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Exploring and Explaining Contracting Out: Patterns among the American States

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ABSTRACT

Although a vast literature explores government contracting out for the delivery of publicly financed services, comparatively little of this analysis, whether descriptive or explanatory, focuses on the American states. Accordingly, the present research has two primary goals. It first examines the extent of contracting out by state agencies and the perceived effects of this activity on the quality and costs of service delivery. The second aim is to develop a model of contracting out by state agencies and to test it empirically using appropriate hierarchical linear modeling (HLM) statistical techniques. The analysis incorporates individual agency variables (level I) and contextual information regarding the states (level II). The findings reveal—not surprisingly—that contracting out for the delivery of services by state governments is very common, employed by more than 70 percent of responding agencies. State agencies, however, do not seem to achieve the main goals that are advocated by proponents of contracting out, at least not routinely. About half of the agencies engaged in contracting out for the delivery of services acknowledge improved service quality, but barely one-third report decreased service costs. Results of the HLM analysis indicate that most of the variables that help to explain contracting out by state agencies are agency-specific, and that the state-level contextual variables, with the exception of fiscal factors, play a much smaller role. Consistent with some literature, this overall finding suggests that privatization has entered a new, less ideological phase, in which it has become an accepted practice across the American states, subject mainly to the circumstances of individual agencies.

Research in public administration and allied fields is often castigated for following rather than leading developing trends in practice. That case cannot be made with respect to privatization,

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however, especially public contracting for the delivery of services. Boyne (1998a, 474) argues, "The expansion of contracting out can be viewed as a huge natural experiment that effectively tests the validity of public choice propositions concerning the behavior of public managers who possess monopoly powers. Indeed, seldom has the major practical recommendation of an abstract model of bureaucracy been so widely implemented." Although Boyne (1998a, 1998b) is hardly sanguine regarding the quality of the research and evidence that has been marshaled concerning the privatization of government-financed services, a huge literature flourishes in the area nonetheless. Over the past two decades, scholars have debated the meaning of the term, the causes and consequences of privatization, as well as its advantages and disadvantages. Remarkably, nearly every putative benefit of privatization has also been questioned as a liability (see Chi and Jasper 1998, 2).

Despite this widespread attention, one level of government privatization has attracted considerably less scrutiny: the states. Wallin (1997, 11) reports that several separate reviews of efforts at the state level "have noted the need for more information on what states are doing with privatization, and how they are doing it." Chi (1993, 8) is more emphatic: "It must be pointed out that the privatization issue has been debated largely, if not exclusively, on either theoretical assumptions about or experiences at the federal or local level." This study seeks to fill this gap in our knowledge. Using a broad survey of the heads of agencies from all fifty states conducted in the later part of 1998 and early 1999, this article examines the extent of contracting out for the delivery of services by state agencies and the reported effects of contracting on service costs and quality. Then, based on the survey responses, as well as data collected from other sources, the analysis develops and tests empirically an explanatory model of contracting out by state agencies.

CONTRACTING OUT AS A TOOL OF GOVERNANCE

Numerous definitions of privatization have appeared in the literature. Nearly all of them center on the theme of greater private sector involvement in the delivery of publicly funded services (for example, Auger 1999, 436; Becker 2001, 26; Greene 1996b, 632; Savas 2000; Seidenstat 1996, 464; U.S. General Accounting Office 1997, 1). Privatization encompasses a wide variety of methods and forms, including the sale of state assets, contracting out, deregulation, franchises, grants and subsidies, private donations, service shedding, volunteerism, vouchers, self-service, and user fees (Chi 1993; Chi and Jasper 1998; International City Management Association 1989; Miranda and Andersen 1994; Savas 2000). Despite the apparent heterogeneity of the privatization concept and the various methods for achieving privatization, in the U.S. context especially, this term is usually taken to mean government "contracting out" or "outsourcing" with a for-profit firm, a nonprofit organization, or another government to produce or deliver a service. Although the job of delivering services is contracted out, the services remain public, funded mainly by taxation, and decisions regarding their quantity, quality, distribution, and other characteristics are left to public decision makers (compare Boyne 1998a, 475; Ferris 1986, 289).

Solid justification exists for the common identification of privatization with contracting out in the United States. "In the United States, contracting is the most common means of privatization" (Becker 2001, 4; compare Raffel, Auger, and Denhardt 1999, 430). Throughout most of the world, where governments have operated large numbers of state-owned enterprises (SOEs), privatization has typically taken the form of divestment through the sale or transfer of state assets, although in the United Kingdom, Canada, Australia, and New Zealand, contracting out is employed with increasing frequency (Kettl 2000). In the

United States, governments have had relatively few SOEs, making divestment a rarely employed option and making contracting out the most common form of privatization.

Survey research shows that, by a wide margin, outsourcing is the most frequently used method of privatization in U.S. state and local governments. At the state level, a 1993 Council of State Governments survey revealed that just over 78 percent (78.1 percent) of all privatization activities reported by state government agencies consisted of contracting out; the next most frequent mechanism of privatization cited was the use of grants, which accounted for just 8.5 percent of state privatization activity (Chi 1993, 27, 30; compare Apogee Research 1992). In 1997 a follow-up survey to the 1993 Council of State Governments study confirmed that contracting out accounted for 80 percent of all state agency privatization activities (80.4 percent); the next most frequent method of privatization was again grants and subsidies, at 8.3 percent (Chi and Jasper 1998, 13–14).

At the local level of government, the connection between privatization and contracting out is equally robust. International City/County Management Association surveys of cities and counties found that contracting out is the most common privatization arrangement, and that use of this service-delivery modality by local governments increased significantly between 1982 and 1992 and continued to grow from 1992 to 1997. The surveys also revealed that local governments make minimal use of other alternatives for delivering services, such as vouchers, franchises, concessions, and subsidies (Greene 1996b; Martin 1999; Miranda and Andersen 1994). Kettl (1993) documents the tremendous growth in contracting out by the federal government and the resulting complexity of public service delivery.

These studies and others report many reasons for the interest of governments in contracting out for the delivery of services. Two of the most prominent benefits or motivations cited by public officials for outsourcing are service cost and quality. In fact, Chi and Jasper (1998, 1) begin by noting that "privatization rapidly is becoming a tool states use to save money and provide better services" (compare Seidenstat 1996, 464). In a 1992 survey of state agencies, the most important advantage of contracting expressed by both agency heads and state comptrollers was operating cost savings (Apogee Research 1992, 8). The second most important was higher-quality services. In a 1995 survey of privatization of municipal services in America's largest cities ($N = 66$ of 100 cities), the responses of city officials indicated that reducing costs and improving services were the two most important factors in the decision to privatize (Dilger, Moffett, and Struyk 1997, 23). Greene (2002) cites the desire by state and local officials to enhance efficiency as the chief motivation for contracting out.

According to microeconomic theory and public choice theory, in the presence of competition, government agency contracting for services should result in cost savings or lower spending for those services produced by external providers (Averch 1990; Boyne 1998a; Ferris 1986; Pack 1987). Although this hypothesis is often accepted as a matter of course, empirical studies differ substantially in regard to the amount of cost savings achieved and, in some instances, whether any savings (or even cost increases) might be forthcoming (see Hodge 2000, 107–10, 128–29; Sclar 2000). Dilger, Moffett, and Struyk (1997, 23) write, "Privatization's advocates argue that privatization typically saves cities from 20 to 50 percent of previous outlays." Indeed, Savas (2000, 147) reports that based on a variety of studies from different nations, "savings average about 25 percent for the same level and quality of services, after taking into account the cost of administering and monitoring the contract." Dilger, Moffett, and Struyk (1997) find these estimates inflated, however. In their study of America's largest cities, the estimated cost savings from privatization range from a low of 16.1 percent for municipal support functions to a high of 20.7 percent for public works/transportation.

