New Forms of Local Governance: 
A Theoretical and Empirical Analysis of the Case of Portuguese Municipal Corporations

António F. Tavares *
atavares@eeg.uminho.pt

Pedro J. Camões **
pedroc@eeg.uminho.pt

School of Economics and Management
University of Minho – Campus de Gualtar
4710-057 Braga
Portugal

Prepared for the Midwest Political Science Association Conference, Chicago, Illinois, 7-10 April 2005

* Assistant Professor; Ph.D. in Public Administration and Policy, Florida State University, USA
** Assistant Professor; Ph.D. in Political Science, University of South Carolina, USA
Abstract

This paper is an attempt to identify which factors influence Portuguese local governments to rely on municipal corporations to provide public services. Based on the ideas of the new institutional economics applied to public administration developed by Milgrom and Roberts (1990) and Horn (1995), we argue that influence costs of in-house production and bargaining costs of external delegation to municipal enterprises are the main determinants of the creation of municipal corporations and other types of local public sector organizations external to the local government. An event count model is employed to explain the differences across 278 Portuguese local governments in adopting municipal corporations/enterprises. Results indicate that organizational size, financial dependency, and fiscal stress, as well as ideological concerns and the activity of local interest groups drive the choices of local governance structures.
Introduction

In the last five years Portugal has witnessed the expansion of new forms of local governance, mainly due to the enactment of the Municipal, Intermunicipal and Regional Corporations Act of 1998. According to official data, 269 of 308 Portuguese local governments (approximately 88%) have invested capital in public and private corporations. The increase of these forms of governance has occurred through the accelerated growth of the local corporate public sector (CPS) demonstrated by the increase in number of municipal corporations from 34 in 1999 to 114 in 2001 and stock companies with connections to local governments from 143 (1999) to 187 (2001) (Almeida, 2001).

In Portugal, it is generally believed that these new forms of local governance are the result of an attempt to improve municipal management and circumvent administrative law and its implications for personnel management, contract agreements and organization. Rigorous controls imposed by institutions such as the Accounting Court (Tribunal de Contas), the General Inspection of Territorial Administration (Inspecção Geral da Administração do Território) and the General Inspection of Finances (Inspecção Geral de Finanças), as well as the demands of public administrative law are avoided by these new forms of governance, even though this does not mean the complete subordination to labour law (Oliveira, 2001).

This paper is the first attempt to identify which factors influence Portuguese local governments to rely on municipal corporations to provide public services. The proliferation of corporations with local governmental capital in the last five years has

---

1 Lei nº58/98: Lei das Empresas Municipais, Intermunicipais e Regionais.
2 The local corporate public sector includes all forms of organizations involving a majority of public capital.
3 Judicial branch organization that inspects and evaluates the legality and conformity of public budgeting and spending practices producing decisions valid for all public organizations.
led us to question the reasons for this significant growth. In other words, since the
dелегация власти местными властями неизбежна, вопросом становится, какое
предпочтение ведомству предпочитать – внутренняя производственная модель
пользуясь услугами местных властей или внешнее выполнение функций
пользуясь услугами одной из организаций локальной власти?

First, we discuss the alternative institutional arrangements of public service
 provision at the disposal of Portuguese local governments. Next, we explore the
motivations for the provision of services by municipal corporations by highlighting the
internal costs of delegation to civil servants. Third, we present the transaction costs
involved in providing services using the local corporate public sector and some of the
possible explanations for why some municipalities may shy away from using these
types of organizations for service delivery. The fourth section discusses the hypotheses
and describes the variables employed in the empirical analysis conducted in sectionive. We close with a short set of conclusions and directions for future research.

**Transaction Costs, Institutional Arrangements and Local Service Delivery**

The literature on new institutional economics and rational choice theory has
explored at length the role played by transaction costs in institutional design and choice
(Milgrom and Roberts, 1990; Miller, 1992; Horn, 1995; Goodin, 1998; Epstein and
O’Halloran, 1999). At the local level, the empirical work has employed the transaction
costs framework both to explain contracting and sector choice decisions (Clingermayer
and Feiock, 2001; Nelson, 1997; Ashton, 1998) and service delivery performance
(Brown and Potoski, 2003).

