

Control patterns in hybrid relationships: it matters what you do, not who you are

Abstract

The contracting-out of public services has often been accompanied by a strong academic focus on the emergence of hybrid organisational and governance forms, and a general neglect of the processes and practices through which contracted-out services are controlled and monitored. To fill this gap, we draw on contracting-out and inter-organizational control literatures to explore how municipalities control the provision of different public services and what variables can explain the choice of their control mechanisms. Our results, based on a survey of Italian municipalities, show that in hybrid contexts, market-, hierarchy- and trust-based controls display different intensities, can co-exist and are explained by different variables. Service characteristics (i.e., output measurability and asset specificity) are more effective in explaining market- and hierarchy-based controls than relationship characteristics. On the contrary, trust-based controls are the most widespread, but cannot be explained by the variables traditionally identified in contracting-out and inter-organizational control studies.

Keywords: contracting-out, hybrids, control, monitoring, public services.

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Introduction

Over the last decades, governments have increasingly moved from the direct provision of services to contracting them out (Brown and Potoski 2003; Van Slyke 2003; Bovaird 2006; Brown et al. 2006; Davis 2007; Marvel and Marvel 2007), giving rise to the emergence of hybrid organizational and governance forms where public and private actors and interests interact (Miller et al 2008; Beriv and Rhodes 2003; Newman 2001; Rhodes 1997; Peters 2008). This requires the development of new systems to manage the contracting process, from the assessment of its feasibility, to its implementation, to its monitoring and evaluation (Johnston and Romzek 1999; Romzek and Johnston 2002; Brown and Potoski 2003; Van Slyke 2007).

Much literature has focused, so far, on the identification of the most efficient organizational and governance forms to provide the service, i.e. the first stage of the contracting process, discussing the features and conditions under which governments prefer to outsource services or outsourcing appears to deliver its benefits (for example, Johnston and Romzek 1999; Brown and Potoski 2003; Van Slyke 2003; Warner and Hefetz 2008; Hefetz and Warner 2011; for a review, Bel and Warner 2008). The purpose of these studies has often been narrow and mainly assessed the efficiency of service-delivery choices, generally drawing on economic theories such as public choice and property rights (Niskanen 1971; Hart and Vishny 1997; Sclar 2000), agency theory (Alchian and Demsetz 1972; Sappington 1991; Jensen and Meckling 1996), and transaction cost economics (Williamson 1981; 1999). In spite of the relevant number of contributions in this field, however, findings are

still inconclusive, since contracting-out appears to be the result of multiple conditions, and is not necessarily associated with a reduction in costs (Bel and Warner 2008).

In the light of the widespread interest in hybrids and contracting-out issues shown by many scholars, it is quite surprising that the other phases, i.e. the monitoring and evaluation of contracted-out public services, have been, instead, scantily investigated. This academic neglect often reflects the limited attention towards the phase of contract evaluation put in place by governments (Kettl 1993; Brown and Brudney 1998; Sclar 2000), which sometimes translates in a deficit of monitoring and, in general, of contract management capacity (Brown and Potoski 2003; Van Slyke 2007). This is also consistent with Miller et al.'s (2008) view that in the literature on hybrids too much attention has been paid to organisational forms, thus largely neglecting the hybrid practices and processes (such as those involved in the control and monitoring) that make possible information flows and coordination across organisational boundaries.

Calls have been made to better understand such monitoring practices, in view of their importance in ensuring the effectiveness (and not only the efficiency) of contracting-out itself (Milward 1996; Johnston and Romzek 1999; Romzek and Johnston 2002; Cristofoli et al. 2010). The few studies addressing the issue of monitoring of outsourced public services usually focus on the intensity, rather than the type of control tools, and point out a difficulty in explaining governments' behaviours. Moreover, they generally find that theories such as agency (Van Slyke 2007), contracting-out and performance measurement (Marvel and Marvel 2007) provide a limited explanation of control practices.

In the light of the above considerations, we combine the contracting-out (Donahue 1989; Behn and Kant 1999; Hefetz and Warner 2011; Marvel and Marvel 2007; Van Slyke 2007)

and the inter-organizational control (Van der Meer-Kooistra and Vosselman 2000; Langfield-Smith and Smith 2003; Håkansson and Lind 2004; Caglio and Ditillo 2008a, 2008b) literatures to explore how municipalities control the provision of different public services and what variables help explain these choices.

Our contribution is threefold: first, in a setting of hybrid relationships, we explore whether the variables traditionally used to explain contracting-out choices have explanatory potential also with reference to control practices. Second, we combine the traditional contracting-out literature with the inter-organizational control one that has, so far, mainly focused on private-sector arrangements. Third, differently from previous studies, we consider not only the intensity, but also the types of control (i.e. hierarchical, market-based or trust-based).

Our analysis is based on a survey of Italian municipalities. The Italian context represents an interesting setting for the study since, as a consequence of a series of reforms, the provision of public services has gradually shifted from a hierarchical mode of governance to a market-based one. This has translated in a layering and coexistence of different governance forms, which, in turn, have required the deployment of different combinations of controls on the public-service providers.

The paper is structured as follows: Section 2 reviews the relevant literature; Section 3 explains the methods; Section 4 presents the results and Section 5 the discussion. Finally, Section 6 draws some conclusions, suggesting implications and further research avenues.