O'Looney's (1998, 8) assessment of cost savings is consistent with these estimates: "Most economic studies of privatization can cite a 10 to 20 percent economic savings." The 1997 Council of State Governments survey reported that over 60 percent of responding agencies (62.3 percent) estimated cost savings from privatization at 5 percent or less; 19.3 percent reported savings between 6 and 10 percent; 3.9 percent reported 11 to 15 percent savings; and 14.6 percent reported cost savings greater than 15 percent (Chi and Jasper 1998, 12).

Hodge's (2000, 128–29, 155) meta-analysis of contracting studies yields similar estimates of 8 to 14 percent in cost savings through outsourcing, which he adjusts "to a level of around 6 to 12 percent, depending on how the average was taken, and assuming a few percent for the costs of the contracting process." Hodge finds no general difference between cost savings through contracting with private providers and contracting with other public agencies. Sclar (2000, 68) asserts that "although there are clear situations in which contracting works well, there are at least as many, if not more, in which the existence of direct public service is a rational economic strategy." Even Greene (2002, 49–50), who concludes that the evidence of efficiency is favorable toward privatizing municipal services, admonishes that cost savings may often be less than reported, and that greater efficiency is generally a result of competition rather than private service delivery. Given the somewhat mixed evidence regarding the efficiency of contracting out, it is not surprising that some researchers have questioned the methodological rigor and validity of studies that compare public with private service delivery (Barnekov and Raffel 1990; Fernandez and Fabricant 2000; Sclar 2000; Starr 1987).

The effect of contracting out on service quality is equally important as the achievement of cost savings. Students of public sector productivity have long cautioned that a decrease in service costs at the expense of quality or effectiveness is a false economy. As noted above, a rationale often given by public officials for contracting out is to improve the quality of service. Yet, many fewer statistical studies have been conducted on the non-economic impacts of contracting, including the quality of performance. As a result, the effect of contracting on service quality remains largely unknown (Hodge 2000, 136–39).

One study has probed quality effects subjectively by asking city officials to estimate in percentage terms the extent to which privatization "improved service delivery" (from 0 to 100 percent). The average reported improvement by service domain ranged from 24.2 percent in public works/transportation to 27.6 percent in public safety (Dilger, Moffett, and Struyk 1997, 24). Other authors, however, have warned of the negative impact that private service delivery can have on service quality. Kamerman and Kahn (1989), in their analysis of privatized child care programs in North Carolina, find that gains in efficiency were attained through a reduction in the level of service provided, particularly by "creaming off" the easier and less costly cases. Bendick (1989) similarly argues that when contracting out for social welfare services, cost reductions may come at the expense of lower-quality service. In Hodge's (2000, 138–41) meta-analysis of contracting studies, the effect of contracting on service quality was neither positive nor negative, but indistinguishable from zero statistically. He interprets this finding to mean that it should be possible to deliver services more cheaply without sacrificing service quality. Seidenstat (1996, 470) concurs that in the few documented studies, service quality was either improved or not significantly different than when produced publicly.

EVIDENCE OF THE SCOPE AND EFFECTS OF CONTRACTING IN THE AMERICAN STATES

To examine the extent of contracting out by state agencies and the perceived effects of this activity on service cost and quality, we rely on the 1998 American State Administrators

Project (ASAP) survey. The 1998 ASAP surveyed ninety-five different types of agencies in the fifty American states. A total of 3,541 agency heads received the initial mailing. This mailing (in September 1998) was followed by three subsequent mailings to nonrespondents (through January 1999) and produced usable replies from 1,175 agency heads for a response rate of 33 percent.

As in most mail surveys, a higher response rate would have been desirable. Nevertheless, the size and scope of the 1998 ASAP survey compare very favorably with the few other empirical studies of state contracting that are the main sources of knowledge at this level of government. For example, a survey on privatization by Apogee Research (1992) relied on responses from just 158 agencies in twenty-nine states. The Council of State Governments (Chi 1993; Chi and Jasper 1998) has conducted two surveys on privatization: a 1993 survey based on 285 state agencies (339 respondents) and a 1998 survey of 419 agencies (477 respondents). The ASAP survey is much broader with respect to both the number of agency heads included and the agencies they direct. Moreover, an analysis of nonresponse to the 1998 ASAP survey, including a telephone survey of a 7 percent sample of nonrespondents, supports the conclusion that the respondents are representative of the universe of administrators to whom the questionnaires were mailed (Wright and Cho 2001).

According to the responses of the state agency directors to the contracting items on the ASAP questionnaire, the rate of contracting out by state agencies to deliver services to the public is substantial. More than 70 percent of the agencies report engaging in this practice (72.5 percent); about one-quarter of the state agencies do not. This finding is consistent with the high incidence of contracting out that has been established in other surveys of state agencies (Apogee Research 1992; Chi 1993; Chi and Jasper 1998). If, as seems likely, all state agencies engage in some form of privatization, and contracting accounts for approximately 80 percent of state privatization activity (Chi and Jasper 1998, 13–14), then the 1998 ASAP estimate is right on target. State agencies that responded to the ASAP survey contract out most frequently with for-profit businesses (82.9 percent of agencies), followed by nonprofit organizations (71.0 percent) and other governments (61.1 percent). Other research (Choi, Cho, Wright, and Brudney, in press) explores the highly complex patterns of state agencies' contracting out with the different service sectors singly and in combination (for example, contracting with both for-profit businesses and nonprofit organizations), documented by Salamon (2002) in his description of the rich mix of service delivery tools used by U.S. governments.

To assess the depth or intensity of privatization activity, the ASAP questionnaire asked the state agency directors to indicate the percentage of their agency's budget that is allocated to contracts for delivering services to the public. This measure of intensity appears to offer improvement over indicators used in previous studies of state and local contracting, such as the number or percentage of programs or services that are privatized. While program scope and definition are highly variable across states and agencies, a budgetary commitment to contracting out is more concrete, stable, and comparable. In addition, a small number of programs that have a substantial amount of the agency budget allocated to contracting out will be much more important than a large number of contracted programs with a negligible amount of state funding in explaining agency contracting.

Although about 70 percent of state agencies report contracting out for the delivery of services, the responses to the survey show that in most cases the percentage of the agency budget allocated to this practice appears rather modest. More than one-half of the agencies (55.1 percent) contract out 10 percent of their budgets or less, and one-third contract out less than 5 percent of budget. By contrast, about 17 percent of the agencies (16.8 percent) report a very high level of contracting out, amounting to 40 percent of their budget or more. Although the extent of contracting out across state agencies may be broad, the intensity of use as measured by budget percentage is considerably less.

The 1998 ASAP survey also queried the state agency heads regarding the effects of contracting out on two important service outcomes: service quality and cost. With respect to the first criterion, the responses indicate that nearly half the responding agency heads felt that contracting out improved the quality of agency services (49.4 percent). Likewise, less than 10 percent of agency heads felt that contracting reduced service quality (9.2 percent). The remainder reported no impact on quality (35.4 percent). Although care must be exercised in interpreting these subjective responses, the perceptions of service quality found in this study are consistent with some past research (Dilger, Moffett, and Struyk 1997; Seidenstat 1996) and may hearten privatization advocates.

With respect to the perceived effects of contracting out on service costs, however, the responses could be seen as dispiriting to those same advocates. The largest group—just over one-third of the agency heads (34.5 percent)—reported that contracting out had decreased the costs of delivering services. Yet, almost as many reported that contracting had increased service costs (28.8 percent), and another 30 percent of the agency heads (29.5 percent) said that contracting had no effect on costs. As reviewed above, the literature has found a very wide range of experience with the cost implications of contracting out for the delivery of services both within and across service domains (Hodge 2000; Savas 2000). The differences in perceived effects of contracting out with respect to service quality and costs found here should continue to fuel the "great debate" over privatization.

