

**Sector Choice for Local Health Contracts:
Public, Nonprofit, or For-Profit?**

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Once a local government chooses to externally produce a health service, it faces the decision of the appropriate sector with which to contract. Local governments can contract with other governments, for-profit firms, and/or nonprofit organizations. This sector choice decision is modeled as a function of sector differences in the availability of producers and in the potential for cost reduction in service delivery, and different constituency preferences with respect to sector choice. The model is estimated with a multinomial logit analysis on a national sample of local government health contracts. The empirical analysis reveals the importance of availability, cost concerns, and constituency preferences in the sector choice decision for local health services.

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1 Introduction

Changes in the health care market have evoked a variety of responses from the public, nonprofit and for-profit health care sectors. As a result, there has been an intensified interest in the relative cost efficiency of the three sectors. Local governments have taken notice, especially due to their declining fiscal fortunes and their increased health service obligations. As a result of their plight and the dynamics within the health care industry, local governments are reexamining their methods of delivering health services. As private sector suppliers have increased, contracting has been considered as an alternative service delivery arrangement. Under this arrangement, the local government finances the service, but contracts with external suppliers to produce the service. Separation of provision and production is believed to yield significant cost savings due to different organizational objectives, reduced bureaucratic monopoly power, scale economies, and sector differences in labor practices.

A growing body of work has explored the contracting decision, but it has focused on the production choice decision: whether or not locally financed health services are produced internally or externally. Virtually no attention has been paid to the sector choice decision: given the decision to contract out, does the government contract with other governments, with nonprofit organizations, or with profit-making firms?'

Although few efforts have been made to model the sector choice decision, this decision has important implications for the ultimate effects of external production on the delivery of health services. Local governments may contract with other governments, nonprofit organizations, or for-profit firms. Contracting with another government is potentially an attractive option. It can provide a local government, at least small governments, with the

Although we treat the sector choice decision as distinct from the production choice decision, they may be interrelated. The two are obviously related if producer availability **was an** important factor in the initial decision and one sector dominated the available **"options**. Similarly, if one sector offers particular cost savings with respect to the service, **the** decisions may be interrelated. See Ferris and Graddy (1986) for a model of the **production** choice decision for local health services.

cost savings that derive from a larger scale of production while maintaining service production in the public sector. This should enable local governments to deliver an output similar to what it would produce at a lower cost. County contracts have, however, been criticized both with respect to cost savings and quality of service.² The nonprofit and for-profit sectors offer alternatives which may be superior with respect to cost and/or quality. Theories of nonprofit organization suggest that, for collective services, there may be more interest in entering into contracts with nonprofits since their behavior motives differ from for-profits due to the non-distribution constraint (Hansmann, 1980). Therefore, if a nonprofit organization is available to produce the service, the local government may prefer it over a for-profit firm since the resulting service may better meet quality and access needs. On the other hand, for-profit firms may offer cost advantages over both the nonprofit and the public sector. How does a local government select the appropriate sector?

This paper is an effort to better understand the contracting local government's sector choice decision. It is structured as follows. A model of the sector choice decision for health services is developed. This model is then empirically tested on a data set constructed for this purpose. Finally, the results and their implications are discussed.

2 Development of the Model

The major incentive to contract out local health services is the potential cost savings (Ferris and Graddy, 1986). However, this may be achieved at the expense of less control over service delivery. Once this tradeoff has been considered and the decision to contract out has been made, the local government will want to achieve the cost savings, while ensuring that the various dimensions of service output meet the community's needs. Sectors vary in their availability of producers and in their potential for cost savings. Constituencies may have sector preferences, and particular services may be more suited for one sector. These factors, therefore, should be the important determinants of the sector choice decision. Consider each in turn.

²Sonenblum, et al (1977, p.37) in their interview with 26 California city managers found that county contracts were evaluated poorly with respect to efficiency, responsiveness, per capita expenditures, quality of service, and quality control. On the other hand, Mehay and Gonzalez (1985) found that the supplying county became more efficient as a result of contracting.

which both for-profit and nonprofit suppliers are available. Small, rural jurisdictions are less likely to have for-profit and nonprofit producers available. Areas with rapid population growth and/or Sunbelt areas are more likely to have available for-profit suppliers.