Monitoring and control systems in public-service provision

The contracting-out literature has mainly focused on outsourcing choices and their determinants (for example Brown and Potoski 2003; Van Slyke 2003; Bel and Warner 2008; Warner and Hefetz 2008; Hefetz and Warner 2011). Contracting-out behaviors have been studied looking at service-delivery choices and consequences, often adopting a transaction cost approach and proposing explanatory variables, such as asset specificity, output measurability, task uncertainty and task interdependence (Ferris and Graddy 1991; Milward and Provan 2000; Brown and Potoski 2003). In a more comprehensive analysis, Hefetz and Warner (2011) find that the most important explanatory factors for contracting-out are the delivery mode (direct, intergovernmental cooperation, for-profit, non-profit), the extent of market competition and citizen involvement (i.e., public interest in service delivery) and the place characteristics (i.e., town status and public management features).

Only a few studies have paid attention to the monitoring of public services in these hybrid contexts, drawing mainly on economic theories, such as transaction cost economics (Williamson 1981, 1999) and agency theory (Alchian and Demsetz 1972; Sappington 1991; Jensen and Meckling 1996). According to these, monitoring systems will be put in place in order to minimize transaction costs and goal misalignment between principals and agents. However, Van Slyke (2007) finds that the degree of variance in the level of monitoring is much lower than expected and that agency theory and goal congruence (or misalignment) have strong limitation in explaining such results. He also underlines that the explanation of different monitoring devices in different public services may necessitate the adoption of different theoretical perspectives.

Different findings are proposed by Marvel and Marvel (2007), who investigate the intensity of monitoring mechanisms contrasting transaction cost and performance measurement literature. They find that, consistently with literature expectations, the delivery mode (in-

house, delivery by government, by for-profit or non-profit entities) can actually affect the intensity of controls put in place, as a consequence of the expected divergence in the provider's goals. Their study shows that, on average, the intensity of ex-ante, process and ex-post monitoring does not differ between in-house and for-profit provision. On the contrary, the intensity of ex-ante and process monitoring is significantly lower towards non-profit providers; while ex-post monitoring is weaker in the presence of governmental providers. Further investigating this issue, Marvel and Marvel (2008), on the one hand, confirm the above results; on the other hand, suggest that intrinsic service characteristics, such as assets specificity and ease of measurement, may also play a role in defining the intensity of controls. Services which generate more monitoring, indeed, do so independently of the type of delivery mode.

Finally, Brown and Potoski (2003) point out that governments that contract out tend to calibrate their monitoring on the basis of the transaction cost risks attributable to a certain service and to the contracting environment. They propose that governments can respond to these risks by investing in contract management and monitoring procedures.

The above contributions have only considered the intensity of controls in hybrid public-service provisions. More recently, Cristofoli et al. (2011) have gone further, looking at the *types* of controls (i.e. market-, hierarchy and trust-based) put in place and widening the range of variables and characteristics that can explain them. They find that control patterns tend to combine and that, while environmental (i.e., uncertainty and asset specificity) and task (i.e., output measurability and task programmability) characteristics only partially explain the adoption of certain control configurations, control mechanisms seem to be rather influenced by variables related to party characteristics (i.e., partner knowledge, ownership configuration and political visibility). However, Cristofoli et al. (2011) only

studied 9 cases and did not consider variables such as delivery mode, political orientation, and financial performance.

Bringing together the inter-organizational control and the contracting-out literatures, which have been so far used separately, our paper aims at providing a more comprehensive view of the monitoring and control mechanisms of contracted-out public services. In particular, we contribute to this (so far, very limited) literature by: (i) exploring, through a survey, whether the variables used to explain contracting-out choices have explanatory potential also with reference to the subsequent control mechanisms set in place; and (ii) considering the existence of different possible types of controls (i.e. hierarchical, market-based or trust-based).

Types of control and explanatory variables

The general literature on control mechanisms has traditionally identified three ideal-types: market-, hierarchy- and trust-based controls (Van der Meer-Kooistra and Vosselman 2000; Langfield-Smith and Smith 2003; Håkansson and Lind 2004). The *market-based pattern* of control refers to models in which competitive bidding takes place at periodic intervals, contracts are characterized by a low level of detail, and payment is based on standardized activities or outputs. There are no investments specifically made to sustain the relationship, and if one party of the relation behaves opportunistically, alternative parties can be chosen without incurring relevant switching costs (Vosselman 2002; Langfield-Smith and Smith 2003). *Hierarchy-based patterns* are characterized by comprehensive selection criteria, formal bidding, and long-term detailed contracts to monitor the performance of the partners. Organizational control mechanisms are made up of specified norms, standards,

detailed rules and rigid performance targets, with the objective to foster continuous supervision, performance measurement and evaluation through a regular process of information supply. In this pattern, the selection of the counterparts requires high levels of competence and contractual trust. Finally, *trust-based patterns* consist of broad non-specific contracts that develop over time, sustained by personal consultation and intensive communication to generate confidence that the other party will not behave opportunistically.

It has to be noted that these three control mechanisms represent extremes on a spectrum, and we might expect that in reality different combinations or “hybrids” of these forms exist (Caglio and Ditillo 2008a; Spekle 2001).

Both inter-organizational control literature and contracting-out literature have traditionally relied on transaction cost economics, identifying variables such as output measurability, task uncertainty and asset specificity as explanatory factors for control choices and contracting-out decisions respectively (Brown and Potoski 2003; Van Slyke 2003; Romzek and Johnston 2002; Bel and Warner 2008). However, a more comprehensive spectrum of variables might be needed to explain them, as Hefetz and Warner (2011) show for contracting-out, and Cristofoli et al. (2011) suggest for control decisions. Drawing on previous studies, two main sets of variables can be identified: service and relationship characteristics. Their features and expected influence are discussed in the next sub-sections.