In short, the 1998 ASAP survey of state administrators has enabled us to obtain a substantial and representative approximation of the extent and nature of state-level contracting for the delivery of public services.[1] Several features are prominent and pertinent to the larger controversy surrounding privatization. Contracting out is used extensively by state agencies; about three-fourths of all state agencies employ this "third-party" tool of governance (Salamon 2002). However, the intensity of contracting, as measured as a proportion of agency budget, reveals a distinctively different picture. Over half of all contracting agencies allocate 10 percent or less of their budgets to third-party organizations. By contrast, roughly 30 percent of the contracting agencies devote 10 to 40 percent of their budgets to this form of service delivery, and about 15 percent are heavy contractors, with over 40 percent of the budget going "out the door." Fourth and finally, half of all agencies that engage in contracting for the delivery of services acknowledge improved service quality, but that result may come at a price. Although some 35 percent of agencies report decreased service costs through contracting, about 30 percent reportedly incur increased costs, and another 30 percent report no cost differences attributable to contracting.

EXPLANATORY MODEL OF CONTRACTING OUT ACROSS THE AMERICAN STATES

Our analysis now turns to the question of what factors explain the extent of contracting out by state agencies. To address this question, we develop a two-level explanatory model of contracting behavior. We estimate the model using hierarchical linear modeling (HLM) techniques based on data from the 1998 ASAP survey, as well as supplemental data from other sources. Our aim is to provide a comprehensive model that can explain the percentage of a state agency's budget that is contracted out.

1 For a complete description of the ASAP respondents, see Bowling and Wright 1998.

The explanatory model consists of two levels of analysis, the state level and the agency level. The dependent variable is the percentage of the agency's budget that is allocated to contracts for delivering services to the public (as reported in deciles by the agency heads); the appendix presents the items that assessed agency contracting. The independent variables are grouped into eight categories: service supply and cost factors; public employee strength; political and ideological factors; fiscal factors; reform variables; agency leadership factors; agency attitude toward expansion of budget, programs, and services; and the "overload hypothesis." We also include several control variables, including one variable to control for the influence of federal actions on state agency contracting, a control variable for agency size, and a series of dummy variables to control for the effects of agency type on the dependent variable. Table 1 shows the independent and control variables, by category and level of analysis, and the hypothesized relationship for each variable.

Lynn, Heinrich and Hill (2001) urge scholars to recognize the hierarchical nature of governance. They assert that phenomena at the policy or program level are embedded in a multilevel governance arrangement and are endogenous to the broader context of governance. We therefore adopt a hierarchical, two-level approach to explaining contracting behavior by state agencies. The state-level variables in our model are treated as contextual variables to control for their influence on an agency's decision to contract out.

We use HLM techniques to examine the interaction between the variables pertaining to the individual state agencies and those characterizing the broader aggregates or states (Heinrich 2000, 2002; Heinrich and Lynn 2000, 81; Hox 1994, 1995, 1–7; Hox and Kreft 1994). In the 1998 ASAP data, the responses from the agency heads constitute the individual level (level I) variables. To analyze the impact of contextual variables on each agency's decision to contract out, we further developed the characteristics of states within which state agencies carry out their functional responsibilities. The characteristics of states comprise the contextual (level II) variables. In hierarchical linear modeling each level in the nested data structure is formally specified by its own submodel (Heinrich 2000, 84–85, 2002).[2] We further introduce an unconditional means model or a one-way random effects analysis of

2 The level I submodel in the present study is specified as follows (Singer 1998; Heinrich 2000, 84–85; Hox 1995, 10–23; Littell, Milliken, Stroup, and Wolfinger 1996, 135–69, 253–66):

$$Y_{ij} = \beta_{0j} + \beta_{1j}X_{1ij} + \ldots + \beta_{nj}X_{nij} + r_{ij}, \quad \text{where } r_{ij} \sim iid\ N(0, \sigma^2). \qquad [1]$$

Y_{ij} is a measure of the intensity of contracting out, where i denotes each agency head who responded to the ASAP survey and j denotes the state to which each agency belongs. At level I, we express the intensity of contracting out as a function of an intercept (the estimated state-level intensity of contracting out, β_{0j}), level I variables (X_{1ij} to X_{nij}), and a random error associated with the ith agency head in the jth state (r_{ij}). The subscript j denotes that each state has unique intercepts and slopes.

Our preliminary HLM regression analyses indicate that the model with unique slopes (i.e., randomly varying slopes across states) does not perform well in terms of the fit statistics. For this reason, we assume that only intercepts vary across states. Thus, our level II submodel is the following:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}W_{1j} + \ldots + \gamma_{0n}W_{nj} + u_{0j}, \quad \text{where } u_{0j} \sim iid\ N(0, \omega_{00})$$

$$\beta_{1j} = \gamma_{10} \cdots \beta_{nj} = \gamma_{n0}. \qquad [2]$$

Equation [2] indicates that the intercept in the level I submodel (β_{0j}) is a function of the intercept (the state-level intensity of contracting out, γ_{00}), level II predictors ($W_{1j} \ldots W_{nj}$), and random variance across states (u_{0j}). By combining equation [1] and equation [2], we have the following random intercept and fixed slope model:

$$Y_{ij} = \gamma_{00} + \gamma_{01}W_{1j} + \ldots + \gamma_{0n}W_{nj} + \gamma_{10}X_{1ij} + \ldots + \gamma_{n0}X_{nij} + u_{0j} + r_{ij}. \qquad [3]$$

Table 1
Independent and Control Variables

Variable	Category	Level of Analysis	Hypothesized Association
	Service Supply and Cost Factors		
competition	Factor score for alternative suppliers/competition: Total service business establishments, population	State	+
costsav	Factor score for potential cost savings from privatization: Right to collective bargain, ratio of average public sector salary to private service sector salary	State	+
	Public Employee Strength		
pubemplo	Factor score for public employee strength: Labor union coverage of public employees, right to strike, state governments FTE employment per 1,000 population	State	–
	Political and Ideological Factors		
citizpref	Factor score for citizen preferences: Percentage 65 years old and over, state spending on welfare, hospital, and health as percent of total state general expenditures, percentage of people below poverty level, citizen ideology 1998 (Berry, Ringquist, Fording, and Hanson, 1998)	State	–
popblck	Percentage black population	State	–
govideo	Factor score for government ideology: State government ideology 1998 (Berry, Ringquist, Fording, and Hanson, 1998) and party of the governor	State	+
govcntrl	Governor's control over agency: z score of governor's involvement in appointment of agency head + z score of perceived governor's influence over agency budget, programs, major policy changes, and rules/regulations	Agency	+
agenideo	Agency head ideology: z score of agency head's self-rating on political party identification + z score on attitude on taxing and spending issues (liberal/conservative)	Agency	+
	Fiscal Factors		
fiscalrev	Factor score for revenue capacity: Two-year average median income of households, gross state product per capita, ratio of intergovernmental (IGR) revenue to total state revenue	State	–
fiscaldemd	Factor score for demand for expenditures: Balanced budget requirement, fiscal need index by Tannenwald for 1996	State	+
	Reform Variables		
reinvent	Number of reinvention- or new public management–type reforms adopted by the agency	Agency	+
prevcontra	Effect of previous experiences with contracting out on service quality and cost savings	Agency	+
perfund	Implementation of state performance funding	State	+
gpphrgrd	Government Performance Project (GPP) grade in human resources	State	+
	Agency Leadership Factors		
tenure	Number of years as agency head	Agency	–
education	Agency head's formal education	Agency	+
experience	Agency head's years of experience in the private sector	Agency	+