Much emphasis of these analyses has been placed upon the public-private sector
choice, but a lot less attention has been devoted to the choice to provide local services
through different governance structures within the public sector. Murray Horn (1995)
presents a theoretical discussion of the choice of public enterprises and public bureaus as alternative ways of providing local government services. The practice demonstrates, however, that the choice between these governance structures is less a dichotomy and more a continuum. In Portugal, the local corporate public sector is composed of several forms of public and public-private arrangements including municipal corporations, stock companies with public capital, public foundations, and cooperatives. The share of public funds invested varies from one form to another, but all these display at least fifty percent of public capital as the initial investment.

The decision to provide a service through the public sector predates the choice of governance structure within the public sector. The transaction costs framework allows us to develop “…falsifiable predictions about institutional choice” (Horn, 1995: 13), and helps us clarify the choice between public enterprise and public bureau. Although this is our main focus, we will address, whenever appropriate, the slight variations among the different governance structures, which characterize the Portuguese local corporate public sector.

**Delegation of Authority and Service Delivery Choice**

The literature on new institutional economics provides an explanation for the option between direct provision by the municipality and the creation of a separate public corporation to provide the service. The institutional arrangements of public service provision can be extremely diverse (Ostrom and Ostrom, 1977; Ostrom, 1983; Smith, 1996). It is possible to organize the options available to local governments in three groups: 1) Direct provision of the service by the municipality; 2) Adoption of one of the public organizational forms included in the CPS; and 3) Contracting with a private business firm. Here, our concern is not with the third option, which involves
privatisation decisions generally absent at the local level in Portugal. More specifically, we are interested in the “make or buy in a public sector organization” decision.

The option between providing a service directly by the local government or delegate this task to another public organization is a decision which depends on institutional, legal and economic factors, including the costs of direct provision of the service, the influence costs resulting from hierarchical centralization of authority, and the negotiation and monitoring costs of contracting with an external provider, the protection against uncertainty present in the political arena, and the protection of social values such as justice, equity, and the public interest (McGuire, Ohsfeldt and Van Cott, 1987 Donahue, 1989; Smith, 1996).

Public bureaus are primarily tax-financed, compete with each other for budget allocations, and are more dependent of political “interference”. In contrast, public enterprises are governed by a board presided by a CEO, have larger managerial discretion in administrative and personnel decisions, avoid limits on public borrowing, and are mainly self-financed. Still, according to Horn (1995), the distinction between public bureaus and public enterprises is less clear when the later run large and persistent deficits, forcing local officials to finance the losses with budget allocations.

Public provision of municipal services always involves delegation of authority. If a municipality produces the service directly, the delegation of authority is internal and the costs incurred can be aggregated under the bureaucratic failure umbrella. When the service is produced by a public organization, the delegation of authority is external, and contracting costs will be present. Both alternatives entail costs that go beyond production costs, mainly due to a monopoly context. In the case of municipal production, the public bureaucracy holds the monopoly, whereas when the service is externally produced the situation can be best described as a bilateral monopoly, with the
municipal corporation retaining the monopoly of service production and the local
government the monopoly of service provision.

If all services provided by the municipality are produced in-house, transaction
costs resulting from contract failure are absent. All inefficiencies will be the result of
bureaucratic monopoly. Once local government officials sponsor the creation of
municipal corporations to provide specialized services (solid waste collection, water
distribution, parks and landscape maintenance, sewage collection and treatment, among
many others), external costs increase sharply, essentially due to bargaining and
monitoring costs involved in the contract with the external producer. Brown and Potoski
(2003) correctly argue that governments that contracts with monopoly producers are
less able to negotiate contractual features.

The choice of the governance structure made by elected officials aims at
minimizing political transaction costs associated with policy implementation, but the
consequences of choice and implementation cannot be fully anticipated. In other words,
the individuals act in ways intendedly rational, while subjected to uncertainty
(Williamson, 1988; Horn, 1995). Alternatives become more attractive as they increase
the chances of re-election of local officials.

*Bureaucratic Supply, Delegation, and Influence Costs*

Traditionally, local governments prefer direct production of services that the
market is unable or unwilling to produce and/or provide. The maintenance of public
parks, the regulation of medical drugs, the control of pollution, or road works are
examples of services the market fails to produce in efficient quantities and that,
therefore, become central or local government responsibility. The hierarchy, opposed to
the market, is more efficacious in the pursuit of these goals.
The lack of flexibility of public service law in Portugal is usually mentioned as an obstacle to efficient management. However, this rigidity is justified as a means to guarantee the continuity and political neutrality of public servants, even if it entails inefficient behaviours.