Service characteristics

Existing inter-organizational control literature mainly refers to service characteristics in terms of asset specificity, task uncertainty, task interdependence and output measurability

(Ferris and Graddy 1991; Milward and Provan 2000; Brown and Potoski 2003; Marvel and Marvel 2008; Van der Meer-Kooistra and Vosselman 2000; Vosselman 2002; Langfield-Smith and Smith 2003). Services characterized by low asset specificity and task interdependence, and high output measurability, are expected to be associated with market-based types of controls. In this case, indeed, the information necessary to regulate the transactions is included in the price, which is linked to measurable activities and outputs. The contracts do not need to be detailed and there are no specific investments (van der Meer-Kooistra and Vosselman 2000; Hakansson and Lind 2004; Sartorius and Kirsten 2005; Caglio and Ditillo 2008a, 2008b).

When the final service output is more or less foreseeable, i.e. the level of task uncertainty ranges from medium to high, and services are characterized by moderate asset specificity, task interdependence and output measurability, hierarchy-based patterns seem to be more suitable. These controls aim to guarantee supervision and exchange of detailed information on the technical and economic aspects of activities and resources, together with regular performance measurement and evaluation (van der Meer-Kooistra & Vosselman 2000; Langfield-Smith and Smith 2003; Caglio and Ditillo 2008a, 2008b).

Finally, trust-based patterns are expected to be associated with tasks characterized with high levels of uncertainty, together with high asset specificity and task interdependence, and low output measurability (Van der Meer-Kooistra and Vosselman 2000; Langfield-Smith and Smith 2003; Håkansson and Lind 2004). These controls will be founded mainly on trust because of low ex-ante programmability and measurability of contributions, and of high switching costs across providers.

In the light of the above considerations, the following proposition can be developed:

Proposition 1: In hybrid relationships concerning the provision of public services, the type of controls (i.e. market-, hierarchy- and trust-based) put in place will be associated with different configurations of service characteristics (namely, asset specificity, task interdependence, uncertainty, and output measurability).

The identified relationships and their expected signs are summarised in Table 1.

Relationship characteristics

The characteristics of the relationship (such as mode of delivery/goal congruence, political visibility and partner knowledge) between the parties involved in the public-service provision may be relevant not only in explaining contracting-out choices, but also in defining the types of controls set in place afterwards.

Previous contracting-out literature has identified the nature of the service provider (i.e. for-profit, non-profit, public) as a possible explanatory factor of contracting-out choices (Hefetz and Warner 2011) and intensity of controls (Marvel and Marvel 2007, 2008; Van Slyke 2007). This variable has been alternatively called delivery mode (Hefetz and Warner 2011; Marvel and Marvel 2007, 2008) or goal congruence (Van Slyke 2007; Provan and Milward 1995). Based on these studies, we expect governmental and non-profit providers to be subject to lower levels of control than private for-profit companies. Similarly, high degrees of alignment between the government's and the provider's objectives (i.e. goal congruence) should determine less intense controls. At this stage, however, there is no definite evidence indicating the type of association between this variable and the type of controls, which calls for further investigation.

Looking at the few inter-organizational control studies on the topic, Cristofoli et al. (2010) suggest that high political visibility and high partner knowledge help explain a predominant bureaucratic model with a trust-based flavour. On the contrary, when political visibility and partner knowledge are low, bureaucratic models seem to be complemented by market-based mechanisms. The relationship between citizens and government is crucial since politicians are particularly sensitive to the general public's evaluation and criticism, which are fundamental conditions for retaining citizens' support (Lioukas et al. 1993; Cristofoli et al. 2010). The attention paid by political bodies to certain services can explain the emphasis on developing more or less formal communication, frequent meetings and daily contacts. Literature has also shown that higher political visibility is associated with a stronger intensity of controls (Lioukas et al. 1993). Finally, a few studies suggest that a higher knowledge of the partner can result either in a reduced need for formal coordination or improved coordination (Dekker 2004; Cristofoli et al 2010).

From the above considerations, a second proposition follows:

Proposition 2: In hybrid relationships concerning the provision of public services, the type of controls (i.e. market-, hierarchy- and trust-based) put in place will be associated with different relationship characteristics (namely, political visibility, delivery mode/goal congruence, partner knowledge).

Table 1 summarises the expected associations between relationship characteristics and types of control.

Insert Table 1 here

Methods

In order to carry out the research we conducted a survey of all Italian municipalities of at least 20.000 inhabitants (510 municipalities). We developed an ad-hoc questionnaire that was administered to municipal Chief Executive Officers. The questionnaire was articulated in two sections: one dedicated to solid waste collection and another to homecare services for elderly (for a total of 1,020 unit of analysis). These services were chosen in order to ensure diversity in the variables under consideration (Brown and Potoski 2003) ¹. The questionnaires were administered by email, with subsequent follow-ups by phone. They collected information on how each service is provided and asked the respondents to express their level of agreement on a 5-point Likert-scale² (where 1=completely disagree; 5=completely agree) with statements describing the control mechanisms and the determinants highlighted in the literature. We obtained a total of 91 responses³, where 46% referred to solid waste collection and 54% to homecare for elderly.

All data refer to 2008. To explore the association among the variables previously identified, we ran a set of linear regressions for each of the control types (market-based, hierarchy-based and trust-based). The market-based pattern has been measured by adjusting Abernethy and Brownell's (1997) scales of output control. The resulting Cronbach alpha was 55%. The hierarchy-based pattern drew on Abernethy and Brownell's (1997) scales of behavioural and accounting control. These items have been adjusted to take into consideration also the extent of supervision over performed activities. After a factor analysis confirming the grouping, the Cronbach alpha performed a very good result of

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¹ It is also useful to highlight that the governance of the elderly homecare services is overall more market-oriented than waste collection, as 96% of the providers are non-profit entities.

