Fiscal Pressures and the Privatization of Local Services

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The privatization movement appears to have lost some momentum in the United States over the 1990s. Although local governments continue to look for ways to deliver services more efficiently by using private contractors, the pace at which they are issuing contracts has slowed. Recent surveys show that about one-quarter of responding cities and towns are increasing outside contracting, down from almost 40 percent in the early 1990s, and very comparable to the percentages reported a decade ago (National League of Cities 1997).

In part, the trends may reflect political realities. Public employees naturally are concerned about losing their jobs, and they constitute a sizable share of the electorate. The limited role of outside contractors may also reflect economic pragmatism, especially in the face of greater scrutiny of past efforts to privatize services. For example, the publication *State Policy Reports* concluded from a broad review of government practices that it had become clear that "the major benefits of privatization are realized only by the introduction of competition, not by substituting private monopoly providers for public monopoly providers" (April 1997, p. 19). It went on to tout the takeover of the Shoreham nuclear power plant by the Long Island Power Authority as a key example of a shift of functions from private companies to government agencies that would result in savings for consumers. Furthermore, a recent in-depth review of three privatization experiences points out the administrative complexity of overseeing private contractors and concludes that "problems of accountability and control can be daunting" (Sclar 1997).

Another influence may be the improving fiscal position of local governments. In 1991, nearly 80 percent of cities and towns responding to the National League of Cities indicated that they currently were less able to meet their financial needs than in the prior year. This proportion fell in subsequent years, and by the 1997 survey, 68 percent of cities and towns reported they were *better off* financially than in 1996. To the extent privatization has been a response to fiscal pressures, the growing fiscal

comfort of local governments would lessen the degree to which they seek out lower-cost providers.

This article examines the degree to which fiscal distress and other factors have served as an impetus to privatization. It begins by reviewing two econometric studies of local government privatization efforts, as measured in the 1987 Census of Governments. It goes on to review trends in outside contracting by cities and towns between 1987 and 1992 and uses regression analysis to sort out the various influences. (1992 is the latest year for which Census data are available.) The results confirm that fiscal pressures, as evidenced by heavy debt burdens, did spur privatization in the early 1990s. To put the analysis of contracting into perspective, the article then examines localities' decisions to drop services altogether. Contracting out and reducing services appear to have been alternatives over this period; cities and towns tended to choose one or the other course of action, not both.

Literature Review—What Do We Know About Privatization Motives?

According to the relatively sparse statistical literature, a variety of factors have influenced the methods by which local services are delivered in the United States. One study concentrated on cities and towns, another on counties.

Kodrzycki (1994) posited that the economic benefits and costs of privatization were likely to differ across communities, which would account for some of the differences in contracting patterns. Her regressions used 1987 data on cities and towns from the Census of Governments. All else equal, contracting should be more likely in cases where in-house provision of services is relatively expensive compared to using outside vendors. Kodrzycki confirmed that contracting was more prevalent in cities and towns paying high wages to their own employees. Governments serving small populations, but located in metropolitan areas, also had a higher-than-average propensity to contract out. These governments would, in some cases, have difficulty achieving scale economies on their own but would tend to have access to a sufficient number of contractors to ensure competitive pricing. The study also indicated that contracting was more likely in cities and towns providing a wide range of services. Kodrzycki posited that local governments were better able to make cost comparisons across programs in these cases. At the same time, a wide scope made it less likely that civil service rules would produce desirable results for all programs. Attitudes regarding public priorities also played a role, in addition to the economic variables. Places that devoted a relatively large share of resources to basic public services such as police and fire protection were more likely to contract out than places where government spent relatively heavily on redistributive programs.

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López-de-Silanes, Shleifer, and Vishny (1995) put even greater emphasis on non-economic determinants of privatization decisions. Their study used 1987 Census data on counties, with some additional analysis of changes in contracting patterns between 1987 and 1992. Their results are consistent with the view that privatization decisions are made by balancing political costs and benefits. On the one hand, politicians derive benefits from in-house provision of public services, including political patronage and support from public employee unions. On the other hand, they may pay a political cost if in-house provision results in expensive government. The relative magnitudes of these benefits and costs are affected by state laws governing local governments. Specifically, López-de-Silanes, Shleifer, and Vishny found that counties were more likely to contract out in 1987 if they were located in states that required use of a merit system in hiring, set purchasing standards such as requirements for competitive bidding, and forbade political activity and strikes by government employees. Contracting was less likely in states that gave counties budgetary leeway—such as allowing them to undertake short-term borrowing—and more likely where they were subject to a balanced budget law. Labor market conditions also mattered; governments in areas with a high rate of unionization were less likely to contract out. López-de-Silanes, Shleifer, and Vishny were relatively unsuccessful in explaining why counties shifted from in-house to private provision or vice versa between 1987 and 1992. However, they did note that governments were more likely to hire contractors for newly provided services in this period.