In-house organization of service delivery allows municipal governments to save on bargaining costs, since the relationship between local governments and municipal corporations is, in essence, a bilateral monopoly, leading to inefficient outcomes due to asset specificity. Milgrom and Roberts (1990) point out that, in situations such as the one described, bargaining costs result from coordination failure between the purchaser (the local government) and the supplier (the municipal corporation) and from measurement costs derived from information acquisition in search of performance quality.

However, the savings in bargaining costs produced by in-house production have a downside: influence costs increase sharply, as a consequence of centralized authority. When the service is provided in-house, it shares the municipal resources and budget allocations with all the other services. This leads to competition between services over limited amounts of resources, entailing four kinds of influence costs: 1) excessive intervention due to over-zealous authority and/or personal interest; 2) increased time dedicated by the middle and lower ranks to influence decision-making resulting in reduced organizational productivity; 3) poor decision-making due to information distortion and asymmetry and; 4) inefficiency generated by structural modifications to avoid influence costs (Milgrom and Roberts, 1990).

The literature on principal-agent theory argues that the internal production of publicly provided services involves delegation from the mayor or municipal council to the bureaucrats or administrative ranks, acting as agents. Bureaucrats have a better
understanding of the minimum cost of service production and ask for a higher budget than their needs – the discretionary budget (Niskanen, 1971) and can engage in on-the-job shirking due to the lack of flexibility of civil service laws barring effective personnel management. These practices are the product of information asymmetry between elected local officials and administrative employees and result in internal delegation costs and inefficiencies.

However, the concept of influence costs goes beyond Horn’s definition of agency costs and Niskanen’s discretionary budget, to encompass a larger number of in-house provision inefficiencies. Larger municipalities face more severe influence costs. As the number and diversity of services to be provided increases, influence costs may rise sharply due to the multiplication of the number of employees and organizational hierarchical levels. In this context, local officials will frequently opt for municipal corporations to deliver local services, even if this results in organizational redundancy or duplication (Bendor, 1985; Miranda and Lerner, 1995).

Municipal corporations help to reduce influence costs in a significant way, because they insulate the provision of specific services from the competition for resources and budgets, reduce the number of transfers between services, and stimulate each corporation to search for own revenues. In addition, local bureaucracies are much more subjected to influence costs than municipal corporations because local officials have to periodically stand for election (Clingermayer and Feiock, 2001). There are, of course, inefficiencies associated with the creation of these entities, mainly as a result of bargaining and monitoring costs, but these have to be compared with the influence costs avoided with the restructuring of service delivery. After discussing influence costs present in local bureaucracies, we now turn to bargaining costs associated with external service delivery.
External Service Delivery and Contractual Costs

In general, the adoption of new forms of governance of public services is associated with a need by municipalities to avoid public expenditure legal limitations and circumvent the lack of flexibility in civil service management. The creation of municipal corporations requires the authorization of the municipal assembly and is subjected to *ex-post* control (*fiscalização sucessiva*) by the Accounting Court. Other than these requirements, all municipal corporations are characterized by high flexibility of organization and have greater discretion to enter in contracts with other public or private organizations. The option for the creation of a municipal enterprise seems to be linked with the attempt to take advantage of flexible financial and personnel controls, the specialization of services, economies of scale, and intermunicipal synergies (CCRN, 1998). The adoption of municipal corporations also allows municipalities to avoid situations where the market fails, such as the outsourcing of companies in monopolist or oligopolist markets.

The delegation of authority to a public organization entails both economic and political efficiency arguments. Economically, external service delivery is likely to produce savings as a result of flexible personnel management and procurement rules. When the delegation is made to municipal corporations, the civil service rules and regulations no longer apply and the governance structure is, at least in theory, dominated by criteria of economic efficiency.

The choice of service delivery mode is also the result of political preferences and the distributive consequences of each governance structure (Moe, 1984). Political efficiency is then measured in terms of the probability of re-election. Elected officials will choose the governance structure that maximizes the probability of re-election.
(minimizes political transaction costs), independently of the consequences in terms of economic efficiency.

Delegating the decision to other public organizations involves a larger number of actors and decision-making points and, therefore, opportunities for delays and other costs. As Pressman and Wildavski (1979) suggested, as the number of veto points increases, the probability of success in policy implementation decreases and the conflict over the means employed in service provision increases. For this reason, the elected officials will choose external service delivery when the external costs of transaction (delegation to municipal corporations) are lower than the internal costs of delegation, i.e., direct provision by the municipality (Coase, 1960; Donahue, 1989; Dasse et. al., 2000; Moe, 1984, 1989, 1990; Williamson, 1988, 1990; Nelson, 1997).

