2007; Fitch, 2007; Hebdon and Jalette, 2008; Hefetz and Warner, 2012; Warner, 2008; Warner and Hebdon, 2001).

Conclusion

Market solutions of intermunicipal contracting and privatization represent an alternative to consolidated regional government. But the benefits to efficiency, equity, and citizen voice are uneven. Our models show some evidence of lower expenditures among municipalities that use more cooperation and privatization. Previous meta-analyses of privatization and costs have found inconsistent results across studies (Boyne, 1998; Hirsch, 1995; Hodge, 2000). More recent meta-analysis shows cost savings from privatization erode over time (Bel et al, 2010b). This can be due to private firms raising their prices (Dijgraaf and Gradus, 2007) or improved efficiency of public delivery (Bel et al, 2010b; Warner and Hefetz, 2008). Likewise, studies of intermunicipal cooperation have found that economies of scale are exhausted at relatively low population levels (20 000–25 000 population), and improved service quality due to enhanced professionalization can erode cost savings from both cooperation and privatization (Bel and Warner, 2009; Holzer and Fry, 2011).

Public choice theory suggests market solutions have their own mechanisms to ensure citizen voice, but managers have learned that market delivery alone does not assure voice. Instead, managers exhibit a social choice approach—balancing technical and political concerns (Hefetz and Warner, 2007; Warner, 2008). Managers who give more attention to citizen voice use cooperation at higher levels in 1997 and 2007. In 2002, the year when cooperation was at its lowest level, the voice effect disappeared. Cooperative agreements are often among managers and are subject to little direct oversight from either elected officials or citizens. The drop in level of intermunicipal contracting from 1992 to 2002 may be explained by this lack of oversight, and the rise in 2007 may be associated with increased attention to mechanisms to ensure citizen voice among municipalities that engage in more cooperation. Similarly, we find attention to maintaining avenues for citizen voice is found in the privatization models in the more recent years (2002 and 2007).

The challenge of service equity and coordination across the metropolitan region remains. We see considerable differences in privatization and cooperation by metropolitan status. Privatization is higher in places with higher income and lower poverty in most model years. Intermunicipal contracting appears to be income neutral but favored by places with higher poverty. This suggests some positive equity effects with cooperation. Both market approaches are more common in suburbs which have lower expenditures and higher per capita incomes. Urban centers face more social problems, provide a broader range of services, and cannot impose taxes on suburbs that enjoy service spillovers. In rural areas there is less financial capacity and it is more difficult for residents to take advantage of service spillovers. If these market solutions allow richer suburbs to enjoy efficiency gains while preserving the benefits of local voice and control, they actually may contribute to the perpetuation of political fragmentation as suburbs will have little incentive to cooperate with their higher cost urban and rural neighbors.

One promise of market forms of service delivery is that they could preserve local voice and diversity while still meeting the challenges of regional service coordination. Our models over the last decade show unpromising results regarding voice, efficiency, and equity. Intermunicipal contracting and privatization are both just partial measures. Privatization is favored by richer communities. Although cooperation is income neutral and actually favored by smaller rural and poorer communities (Warner, 2009), it still may not be sufficient to resolve

coordination problems at either the technical or the political level. When intermunicipal contracting is technical in form, single function, and without direct public accountability, it can fortify metropolitan divisions (Frug, 2002), and the continued fragmentation may frustrate efforts to achieve economies of scale and scope (Holzer and Fry, 2011). Frug (2002) argues that a system based on democratic participation and subject to public accountability is required.

The appeal of market solutions is that they are voluntary, flexible, and efficient. But solutions to the challenge of metropolitan regional coordination must be effective as well. Market actors naturally seek opportunities with higher marginal returns. Despite the popularity of market solutions, their limited efficiency, equity and voice gains suggest some form of multifunctional regional government is still necessary.

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