Table 1
(continued)

Variable	Category	Level of Analysis	Hypothesized Association
sectorpref	Agency head's advice to a young person to enter a career in the private sector rather than public sector	Agency	+
	Agency Attitude toward Budget Expansion		
budgexpan	Factor score for agency expansion attitudes; Agency head's attitude toward expansion of state programs, services, and expenditures; agency programs and services; request for budget increase	Agency	+ or −
	Overload Hypothesis		
popchang	Population change over three-year period (1995–1998)	State	+
	Control Variables		
fedaction	Perceived effects (negative/positive) of federal actions on state agency (federal administrative regulations, mandates, statutory preemptions, federal court decisions)	Agency	
	Dummy variables for each of 13 agency types	Agency	
budget	Size of agency budget	Agency	

variance (ANOVA) model (Singer 1998), which we will use as the reference model to estimate how much of the variance can be explained by level I and level II variables (Snijders and Bosker 1994).[3]

The unconditional means model indicates an intrastate correlation coefficient of .003401 (= .008887/[.008887 + 2.6041]). This coefficient indicates a very small, statistically insignificant variation in the intercept across states. By contrast, the correlation coefficient across agency type or functional categorization is .236546, which is statistically and practically significant. This result suggests that certain types of agencies may be more disposed to contracting out than others, perhaps due to the existence of a market of qualified external providers and a history or culture of relying upon them. Rather than running a three-level HLM "cross-classified model" (Goldstein 1994), we included dummy variables for each of the thirteen agency types encompassed in the ASAP survey to control for variation across agency type. The agency types or functional categorizations are elected officials, fiscal staff, nonfiscal staff, income security and social services, education, health, natural resources, environment and energy, economic development, criminal justice, regulatory, transportation, and other.

Service Supply and Cost Factors

As the literature review indicated, the potential for more efficient service delivery typically is a driving force in the decision to contract out (Chi and Jasper 1998; Dilger, Moffett, and Struyk 1997; Greene 2002; Savas 2000;). Whether or not the cost of service delivery can be reduced through contracting out is contingent on at least two factors: the level of competition and the cost of public sector labor.

Competition is one of the most frequently cited factors related to successful privatization. Savas (1987, 2000) argues that competition during the bidding process is the

[3] $$Y_{ij} = \gamma_{00} + u_{0j} + r_{ij}. \qquad [4]$$

most important determinant of success, even in the case of contracting for human services, where competition among providers is often limited. Morgan, Hirlinger and England (1988), Ferris (1986) and Greene (1996a) used a set of dummy variables for size of a city and its location (MSA or non-MSA) as proxy measures for competition; they found that larger cities were more likely to contract out than smaller ones.[4] In our model of state contracting activity, we measure the level of competition for services in a state, *competition*, using a factor score created from two indicators: total service business establishments in a state and the population of the state. Total service business establishments has not been used before in studies that have examined the determinants of contracting out at the local level. However, it seems to be a valid measure of the availability of suppliers in a state and thus is used in this study. We expect *competition* to be positively correlated with the extent of contracting.

The cost of public sector labor also has been found to influence the use of contracting out (Ferris 1986; Kodrzycki 1994). To measure the cost of public sector labor, we created a factor score, *costsav*, from two indicators: the ratio of average public sector salary to private sector service salary and the right to collective bargaining by state employees. The first variable represents potential savings in wages to be gained by switching service delivery from public employees to the private sector. Since most state activity involves services, we use average private sector service salary rather than the average of all private sector salaries (see also Ferris 1986; Morgan, Hirlinger, and England 1988). The right to collective bargaining by state employees is included as a proxy measure for nonwage labor costs, such as fringe benefits, pensions, and insurance. These nonwage labor costs are strongly influenced by union activity and are generally higher in the public sector (Ferris 1986, 298). As the cost of public sector labor increases due to higher wages and nonwage labor costs, agencies should face greater pressures to contract out. Thus, we expect *costsav* to be positively correlated with the dependent variable.

Public Employee Strength

The fear of layoffs and lower wages and benefits has made public employees and public sector unions ardent opponents to contracting out (Fernandez, Lowman, and Rainey 2002). Several studies point to the ability of public employees and their unions to successfully oppose contracting out (Becker, Silverstein and Chaykin 1995; Chandler and Feuille 1991; Ferris and Graddy 1986).

Boyne (1998b) reviewed a number of studies that used labor union coverage and the ratio of public employees to total population as measures of the power of public employees to oppose privatization (for example, Ferris 1986; Ferris and Graddy 1988; Miranda 1992; Morgan, Hirlinger, and England 1988). He concludes that "a majority of the tests of employees per capita point toward a negative relationship with contracting out. The evidence on unionization is much more mixed but suggests that, on balance, this variable also has a negative effect on service contracting" (Boyne 1998b, 157). To measure public employee strength, we use a factor score, *pubemplo*, created from the following three indicators: labor union coverage of public employees, right to strike state, and state

4 As Boyne (1998b) notes, population size has also been used in many studies as a measure of scale economy to test the hypothesis that cities with smaller populations are more likely to contract out than larger ones. The results, however, have been mixed and inconsistent with the scale hypothesis.

government FTE (full-time equivalent) employment per 1,000 population. We expect *pubemplo* to be negatively correlated with contracting out.

Politics and Ideology

Researchers have proposed a number of political and ideological variables as factors that may influence the decision to contract out, such as citizens' preferences for the size or role of government. Political pressure to limit the role of local government is likely to result in more contracting for services (Boyne 1998b, 155). Conversely, three population subgroups have been hypothesized to favor a larger role for government and thus to oppose privatization of service delivery: blacks, the elderly, and individuals with low incomes (Ferris 1986; Ferris and Graddy 1988; Miranda 1992; Morgan and Hirlinger 1991; Morgan, Hirlinger, and England 1988; Thompson and Elling 2000). The findings from these studies for the low income variable seem the strongest, while those for the percentage of the population that was black and the percentage of the population that was elderly were much weaker and inconclusive.[5]

To measure citizens' preference for the size and role of government, we created a factor score, *citizpref*, from four indicators: percentage of the state's population that is sixty-five years old and over; percentage of a state's population below the poverty level; state spending on welfare, hospitals, and health as a percentage of total state general expenditures; and a measure of the ideology of a state's citizens developed by Berry, Ringquist, Fording, and Hanson (1998). The first two variables were used in several of the studies cited above, and our measure of state spending on welfare, hospitals, and health as a percentage of total state general expenditures is a modification of the indicator used by Kodrzycki (1994) to measure citizens' preferences for the role of government. Berry, Ringquist, Fording, and Hanson (1998) construct a dynamic measure of the ideology of a state's citizens (defined as the mean position of the active electorate in a state), using interest group ratings for each district's member of Congress, an estimate of the ideological position of citizens who voted for the losing candidate in each district, and the percentage of votes that went to each candidate. The percentage of a state's population that is black, *popblck*, a variable used in previous studies, did not load with the other four variables and is included in the model as a separate variable. In light of the literature reviewed above, we expect both *citizpref* and *popblck* to be negatively correlated with the dependent variable.

The political ideology of elected officials, particularly of the chief executive, and the political ideology of high-level public managers, such as the head of the agency, also seem to be important factors that influence the use of contracting out. For over two decades, modern conservative political movements in the United States, the United Kingdom, and elsewhere have adopted privatization as a means for reducing the size of the public sector, curbing the power of the state, and making public bureaucracy more productive and competitive (Savas 2000). Wallin (1997), Breaux, Duncan, Keller, and Morris (2002), Sclar (2000), and others have observed how elected chief executives with an ideological preference for privatization can exert pressure to contract out service delivery. Warner and

5 Kodrzycki (1994) used a different measure of citizens' preferences for the role of government: the percentage of a local government's general non-educational expenditures that went to human services (measured as public welfare spending plus spending on health and hospitals). Her results indicate a strong negative relationship between this variable and the use of contracting out.