Service characteristics are also related to the availability of producers by sector. An important characteristic for health services is the extent of collectivity.⁴ Collective, as opposed to individual, services are less likely to be supplied by the for-profit sector, at least in efficient quantities, due to the free rider problem. The nonprofit sector typically supplies a service more like that provided by the public sector, i.e., collective, while the for-profit sector typically supplies an individual good substitute (Weisbrod, 1977). Therefore, more collective services are more likely to be supplied by nonprofit organizations (Krashinsky, 1986). By the same argument, it is likely that the most collective goods were provided first in the public sector and thus fewer private options may be available. Therefore, we would expect government to contract more often with other governments and nonprofit organizations for health services which are more collective (e.g., public health services) and with for-profit firms for services which are more individual (e.g., hospital services).

2.2 Sector cost differences

Since cost savings are a major motivation for contracting out one would expect sector differences in efficiency to be an important determinant of the sector choice decision given producer availability in different sectors. Consider the comparative position of each sector with respect to the expected sources of cost savings.

First consider the public sector. Contracting with other larger governments can yield scale economies in production and administration. These scale economies are most likely

⁴Another potentially important characteristic is asymmetric information. Services with a high degree of asymmetry of information between consumers and producers are more likely to have a viable nonprofit sector (e.g., Weisbrod and Schlesinger, 1986). This asymmetry is present in all health services. Although this hypothesis is consistent with the viability of the nonprofit sector in health services, it does not allow us to differentiate either across health services or jurisdictions.

to derive from equipment and material cost savings and higher capacity utilization. The key factor in exploiting scale economies is size rather than sector. Either large governments or large private units could obtain these savings.⁶ Thus, with respect to scale savings, there is no inherent reason why local governments should prefer contracting with other governments over another sector.

Moreover, other governments are not likely to be attractive contract options if the service is labor intensive. First, more flexible labor practices outside the public sector yield potential labor cost savings. For example, county administrators involved with acute mental health care in Wisconsin report constraints on personnel practices due to public employee groups demands (Schulz, et al, 1984). Flexibility was limited and improvements were impeded. The private hospital units, many of which were unionized, reported no such effects on operations by the unions. Thus, due to flexibility in labor practices, contracting with for-profit or nonprofit health units may yield more cost savings than contracting with other public units. Second, large governments have higher rather than lower wages than small governments.⁷ Wage rates may also be lower in the outside the public sector, especially for unskilled and semiskilled workers. Borjas, et al (1983) found that for-profit nursing homes pay significantly lower wages than public nursing homes for workers with similar skill levels. The differential was highest for the least skilled.

There may also be sector cost differences deriving from different managerial practices. Schulz, et al (1984) found direct costs were significantly lower in private community general mental health units compared to county-operated mental health units. Two differences in managerial practices appeared to affect this cost difference: more emphasis

⁶Although Schulz, et al (1984) found that in acute mental health units of from 20 to 50 beds, there are important labor economies-of-scale. They argue that a certain minimum staff is needed for acute inpatient psychiatric services and that patient census can be increased without a commensurate increase in staffing.

⁶Moreover, it may be possible for small local governments to join together in the procurement of equipment and materials, giving them most of the advantages of large-scale purchasing without losing the advantages of in-house production.

⁷Sonenblum, et al (1977, p. 24) note that one of the concerns of contracting cities was that smaller cities were able to pay lower wages than the larger county governments.

on cost containment by private managers, and more psychiatrist influence on how the private units were run. Psychiatrists wanted or needed fewer supporting staff when they had more control. The differences did not appear to be related to differences in patient requirements.⁸

Now, consider whether these cost advantages of the private sector apply equally to nonprofit organizations and for-profit firms. There is not an unambiguous cost efficiency distinction between the nonprofit and for-profit sectors. The profit motive induces firms to search for the least costly production methods.⁹ On the other hand, nonprofit organizations may be able to lower labor costs through the use of volunteers and part-time personnel. They may also subsidize the service from other funding sources such as governmental grants and charitable contributions, thus charging less than the full costs. The relative efficiency of these two sectors has been studied exhaustively for hospital services, yet the findings are mixed. Some hypothesize that for-profit hospitals have easier access to capital, greater management efficiency due to the profit motive, and scale economies (from chains) (Reading, 1985; Ermann and Gabel, 1986). These advantages should lead to cost saving. If, however the sources of the efficiency gains are scale economies, in purchasing and administration, these efficiencies are in principle

⁸Obviously composition differences across sectors can affect relative costs. Coffey (1983) found that urban public hospitals treat poorer patients, but not more seriously ill ones, than urban voluntary hospitals; rural public hospitals see sicker patients, but not poorer patients. Service quality can also be affected. If client composition affects service outcome, increasing access to the for-profit and nonprofit sectors may reduce quality (Murnane, 1983).