Taken together, the Kodrzycki and López-de-Silanes, Shleifer, and Vishny studies point to the

complexity of contracting decisions. They find that the costs and benefits of privatization have both economic and non-economic dimensions, and that localities take both sets of factors into account. At the same time, these studies provide relatively little evidence on how the fiscal position of local governments influences their decision on whether or not to privatize service delivery. López-de-Silanes, Shleifer, and Vishny indicated that counties subject to budget constraint laws were more likely to contract out for services, but they did not investigate the extent to which such constraints were likely to be binding.

Furthermore, these studies neglect a more fundamental form of privatization: dropping public provision of services. Concentrating on cross-sectional differences across localities, Kodrzycki and López-de-Silanes, Shleifer, and Vishny do not investigate how governments decide between turning to private *contractors* versus private *markets* during a given time period.

Connections between fiscal distress and contracting, and between fiscal distress and service reductions, are implied in the annual reports of the National League of Cities in the late 1980s and early 1990s. The League found that "after a substantial downturn in 1990, cities' fiscal positions did not show much improvement for the next two years" (Pagano 1993, p. v), and its survey suggested that conditions would continue to be adverse for at least another year. It indicated that, in 1993, approximately 41 percent contracted out services during the past 12 months, up from 28 percent five years earlier.[1] In dealing with deteriorated financial conditions, the only steps that were more popular were "reduced growth of operating spending" (72 percent), "reduced actual level of capital spending" (55 percent), and "increased level of fees/charges" (52 percent).

Contracting Trends, 1987 to 1992

The most comprehensive source of information on privatization activity by local governments is the quinquennial Census of Governments. The 1987 Census was the first to inquire as to whether or not the locality provided certain services and, if so, whether they were provided exclusively by government employees or partially or totally contracted out.[2] The services and facilities were the following: airports; electric power; fire protection; gas supply; hospitals; landfills; libraries; nursing homes; public transit; sewerage system; stadiums, auditoriums, and convention centers; and water supply.[3]

Of the 1,071 cities and towns with population of at least 25,000, the Census found that 411 (38 percent) contracted out for at least one service in 1987. By 1992, this number had grown to 505 (47 percent). Table 1 shows a further breakdown of privatization trends. From 1987 to 1992, a total of 171 localities (16 percent) switched from in-house provision to outside contracting for at least one service, with 35 (3 percent of the total sample) making such a change for more than one service.[4]

Larger communities were somewhat more likely to switch to contracting than smaller communities: 18 percent of those with population of at least 50,000 versus 14 percent for those with population below 50,000. There were sharp differences according to the number of services provided. For example, 26 percent of localities providing at least eight of the twelve services in 1987 switched to outside contractors in the 1987–92 period, versus only 18 percent providing four to seven services and 10 percent providing fewer than four services.

Privatization trends also differed by type of service, as indicated in the top panel of Table 2. The most common services to be newly contracted out were sewer systems (47), landfills (39), water (30), libraries (24), airports (23), and stadiums and other similar facilities (21). No city or town switched to outside contractors for nursing homes. But many more cities

[1] There is some confusion about whether local governments were queried about whether they contracted out for services or whether they had increased or decreased their use of contracting. The National League of Cities report for 1990 indicated specifically that "The survey *did not* ask if new services had been contracted out during the past year, but whether 'During the past year your city has contracted out services'" (p. 22). However, the 1997 report labels the current and historical data "Increase contracting out" (p. 18).

[2] For a further summary of the 1987 responses, see Kodrzycki (1994). Even though the Census is used to measure "privatization," some contracts were with other governments rather than private entities.

[3] The 1992 Census added three additional services: ambulances, solid waste management, and road maintenance, and asked whether or not the local government owned the assets used to provide services.

[4] Almost 14 percent made the opposite type of change, from outside contractors to in-house provision, for at least one service. The difference between the number switching to outside contracting and the number switching to in-house provision does not equal the net change in the number of governments using outside contractors. For example, some governments that started using outside contractors for a particular service may already have been using contractors for other services. Also, some governments that stopped using outside contractors for a particular service may have continued to use them for other services.

Table 1
Summary of Privatization Trends, 1987 to 1992, for Municipalities and Townships with a 1986 Population of 25,000 or More
Number of Governments, Percent of Total in Parentheses.