Hebdon (2001), however, examine several measures of political forces that might influence local government restructuring and find no relationship between these political variables and government restructuring at the local level in the state of New York.

We include in our model a measure of government ideology and of the agency head's ideology. To measure government ideology, we created a factor score, *govideo*, from two indicators: Berry, Ringquist, Fording, and Hanson's (1998) measure of state government ideology, and the party of the governor. Like their measure of state citizen ideology, Berry, Ringquist, Fording, and Hanson's (1998) measure of government ideology is dynamic, created by combining weighted estimates of the ideology of five major actors in state government (the governor and the two major party delegations in each legislative chamber). At the individual agency level of analysis, the ideology of the agency head, *agenideo*, is measured using an index created from two indicators: the agency head's reported position on taxing and spending issues and his or her political party identification. The two indicators were standardized and added to create the index (lower values on the index indicate more liberal, and higher values more conservative). We expect *govideo* and *agenideo* to be positively correlated with the dependent variable.

As mentioned previously, privatization is often initiated by elected chief executives such as mayors and governors (Breaux, Duncan, Keller, and Morris 2002; Sclar 2000; Wallin 1997). We use a measure of the governor's control over the agency, *govcntrl*, to account for his or her ability to influence the agency's decision to contract out. The governor's control over the agency is measured using an index created from two indicators: whether or not the agency head was appointed by the governor and an indicator of the governor's influence over the agency in important areas. The two indicators were standardized and added to create the index. Although governors often lead privatization efforts, the relationship between *govcntrl* and the dependent variable could be in either direction.

Fiscal Variables

As Greene (2002), Dilger, Moffett, and Struyk (1997), Apogee Research (1992), and others have found, the potential for reducing the cost of public service delivery is the most frequently cited reason for contracting out (see also Van Slyke and Hammonds 2003). This finding is not surprising, given the assertion made by advocates of privatization that privatized service delivery is nearly always more efficient (Savas 1987, 2000), even though the empirical evidence to support this claim is somewhat mixed. This potential for cost savings should be particularly appealing to public agencies that are experiencing fiscal stress. Indeed, most studies that seek to identify the determinants of contracting out have included one or more measures of fiscal stress (Chandler and Feuille 1994; Kodrzycki 1994; Ferris 1986; Ferris and Graddy 1986; Morgan, Hirlinger, and England 1988; Warner and Hebdon 2001).

Although some studies have found a positive correlation between fiscal stress and the extent of contracting out, Boyne (1998b, 152) asserts that overall, "the evidence provides little support for the view that fiscal stress is a significant constraint on decisions to contract out." He attributes the lack of support for this hypothesis to various factors, including poor measures of the revenue shortfall aspect of fiscal stress, a disregard for measures of fiscal need or growing demand for services, and the fact that governments often contract out not to reduce costs but to improve quality of service. In our model we include two measures of fiscal stress. The first variable, *fiscalrev*, is a factor score created from three indicators of revenue capacity: the two-year average median income of households in the state; the gross state product per capita; and the ratio of intergovernmental revenues to total state revenue.[6] The second variable, *fiscaldemd*, is a factor score created from two indicators of fiscal need or demand for expenditures in a state: whether or not the state has a balanced budget requirement and the fiscal need index created by Tannenwald (1999).[7] By using multiple indicators of fiscal stress and by accounting for both the revenue and demand side of the fiscal stress problem, we aim to address some of the concerns expressed by Boyne (1998b). We expect *fiscalrev* to be negatively correlated and *fiscaldemd* to be positively correlated with agency contracting.

Reform Variables

As several authors have observed, privatization and contracting out are but two elements of the much broader reinvention and new public management reform agenda adopted in many industrialized countries that is intended to make governments simultaneously smaller and more efficient, effective, and responsive. Ingraham (1997) and Kettl (2000) identify a similar set of innovations and techniques that have been adopted under the rubric of reinvention or new public management, including privatization, performance measurement and other strategic management techniques, personnel cutbacks, decentralization, and bureaucratic deregulation and streamlining. Although important differences characterize the pace and intensity of reforms, as well as the strategies and techniques used by countries to bring them about, the various reform strategies and tactics have been typically adopted as a package of reforms (Barzelay 2001; Ingraham 1997; Kettl 2000).

In our model, we include three variables that measure the adoption of reinvention or new public management strategies and tactics other than contracting out: *perfund*, an indicator of whether or not the state-implemented state performance funding, developed by Jordan and Hackbart (1999); *gpphrgrd*, the grade in human resources awarded to the state by the Government Performance Project (GPP); and *reinvent*, an indicator of the number of different reform strategies adopted by the agency.[8] All three variables are thought to be positively correlated with the dependent variable. We should also expect agencies that

6 More elaborate measures of fiscal capacity such as the fiscal capacity index and the tax effort index developed by Tannenwald (1999) did not load with the three indicators on *fiscalrev*.

7 The fiscal capacity index and the tax effort index do not account for different demands for public programs across states. To address this limitation, the representative expenditures system (RES) approach has been developed, based on seven workload measures for representative expenditures of state and local governments: elementary and secondary education, higher education, public welfare, health and hospitals, highways, police and corrections, and all other direct general expenditures (Rafuse 1990). In this approach each state's workload measure for each function as a share of the national total workload is calculated and is multiplied by the nationwide spending for the category to determine "how much the state would have spent if it had spent an average amount per workload measure unit" (Tannenwald 1998, 67; 1999, 14). The estimated spending is then adjusted for relative costs of inputs for that function. For each state, the per capita spending levels on each function are summed to get a state's per capita spending on a standard expenditure package that represents an overall fiscal need index for each state (Rafuse 1990; Tannenwald 1998, 1999).

8 The "reinvention" items are strategic planning to produce clear mission statements; training programs to improve customer service; quality improvement programs to empower employees; reduction in hierarchical levels; benchmarks for measuring outcomes; decentralization of decision making; systems for measuring customer satisfaction; greater discretion in procurement; greater discretion to carry over funds; and simplification of human resource rules. The ASAP survey asked the agency heads to assess the degree of implementation of each of these reinvention features in their agency. Brudney and Wright (2002) elaborate the reinvention items.

have experienced success with contracting out in the past to contract out more in the future (Kodrzycki 1998). Thus, we include in our model the variable *prevcontra*, an index created from two indicators of the impact of contracting out on an agency (perceived cost savings and improvement in service quality).

Agency Expansion Attitude

In our model we account for an agency's stance toward budgetary expansion by including the variable *budgexpan*, a factor score created from three indicators: the agency head's attitude about the state's current overall level of programs, services, and expenditures; the agency head's attitude about his or her agency's level of programs and services; and the agency's initial budget request to the governor (for an increase, decrease, or no change in budget). Higher scores on *budgexpan* indicate more favorable attitudes toward expansion. Niskanen (1971) argued that bureaucrats are motivated to maximize their agency's budgets to increase their power and reputation (see also Downs 1967). Such behavior, however, leads to greater inefficiency. Given this line of reasoning, and the potential that privatization holds for enhancing efficiency, as well as for reducing the size of an agency's budget, we would expect an expansionist attitude to be negatively correlated with the extent of contracting out by state agencies. By contrast, an agency may ask for a budget increase and an expansion of its programs and services because it is experiencing some form of fiscal stress, such as the need for additional resources. Since contracting out can possibly cut the cost of service delivery and therefore alleviate fiscal stress, *budgexpan* also could be positively correlated with the use of contracting. That is, agencies that are experiencing fiscal need will request budget increases and an expansion of their programs and services while simultaneously taking steps to cut costs, such as through the more extensive use of contracting out.