Any alternative scheme of production that involves a contract of the municipality with another entity involves bargaining and monitoring costs not present in direct provision. The decision to provide the service externally through a municipal enterprise is likely to increase management flexibility and significantly reduce influence costs, although often counterbalanced by the loss of control by local officials.

However, the degree to which influence costs are reduced depends upon a strict financial independence between municipal government and municipal enterprise. In other words, when the legal limits to debt in municipal corporations are nonexistent and the contract between the local government and the municipal enterprise is incomplete, bargaining costs rise sharply, mainly due to the breach of the boundary between both organizations. Municipal corporations surpluses may be employed to cover municipal budget losses and municipal revenues can be used to bail out enterprise losses. In these cases, bargaining costs become true influence costs, since the boundary between both organizations is blurred and what previously were contracting costs resulting from the
negotiation between separate organizations become influence costs within a single organization with several financial flows and transfers.

In the Portuguese case, the leadership of municipal corporations has been linked with the local elected leaders, with the mayor frequently becoming the CEO of the corporation. The existence of vague legislation favours the establishment of these organizations at the local level circumventing the legislation. In this context, the central government has a limited number of instruments to monitor municipalities; individual monitoring activities are too expensive and a single monitoring strategy may be inadequate to the diversity of situations. As a result, in a situation of public monopoly, municipal elected officials are relatively free to choose the governance structure of service delivery that enhances political efficiency, translated in electoral gains.

**Hypotheses and Variables**

The previous section shows that the transaction costs framework enables us to analyse theoretically the choices of governance structure in Portuguese municipalities. Our aim is not only to develop theoretical arguments but also to actually test them empirically. This objective presupposes the development of testable hypotheses. As always, an empirical test is constrained by practical concerns with data availability.

Theoretically, it would be possible for municipalities to retain internal control over all public service production. However, resource and organizational limitations entailing significant influence costs force delegation of activities to a greater or lesser extent to external providers. The size of the local bureaucracy is a reliable indicator of the amount of influence costs faced by local officials. If the number of local government employees is large, influence costs will be high, leading local officials to opt for the creation of municipal enterprises to reduce them. The formation of specialized
municipal corporations then is likely to reduce influence costs generated by excessive organizational complexity and size of traditional municipal services.

In municipalities characterized by large population growth, the need for delegation will be higher, not only because the pressures for the municipality to provide a larger amount and diversity of services is higher and fiscal stress more likely to occur, but also because interest groups will be more active and in larger number in calling for specific services.

The motivation behind this option of service delivery is that when public service demand increases, the response of the municipality may become inadequate due to the size and complexity of internal organization. Population growth can also be seen as a proxy of service demand, that is, how heterogeneous are the community’s preferences. Population growth is measured as the rate of population change over the last ten years. The index of social development is included as a control variable for the socio-economic conditions prevailing in the municipality.

Fragmentation in the municipality is likely to increase the number of municipal corporations, because each parish\(^4\) operates as an interest group, lobbying the municipal government for more and better services. A large number of parishes is also a good proxy for the heterogeneity of preferences at the local level. Special purpose municipal corporations may be better equipped to deal with heterogeneous service demands and preferences (Nelson, 1997; Foster, 1996). The area of the municipality is measured in squared kilometres and is used as a control for our fragmentation variable.

The creation of municipal corporations can also be driven by an ideological conception of municipal service delivery. The most representative political parties in

---

\(^4\) The smallest territorial unit with self-government in Portugal, with a low number of competences and heavily financially dependent of the municipal government; the lower tier of government.
Portugal cover the political spectrum from the left to the right and it is expected that municipalities with governments on the right or leaning towards the right will be more supportive of the creation of municipal corporations. Although the Parties on the right are inclined to favour privatisation or contracting out of private firms to deliver municipal services, they may not be able to convince the electorate to accept such a radical solution, given the Portuguese tradition of public bureaucratic production and provision of municipal services. In this context, public municipal corporations are a middle of the road strategy to move municipalities away from in-house production.

In addition to the party ideology measure, we employ a dichotomous variable identifying a single party majority in the executive body of the municipality. It is expected that the presence of a majority will increase the number of municipal corporations, essentially because decision-making costs in the executive body are substantially reduced (Horn, 1995). When a single party holds the majority, veto points in the executive are absent and decisions are not constrained by the opposing parties. In this context, it is more likely that delegation to the local corporate public sector will occur.