⁹See Wilson and Jadlow (1982) or Borjas, et al (1983) for a discussion of the property rights argument. See Steinberg (1985) for a discussion of the objectives of nonprofit firms. He found non-profit health firms behaved like budget maximizers. Finally, see James (1983) for a theory of nonprofit service production choices.

¹⁰This is consistent with the results of Borjas, et al (1983). Their study of nursing home wages by ownership group found that church-operated nursing homes paid lower wages than for-profits for skill groups for which religious personnel could be used. Other nonprofits did not show a significant difference.

attainable by nonprofit chains as well as for-profit chains. With respect to capital, for-profits have access to capital through the sale of equity, but total capital costs may be lower for nonprofits because of their access to private philanthropy, operating surpluses, and tax-exempt debt (Anderson et al, 1985). Nonprofit hospitals have, however, begun increasingly to-rely on the private capital market because of decreases in both charity and in government construction grants (Bays, 1983). It is thus not clear whether one sector should be inherently more efficient than the other.

The empirical evidence is mixed. For example, Bays (1979) found that for-profit general hospitals were less costly than nonprofits after controlling for differences in case mix and possible over-treatment of certain case types by for-profits. Wilson and Jadlow (1982) studied the production of nuclear medicine services (a relatively homogeneous output) in 900 for-profit, private nonprofit, and government hospitals. They found that type of ownership had a significant impact on technical efficiency. For-profit hospitals were more efficient than nonprofits; government hospitals were the least efficient. Robinson and Luft (1985) using 1972 data found that for-profit hospitals had lower costs and public hospitals had higher costs per admission and per day than nonprofits. In contrast, Becker and Sloan (1985) in a study of Florida hospitals found costs were similar across ownership types, disaggregated by chain versus independent, and newly acquired versus old chains. Finally, Watt, et al. (1986) using a national sample of community hospitals did not find a relationship between ownership and cost. There is little evidence for other health services. It is difficult to draw conclusions from this empirical literature. Nevertheless, the current perception (whether or not it is justified) is that for-profit firms produce health services more efficiently than nonprofit organizations, and that governments are the least efficient.¹²

Jurisdictions with high health costs may be more concerned about sector cost (as opposed to quality) differences and thus may be more likely to contract with for-profit

¹¹Rosett (1984) notes, however, that for-profit chains operate hospitals at staffing levels about 20 percent below comparable nonprofits.

¹²Note, if for-profit firms are more efficient, this does not imply that they charge less. It does suggest they could, if they desire, contract to produce services at a lower cost and still be profitable.

firms. There are several jurisdictional factors that affect health costs. Rural hospitals use less labor and capital, have fewer services and lower costs per admission (Farley, 1985a; Watt et al., 1986). Robinson and Luft (1985) found hospitals operating in high per capita income areas have higher costs than hospitals in lower income areas; this cost difference probably reflects higher demand in wealthy areas for technologically sophisticated and expensive clinical medicine. Many have found that hospitals in more competitive local markets have significantly higher average costs per admission and per day than do hospitals in less competitive areas, controlling for case mix (Robinson and Luft, 1985; Wilson and Jadlow, 1982; Farley, 1985b).¹³ These results suggest that jurisdictions which are urban, have high per capita income, and face more competitive hospital markets are more likely to have high health care costs. Thus, in order to obtain the largest cost reductions from contracting out, we expect these jurisdictions to be more likely to contract with the for-profit sector.

To summarize, there are cost differences across sectors. Scale economies are not likely to differentiate between the public and private sectors, but labor cost savings do. Within the private sector, the differences are less clear. Despite conflicting evidence, the perceived ordering in terms of cost efficiency seems to be: for-profit firms, nonprofit organizations, other governments. Therefore, jurisdictions wishing to maximize the cost savings that can derive from contracting out should prefer to contract with the for-profit sector. Jurisdictions with high health costs are prime candidates.