There is further reason to believe that *budgexpan* may be positively correlated with agency contracting. As Rainey (2003, 419) has noted, "the chief irony of privatization is that proponents tout it as a cure for bad government, but it takes excellent government to make it work" (371). Contracting out requires new managerial knowledge and skills, and an agency may need an infusion of resources to create contract management capacity. Moreover, studies have found that successful implementation of new programs or innovations in the public sector, an example of which would be the move to contract out a sizeable portion of an agency's budget, typically requires a substantial commitment of financial resources (Bingham and Wise 1996; Chakerian and Mavima 2000; Montjoy and O'Toole 1979; Thompson and Fulla 2001).

Leadership Variables

Our model includes several variables that measure certain traits of the agency head. A number of scholars have argued that privatization is no panacea for improving the performance of the public sector (for example, Cooper 2002; Donahue 1989; Sclar 2000). As discussed above, contracting for services does not always result in lower cost or better-quality service. Contracting for services must be managed well, and doing so requires a special set of managerial knowledge, skills, and practices (Rainey 2003; Moe 1996). Morgan, Hirlinger, and England (1988) found that municipalities with a council-manager form of government were more likely to contract out in several different functional areas.

This relationship may indicate that cities with professional administrators possess the knowledge and skills to make contracting out work well and are more likely to adopt a more complex and riskier service delivery strategy. In our model, we include the variable *education*, the agency head's level of formal education. Agency heads with higher education are likely to be more knowledgeable about privatization and better prepared to manage a privatization initiative successfully. We expect, therefore, that *education* will be positively correlated with the dependent variable.

The decision to contract out significant portions of a state agency's budget constitutes a major organizational change. Contracting out reshapes the way in which policies and programs are implemented and managed; it requires that public managers acquire new knowledge and skills; and it may threaten the job security of some public employees. Organization theorists dating back to Selznick (1957) have observed the role that organizational leaders play in promoting institutionalization and stability within organizations (see also DiMaggio and Powell 1983; Stinchcombe 1968). Recently, however, some studies have begun to show that changes in top management can have a significant effect on the adoption of innovations by organizations (Boeker 1997; Kraatz and Moore 2002). As Kraatz and Moore (2002, 121) explain, "immigration of executives with different background ... is a significant—perhaps necessary—part of the process through which existing institutional norms are overturned."

To account for the influence of leadership change on the decision to contract out, we include in our model the variable *tenure*, an administrator's tenure as head of the agency. The relationship between an administrator's tenure as head of the agency and the extent of contracting is expected to be negative. That is, we expect agency heads that have been in their current position for a shorter period of time will be more likely to adopt a change in service delivery than administrators with longer tenure as head of the agency.

We also include in our model the agency head's years of experience in the private sector, *experience*, and his or her (hypothetical) advice to a young person to enter a career in the private sector rather than the public sector, *sectorpref*. The latest wave of reinvention or new public management reforms in the United States and abroad has introduced various managerial practices and techniques that are relatively new to the public sector. Many of these managerial practices and techniques, including extensive outsourcing but also total quality management, performance management, and customer satisfaction surveys, were borrowed from the private sector (Ingraham 1997; Kettl 2000). Indeed, support for contracting out to a large extent is based on the belief that the private sector is inherently better performing than the public sector. We expect, therefore, that *experience* and *sectorpref* will be positively correlated with the dependent variable.

Overload Hypothesis

Significant shifts in the size of a municipal or state population can have an effect on the use of contracting for services. This phenomenon has been termed the "overload hypothesis" (Greene 2002). Rapid population growth in a jurisdiction can overload the service delivery capacity of governments, prompting public officials to make increasing use of contracting out to meet the growing demand for services, particularly when governments face hiring constraints. Rapid population growth also could strain the fiscal capacity of government, making privatization, with its potential for greater efficiency, a more appealing option. Interestingly, Greene (2002) also suggests that a sharp decline in population can cause an increase in the use of contracting out due to fiscal strain caused by a shrinking economy and tax base. Empirical tests of this hypothesis have been mixed: Greene found a positive and statistically significant relationship between population change (1977–1986) and the percentage of services that were contracted out by local governments, while Kodrzycki's (1994) analyses failed to yield consistent support for this hypothesis. To test the overload hypothesis, we include in our model the variable *popchang*, population change in the state from 1995 to 1998.

TESTING THE EXPLANATORY MODEL

In this section we turn to the results of our two-level explanatory model of contracting behavior across state agencies. Table 2 presents the results of the statistical estimation based on hierarchical linear modeling.

As elaborated above, the model includes two service supply and cost variables, a factor score for the level of competition, *competition*, and a factor score for the cost of public sector labor, *costsav*. Both variables are at the state level of analysis, and both were expected to be positively correlated with the dependent variable. The results in table 2 indicate that neither variable has an impact on an agency's use of contracting out, at the .10 level of statistical significance (table 2 reports the exact level of statistical significance for each variable).[9] The statewide level of competition and potential for cost savings, therefore, do not appear to influence an agency's decision to employ contracting out as a service delivery approach. However, we cannot safely conclude that service supply and cost factors have no impact on the use of contracting by state agencies because our model lacks measures of these factors at the agency level. It is still possible that agency-level measures of competition and cost of public labor have an impact on contracting.

As our literature review indicated, considerable evidence exists that strong public employee opposition to privatization can have a negative influence on the decision to contract out. Our model includes a factor score for public employee strength, *pubemplo*, at the state level of analysis. Surprisingly, this variable does not attain statistical significance, suggesting that the strength of public employees statewide has no impact on an agency's use of contracting out. However, insofar as our model includes only one variable for public employee strength at the state level, we should exercise caution in inferring that public employee strength has no influence on the use of contracting by agencies. That is, even though the overall strength of public employees across a state seems to have no impact on the dependent variable, public employee opposition to privatization at the level of the individual agency might still have an impact on the use of contracting out, as several previous studies have demonstrated.

Our model includes two state-level fiscal variables, a factor score for the state's revenue capacity, *fiscalrev*, and another factor score for fiscal need or demand for expenditures in a state, *fiscaldemd*. Revenue capacity and fiscal need were expected to be negatively and positively correlated, respectively, with the use of contracting out by state agencies. The results in table 2 support these two hypotheses. The coefficient for state revenue capacity, *fiscalrev*, is −.1293, statistically significant at the .10 level. The

9 Decisions regarding the precise level of statistical significance used to evaluate the importance of a variable are subjective. In our judgment, coefficients at the $p < .10$ level were the only ones that stood out as important in the HLM analysis. The reader can review the exact levels of significance in table 2.

Table 2
Regression Results (Dependent variable = percentage of agency's budget allocated to contracts for delivering services to the public)

Variable	Description	Coefficient	Significance
Intercept		−.1162	.8266
Level I (Agency) Variables			
budgexpan	Agency budget expansion attitude	.2276	<.0001
govcntrl	Governor's control over agency	.0062	.8573
agenideo	Agency head ideology	−.0211	.5435
fedaction	Perceived effects of federal actions	−.0062	.7846
budget	Size of agency budget	.0000	.7854
prevcontra	Effects of previous contracting	.5802	<.0001
experience	Agency head's experience in private sector	−.0055	.4226
tenure	Number of years as agency head	−.0180	.0751
education	Agency head's education	.0118	.8273
sectorpref	Agency head's preference for private sector	.0684	.2246
reinvent	Number of reinvention/new public management reforms	.0199	.0109
income	Income security and social services agencies*	.9937	.0022
health	Health agencies*	2.2481	<.0001
transport	Transportation agencies*	1.2365	.0003
Level II (State) Variables			
competition	Alternative suppliers/competition	−.0462	.4792
costsav	Potential cost savings from privatization	.0821	.2936
fiscalrev	Revenue capacity	−.1293	.0986
fiscaldemd	Demand for expenditures	.1223	.0740
citizpref	Citizen preference for the size/role of government	.0465	.5328
govideo	Government ideology	−.1003	.1771
pubemplo	Public employee strength/opposition	.0804	.3655
popchang	Population change from 1995–1998	.0176	.5271
popblck	Percentage black population	.0038	.5790
perfund	Implementation of state performance funding	.1282	.3426
gpphrgrd	GPP grade for human resources	.0388	.2486

*Table includes only those agency dummy variables that are statistically significant at $p < .05$.

coefficient for fiscal need or demand for expenditures in a state, *fiscaldemd*, is .1223, statistically significant at the .07 level. These findings suggest that agencies in states with higher levels of fiscal capacity tend to contract out a smaller percentage of their budgets, and that agencies in states experiencing higher levels of fiscal need or demand for expenditures tend to contract out a larger percentage of their budgets. The contextual influence of fiscal stress at the state level, therefore, has a significant impact on an agency's use of contracting out as a service delivery approach.