² Previous studies show that intrinsically ordinal variable with more than four categories can be treated as continuous (Bentler and Chou 1987; Ter Bogt 2004).

76%. Finally, we adopted the Carson et al.'s (2006) scale for trust-based control pattern with a Cronbach alpha of 79.6%.

The list of independent variables is presented in Table 1, which specifies the relevant references, the measures and the scales used. It also shows the expected associations with the three types of controls (market-, hierarchy- and trust-based).

In addition to service and relationship characteristics, we also controlled for the geographical area (the North-South divide being often relevant in the Italian setting, Anessi Pessina et al. 2008), the municipality's (in terms of population) and the provider's (in terms of turnover) size, as well as for the municipality's financial performance. The Appendix shows the correlation table for dependent and independent variables.

Findings

Table 2 shows the overall descriptive statistics of the analysed variables. Considering the control patterns' mix, the minimum and maximum scores relative to the three types suggest that the trust-based mechanisms are the most present, followed by hierarchy- and market-based ones. Looking across services, while trust controls are still predominant (see Table 3), hierarchy-based controls are more present than market-based ones in the elderly homecare; the vice-verse is true for the waste collection.

Insert Tables 2 and 3 here

In order to explore the variables associated with the different types of control (i.e. market-, hierarchy- and trust-based), three separate sets of linear regressions were performed. Tables 4, 5 and 6 present the results for the three patterns of inter-organizational control.

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³ In order to account for a non-response bias, we ran a two-sample t test, using late respondents as surrogates for non-respondents (Wallace and Mellor, 1988; Oppenheim, 1992). The difference across responses was not statistically

As expected, the significance of the explanatory variables varies with the type of control adopted by the municipality. Proposition 1 appears to hold for hierarchical and market-based patterns of control, but not for trust-based ones (Table 7). Interestingly, service characteristics appear to be significantly associated with the two former types of controls, but not with the latter. Proposition 2, on the contrary, does not seem generally supported by our study, suggesting that relationship characteristics would tend not to be significantly associated with the type of control chosen (Table 7). Only political visibility appears to be significantly (at 1%) related to market-based patterns of control.

Looking more closely at the types of controls and the explanatory variables, market-based mechanisms are positively associated with political visibility (also representing the different types of services) and output measurability (both significant at 1%), while negatively related to task uncertainty (at 5% significance). Output measurability and task uncertainty are aligned with the prediction of the broader contracting-out and inter-organizational literatures. As far as political visibility is concerned, instead, the data show that waste collection services, which are also the most visible to citizens, foster market-type controls, while elderly homecare, although being characterized by governance systems based on market, tend to display fewer market-control mechanisms. This finding contradicts our expectations and previous studies (Cristofoli et al. 2010, Lioukas et al. 1993).

Hierarchy-based mechanisms are the better explained by the identified variables with an R^2 of 54.37% defined by the significant (positive) association of asset specificity (10%) and output measurability (1%), and the negative relationship with the municipality's financial performance (significant at 5%). These results are consistent with previous literature

□
significant.

(Hefetz and Warner 2011). A better organizational financial performance provides the bases for lower hierarchical control, thus less centralization and focus on processes (rather than final results) are required. It is also worth noting that in this case the service political visibility does not contribute to explain the adoption of hierarchy-based controls.

Interestingly, trust-based controls do not seem to be explained by any of the variables that the traditional contracting-out and inter-organizational control literatures would propose. This suggests that while market and hierarchical controls can be better explained by service features, trust-based control patterns in the public sector may be more strongly influenced by the informality of the political processes and the role they play in the decisions around the provision of public services.

Finally, it is important to highlight that, differently from expectations, the delivery mode/goal congruence (i.e. the fact that a for-profit private company is the provider) does not seem to influence the final choice of control mechanisms. Similarly, different from what we expected, geographical position (which strongly differentiates the economic and social background in Italy), municipality's political orientation, size of the municipality and of the provider, all do not seem to influence the choice of controls.

Insert Tables 4, 5 and 6 here

Control mechanisms and explanatory variables: an interpretation

The results raise some considerations about the importance of looking at the types of controls, the pervasiveness of trust-based mechanisms, and the different importance of their explanatory variables. They also highlight an emerging paradox, whereby organizational

and governance forms adopted in hybrid relationships might be only loosely coupled with the related control practices. These reflections are further developed below.

First, our findings point out the importance to consider not only the intensity of controls, as a limited number of studies had previously done, but also to distinguish across the different types of controls that can be put in place. The analysis points out that in hybrid contexts, such as the one under analysis, market, hierarchy and trust controls display different intensities, can co-exist and are explained by different variables. More specifically, trust-based control mechanisms, on the one hand, and hierarchy- and market-based ones, on the other, require different explanatory models. Trust-based mechanisms, although representing an essential and predominant component in contracted-out service control, do not seem to be explained through any of the factors identified by the two traditional literatures we considered.

Second, the high score of trust-based mechanisms and the difficulty in explaining them may suggest that these controls are pervasive within public organizations and are strictly interwoven with the public nature of the services themselves. The strong presence of trust-based patterns might suggest two alternative explanations. On the one hand, municipalities might have adopted very advanced or idiosyncratic configurations of relational/trust-based controls, which are not fully explained by the variables suggested by the literature. On the other hand, municipalities might resort to “informal” channels in order to fill up the lack of alternative monitoring tools. These dimension are hardly captured by the variables traditionally used by the main literature and the use of surveys and questionnaires more in general. As a consequence, different factors, such as the presence of social or informal networks and the use of fiduciary appointments, may come into play. Trust probably provides the background against which other control choices are taken.