In Portugal, local revenues consist of two large parcels: revenue from local taxes and central government grants. Financial dependency from the central government is the proportion of central government grants over total municipal revenues. When financial dependency is high, the discretion of local governments in the creation of municipal corporations is smaller, especially because an analysis of financial dependency data reveals that dependency is higher in less populated municipalities, which also happen to have, on average, less municipal enterprises. Hence, local governments where local

---

5 The four major parties in the Portuguese political system are the Portuguese Communist Party (PCP) coded “0” on the left, the Socialist Party coded “1” center-left, the Social Democratic Party (PSD) coded “2”, center-right, and the Christian-Democratic Party/Popular Party coded “3” on the right. The parties close to the center of the political spectrum have alternated in the National Government for the last 18 years and control about 82.7 per cent of all municipal governments.
taxes represent a larger share of total revenues are expected to display larger numbers of municipal corporations.  

If the financial conditions are adverse (high deficits), municipalities avoid the creation of municipal enterprises, apparently because these drain resources from the general fund (Rubin, 1988). The empirical literature suggests that fiscal stress reduces contracting-out for service delivery with private organizations (Ferris, 1986), but increases the formation of public municipal enterprises (Rubin, 1988). In order to capture fiscal stress in the municipality, we employ the total deficit, measured as the difference between total revenues and total expenditures. The larger the deficit, the less likely municipal corporations will be created.

To sum up, Table 1 summarizes the hypotheses and variables described above and their expected effects. It also presents a brief definition and measurement of each variable, as well as the data source. In addition, Table 2 shows the summary statistics for the variables used in the analysis.

[Insert Table 1 and Table 2]

**Empirical Analysis**

The empirical analysis of the hypotheses presented in the previous section involves the use of two different but related dependent variables. The first is the total number of the various Corporate Public Sector Organizations (with more than 50% of public capital) created in the 1999-2002 period. This is a count variable and reflects the intensity of choice. The second dependent variable is a dichotomous variable to measure the choice to create Municipal Corporations only. As we saw before, municipal corporations are just one specific type of CPS of organization, although it is by far the most frequently adopted.
In the first analysis, we use the Poisson regression model. This is the appropriate estimation technique to treat event counts as in this case, since the major assumption is that the conditional mean of the distribution equals the conditional variance (equidispersion). However, we are aware that more often than not, the variance exceeds the mean (overdispersion) so that the Poisson model is no longer adequate. Then, the first step in determining the appropriateness of this model is to test for overdispersion (Long, 1997; Green, 1997). The goodness-of-fit $\chi^2$ test does not allow us to reject the null hypothesis that the data are Poisson distributed, so a Poisson regression model is used in the estimation. The Poisson regression results are presented in table 3.

[INSERT TABLE 3]

The likelihood ratio test based on a chi-square distribution compares the log likelihood of the unconstrained model with the log likelihood of a model only with the constant. If the constraint significantly reduces the likelihood, the null hypothesis is rejected (Long, 1997). The likelihood ratio for this model is statistically significant providing the indication that the full model is adequate. The pseudo-$R^2$ should be carefully interpreted, since the usual interpretation – the proportion of the variation in the dependent variable explained by the independent variables – is not fully satisfactory. Long (1997) advises that large values are, obviously, better than lower values, but there is no clear cut criterion to judge the value of 23.3% obtained for our estimated model.

In more substantive terms, the results provide general support for the hypotheses we developed in the previous sections. Concerning the political variables, the ideology of the party governing the municipality matters. The analysis gives support to the idea that a right-leaning composition of the local council increases the probability of using a larger number of external delivery governance structures such as municipal
corporations. Therefore it stands the argument that rightist parties use public municipal corporations as a middle road strategy to move away from in-house production.

Turning to hypotheses essentially derived from the transaction costs approach, the hypothesis regarding the effect of influence costs is strongly supported. This means that as the organizational complexity increases (hierarchical levels and number of actors) so do the benefits of turning to external delivery.

The variable measuring number of parishes in the municipality is also supported, which suggests that more fragmentation means more interest groups lobbying the municipal government for more and better services. In this sense, the obvious rational strategy to avoid it is to rely on organizational structures that are, in fact, much more insulated from these political demands.