The model includes five politics and ideology variables, three at the state level and two at the agency level of analysis. As the results in table 2 indicate, all five variables fail to achieve statistical significance. At the state level of analysis, the factor score for citizens' preferences for the size or role of government, *citizpref*, the factor score for the government's ideology, *govideo*, and the percentage of the population that is black, *popblck*, have no apparent impact on contracting. The statewide political context in which these agencies operate, as measured here, thus seems to have little influence on the decision to contract out by individual agencies. At the agency level of analysis, the findings indicate that the ideology of the agency head, *agenideo*, and the degree to which a governor exercises control over an agency, *govcntrl*, also have little impact on the extent of contracting by agencies.

Overall, then, the politics and ideology variables in our model appear to have no impact on an agency's use of contracting out as a service delivery approach. Our findings run counter to those of some previous studies, which found political and ideological factors to be important determinants of the use of contracting out, and support, instead, Warner and Hebdon (2001), who found no relationship between political forces and a local government's decision to restructure. As suggested by our discussion above, the lack of impact for these variables may be due partly to privatization having become a national, as well as international, phenomenon and a "tool" of governance that now transcends ideological and party lines (for example, Auger 1999; Raffel, Auger, and Denhardt 1999; Salamon 2002). For instance, over the last decade or so, an increasing number of liberal elected officials in the United States and abroad have endorsed privatization (for example, the Labour Party in New Zealand, Governor Ed Rendell of Pennsylvania, Mayor Richard Daley of Chicago). Also, Shleifer and Vishny (1998) assert that politicians derive political gains from in-house service delivery, including the power of patronage. Our findings suggest that these benefits may have dissipated, at least to some extent. Finally, we cannot rule out the possibility that political and ideological factors are influencing the contracting decision in some way through other channels not accounted for by the five politics and ideology variables in our model.[10]

The overload hypothesis was tested using the variable *popchang*, the change in population in a state over the period 1995–1998. The coefficient is not statistically significant at the .10 level, indicating that population change over the three-year period does not influence the use of contracting out by state agencies. Thus, we find no evidence in support of the overload hypothesis.

Our model includes four reform variables, two at each level of analysis. Neither of the two state-level reform variables, implementation of state performance funding, *perfund*, or the GPP human resources grade, *gpphrgrd*, is statistically significant at the .10 level. These two contextual variables, which are indicative of statewide reform efforts, appear to have no impact on an agency's use of contracting out. By contrast, the two agency-level reform variables are positively correlated with the use of contracting out and statistically significant. *Reinvent* has a coefficient of .0199, statistically significant at the .02 level, indicating that as state agencies adopt additional "new public management" reforms, they tend to contract out a larger percentage of their budget. As other scholars have suggested, therefore, contracting out appears to be one component of a broader package of administrative reforms aimed at making public organizations smaller, more efficient, and more effective.

The variable *prevcontra* has a coefficient of .5802, statistically significant at the .0001 level.[11] This result suggests that agencies that have had a positive experience with

10 Other potential channels of influence that are not accounted for in our model include the ideology of the agency's constituency and the agency head's opinion regarding the use of contracting out as a service delivery alternative.

11 We tested this relationship for heteroscedasticity using both White's test and the Breusch-Pagan test (in SAS): both were insignificant.

contracting out in the past tend to contract out a larger percentage of their budget. Agencies that have experienced past success with contracting are more likely to possess the knowledge, skills, and contract management capacity necessary to make this form of privatization work and thus are more likely to expand their use of contracting out as a service delivery approach. These agencies may have learned how to manage the contracting process and are, therefore, better prepared to undertake additional and even larger privatization initiatives.

Of the four leadership variables at the agency level of analysis, only *tenure*, the number of years served as agency head, is statistically significant. The coefficient is –.0180 and is statistically significant at the .08 level. Agency heads with shorter tenures seem to contract out a larger percentage of their agency's budget than their counterparts who have been the head of an agency for a longer period. As we suggested above, the decision to contract out a significant portion of a public agency's budget constitutes a major organizational change for these agencies; as some organizational studies have found, a new leader may be in a better position to propose and implement such a risky and difficult change. (It is also possible that a new leader may not fully know or appreciate the challenges associated with contracting.) The variables *education*, an agency head's education, *experience*, the agency head's years of experience in the private sector, and *sectorpref*, the agency head's advice to a young person to enter a career in the private sector, were not significant at the .10 level, indicating that they have little, if any, impact on the extent of contracting by agencies.

The factor score for an agency head's attitude toward budgetary expansion, *budgexpan*, is positive and statistically significant. The coefficient is .2276, significant at the .0001 level. Agencies that favor and request larger budget increases contract out a larger percentage of their budget than agencies that favor and request smaller budget increases or even reductions in their budget. A couple of explanations may be offered for this finding. First, agencies that favor and request budget increases may do so because they are experiencing some form of fiscal stress or a need for additional financial resources to carry out their mission. Agencies may also be able to alleviate fiscal stress by expanding their use of contracting out in an effort to cut costs and extend available resources. We would expect, therefore, for a favorable attitude toward budgetary expansion to be positively correlated with the extent of contracting. A second possibility is that the transition from internal to external service delivery requires an infusion of additional resources to develop contract management capacity within the agency and to manage the employee transition, including retraining, counseling, job placement, and reimbursement for lost pensions and other benefits. Ironically, then, any gains in efficiency from greater use of contracting out might be offset, at least initially, by the costs incurred to manage privatization effectively.

The control variables in the model for the influence of federal actions on a state agency's use of contracting out, *fedaction*, and for the size of an agency budget, *budget*, both failed to achieve statistical significance at the .10 level, indicating that these variables have no impact on the dependent variable. Our model also includes twelve dummy variables for the thirteen state agency types; three of these variables achieved statistical significance and were positively correlated with the percentage of an agency's budget contracted out (only these three dummy variables are shown in table 2). *Income*, a dummy variable for income security and social services agencies, has a coefficient of .9937 that is statistically significant at the .01 level. *Health*, a dummy variable for health agencies, has a coefficient of 2.2481 that is statistically significant at the .0001 level. Finally, *transport*, a dummy variable for transportation agencies, has a coefficient of 1.2365 that is statistically significant at the .001 level.

The finding that agencies operating in the functional areas of social services, health, and transportation contract out a larger percentage of their budget than other types of agencies is important. It suggests that in addition to administrators' attitudes and behaviors and the various influences exerted on them by their states and organizations, technical, economic, or market imperatives may also drive agencies to contract out. Private (for-profit and nonprofit) firms historically have played a large role in the delivery of publicly financed services in the areas of social services, health, and transportation, and this role of direct service provider seems to have increased over the past two to three decades (Salamon 2002). In-house delivery of health and transportation-related services (such as road construction and maintenance), in particular, has not been the predominant form of service delivery in the United States. The extensive use of contracting in these three service domains may be due not only to historical factors, but also to the presence of well-developed markets with large numbers of competent private providers, which would increase competition and improve the likelihood of achieving cost savings and higher quality of service.