Third, the findings provide support to our idea that future studies on hybrid public-service delivery might gain fruitful insights by looking more at the inter-organisational control literature. Indeed, service characteristics (i.e. output measurability, asset specificity and task uncertainty – Proposition 1, see Table 7) appear to better explain market- and hierarchy-based controls when compared to relationship ones (i.e. political visibility and delivery mode/goal congruence – Proposition 2, see Table 7). In particular, the results suggest that a higher degree of measurability of the service outputs is associated with an increase in the level of control through both hierarchical and market-like systems.

The scant relevance of a number of variables proposed by the extant literature could be explained by the little consideration that municipalities have paid to public-service providers' monitoring and control devices so far. This attitude might bring about a relative poorness in control systems' design, which, in turn, may also account for the low variance across the different delivery modes (majority of non-profits in elderly homecare, majority of public-sector providers in waste collection). This interpretation is consistent with Van Slyke's (2007) finding of a lack of monitoring variation in social-service providers, accompanied by a general underdevelopment of the systems.

While trust-based control mechanisms seem to be the most difficult to explain in terms of traditional contracting-out and inter-organisational literatures, our theoretical model has its better predictive performance in the presence of hierarchy-based controls, where, consistently with literature expectations, output measurability, asset specificity and financial performance prove relevant in explaining the choice of such mechanisms. Delivery mode/goal congruence (Marvel and Marvel 2007, 2008; Hefetz and Warner 2011) and political visibility (Lioukas et al. 1993; Cristofoli et al. 2010), instead, do not return significant results. This is probably because hierarchical controls are those traditionally

more established in the public sector (in our study, second only to trust-based ones), and, as a consequence, such mechanisms are always present in hybrid contexts and relationships despite the type of service involved, its visibility and the nature of the provider (i.e. the delivery mode). The preference for hierarchical mechanisms is probably further strengthened by the traditional bureaucratic culture, where the accomplishment of predefined rules is considered as the achievement of the result itself (Crozier 1963; Cristofoli et al. 2010).

In municipalities, the adoption of more recent market-based controls (Hood 1995; Olson et al. 1998; Lapsley 1999) do not appear to replace hierarchical or trust-based ones. On the contrary, once the trust and hierarchical bases have been laid, indeed, the results suggest that market controls also play a role, and selective choices are made when these mechanisms are deemed useful. They are associated with the political visibility of the service (Lioukas et al. 1993; Cristofoli et al. 2010), its output measurability and task uncertainty (Van der Meer-Kooistra and Vosselman 2000; Langfield-Smith and Smith 2003; Håkansson and Lind 2004). This is in line with the previous literature suggesting that the nature of the service itself matters in controlling and monitoring choices (Van Slyke 2007; Marvel and Marvel 2008).

Our findings highlight that the type of service and its visibility is important not only to define the intensity of controls (as suggested by previous literature), but also the type of control exerted. This could have a twofold explanation. First, as a consequence of the managerial reforms that took place over the last two decades in the public sector, a greater emphasis has been put on the communication of results and output to legitimate governments' activities. Second, more politically visible services (such as waste collection) might require tighter overall controls because of their greater importance. This leads to a

triangulation of different mechanisms (together with the more common trust- and hierarchy-based ones) to monitor the service and its provider.

Finally, our research confirms the relevance of looking not only at the organizational forms, but also at the control practices adopted in hybrid relationships. An emerging paradox makes evident that although the governance structure of the elderly homecare sector is market-oriented and based on accreditation systems (relying on the externalisation of the service to private non-profit providers in the majority of the cases), market-based controls are significantly more present for waste collection (in the provision of which public-owned organizations are instead more often involved). This suggests that market-based controls are not necessarily tied to the form of governance adopted, i.e. control practices can be disjointed from the organizational forms chosen for public-service provision.

Insert Table 7 here

Conclusions

The contracting-out of public services has often been accompanied by a strong academic focus on the emergence of hybrid organisational and governance forms, and a major neglect of the processes and practices through which these contracted-out services are controlled and monitored.

Trying to fill this gap, our paper aimed at exploring municipalities' choices to control the provision of different public services. In particular, bringing together variables so far investigated separately in the inter-organizational control (Van der Meer-Kooistra and Vosselman 2000; Langfield-Smith and Smith 2003; Caglio and Ditillo 2008a, 2008b) and the contracting-out (Donahue 1989; Marvel and Marvel 2007 and 2008; Van Slyke 2007) literatures, we investigated whether the variables traditionally used in those studies have

explanatory potential also with reference to control choices of contracted-out services. Moreover, we looked not only at the intensity, but also at the different types of controls (i.e. hierarchical, market-based or trust-based). While most literature has so far focused only on the hybrid organizational and governance forms related to contracting-out processes, our paper sheds new lights on the configuration and role of control mechanisms in hybrid relationships, where both public and private actors interact.

We find that service characteristics, drawing on both contracting-out and inter-organizational control literatures, are more effective in explaining market- and hierarchy-based mechanisms than relationship characteristics, drawn on contracting-out studies. Moreover, trust-, hierarchy- and market-based mechanisms seem to require different explanatory models. Trust-based controls, in particular, are the most widespread, but cannot be explained by the contracting-out and inter-organizational variables traditionally used. This finding calls for further investigation of both the types of trust-based controls in use and the effectiveness of these monitoring systems. Market-based controls, on the contrary, are not necessarily tied to the form of governance adopted, i.e. control practices can be disjoint from the (hybrid) organizational forms chosen for public-service provision. Finally, different from expectations (Marvel and Marvel 2007 and 2008), the mode of delivery and goal congruence do not appear to influence significantly the type of control adopted.