	All Governments	By Population:		By Number of Services:		
		25,000 to 50,000	50,000 and over	Fewer than 4	4 to 7	8 and over
Switched to Contracting for at Least 1 Service	171 (16.0)	85 (14.3)	86 (18.1)	32 (10.0)	115 (17.5)	24 (26.4)
Switched to Contracting for More than 1 Service	35 (3.3)	17 (2.9)	18 (3.8)	2 (.6)	24 (3.6)	9 (9.9)
Dropped Provision of at Least 1 Service	341 (31.8)	178 (29.9)	163 (34.2)	60 (18.7)	229 (34.8)	52 (57.1)
Dropped Provision of More than 1 Service	103 (9.6)	51 (8.6)	52 (10.9)	6 (1.9)	58 (8.8)	39 (42.9)
Memo: Number of Governments	1071	595	476	321	659	91

Source: U.S. Bureau of the Census (1987, 1992).

and towns provide sewer service, water, and libraries than provide landfills, airports, stadiums, and nursing home services. The last column shows the number of governments switching to outside contractors as a percentage of those who provided the service in 1987 and continued to provide it in 1992 (either via their own employees or outside contractors). In percentage terms, hospitals and landfills were by far the most likely to be contracted out over this time period—14 and 12 percent, respectively. Stadiums, airports, public transport, and sewers were next; between 6 and 9 percent of cities and towns providing these services switched to outside employees. Very low rates of privatization were reported for fire protection, the most commonly provided type of service, and for electricity.

Regression Analysis

To further sort out the determinants of changes in contracting, a series of probit regressions were run, with the dependent variable equal to 1 if the locality switched from in-house provision of services to outside contracts for one or more services, and 0 otherwise. The sample was limited to the 750 municipalities and townships providing at least four of the twelve possible services in 1987. Of these governments, 19 percent switched to outside contractors for at least one service that had previously been performed by its own employees. Results also are shown for the subsample of 374 places with population of 50,000 and over, of which 21 percent switched to outside contractors during this period.[5]

Comparison to 1987

The first exercise was to determine whether factors that explained the degree of privatization in 1987 were also helpful in explaining changes between 1987 and 1992. Thus the regression included variables used by Kodrzycki (1994), computed for 1987: average wage for public sector employees, whether or not the city or town was located in a metropolitan area, population, the percent of public noneducational employees in the state who are unionized (computed separately for municipalities and townships), the rate of population growth over the five-year period, and the number of services provided.[6] In addition, the regression included the four variables on state laws governing city and town practices from the López-de-Silanes, Shleifer, and Vishny study. (For further description of all the variables used in the regressions, see Appendix Table 1.)

[5] Other regressions, not shown, examined decisions to switch to contractors for individual services. Although different factors may influence the choice of delivery mode for different services, this is difficult to determine with a high degree of confidence using the current sample. This is because, for any one service, relatively few governments switched delivery modes over the five-year period studied.

[6] Alternative versions of the regression included and excluded regional dummies, but the regional dummies were never significant.

Table 2
Changes in Service Delivery, 1987 to 1992, by Type of Service

Services Contracted Out

Service (in order of percent contracted)	Number of Governments That Switched to Contracting Out Service	Number of Governments Providing the Service (any form) in Both Years	Percent Switching to Contracting
Hospitals	5	35	14.3
Landfills	39	332	11.7
Stadiums, etc.	21	227	9.3
Airports	23	295	7.8
Public Transport	17	253	6.7
Sewer System	47	815	5.8
Gas	2	50	4.0
Water	30	772	3.9
Libraries	24	635	3.8
Fire Protection	14	969	1.4
Electricity	2	144	1.4
Nursing Homes	0	17	0

Services Dropped

Service (in order of percent dropped)	Number of Governments That Dropped Service	Number of Governments Providing the Service (any form) in 1987	Percent Dropping
Nursing Homes	31	48	64.6
Hospitals	43	78	55.1
Gas	43	93	46.2
Landfills	108	440	24.5
Stadiums, etc.	63	290	21.7
Electricity	37	196	18.9
Public Transport	52	305	17.0
Airports	40	335	11.9
Libraries	66	701	9.4
Sewer System	77	889	8.7
Water	55	827	6.7
Fire Protection	36	1005	3.6

Source: U.S. Bureau of the Census, Census of Governments, machine readable data. Sample consists of all municipalities and townships with a 1986 population of at least 25,000.

All in all, these variables could not explain changes in behavior between 1987 and 1992 (Appendix Table 2). The only variable with a significant impact was the number of services provided in 1987.[7] As in the 1987 cross-section, the sign was positive: Places that had been providing more services were more likely to switch to private contractors. Of the political variables, the one for state laws allowing local government employees to strike was negatively correlated with moves to privatize, but its coefficient was only slightly greater than the standard error. The effects of the remaining political variables were even more uncertain.[8]

These results suggest that shifts in service delivery patterns might be explained by turning to additional beginning-of-the-period variables omitted in the prior study or by examining developments after 1987. Several new specifications were tried, and the findings are shown in Table 3. In addition to these regressions, other alternatives included the political variables from Appendix Table 2 or state dummies. These latter specifications are included in the discussion below to the extent they produced substantially different results.