¹³In most markets competitive structures should induce producers to be more efficient, **but** hospitals, because of the unique physician-patient-hospital relationship (Harris, 1977), may be different. Hospital administrators prefer high facility utilization rates, but staff physicians prefer lower utilization rates, so that hospital facilities are more likely to be available for their patients. The relative dominance of these two decisionmaking groups depends on the structure of the local hospital market. In an area with many hospitals, physicians affiliated with one institution may threaten to shift patients elsewhere. Therefore, hospitals in more competitive markets have weaker bargaining power and hence greater duplication of services, lower patient volumes per service, and higher costs (Robinson and Luft, 1985; Wilson and Jadlow, 1982).

2.3 Constituency preferences

Although there may not be significant cost differences between the for-profit and the nonprofit sectors, there is a perception that they differ in terms of quality and access. This perceived difference may lead to a constituency preference for nonprofit over for-profit production of health services. Citizens often oppose contracting for health services with a for-profit firm, based on a concern that service quality will be jeopardized (Valente and Manchester, 1984, p.128). Nonprofits, operating under the nondistribution constraint, have less incentives to cut corners than for-profits. This contributes to the perception that nonprofit organizations provide higher quality (Clark, 1980). For example, Nevvhouse (1970) argues that nonprofit hospitals are biased against economy care because higher quality service enhances their prestige. If citizens believe nonprofits provide better quality, governments may prefer to contract with nonprofit organizations when they are available. There is also concern that the for-profit form undermines the physician-patient relationship and thus diminishes the quality of care (Brock and Buchanan, 1986). There is, however, no empirical support for this concern. Gaumer (1986) in his study of the effects of hospital ownership on patient outcomes found no evidence that the profit -motive compromises patient care. Specifically, he found that hospital ownership had no influence on post-operative mortality rates or readmission.

Moreover, there is concern that access to health care is threatened when contracting is with a for-profit firm. There is, however, little evidence to support this belief. For-profit and nonprofit hospitals alike advertise, market their services vigorously, and strive for profits by means of cost control and adjustments of services (O'Brien and Haller, 1985). The evidence indicates that ownership is not a good predictor of behavior in the provision of free care and in the denial of needed health care because of an inability to pay (e.g., Bays, 1983; Sloan and Vraciu, 1983). In any case, the amount of free care for the poor can be specified explicitly in a contract, regardless of sector choice. One option is to specify a level for for-profit contracts comparable to that provided by nonprofit hospitals (Reading, 1985).

There are also arguments against the use of the nonprofit sector. The nonprofit organizational form may more effectively serve the individual economic interests of professionals or directors of nonprofits than the public interest. For example, physicians may prefer nonprofit hospitals because favorable tax treatment and private and

government subsidies to nonprofits lower the total cost of the complementary hospital inputs and, therefore, increase the price that physicians can charge (Bays, 1983; Hansmann, 1980).¹⁴

Nevertheless, the constituency perception that nonprofits are better protectors of the community interest, in terms of quality and/or access, is likely to create a constituency preference for contracting with the nonprofit, rather than the for-profit, sector. Therefore, jurisdictions in which a large proportion of their population are potential users of locally financed health services, we would expect resistance to contracting with the for-profit sector.

2.4 Other service characteristics

Finally, particular service characteristics may suggest a preferred sector. A factor that could encourage contracting with other governments is the desire for standardization of service outputs across jurisdictions within a geographic area. Substantial differences in service quality within a geographic area may generate important negative externalities. For example, public health services, which include communicable disease control and assurance of water and food quality, often require organized government control across jurisdictions. For these services, a city may want to contract with the county (or a larger city) to ensure similar service levels or minimum standards throughout the area. Therefore, we expect governments that contract health services that require standardization to contract with other governments, rather than with the nonprofit or for-profit sectors.

¹⁴ Moreover, evidence does not support the hypothesis that the common nonprofit practice of cross subsidization is an attempt to hold down costs for those who would have difficulty paying (Bays, 1983). If hospitals charge less than cost for such products as surgery and anesthesia, surgeons can charge more for their services. This loss can be subsidized by charging more on services that do not have such a direct link to physician's services such as rooms and therapy. Therefore, cross subsidization in hospital pricing has distributional consequences (Clark, 1980).