This paper's contribution is twofold. First, we assessed the explanatory potential of transaction cost variables with reference to control choices, rather than to contracting-out choices as most of the literature had done before (Brown and Potoski 2003; Van Slyke 2007). Second, while the small literature on the control of contracted-out public services has mostly focused on the intensity of the control put in place, we took into consideration also the types of control pattern (i.e. hierarchy, market and trust) integrating contracting-out

with inter-organizational control literature (Van der Meer-Kooistra and Vosselman 2000; Langfield-Smith and Smith 2003; Caglio and Ditillo 2008a, 2008b) and showing that not all variables are relevant to explain controls in hybrid relationships.

This study calls for further research on additional services, with different characteristics. The importance of trust-based controls and the difficulty in explaining them with traditional variables (mainly drawn on economic and control studies) suggest that further studies are needed to explore the role of other variables, such as political and informal factors, in defining the type and the intensity of the controls used between governments and public-service providers. Moreover, the findings highlight the importance of distinguishing among the three different types of control as market and hierarchical mechanisms appear more influenced by variables linked to managerial rationality, while trust-based ones might be expression of political rationality. Finally, we conducted a survey, but studying informal processes of control might require more participative research methods, such as interviews, direct observations and ethnographic studies.

From a practice perspective, our results advise municipalities to ensure a balance among the three possible control types, taking into consideration the service and the relationship characteristics associated with the service provision. The current pervasiveness of trust-based mechanisms also suggests the need for the development of managerial competences and skills, such as communication, negotiation and networking, together with the strengthening of the transparency mechanisms in place between governments and service providers.

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Tables

Table 1 – Independent variables: references, measures, expected associations

Independent variables	References	Measures	Expectations on control types		
			Market- based	Hierarchy- based	Trust-based
<i>Service characteristics</i>					
Asset specificity	Ferris and Graddy (1991) Van der Meer-Kooistra and Vosselman (2000) Milward and Provan (2000) Brown and Potoski (2003) Langfield-Smith and Smith (2003) Håkansson and Lind (2004) Caglio and Ditillo (2008a, 2008b)	Fernandez's (2007) Likert scale, measuring the extent to which the investments made to support a particular transaction have a higher value to that transaction than they would have if they were redeployed for any other purpose. Crombach alpha: 60%	Low	Moderate	High
Task uncertainty	Ferris and Graddy (1991) Van der Meer-Kooistra and Vosselman (2000) Milward and Provan (2000) Brown and Potoski (2003) Langfield-Smith and Smith (2003) Håkansson and Lind (2004) Caglio and Ditillo (2008a, 2008b)	Abernethy and Brownell's (1997) scale, used to measure, in five-point fully anchored form, the level of task analysability that may derive from the execution of the task ⁴ . Crombach alpha 81.2%	Low	Moderate	High
Task interdependence	Ferris and Graddy (1991) Van der Meer-Kooistra and Vosselman (2000) Milward and Provan (2000) Brown and Potoski (2003) Langfield-Smith and Smith (2003) Håkansson and Lind (2004) Caglio and Ditillo (2008a, 2008b)	Ben Bensaou and Venkat Venkatraman (1995)'s scale. Respondents were asked to indicate on a 5-item scale the extent to which the service providers rely on the municipality to start, progress and complete their activities. Crombach alpha 75.2%	Low	Moderate	High
Output measurability	Ferris and Graddy (1991) Van der Meer-Kooistra and Vosselman (2000) Milward and Provan (2000) Brown and Potoski (2003) Langfield-Smith and Smith (2003) Håkansson and Lind (2004) Caglio and Ditillo (2008a, 2008b)	Trevor Brown and Matthew Potoski (2005)' s scale, using a five-point fully anchored instrument to measure the measurability of outputs. Crombach alpha: 78.6%	High	Low	Low

⁴ We employed summed scores for the set of items loading on each factor, as opposed to the factor scores, because of the conventional caution on the instability of factor loading solutions.

<i>Relationship characteristics</i>					
Political visibility	Lioukas et al (1993) Cristofoli et al (2011) Hefetz and Warner (2011)	As a proxy for political visibility we used the number of final users for the services, higher for waste collection (pol_vis=1) and lower for homecare services (pol_vis=0).	Low	Moderate	High
Delivery mode/ goal congruence	Provan and Milward (1995) Van Slyke (2007) Hefetz and Warner (2011) Marvel and Marvel (2007, 2008)	Drawing on Marvel and Marvel (2007, 2008) the delivery mode was defined in terms of provider's ownership, distinguishing across private for-profit (delivery mode/goal_congr=1) vs. non-profit entities (both public and private, delivery mode/goal_congr=0).	No expectation	No expectation	No expectation
Partner knowledge	Cristofoli et al (2011)	Length of previous contract (days)	Low	Moderate	High
<i>Controls</i>					
Provider's size		Provider's turnover (thousands of Euros)	No expectation	No expectation	No expectation
Political orientation	Hefetz and Warner (2011)	Municipality's council political orientation in 2008: Centre-right (0) Centre-left (1)	No expectation	No expectation	No expectation
Municipality's size		(ln)population size	No expectation	No expectation	No expectation
Geographical position	Hefetz and Warner (2011)	North-centre (1) South-centre (0)	No expectation	No expectation	No expectation
Financial performance	Hefetz and Warner (2011)	municipality's surplus/deficit (thousands of Euros)	No expectation	No expectation	No expectation