Number of Services

The first regression in Table 3 scraps all economic variables, and includes two variables related to local government services. First is the number of services contracted out in 1987. If this enters positively, it would signal that 1987–92 trends in part reflect favorable experiences with privatization—that is, localities already making substantial use of private contractors in 1987 tended to expand their use. A negative sign would indicate some retrenchment on the part of cities and towns that had privatized, as well as a tendency for those making little or no use to catch up to the norm. The second variable is the total number of services added between 1987 and 1992. In examining time trends over this period, López-de-Silanes, Shleifer, and Vishny had noted that new services were dispro-

[7] In the subsample with population of 50,000 and over, the share of expenditures on core functions (police and fire) was *negatively* correlated with shifts to outside contractors, in contrast with the positive relationship found in Kodrzycki (1994).

[8] Separate regressions indicated that the percent change in average public wages between 1987 and 1992 was also an unreliable predictor of privatization.

Table 3
Regression Results: Probability of Switching to Outside Contractors, 1987 to 1992

	Full Sample of Cities and Towns				Population 50,000 and Over			
Independent Variable	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Number of services contracted out, 1987	.0760 ** (.0366)	.0754 ** (.0368)	.0848 ** (.0384)	.0840 ** (.0385)	.0769 (.0513)	.0773 (.0515)	.0797 (.0532)	.0747 (.0541)
Change in number of services provided, 1987 to 1992	.0769 *** (.0254)	.0769 *** (.0256)	.0777 *** (.0263)	.0827 *** (.0263)	.0799 ** (.0332)	.0809 ** (.0334)	.0851 ** (.0350)	.0908 *** (.0352)
Unemployment rate, 1987		−.0423 * (.0233)	−.0293 (.0239)	−.0327 (.0242)		−.0276 (.0356)	−.0157 (.0368)	−.0277 (.0378)
Change in unemployment rate, 1987 to 1992		−.0136 (.0234)	−.0036 (.0244)	.0034 (.0247)		−.0085 (.0353)	.0033 (.0372)	.0316 (.0380)
Budget surplus relative to expenditures, 1987			−.6362 (.5267)				−.5168 (.8155)	
Change in budget surplus ratio, 1987 to 1993			−.7381 * (.4182)				−1.248 * (.7169)	
Interest on general debt relative to general revenues, 1987				1.248 * (.6901)				3.915 *** (1.110)
Change in general interest ratio, 1987 to 1992				1.012 (1.141)				3.826** (1.601)
Adjusted revenue burden, 1987			2.119 (2.849)	.6372 (2.840)			2.018 (4.833)	.1560 (4.924)
Percent change in per capita adjusted revenues, 1987 to 1992			.0012 (.0016)	.0009 (.0015)			.0022 (.0032)	.0036 (.0033)
Expenditures on basic services relative to income, 1987			−29.479 ** (14.424)	−25.661 * (14.217)			−32.374 (20.446)	−30.679 (20.388)
Percent change in per capita expenditures on basic services, 1987 to 1992			−.0046 ** (.0022)	−.0038 * (.0022)			−.0033 (.0034)	−.0023 (.0034)
Constant	−.9945 *** (.0674)	−.7197 *** (.1707)	−.4452 * (.2335)	−.5572 ** (.2421)	−.9302 *** (.0932)	−.7538 *** (.2558)	−.5274 (.3534)	−.9148 ** (.3757)
Pseudo R-squared	.014	.019	.033	.033	.016	.018	.040	.062
Number of observations	750	750	730	730	374	374	367	367

Standard errors in parentheses.
***significant at 1 percent level
**significant at 5 percent level
*significant at 10 percent level
Source: Author's calculations. Sample consists of all municipalities and townships providing at least 4 services in 1987.

portionately provided by outside contractors, presumably because the opposition was less than in the case of services already provided by public employees. Because the current regression looks at changes in delivery mode only for services that were provided in the past, this variable is a test of whether a spillover effect is present for existing services. That is, are governments that are expanding their services offerings (and therefore more likely to contract out) also more likely to privatize existing service offerings?

The results, reported in Table 3, indicate positive effects for both service variables: Experience with contracting led to more contracting, and governments

offering an expanding set of services were more likely to privatize existing services. (The coefficient for the number of services contracted out in 1987 was not significantly different from zero in the case of larger cities and towns, however.) These findings indicate that privatization decisions are dynamic, depending both on prior history and on ongoing service offerings.