The three public finance variables are supported with high statistical significance and virtually robust to every modelling specification. Budgetary limitations are an evident concern in the decision. That is, fiscal crises (budgetary deficits) constrain local decision-makers to rely more on in-house, thus more controllable, delivery of local public services. In the same way, tax limitation and financial dependency concerns also seem to influence local governance choices. The more the municipalities are able to raise own sources of financing – and, symmetrically, the less they are financially dependent – the more they rely on alternative organization structures for delivering services.

To advance a step further, Table 4 shows the computation of what Scott Long (1997) calls factor changes. They are derived from the Poisson regression model shown in Table 3. Simply put, a factor change means that, holding all variables constant, for a unit change in a given independent variable $X_k$, the output count changes by a factor of $\exp(B_k)$ (Long 1997: 225). This factor has an important advantage when it comes to
interpret the results. Contrary to what happens with the standard Poisson coefficients, the factor changes do not depend on the level of the variable of interest or all other variables in the model.

[INSERT TABLE 4]

To illustrate, the factor change attached to the variable measuring party ideology is 1.1495. This means that a change in the party securing local power to the party immediately on its right, is expected to increase, on average, the number of municipal corporations by 14.95%. Thus, the effect is strong and uniform in the entire ideological spectrum. Similarly, holding all other variables constant, having one more parish in a municipality implies having about 1.13% more municipal enterprises in that given municipality. It should also be obvious that a factor change of 0.24 of the financial dependency variable means a decrease. On average, it means the creation of less 76% municipal corporations for each unit increase in that variable.

Turning to the second dependent variable, the results are less supportive of the suggested hypotheses. Recall that this is a dichotomous variable to measure the mere choice to create the specific type of organization defined as Municipal Corporation. As we saw in the previous sections, this type of organization has some common characteristics such as that they are governed by a board presided by a CEO, have larger managerial discretion in administrative and personnel decisions, avoid limits on public borrowing, and are mainly self-financed.

[INSERT TABLE 5]
The results show nevertheless two important regularities. The hypothesis concerning the relevance of influence costs is, again, strongly supported. More importantly, these results are robust to many different specifications of the model\(^6\) and dependent variables collected from different sources. This means that organizational complexity (hierarchical levels and number of actors) is a strong determinant in the decision to rely on external sources of provision. This message seems to be clear.

The second regularity relates to the number of parishes, seen as pressure groups demanding for more services to be delivered. Since it is also a good proxy for the heterogeneity of preferences at the local level, municipal corporations may be better equipped to deal with heterogeneous service demands and preferences (Nelson, 1997; Foster, 1996).

**Conclusions and Future Research**

The large number of municipal corporations and CPS organizations justifies an inquiry to the causes of their adoption. The different socio-economic and political characteristics of Portuguese local governments are relevant to explain the reasons for the delegation of authority from the municipalities to a set of public organizations (CPS) rather than in-house production.

The size of the municipal government’s in-house production services generates extremely high influence costs, due to excessive centralization of authority. Influence costs are also present in municipal corporations, but the smaller size and lower complexity makes these costs more manageable at this level. Then, it seems clear that, when size and complexity of internal organization become a problem, local governments opt for a specialized organization for service delivery. As the empirical

---

\(^6\) The different specifications were not included here due to space limitations but they are available upon request.
analysis has shown, the heterogeneity of preferences of local citizens is an additional source of pressure for the creation of municipal corporations.

Since this work is mainly focused on municipal corporations as a specific type of CPS organization, future research will further explore the choice among all types of organizations within the corporate public sector for municipal service delivery. Once data becomes available, we expect to develop hypotheses related to these choices in terms of specific services to be delivered. As the empirical literature has shown at length, the type of service to be delivered is linked with contracting and sector choice decisions (Clingermayer and Feiock, 2001; Dasse, Clingermayer and Feiock, 2000). The diversity of services provided by public corporations at the local level allows us to expect different patterns of choice of public governance structures.
References


Smith, Steven Rathgeb. “Transforming Public Services: Contracting for Social and Health Services in the US.” *Public Administration* 74 (Spring): 113-27.