Table 2 –Overall descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
mkt_ctrl	87	2.258621	.7824623	1	4
hierarchy_ctrl	91	3.09652	.6681766	1.333333	4.5
trust_ctrl	90	3.693915	.5279828	2.142857	4.857143
turnover	62	2.01e+08	9.04e+08	84162	6.09e+09
pol_vis	91	.4615385	.5012804	0	1
asset_spec	91	3.045788	.5098208	1.333333	4.5
output_measur	91	3.586264	.5877011	2	4.8
task_uncert	91	3.635531	.4248242	2.555556	4.666667
task_interdep	91	3.142857	.7406085	1	4.666667
lnpop	91	11.47022	.8946997	9.939674	14.07759
length_oldcontr	79	68.56962	109.6675	3	624
pol_orient08	91	.6153846	.4891996	0	1
geo_area	91	.5714286	.4976134	0	1
surplus_def	91	2.14e+07	6.99e+07	-4778352	4.64e+08
delivery_mode/ goal_congr	84	2.190476	.8981399	1	3

Table 3 - Descriptive statistics by service type

Elderly Homecare	Obs	Mean	Std. Dev.	Min	Max
mkt_ctrl	46	2.148551	.7405606	1	4
hierarchy_ctrl	49	3.22551	.605789	1.333333	4.333333
trust_ctrl	48	3.705853	.5612804	2.142857	4.857143
turnover	32	1.39e+07	2.35e+07	84162	7.00e+07
asset_spec	49	2.965986	.5057306	1.333333	4
output_measur	49	3.75102	.4787668	2.2	4.8
task_uncert	49	3.547052	.38669	2.555556	4.222222
task_interdep	49	3.278912	.7211967	1	4.666667
lnpop	49	11.473	.8868626	9.939674	14.07759
length_oldcontr	45	26.97778	16.66036	3	60
pol_orient08	49	.6122449	.4922875	0	1
geo_area	49	.5918367	.496587	0	1
surplus_def	49	2.01e+07	6.78e+07	-4778352	4.64e+08
delivery_mode/ goal_congr	45	2.911111	.4168182	1	3
Waste collection	Obs	Mean	Std. Dev.	Min	Max
mkt_ctrl	41	2.382114	.8184028	1	4
hierarchy_ctrl	42	2.946032	.7122601	1.333333	4.5
trust_ctrl	42	3.680272	.4935887	2.428571	4.714286
turnover	30	4.00e+08	1.28e+09	930262	6.09e+09
asset_spec	42	3.138889	.5046084	1.666667	4.5
output_measur	42	3.394048	.6477166	2	4.6
task_uncert	42	3.738757	.4481472	2.666667	4.666667
task_interdep	42	2.984127	.7397076	1.333333	4.666667
lnpop	42	11.46697	.9145149	9.939674	14.07759
length_oldcontr	34	123.6176	150.2539	6	624
pol_orient08	42	.6190476	.4915074	0	1
geo_area	42	.547619	.5037605	0	1
surplus_def	42	2.30e+07	7.31e+07	-4778352	4.64e+08
delivery_mode/ goal_congr	39	1.358974	.4859705	1	2

Table 4 - Regression results for market-based control

Source	SS	df	MS	Number of obs = 51		
Model	10.5925477	12	.88271231	F(12, 38)	=	1.87
Residual	17.8911126	38	.470818753	Prob > F	=	0.0701
				R-squared	=	0.3719
				Adj R-squared	=	0.1735
Total	28.4836603	50	.569673206	Root MSE	=	.68616

mkt_ctrl	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
turnover	-7.81e-11	2.00e-10	-0.39	0.698	-4.83e-10	3.26e-10
pol_vis_1	.9077998	.3139598	2.89	0.006	.2722214	1.543378
asset_spec	-.1217351	.191822	-0.63	0.529	-.5100585	.2665883
output_measur	.8294338	.2297293	3.61	0.001	.3643711	1.294497
task_uncert	-.5577926	.2706411	-2.06	0.046	-1.105677	-.0099083
task_interdep	-.0744968	.1559565	-0.48	0.636	-.3902142	.2412205
lnpop	.0353652	.1408685	0.25	0.803	-.2498082	.3205386
length_oldcontr	-.0008338	.001422	-0.59	0.561	-.0037125	.0020449
pol_orien_1	-.2130474	.271713	-0.78	0.438	-.7631016	.3370068
geo_area_1	.0086965	.2768335	0.03	0.975	-.5517236	.5691165
surplus_def	-2.63e-09	1.82e-09	-1.44	0.157	-6.33e-09	1.06e-09
delivery_mode/ goal_congr_1	-.5588987	.4039567	-1.38	0.175	-1.376666	.2588688
_cons	1.262319	1.983928	0.64	0.528	-2.753933	5.27857

Table 5 - Regression results for hierarchy-based control

Source	SS	df	MS	Number of obs = 52		
Model	12.5171545	12	1.0430962	F(12, 39)	=	3.87
Residual	10.5062656	39	.269391426	Prob > F	=	0.0006
				R-squared	=	0.5437
				Adj R-squared	=	0.4033
Total	23.0234201	51	.451439609	Root MSE	=	.51903

hierarchy_ctrl	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
turnover	-1.83e-10	1.50e-10	-1.22	0.231	-4.87e-10	1.21e-10
pol_vis_1	-.0962652	.2356317	-0.41	0.685	-.5728753	.3803448
asset_spec	.2578674	.1426553	1.81	0.078	-.0306801	.5464149
output_measur	.8085447	.1730135	4.67	0.000	.458592	1.158498
task_uncert	-.2529798	.2045268	-1.24	0.224	-.6666742	.1607147
task_interdep	.045219	.1142439	0.40	0.694	-.185861	.2762991
lnpop	.1748687	.1049856	1.67	0.104	-.0374847	.387222
length_oldcontr	.0003596	.0010756	0.33	0.740	-.0018159	.0025351
pol_orien_1	-.0103947	.1997981	-0.05	0.959	-.4145244	.3937351
geo_area_1	.3260648	.1993199	1.64	0.110	-.0770977	.7292274
surplus_def	-2.82e-09	1.36e-09	-2.07	0.045	-5.58e-09	-5.97e-11
delivery_mode/ goal_congr_1	.2248121	.3051717	0.74	0.466	-.392456	.8420801
_cons	-1.97291	1.47505	-1.34	0.189	-4.956481	1.010661