Economic Conditions

The next experiment was to test the effects of general economic conditions. This was measured by the county unemployment rate in 1987 as well as the change in the jobless rate between 1987 and 1992. López-de-Silanes, Shleifer, and Vishny found that high unemployment discouraged privatization, and they argued that this was because public employment commonly is seen by politicians as a means to reduce joblessness. On the other hand, to the extent rising unemployment is associated with greater difficulties in balancing the budget, the potential cost saving associated with outside contractors could be an attraction. The average local area unemployment rate was 6.2 percent in 1987, but it rose to 7.6 percent in 1992. High unemployment in 1987 was associated with a lower tendency to contract out in subsequent years (though not significantly so for larger cities and towns), while rising unemployment had a statistically insignificant effect.[9]

Fiscal Distress

The final regressions shown in Table 3 explicitly examine the fiscal position of the locality, in terms of both conditions preexisting in 1987 and the trend in the 1987–92 period, using information from the Census of Governments. Following Bradbury (1982), the study distinguishes between two categories of fiscal problems. "Budgetary distress" refers to difficulty in balancing the budget. Short-term budgetary problems are indicated by the locality's surplus or deficit as a fraction of its budget. An alternative indicator of budgetary distress is the locality's interest on general debt relative to general revenues; to the extent a locality repeatedly has an unbalanced budget, this would show up as high debt-related costs. On average, localities had surpluses equal to 2 percent of expenditures in 1987, but by 1992 they had small deficits. Interest on general debt averaged about 10 percent of general revenues in both 1987 and 1992. In both years, the differences among localities were considerable. For example, in 1987, the 25th percentile locality had an interest-to-revenue ratio of 5 percent, while the 75th percentile locality was at 14 percent.

Bradbury's concept of "citizen fiscal distress" refers to potential longer-term difficulty in providing adequate local public services at a reasonable cost to residents. Signs of citizen fiscal distress include a high tax burden or high costs for basic services. To measure tax burden, the regressions included each locality's own-source revenues relative to total household income, multiplied by the fraction of its total expenditures for purposes other than education. The adjustment of own-source revenues for the mix of spending is an attempt to correct for differences in governmental responsibilities. On the East Coast, many cities and towns are responsible for public schools. In other parts of the country, education typically is the responsibility of separate school districts. Without the adjustment, localities providing public schooling would appear to be imposing higher burdens on their citizens than localities without these expenditures.[10] To measure spending on basic services, the regressions included the share of household income spent on police and fire, for those cities and towns providing both services.

The household income concept in these calculations is 1989 money income, as measured in the 1990 Census of Population. Because income data for local areas are available only on a decennial basis, the percent change in adjusted revenue burden and the percent change in basic expenditures from 1987 to 1992 are computed using per capita revenues and per capita expenditures, respectively, in the two years.

Own-source per capita revenues, multiplied by the share of expenditures not directed at education, averaged 4 percent of income, and spending on basic services averaged 1 percent of income in 1987. Aver-

[9] One caveat is that a conceptual revision in 1990 makes the 1992 unemployment rate data not strictly comparable with the 1987 data. This may help to account for the statistically insignificant finding for the change in unemployment. In the versions that included dummy variables, the standard error for the level of unemployment was higher than shown in Table 3—especially in the specification using state dummies. Thus, it is difficult to disentangle the effects of local versus statewide economic conditions.

[10] An alternative adjustment took into account broader sources of differences in local government responsibilities in different parts of the country. Each locality's own-source revenue was multiplied by the ratio of total state and local own-source revenue to total city and town own-source revenue in the state, relative to the same ratio for the nation as a whole. The results did not differ materially from those reported.

age own-source revenues per capita and basic spending per capita each rose over the next five years, by 45 and 41 percent, respectively. These increases exceeded the estimated national inflation rate for government purchases of 18 percent over this period. Thus, tax burdens and basic spending were both rising in real terms, indicating that on the whole local governments exhibited more citizen fiscal distress in 1992 than in 1987.[11]

To some degree, as pointed out by Bradbury, budgetary fiscal distress and citizen fiscal distress are alternatives. For example, a locality may incur deficits because the government is reluctant to impose higher taxes or reduce expenditures. Indeed, the regressions indicate that these assessments of fiscal condition had different influences on privatization decisions. Some cities and towns reacted to prolonged budgetary fiscal distress by privatizing services. Rising deficits (or falling surpluses) between 1987 and 1992 as well as high interest costs in 1987 were significant spurs to increasing a locality's reliance on outside contractors. Increases in interest costs relative to revenues between 1987 and 1992 also had a significant positive effect for larger cities and towns. Furthermore, with the inclusion of the fiscal variables, the unemployment rate was never significant.

Of the two citizen fiscal distress measures, the revenue burden never mattered, according to the regressions. High and/or rising per capita expenditures on police and fire, on the other hand, were associated with a *lower* tendency to privatize service delivery, all else equal. (This effect was not significant in the sample for population of 50,000 and over, however.) Thus the regressions indicate that, in the absence of budgetary problems such as repeated deficits, high public spending did *not* tend to lead to the adoption of a different mode of delivering services. Instead, it may actually indicate cases where the populace is supportive of public employees. In the sample, high per capita expenditures on police and fire are positively correlated with a high public wage and high unionization rates in the public sector.[12]

Although the regressions identify some factors that influenced local government privatization trends, on the whole they indicate that the timing of shifts in delivery mode is very difficult to explain by indicators that are available to researchers. The adjusted R^2 in these regressions is no higher than 0.06, compared to values up to about 0.30 in Kodrzycki (1994).[13] This generally accords with survey data. For example, when the National League of Cities inquired of its members in 1991 why they had turned to contracting, 85 percent indicated that factors other than specific changes in federal and state policies had played a role.