Appendix

Table 1 – Variables Description, Expected Signs, and Sources

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Expected Sign</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPS</td>
<td>Dependent Variable; the number of Corporate Public Sector Organizations with more than 50% of public capital created by 2001.</td>
<td></td>
<td>Almeida (2001)</td>
</tr>
<tr>
<td>Mun Corporations</td>
<td>Dependent Variable; Dichotomous variable to measure the choice to create Municipal Corporations only. 1 if one or more corporations were created and 0 if none was created.</td>
<td></td>
<td>Direct Survey to Municipalities</td>
</tr>
<tr>
<td>PartyId</td>
<td>Left-right ideological measure of the party securing the majority of the local council; PCP (left) coded as 0, PS (center-left) coded 1, PSD (center-right) coded 2, and PP (right) coded as 3.</td>
<td>+</td>
<td>DGAL (2001)</td>
</tr>
<tr>
<td>Majority</td>
<td>Dummy variable which takes the value of “1” when the winning party has the majority of seats in the executive body. “0” otherwise.</td>
<td>+</td>
<td>DGAL (2001)</td>
</tr>
<tr>
<td>Bureaucracy</td>
<td>The number of employees of the in-house municipal organization.</td>
<td>+</td>
<td>Direct Survey to Municipalities</td>
</tr>
<tr>
<td>Parishes</td>
<td>Number of Parishes in the municipality.</td>
<td>+</td>
<td>DGAL (2001)</td>
</tr>
<tr>
<td>Pop. Growth</td>
<td>Variation in the population between two census.</td>
<td>+</td>
<td>DGAL (2001)</td>
</tr>
<tr>
<td>Area</td>
<td>Area in squared kilometers</td>
<td>+</td>
<td>DGAL (2001)</td>
</tr>
<tr>
<td>IDS</td>
<td>Index of social development as measured by Portuguese government.</td>
<td>+</td>
<td>DGAL (2001)</td>
</tr>
<tr>
<td>Taxpc</td>
<td>Local taxes per capita.</td>
<td>+</td>
<td>DGAL (2001)</td>
</tr>
<tr>
<td>Def</td>
<td>Total local budgetary balance (a negative number is a deficit).</td>
<td>+</td>
<td>DGAL (2001)</td>
</tr>
<tr>
<td>FinDep</td>
<td>Financial dependency, that is, the proportion of central grants in total local revenues.</td>
<td>-</td>
<td>DGAL (2001)</td>
</tr>
</tbody>
</table>
Table 2 – Summary of the Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs.</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPS</td>
<td>278</td>
<td>2.9353</td>
<td>2.7592</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>Mun Corporations</td>
<td>278</td>
<td>.3273</td>
<td>.4701</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>PartyId</td>
<td>278</td>
<td>1.2986</td>
<td>.7510</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Majority</td>
<td>278</td>
<td>.8921</td>
<td>.3108</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Bureaucracy</td>
<td>276</td>
<td>399.5797</td>
<td>714.6057</td>
<td>46</td>
<td>10306</td>
</tr>
<tr>
<td>Parishes</td>
<td>278</td>
<td>14.5216</td>
<td>12.7717</td>
<td>1</td>
<td>89</td>
</tr>
<tr>
<td>Pop. Growth</td>
<td>278</td>
<td>.8000</td>
<td>12.2127</td>
<td>-19.22</td>
<td>78.06</td>
</tr>
<tr>
<td>Area</td>
<td>278</td>
<td>319.0423</td>
<td>283.0178</td>
<td>7</td>
<td>1721</td>
</tr>
<tr>
<td>IDS</td>
<td>278</td>
<td>.8456</td>
<td>.0457</td>
<td>.6392</td>
<td>.9347</td>
</tr>
<tr>
<td>Taxpc</td>
<td>278</td>
<td>12.3871</td>
<td>13.0934</td>
<td>.3586</td>
<td>157.4417</td>
</tr>
<tr>
<td>Def</td>
<td>278</td>
<td>-64358.09</td>
<td>794486.4</td>
<td>-1.28e+7</td>
<td>831195</td>
</tr>
<tr>
<td>FinDep</td>
<td>278</td>
<td>0.4556</td>
<td>0.1705</td>
<td>.1007</td>
<td>.903</td>
</tr>
</tbody>
</table>
Table 3 – Results of the Poisson Regression Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Err.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PartyId</td>
<td>.1396***</td>
<td>.0534</td>
</tr>
<tr>
<td>Majority</td>
<td>.0226</td>
<td>.1130</td>
</tr>
<tr>
<td>Bureaucracy</td>
<td>.0004***</td>
<td>.0001</td>
</tr>
<tr>
<td>Parishes</td>
<td>.0112***</td>
<td>.0026</td>
</tr>
<tr>
<td>Pop. Growth</td>
<td>.0025</td>
<td>.0031</td>
</tr>
<tr>
<td>Area</td>
<td>.0002</td>
<td>.0002</td>
</tr>
<tr>
<td>IDS</td>
<td>.8872</td>
<td>1.3151</td>
</tr>
<tr>
<td>Taxpc</td>
<td>.0099***</td>
<td>.0024</td>
</tr>
<tr>
<td>Def</td>
<td>2.79e-07***</td>
<td>5.05e-08</td>
</tr>
<tr>
<td>FinDep</td>
<td>-1.4096***</td>
<td>.3531</td>
</tr>
<tr>
<td>Const</td>
<td>.0954</td>
<td>1.2206</td>
</tr>
<tr>
<td>Num Obs.</td>
<td>276</td>
<td></td>
</tr>
<tr>
<td>LR chi² (10)</td>
<td>304.03</td>
<td></td>
</tr>
<tr>
<td>Prob &gt; chi²</td>
<td>.0000</td>
<td></td>
</tr>
<tr>
<td>Pseudo R²</td>
<td>.2338</td>
<td></td>
</tr>
<tr>
<td>Log-L</td>
<td>-498.2765</td>
<td></td>
</tr>
</tbody>
</table>