Table 6 – Regression results for trust-based control

Source	SS	df	MS			
Model	1.88783483	12	.157319569	Number of obs =	52	
Residual	10.794661	39	.276786181	F(12, 39) =	0.57	
Total	12.6824959	51	.24867639	Prob > F =	0.8537	
				R-squared =	0.1489	
				Adj R-squared =	-0.1130	
				Root MSE =	.5261	

trust_ctrl	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
turnover	6.40e-11	1.52e-10	0.42	0.677	-2.44e-10	3.72e-10
pol_vis_1	-.0178381	.2388438	-0.07	0.941	-.5009453	.4652691
asset_spec	.1462505	.1445999	1.01	0.318	-.1462304	.4387315
output_measur	.0203358	.175372	0.12	0.908	-.3343875	.3750591
task_uncert	-.0527861	.2073149	-0.25	0.800	-.4721201	.3665478
task_interdep	-.0281508	.1158013	-0.24	0.809	-.262381	.2060794
lnpop	.0316492	.1064167	0.30	0.768	-.1835989	.2468973
length_oldcontr	.0008672	.0010902	0.80	0.431	-.001338	.0030724
pol_orien_1	-.1748368	.2025217	-0.86	0.393	-.5844756	.2348021
geo_area_1	-.0552689	.202037	-0.27	0.786	-.4639274	.3533895
surplus_def	-2.28e-09	1.38e-09	-1.65	0.107	-5.07e-09	5.19e-10
delivery_mode/	-.1236682	.3093318	-0.40	0.691	-.7493508	.5020145
goal_congr_1						
_cons	3.247743	1.495158	2.17	0.036	.2234999	6.271986

Table 7 –Findings: expected and actual associations

	Type of control/Dependent variable	Market- based		Hierarchy-based		Trust-based	
	Independent variables	Expected sign	Findings	Expected sign	Findings	Expected sign	Findings
Service characteristics							
<i>Proposition 1</i>	Asset specificity	Low	-	Moderate	Confirmed	High	-
	Task uncertainty	Low	Confirmed	Moderate	-	High	-
	Task interdependence	Low	-	Moderate	-	High	-
	Output measurability	High	Confirmed	Low	Confirmed	Low	-
Relationship characteristics							
<i>Proposition 2</i>	Political visibility	Low	High (Contradicted)	Moderate	-	High	-
	Delivery mode/ goal congruence	No expectation	-	No expectation	-	No expectation	-
	Partner knowledge	Low	-	Moderate	-	High	-
Controls							
	Provider's size	No expectation	-	No expectation	-	No expectation	-
	Political orientation	No expectation	-	No expectation	-	No expectation	-
	Municipality's size	No expectation	-	No expectation	-	No expectation	-
	Geographical position	No expectation	-	No expectation	-	No expectation	-
	Financial performance	No expectation	-	No expectation	High	No expectation	-

Appendix

Correlation table

	trust	mkt	hier	turnover	pol_vis	asset_sp	output_meas	task_int	task_unc	lnpop	length_old	pol_or08	geo_area	surpl_def	deliver_md
trust_ctrl	1.0000														
mkt_ctrl	-0.0013	1.0000													
hierarchy_ctrl	0.2129	0.3324	1.0000												
turnover	-0.0028	0.0365	0.0298	1.0000											
pol_vis	-0.0243	0.1499	-0.2097	0.2155	1.0000										
asset_spec	0.1752	0.0896	0.2020	0.0569	0.1700	1.0000									
output_measur	0.0319	0.2159	0.4434	0.0907	-0.3045	-0.0387	1.0000								
task_interdep	0.0118	0.0851	0.1765	-0.0051	-0.1995	0.0217	0.1675	1.0000							
task_uncert	0.1083	-0.0354	0.1705	0.1469	0.2262	0.0843	0.1312	0.1770	1.0000						
lnpop	-0.1302	-0.0595	-0.0151	0.1650	-0.0034	0.0729	-0.0846	-0.0591	-0.0828	1.0000					
length_oldcont	0.0076	0.0546	-0.0881	-0.0146	0.4391	0.1342	-0.1897	-0.1924	0.1625	-0.0062	1.0000				
pol_orient08	0.2067	0.0089	0.1715	0.1641	0.0070	0.1605	0.0355	-0.0307	-0.0404	-0.0638	-0.0755	1.0000			
geo_area	0.0546	-0.1857	0.1503	0.1545	-0.0445	0.0198	-0.0413	-0.1637	0.1179	0.2169	0.2602	0.3651	1.0000		
surplus_def	-0.2038	-0.1103	-0.1827	0.0143	0.0209	0.0307	-0.0686	-0.2577	-0.2346	0.5293	-0.0679	-0.1779	0.0667	1.0000	
delivery_mode/	-0.0839	-0.1004	0.2568	-0.2572	-0.8671	-0.2433	0.3254	0.2539	-0.2082	-0.0391	-0.5224	-0.0798	-0.1116	-0.0494	1.0000
goal_congr															