2.5 Summary

To summarize, we expect the sector choice decision of contracting governments to be a function of producer availability across sectors, cost concerns, community quality and access preferences, and service characteristics. Producer availability in the private sectors is likely to be positively related to jurisdiction size, urbanism, and rapid population growth, and the degree of collectivity of the service. In terms of cost savings, we expect those with the greatest incentive to reduce costs via contracting out to choose the for-profit sector. This is due to the perceived advantage of this sector in achieving cost savings. In contrast, the communities most concerned about health care quality and access should prefer nonprofit contractors. Finally, for services in which standardization across jurisdictional boundaries is desirable, the preferred option is another government.

3 Estimation

We test our model by considering the determinants of the sector choice decision for four local health services: public health programs, hospital services, drug and alcohol treatment programs, and mental health programs. The incidence of local government contracting with different sectors can be determined from data collected by the International City Management Association in 1982. The survey collected information on the service delivery arrangements of local governments for approximately 60 public series, including four health services: hospitals, public health programs, drug and alcohol treatment programs, and mental health programs.¹⁵ Of the 1780 local governments which responded, 344 provide hospital services, 671 provide public health services, 554 provide drug and alcohol programs, and 457 provide mental health programs/facilities. The survey reveals a substantial degree of contracting out for local health services. Hospital services are contracted out either in whole or in part¹⁶ by 78 percent of the local governments which provide this service; public health services are contracted out by 61 percent; drug/alcohol treatment programs are contracted out by 80 percent; and mental health services are contracted out by 80 percent.

¹⁵For more information on the study see International City Management Association, 1983.

¹⁶Contracting out may be either in whole, where there are no public inputs used, or in part, where public inputs, i.e., public employees, are used in conjunction with contracts.

This survey data was merged with information on community fiscal and demographic characteristics obtained from a variety of secondary sources, primarily the 1983 County and City Data Book. The County and City Data Book provided information for cities and counties with a population in excess of 25,000. Consequently, jurisdictions with a population less than 25,000 were truncated from our sample, and one is cautioned from drawing inferences from this analysis for those jurisdictions.

This data set was then transformed from one in which the local government is the unit of observation to one in which a contracted health service is the observation. For example, if a particular city contracts out for both hospitals and mental health services, then the city contributes two observations to the transformed data set. The estimation technique utilized prevents the use of multiple classifications for a given observation, thus the dependent variable represents the most private form of contractor. For example, if both nonprofits and for-profits receive contracts for a service, the contractor is recorded as for-profit. In addition, observations with missing values are deleted. These alterations result in a working data set of 691 observations. Of these, 284 represent contracts with other governments (41 percent); 341 represent contracts with nonprofit organizations (49 percent), and 66 represent contracts with for-profit firms (10 percent). The working data set is summarized in Table 1, and includes the variable descriptions, sources, and descriptive statistics for the independent variables.

3.1 Model specification

We assume the local government's sector preference is a linear function of service and jurisdictional characteristics. If we denote this preference as Z , and the vector of characteristics as C , then our model is:

$$Z = aC + u$$

where a is the vector of coefficients associated with C and u is a random error term.

We cannot observe Z , but we can observe the choice based on it. Local governments can choose contractors from three sectors: other governments, nonprofit organizations, and for-profit firms. This choice can be represented as a continuum from the public to the for-profit sectors with nonprofits representing an intermediate choice. This seems a reasonable specification since nonprofit organizations represent a movement toward the

private sector without reliance on for-profit firms. The voluntary nonprofit sector embodies characteristics of both the public and the for-profit sectors. In order to qualify for nonprofit status, the organization must deal with collective interests; yet, it is permitted to make profits, it just cannot distribute them (Douglas, 1983).

There is some critical value of Z , denoted Z^* , above which a jurisdiction will choose to contract with a nonprofit organization. There is a higher value of Z , denoted Z^{**} , above which a jurisdiction chooses a for-profit firm. If we denote the observed choice as Y , where Y is a trichotomous ordered categorical variable, then the relationship between Z and Y can be specified as:

$$\begin{array}{lll} Y = 0 & \text{if } Z < Z^* & \text{other government} \\ Y = 1 & \text{if } Z^* \leq Z < Z^{**} & \text{nonprofit} \\ Y = 2 & \text{if } Z \geq Z^{**} & \text{for-profit} \end{array}$$