An Additional Perspective: Contracting Out versus Cutting Back

When a local government turns to outside contractors to perform services formerly provided by public employees, this is just one form of privatization. Another, more radical form is to drop the service altogether. In that case, residents are left with the option of seeking these services from other providers, without the intervention of their local government to assure that the service is provided according to given specifications and without public funding. For example, in the case of public transit, a local government that uses outside contractors would typically specify which routes must be covered and possibly the fare that may be charged. But if the government simply drops this service, decisions on routes and fares would be left up to private firms. Furthermore, there would be no guarantee that mass transit would be provided at all.

Dropping services was more common than switching to outside contractors during the 1987–92 period. Table 1 showed that 341 (32 percent) of the 1,071 places with population of at least 25,000 dropped at least one service, with 103 (10 percent) dropping more than one service. As in the case of contracting, dropping services was somewhat more common among larger cities and towns, and considerably more common among places that had been providing many services. Of the cities and towns that had provided at least eight of the twelve services covered in the Census of Governments, 57 percent dropped at least one service and 43 percent dropped more than one.

The types of services most likely to be dropped (in percentage terms) included some that were also most likely to be contracted out during this period—

[11] On the whole, local government revenues and basic expenditures also rose somewhat relative to household income. Nationally, personal income increased 36 percent between 1987 and 1992 (*Economic Report of the President* 1997).

[12] High per capita expenditures on police and fire were also positively correlated with the share of total non-educational expenditures on police and fire, which was negatively correlated with privatization for larger cities and towns (see Appendix Table 2).

[13] In the specifications that included state dummies, the adjusted R^2 was as high as 0.15, despite the fact that no individual state coefficient was significantly different from zero. However, it is hard to attach a structural interpretation to this specification, as the state dummies could be proxying for a variety of economic, political, and other influences.

hospitals, landfills, and stadiums (Table 2). However, whereas no government decided to contract out for nursing homes, almost two-thirds of those running nursing homes in 1987 were no longer running them as of 1992. The strong trend toward selling off or shutting down hospitals and nursing homes, as well as bringing in outside contractors to run hospitals, probably reflects the difficulties cities and towns faced in getting sufficient reimbursement at a time of very rapid health care inflation. The moderation in health care costs in more recent years may be an additional factor serving to slow the pace of privatization.

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Local governments appear to have viewed shifting to outside contractors and dropping services as alternatives. Only 4 percent (41 places) did both. To explore this interaction further, probit regressions were run to explain the probability of dropping one or more services (Table 4).[14] They indicate that cities and towns were more likely to drop services between 1987 and 1992, the more services they had provided initially. They were less likely to drop services if they switched to outside contractors. Controlling for these factors, rising county unemployment was more likely to lead to fewer services being provided, presumably because it accentuated other problems. However, the fiscal variables used above had an insignificant effect when entered together with unemployment (except for the level and change in the budget surplus ratio in the full sample; these had opposite signs from what was expected). When state dummies were included, rising unemployment was no longer a significant determinant of service cuts, but several state dummies were themselves significant. Most consistently, over this time period, Iowa, Oklahoma, and Texas did not eliminate services to the extent the other explanatory variables would have indicated.

[14] Another approach would be to estimate the probabilities of switching to outside contractors and dropping services in a simultaneous model, such as a multinomial logit. However, this would entail developing a more complex model because the specification used in Table 3 is not totally appropriate for explaining the decision to eliminate services. For example, the number of services contracted out in 1987 was used to explain contracting decisions over the subsequent five years but presumably does not influence whether or not services would be dropped.

Conclusions

Cities and towns turned to outside contractors to provide public services in increasing numbers in the late 1980s and early 1990s, but recent surveys suggest that the pace of privatization has slowed. This paper has attempted to explore the reasons behind these changes, relying on information collected by the Census of Governments in 1987 and 1992.

The study indicates that, in general, it is difficult to explain why privatization occurred within a given time interval. Such changes may have had to do with idiosyncratic political, economic, or business developments that are difficult for researchers to capture by means of regression analysis. For any given local government, a case study may be needed to pinpoint the determinants. However, the statistical analysis did point to some common threads in the period 1987 to 1992. First, prior experience with privatization mattered. For the most part, localities' own experiences with privatization appear to have been positive, since those that had already turned to outside contractors by 1987 tended to be more willing to expand their use of outside contractors over the subsequent five-year period. Moves to privatize existing services were also more likely in communities that were expanding their service offerings over this period.