DISCUSSION

Nine variables achieve statistical significance in our model of state agencies' contracting out for the delivery of services. Two of them are state-level variables: the fiscal stress indicators that measure revenue capacity (*fiscalrev*) and the demand for expenditures (*fiscaldemd*). Statewide fiscal stress, therefore, has an impact on the use of contracting out by state agencies. Specifically, the state's revenue capacity and the demand for expenditures in a state have a negative and a positive impact, respectively, on an agency's use of contracting out. This finding is an interesting one, given the responses of the agency heads about the effects of contracting out on the cost of service delivery. The potential of contracting out to reduce costs makes it an appealing option for alleviating fiscal stress, and the statistically significant relationships between our two fiscal stress variables and the use of contracting by state agencies support this assertion. However, our other finding that the use of contracting out by state agencies appears to increase costs nearly as often as it reduces them indicates that the potential for cost savings cannot be assumed. State agencies perhaps are being influenced more by the optimistic rhetoric of privatization than by the rather sobering empirical evidence of its actual impact on the cost of service delivery.

The results of the statistical estimation suggest further that seven agency-level variables have a statistically significant effect on an agency's use of contracting. The type of agency has an important impact: income and social security agencies, health agencies, and transportation agencies rely more on contracting out than do other types of agencies. Two reform variables, the effects of previous experiences with contracting, *prevcontra*, and the number of reinvention- or new public management–type reforms adopted by the agency, *reinvent*, also have a positive impact on the use of contracting by state agencies. State agencies tend to make greater use of contracting out when they have experienced success with contracting in the past, and as agencies adopt more types of reforms associated with reinvention or new public management, their reliance on contracting out as a service delivery approach tends to increase as well. Also, agencies that favor and request larger budget increases contract out a larger percentage of their budgets than other agencies. Finally, one leadership variable, the number of years as head of the agency or *tenure*, has a negative impact on the use of contracting by state agencies, indicating that agency heads who are newer to the agency contract out a larger percentage of their agency's budget than administrators who have been the head of an agency for longer periods.

The political and ideological variables included in our model at both the state and agency levels failed to attain statistical significance. This finding suggests that political and ideological considerations have little apparent effect on contracting out by state agencies. State-level variables tapping service supply and cost factors, public employee strength, and changes in population also were not statistically significant. One should not conclude too quickly, however, that competition, the cost of public labor, or public employee strength have no impact at all on the use of contracting by state agencies, for our model lacks measures of these factors at the agency level.

Another point worth noting is that agency-level variables have stronger power in explaining the variance in contracting out. The proportional decrease in random variances in intercept and residuals, more specifically, indicates how variables from each level can contribute to the explanatory power of our models (Hox 1994; Singer 1998; Steenbergen and Jones 2002). The variance in intercept (ω_{00}), which explains the variation in our dependent variable across states, is not statistically significant in both the unconditional means model and the HLM, including the level I and II variables. By contrast, the variance within agencies (σ^2) is statistically significant in the unconditional means model. The variance further decreases by about 32 percent ([2.6041–1.7666]/ 2.6041) when level I variables are entered into the HLM with level I and II variables. Overall, the results indicate that level II contextual variables are not as strong predictors of the intensity of contracting out as level I variables.[12]

CONCLUSION

As in the present inquiry, Deborah Auger (1999) found that state privatization activity was not only substantial and sharply increasing, but also that it had received remarkably little attention in the research literature. Auger based her study on a review of the privatization literature that encompassed more than 300 articles and state reports, as well as data gathered directly from observations of respondents representing state governments in all fifty states. She concluded, "Although the earliest years of the decade found state administrators buffeted by ideologically driven debates casting privatization as the panacea for all governmental ills on the one hand and as anathema to sound government on the other, the decade's close finds state privatization discussions have shifted onto a decidedly more pragmatic plane .... Moreover, among states, deliberation and

12 While the low intrastate correlation coefficient introduced above implies that there may not be a substantial difference between ordinary least squares (OLS) estimation and HLM estimation, disaggregation of higher-level variables into lower-level variables is likely to significantly increase the sample number of the former variables, thus resulting in more frequent rejection of the null hypothesis than the nominal p-value suggests (Hox 1995, 4–5; Hox and Kreft 1994). For this reason, we employed the HLM approach. Since there is virtually no difference between the two estimations, however, we do not report the results of the OLS estimation here.

dialogue have increasingly yielded to action" (Auger 1999, 435; Raffel, Auger, and Denhardt 1999).

The findings of the present research offer support for this conclusion. More than 70 percent of the agencies responding to the 1998 American State Administrators Project survey indicated that they contracted out for the delivery of services, thus suggesting a decided trend across the states. This finding is consistent with the high level of privatization activity documented in other surveys of the states (for example, Apogee Research 1992; Chi 1993; Chi and Jasper 1998). The empirical analysis presented here also shows that aside from fiscal considerations, state level differences and variations (level II) have little apparent effect on the extent of contracting out by state agencies. An agency's decision to contract out seems to be largely unaffected by political forces, ideological predispositions, the size of the constituencies that demand government services, or the strength of public employee unions in its state. Contracting out as a governance "tool" or practice may have entered a less ideological phase, in which its use has become less controversial and more accepted. Indeed, Kelman (2002, 315) has recently observed that "contracting is almost universally viewed as a highly legitimate tool for accomplishing public purposes" and that "no one would argue that the tool should not be used at all."

Our analysis shows that the agency-level variables (level I) bear the strongest relationships to contracting out for the delivery of services in the states. Agencies that have adopted other new public management reforms (in addition to contracting out), that have relatively new leadership, that have had positive experiences with contracting (for example, achieved cost savings and service improvements) in the past, and that have sought to expand budgetary capacity are more likely to contract out a higher percentage of their budgets. In addition, agencies with a mission in the areas of income security and social services, health care, and transportation contract out a larger percentage of their budget than do other types of agencies. Historically, these service domains have featured high levels of private sector involvement; the extensive use of contracting may be attributable to the greater availability of providers, which would increase competition and improve the chances for cost savings and higher quality of service.

Studies of contracting out for the delivery of services across the American states are rare, and empirical inquiries aimed at explaining this phenomenon are nonexistent. The present study offers a solid beginning. Independent confirmation of the reliability of the results presented here emanates from their similarity to the general findings regarding contracting obtained in surveys of state agencies by the Council of State Governments (Chi 1993; Chi and Jasper 1998). In sum, our findings appear sufficiently promising to warrant further efforts toward understanding and explaining contracting activity across the fifty states and their array of administrative agencies.

APPENDIX

Contracting Items Used in Analysis

Source: American State Administrators Project 1998

1. In recent years, some governments and agencies have used contracts (or contracting out) to deliver services to the public. Does your agency use such contracts?

Yes

No

Don't know

IF YES:

1a. How has contracting out affected the quality of services your agency delivers to the public?

Improved quality

Reduced quality

No effect on quality

Don't know

1b. How has contracting out affected the cost to your agency of delivering services to the public?

Increased cost

Decreased cost

No effect on cost

Don't know

1c. Currently, about what percentage of your agency's budget is allocated to contracts for delivering services to the public?

5% or less*

6–10%*

11–20%

21–30%

31–40%

Over 40%

*Categories combined for analysis

1d. Does your agency contract with any of the following sources to deliver goods and services to the public (Yes/No)?

Other governments

Nonprofit organizations

For-profit businesses

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