Therefore, the model to be estimated is:

$$Y = \beta C + e$$

where β is the vector of coefficients associated with C , and e is the error term, assumed to be distributed logistically.¹⁷

The independent variables, vector C , are measured as follows. The factors that affect producer availability are captured by four variables: POP80, SMSA, SUNBELT, and COLL. The first three are jurisdictional variables. POP80 is simply the jurisdiction's 1980 census population. SMSA is a dummy variable with a value of 1 if a jurisdiction is located within a SMSA, 0 otherwise. SUNBELT is a dummy which assumes a value of 1 if the jurisdiction is located in the sunbelt, 0 otherwise.¹⁸ The signs on all three coefficients are expected to be positive; more contracting with the private sector is expected in large, urban jurisdictions and those located in the sunbelt because of greater availability of private producers. COLL is a service specific variable. In order to construct this variable, the

¹⁷See Maddala (1983) for a comparison and discussion of different qualitative dependent variable models.

¹⁸For the purposes of this study, the sunbelt states are: Alabama, Arizona, Arkansas, California, Florida, Georgia, Kentucky, Louisiana, Mississippi, New Mexico, Oklahoma, Tennessee, and Texas.

four services were classified as to degree of collectivity. Public health is the most collective; mental health and drug/alcohol programs are somewhat collective; and hospital services are the least collective. Specifically, COLL assumes a-value of 2 for public health services, 1 for mental health and drug/alcohol programs, and 0 for hospital services. The expected sign of the coefficient is negative; the more collective a service, the less likely it is to be contracted with the for-profit sector, because these producers are less likely to be available.

There are four cost-related variables: RELSAL, SMSA, HOUSINC, and HOSPOP. RELSAL is the ratio of public sector wages to private sector wages. It measures relative wages across sectors and suggests the potential for labor cost savings. The higher the relative wages, the more likely the jurisdiction is to contract with the for-profit sector. The latter three variables capture high health costs in a jurisdiction. SMSA is as described above. HOUSINC is the median household income in the jurisdiction; and HOSPOP is the number of hospitals per 100,000 population. The signs on all three coefficients are expected to be positive. Urban jurisdictions, those with high household income, and those with a high concentration of hospitals relative to the population are expected to have higher health costs and thus have a greater incentive to seek the extra cost savings which may be provided by contracting with the for-profit sector.

There are two measures of constituency strength, PCTPOV and PCTNW. The former is the proportion of the jurisdiction's population with income below the poverty level; the latter is the percentage of the jurisdiction's population that is nonwhite. These are indicators of the group which is most dependent on local health services and thus is likely to prefer contracts with other governments or nonprofit organizations. The signs of both coefficients are expected to be negative. The larger the proportion of those in poverty and the larger the proportion of nonwhites in the jurisdiction, the less likely that jurisdiction is to contract with the for-profit sector.

Finally, our remaining service specific variable is STAND. This variable is constructed by classifying the four health services according to the need for standardization. Only public health services are viewed as having a strong need for standardization. Therefore, STAND assumed a value of 1 for public health services and 0 otherwise. The sign on the coefficient is expected to be negative. The need for standardization should encourage contracting with other governments.

In summary, our model of the sector choice decision for local health services, with the expected sign of each coefficient denoted in parentheses, is:

$$Y = [\text{POP80 (+), SMSA (+), SUNBELT (+), COLL (-), STAND (-)} \\ \text{RELSAL (+), HOUSINC (+), HOSPOP (+), PCTPOV (-), PCTNW (-)}]$$

The model is estimated using an ordered, multinomial logit analysis. The maximum likelihood estimates of the coefficients are displayed in Table 2 with their associated standard errors.

3.2 Results

The results indicate that each of the three major identified influences have some effect on the sector choice decision. The most important determinant is apparently availability. Three of the four availability variables (POP80, SMSA, and COLL) have significant coefficients with the expected signs. Jurisdictions that are large and urban are more likely to contract with the for-profit sector. Those services which are collective are, as expected, less likely to be contracted out to the for-profit sector. This is consistent with the hypothesis that collective services originally were provided by the public and nonprofit sectors, and thus these sectors are more developed than the for-profit one. SUNBELT is the only availability variable which proved to be unimportant.