*** significant at the level of .01  
**  significant at the level of .05  
*   significant at the level of .1
Table 4 – Factor Changes of the Poisson Regression Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factors</th>
<th>Std. Err.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PartyId</td>
<td>1.1495</td>
<td>.0614</td>
</tr>
<tr>
<td>Majority</td>
<td>1.0228</td>
<td>.1156</td>
</tr>
<tr>
<td>Bureaucracy</td>
<td>1.0004</td>
<td>.0001</td>
</tr>
<tr>
<td>Parishes</td>
<td>1.0113</td>
<td>.0025</td>
</tr>
<tr>
<td>Pop. Growth</td>
<td>1.0025</td>
<td>.0031</td>
</tr>
<tr>
<td>Area</td>
<td>1.0002</td>
<td>.0002</td>
</tr>
<tr>
<td>IDS</td>
<td>2.4284</td>
<td>3.1936</td>
</tr>
<tr>
<td>Taxpc</td>
<td>1.0099</td>
<td>.0024</td>
</tr>
<tr>
<td>Def</td>
<td>1</td>
<td>5.05e-08</td>
</tr>
<tr>
<td>FinDep</td>
<td>0.2442</td>
<td>.0862</td>
</tr>
<tr>
<td>Variable</td>
<td>Coefficient</td>
<td>Std. Err.</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
<td>-----------</td>
</tr>
<tr>
<td>PartyId</td>
<td>.0322</td>
<td>.2136</td>
</tr>
<tr>
<td>Majority</td>
<td>.9068*</td>
<td>.5442</td>
</tr>
<tr>
<td>Bureaucracy</td>
<td>.0016**</td>
<td>.0007</td>
</tr>
<tr>
<td>Parishes</td>
<td>.0254**</td>
<td>.0129</td>
</tr>
<tr>
<td>Pop. Growth</td>
<td>-.0036</td>
<td>.0177</td>
</tr>
<tr>
<td>Area</td>
<td>.0013**</td>
<td>.0006</td>
</tr>
<tr>
<td>IDS</td>
<td>7.1952</td>
<td>5.1918</td>
</tr>
<tr>
<td>Taxpc</td>
<td>.0156</td>
<td>.0139</td>
</tr>
<tr>
<td>Def</td>
<td>-1.62e-07</td>
<td>7.28e-07</td>
</tr>
<tr>
<td>FinDep</td>
<td>-.4144</td>
<td>1.5845</td>
</tr>
<tr>
<td>Const</td>
<td>-9.0835*</td>
<td>4.8825</td>
</tr>
<tr>
<td>Num Obs.</td>
<td>276</td>
<td></td>
</tr>
<tr>
<td>LR chi² (10)</td>
<td>55.69</td>
<td></td>
</tr>
<tr>
<td>Prob &gt; chi²</td>
<td>.0000</td>
<td></td>
</tr>
<tr>
<td>Pseudo R²</td>
<td>.1591</td>
<td></td>
</tr>
<tr>
<td>Log-L</td>
<td>-147.1333</td>
<td></td>
</tr>
</tbody>
</table>

*** significant at the level of .01  
**  significant at the level of .05  
*    significant at the level of .1