Another key finding related to the role of budgetary pressures. Cities and towns with rising deficits (or falling surpluses), as well as those with high interest costs relative to their revenue stream, were more likely to turn to outside contractors. Although previous studies have concluded that a variety of political and economic factors influence privatization decisions, the current study shows that cities and towns do tend to view outside contractors as a means of reducing costs of government operations, and that this is a particularly useful option at times of fiscal stress.

Further regressions indicated that, to some degree, switching to outside contractors was an alternative to dropping services altogether. Cities and towns

Table 4
Regression Results: Probability of Dropping Services, 1987 to 1992

	Full Sample of Cities and Towns				Population 50,000 and Over			
Independent Variable	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Number of services provided, 1987	.1795 ***	.2038 ***	.2081 ***	.2077 ***	.1875 ***	.2105 ***	.2191 ***	.2258 ***
	(.0298)	(.0310)	(.0321)	(.0320)	(.0405)	(.0422)	(.0436)	(.0442)
Switched to outside contractors, 1987 to 1992	−.4379 ***	−.4834 ***	−.4581 ***	−.4707 ***	−.5305 ***	−.5571 ***	−.5547 ***	−.5470 ***
	(.1297)	(.1322)	(.1340)	(.1339)	(.1791)	(.1812)	(.1838)	(.1863)
Unemployment rate, 1987		−.0400 **	−.0323	−.0303		−.0098	−.0063	−.0071
		(.0195)	(.0202)	(.0202)		(.0331)	(.0339)	(.0341)
Change in unemployment rate, 1987 to 1992		.0525 **	.0499 **	.0487 **		.0813 **	.0877 **	.0824 **
		(.0210)	(.0219)	(.0222)		(.0335)	(.0354)	(.0360)
Budget surplus relative to expenditures, 1987			.7964 *				.2341	
			(.4486)				(.6590)	
Change in budget surplus ratio, 1987 to 1992			.5637 *				.3691	
			(.3334)				(.4819)	
Interest on general debt relative to general revenues, 1987				−.1602				−.5156
				(.6519)				(1.137)
Change in general interest ratio, 1987 to 1992				−.6344				−1.728
				(1.103)				(1.826)
Adjusted revenue burden, 1987			−1.581	−.6307			−3.516	−3.237
			(2.420)	(2.412)			(4.521)	(4.325)
Percent change in per capita adjusted revenues 1987 to 1992			.0008	.0009			−.0021	−.0019
			(.0014)	(.0014)			(.0030)	(.0030)
Expenditures on basic services relative to income, 1987			−12.628	−15.979			−18.113	−18.555
			(11.996)	(11.829)			(18.121)	(17.719)
Percent change in per capita expenditures on basic services, 1987 to 1992			−.0002	−.0008			−.0002	−.0010
			(.0019)	(.0019)			(.0033)	(.0032)
Constant	−1.262 ***	−1.223 ***	−1.143 ***	−1.113 ***	−1.361 ***	−1.539 ***	−1.270 ***	−1.249 ***
	(.1727)	(.2195)	(.2573)	(.2629)	(.2471)	(.3369)	(.3923)	(.4034)
Pseudo R-squared	.045	.062	.067	.064	.057	.075	.087	.088
Number of observations	750	750	730	730	374	374	367	367

Standard errors in parentheses.
***significant at 1 percent level
**significant at 5 percent level
*significant at 10 percent level
Source: Author's calculations. Sample consists of all municipalities and townships providing at least 4 services in 1987.

facing deteriorating local economic conditions were more likely to reduce their service offerings if they had not increased their reliance on contractors.

What do these results indicate about the apparent moderation of interest in privatization in recent years? Any inferences necessarily must be tentative until subsequent data are released in the 1997 Census of Governments. One possibility is that, in contrast with the situation in the early 1990s, governments may be faced with a more restricted set of cases in which the economic and political benefits of privatization clearly outweigh the costs. Another possibility supported by the statistical analysis is that the improved fiscal position of local governments in recent years makes privatization and other cost-cutting measures less pressing.