Recall, four cost-related variables are included in the empirical specification: RELSAL, SMSA, HOUSINC, and HOSPOP. RELSAL is the only variable that directly measured cost differences between the sectors. Its coefficient has the expected positive sign and is significant. Jurisdictions with high public salaries relative to private salaries are more likely to contract with the private sectors. The other three variables are included to reflect pressures for contracting with the for-profit sector due to high health costs. Only one of these variables is significant, SMSA. However, recall that this variable measures both availability and cost; we cannot separate these effects. It may be that urban jurisdictions contract with the for-profit sector because they have more choices, or because they have higher health costs and thus have greater need for the cost savings that derive from using that sector.

Constituency preferences are measured with two variables, PCTPOV and PCTNW. The latter is statistically significant and has the expected negative sign. Jurisdictions with a

large proportion of nonwhites were less likely to contract with the for-profit sector. Our theory suggests that this reluctance derives from concerns about access and/or quality of health services. PCTPOV does not have a significant effect.

The only surprising result is the unexpected positive and significant coefficient on STAND. This seems to suggest that those services for which jurisdictions may want to standardize service output are more likely to be contracted out to the private sectors. This counter-intuitive result may be a function of our range of services. Among our four health services, only public health is thought to require standardization. However, this service entails a more heterogeneous collection of activities. It may be that those portions of public health services that are contracted out are not those that require standardization. If the private sectors are appropriate for those services, then we might observe the apparent relationship between STAND and private sector preference.

4 Conclusion

Our results indicate the importance of availability of producers as a major determinant of sector choice. The importance of availability as a constraint in this decision should, however, diminish over time. For-profit health care providers are expanding their presence in many markets. Currently this expansion is into suburban areas, giving those jurisdictions more choices. The expansion should continue, providing more options for jurisdictions seeking alternative producers of health care services.

Moreover, the importance of cost variables may indicate a future growth in the demand for alternative producers. If the cost differences between the sectors persist, and local governments continue to face fiscal stress, we would expect more jurisdictions to seek to contract out and, of those, more to choose the for-profit sector. Our analysis suggests, therefore, a continued and expanding role of the private sector in the delivery of health care services, particularly the for-profit segment.

Although this prediction is tempered by the importance of constituency resistance in our results, this constituency effect may well be dominated in the future by the cost realities. As jurisdictions become more pressed in their efforts to deliver health services.

constituencies may be more willing to accept for-profit production¹⁹ if the alternative is reduced services levels.

¹⁹Of course, it may be that over time, as the environment facing the public and private sectors become more similar (e.g., financing), the differences between the sectors may become muted (Hollingsworth and Hollingsworth, 1986).

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Table 1

Independent Variable Definitions and Descriptive Statistics

		Mean*	Standard Deviation
RELSAL	The ratio of local public sector salaries to private sector salaries	1.63	.33
SMSA	A categorical variable: 1 if jurisdiction is located in a SMSA; 0 otherwise	.79	
HOUSINC	The median household income of the jurisdiction (in \$100,000)	.16	.04
HOSPOP	The number of hospitals per 100,000 population	3.42	2.18
POP80	The jurisdiction population as of June 1, 1980		
SUNBELT	A categorical variable: 1 if jurisdiction is located within the Sunbelt; 0 otherwise	.34	
COLL	A categorical variable indicating degree of collectiveness of service:		
	2-highly collective	-.24	
	1-somewhat collective	.59	
	0-otherwise	.17	
PCTPOV	The percent of the jurisdiction's population which is below the federal poverty line	11.38	4.94
PCTNW	The percent of the jurisdiction's population that is non-white	13.30	12.93
STAND	A categorical variable indicating if standardization is desired: 1-desirable; 0-otherwise	.24	

*In the case of categorical variables, relative frequencies are reported.

Source: The 1983 City and County Databook.

Table 2

Logit Estimates of Local Government's
Sector Preference for Health Contracts

	β	standard error
Alpha 1	-.24	1.00
Alpha 2	-2.98	1.02
RELSAL	.60***	.23
SMSA	.37*	.21
HOUSINC	1.16	3.22
HOSPOP	.02	.04
POP80	.08***	.03
SUNBELT	-.19	.16
COLL	-.97***	.22
PCTPOV	.01	.03
PCTNW	-.02**	.01
STAND	.37***	.21

Model $\chi^2 = 44.65***$
n = 691

***Denotes significance at .01 level

**Denotes significance at .05 level

*Denotes significance at .10 level