Appendix Table 1:
Description of Regression Variables

Variable	Date and More Detailed Definition	Data Source	Mean (full sample) n= 750	Mean (1986 population >49,999) n = 374
Switched to outside contractors	For one or more service which was provided in-house in 1987	b	.19	.21
Dropped provision of services	For one or more service which was provided in-house or contracted in 1987	b	.38	.37
Average wage in public sector	Average October 1987 earnings of full-time employees, thousands of dollars	b	2.09	2.19
Percent change in public sector average wage	Between 1987 and 1992	b, c	29.4	29.7
Location in metropolitan area	Dummy = 1 if the municipality or township is located in a metropolitan statistical area	b	.87	1
Population	1986 population	b	113,967	193,949
Unionization	Percent of public noneducational employees who are organized, by state. Computed separately for municipalities and townships	b	36.7	37.0
Population growth	Population growth rate from 1986 to 1991	b, c	4.0	3.5
Concentration on health and human services	Expenditure on public welfare and health and hospitals as a percent of total expenditures less education	b	4.6	4.7
Concentration on core functions	Expenditure on police and fire protection as a percent of total expenditures less education	b	24.7	24.7
Number of services provided	Sum of services provided in-house or contracted	b	5.7	5.9
State requires a merit system in hiring	1990	a	.45	.44
State sets purchasing standards for local governments	1990	a	.75	.75
State forbids political activity by city or county employees	1990	a	.57	.58
State allows certain groups of public employees to strike	1990	a	.03	.04
Number of services contracted out	1987	b	.94	.87
Change in number of services provided	Between 1987 and 1992	b, c	.23	.38
Unemployment rate	County level unemployment rate	d	6.2	6.1
Change in unemployment rate	Between 1987 and 1992	d, e	1.4	1.3
Budget surplus relative to expenditure	Fraction, 1992	b	.02	.03
Change in budget surplus ratio	Between 1987 and 1992	b, c	−.03	−.03
Interest on general debt relative to general revenues	Fraction, 1987	b	.10	.11
Change in general interest ratio	Between 1987 and 1992	b, c	−.004	−.001
Adjusted revenue burden	Own source general revenue relative to 1990 money income, adjusted for education, 1987	b, f	.04	.04
Percent change in adjusted revenue burden	Between 1987 to 1992	b, c	40.2	34.4
Basic services relative to income	Basic service expenditure, 1987, relative to money income, 1990.	b, f	.01	.01
Percent change in per capita expenditure on basic services	Between 1987 and 1992	b, c	41.0	37.5

Source: a: U.S. Advisory Commission on Intergovernmental Relations (1993). b: U.S. Bureau of Census, Census of Governments (1987). c: U.S. Bureau of Census, Census of Governments (1992). d: U.S. Bureau of Labor Statistics (1987). e: U.S. Bureau of Labor Statistics (1992). f: U.S. Bureau of Census, Census of Population and Housing (1990).

Appendix Table 2

Regression Results: Probability of Switching to Outside Contractors

	Full Sample		Population 50,000 and Over	
Independent Variable	Coefficient	Standard Error	Coefficient	Standard Error
Average wage in public sector	−.0752	.1735	−.1135	.2267
Location in metropolitan area	.1739	.1886		
Population	1.39e-07	1.59e-07	1.01e-07	1.61e-07
Unionization	.0019	.0034	.0044	.0046
Population growth	−.0010	.0060	−.0014	.0100
Number of services	.1370***	.0337	.1294***	.0455
Concentration on health and human services	−.0009	.0057	−.0131	.0094
Concentration on core functions	−.0102	.0087	−.0265***	.0126
State requires merit system in hiring	−.0075	.1594	−.1138	.2153
State sets local purchasing standards	.0455	.1495	.2488	.2067
State forbids political activity for public employees	−.0232	.1469	−.1813	.1986
State allows public employees to strike	−.4124	.4049	−.3878	.4344
Constant	−1.551	.4997	−.8795	.7042
Pseudo R-squared	.042		.064	
Number of observations	644		336	

***significant at 1 percent level.

Source: Author's calculations. Sample consists of all municipalities and townships providing at least 4 services in 1987.

References

Bradbury, Katharine L. 1982. "Fiscal Distress in Large U.S. Cities." *New England Economic Review*, November/December, pp. 33–44.

Economic Report of the President. 1997. Washington, DC: Government Printing Office.

Kodrzycki, Yolanda K. 1994. "Privatization of Local Public Services: Lessons for New England." *New England Economic Review*, May/June, pp. 31–46.

López-de-Silanes, Florencio, Andrei Shleifer, and Robert W. Vishny. 1995. "Privatization in the United States." National Bureau of Economic Research Working Paper No. 5113, May.

Pagano, Michael A. 1991. *City Fiscal Conditions in 1991*. Washington, DC: National League of Cities. July.

_____. 1993. *City Fiscal Conditions in 1993*. Washington, DC: National League of Cities. June.

Pagano, Michael A. with David Shock. 1997. *City Fiscal Conditions in 1997*. Washington, DC: National League of Cities. June.

Peterson, Douglas D. 1990 and earlier editions. *City Fiscal Conditions in 1990*. Washington, DC. National League of Cities. June.

Sclar, Elliott. 1997. "The Privatization of Public Service: Lessons From Case Studies." Washington, DC: Economic Policy Institute.

State Policy Reports. April 1997 (second of two April issues).

U.S. Advisory Commission on Intergovernmental Relations. 1993. "State Laws Governing Local Government Structure and Administration."

U.S. Bureau of the Census. 1987. Census of Governments, machine readable data.

_____. 1990. Census of Population and Housing, machine readable data.

_____. 1992. Census of Governments, machine readable data.

U.S. Bureau of Labor Statistics. 1987. Local Area Unemployment Statistics, machine readable data.

_____. 1992. Local Area Unemployment Statistics, machine readable data.