Multiple principals, multiple problems: Implications for effective governance and a research agenda for joint service delivery

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The multiple principal problem refers to multiple collective action problems that organizations face when they must balance (competing) interests of multiple stakeholders under joint service delivery. It negatively affects different types of organization, yet we know little about how organizations (can) mitigate it. We expand a framework based on principal–agent theory, review the literature, and consider implications for effective governance of joint service delivery in the public sector. We observe that joint service delivery can lead to free-riding and duplication in monitoring, lobbying by principals, and increased autonomy for agents, leading to inefficiency. We build a research agenda and tentatively suggest, based on the literature, that an interface approach, where an elected unitary actor is placed in a middle tier between politics and service delivery, might best mitigate the multiple principal problem, which is currently not dealt with effectively in public management.

1 | INTRODUCTION

Is joint service delivery beneficial for public sector organizations? We know from the literature on inter-municipal cooperation that knowledge sharing and scale economies frequently make joint service delivery efficient (Hulst et al. 2009; Bel et al. 2014; Bel and Warner 2015; Silvestre et al. 2017; Voorn et al. 2017). However, joint service delivery is also prone to failure, due to multiple possible collective action problems (Feiock 2009, 2013). For inter-municipal service delivery, Garrone et al. (2013) find that conflict over objectives can trickle down to insufficient or incoherent directives to boards; Sørensen (2007) finds insufficient monitoring due to free-riding. We observe similar inefficiencies for parliaments and agencies (McCubbins et al. 1987; Moe 1987; Wood and Waterman 1991; Hammond and Knott 1996; Koppell 2005; Dehousse 2008; Schillemans and Bovens 2015), public–private partnerships (Bognetti
and Robotti 2007; Da Cruz and Marques 2012), and private firms with dispersed ownership (Young et al. 2002; Su et al. 2007; Ward and Filatotchev 2010; Lin and Chuang 2011).

Theory has focused on understanding these collective action problems in joint service delivery separately. Models of Gailmard (2009), Khalil et al. (2007), and Varian (1989) establish monitoring complexities; Dixit (2002), Martimort (1992), and Stole (1997) demonstrate an incentive-setting problem; and Hammond and Knott (1996), McCubbins et al. (1987), and Schillemans and Bovens (2015) show difficulties of steering and accountability. Yet, the literature remains dispersed, policy recommendations for joint service delivery remain complex and incoherent, and predictive powers of models of joint service delivery remain weak. Some authors have begun collocating the collective action problems inherent to joint service delivery under a single term,1 hoping to find coherence to this multiple principal problem (e.g., Waterman and Meier 1998; Miller 2005; Dehousse 2008).

In this article, we expand a framework grounded in principal–agent theory to understand the multiple principal problem and build a research agenda for governance. In section 2, we describe our study’s background and explicate our approach. In section 3, we derive the framework and form hypotheses. In section 4, we review and synthesize the extant literature on the multiple principal problem, test the framework, and highlight implications for joint service delivery. In section 5, we consider typical organizational responses to the multiple principal problem, and highlight problems these responses face. In section 6, we suggest a solution to the multiple principal problem, based on an interface approach and grounded in median voter theorem. In section 7, we summarize, emphasize limitations, offer potential avenues for research, and conclude.

2 | BACKGROUND AND APPROACH

Joint service delivery is widespread, for good reasons. When organizations cooperate, they can engage in risk sharing, specialize, and capture scale economies (Bel and Warner 2015; Silvestre et al. 2017). Accordingly, we observe that many firms and foundations have multiple shareholders (e.g., Maury and Pajuste 2005), that governments and agencies, local councils, and political parties frequently cooperate (e.g., Bouckaert et al. 2016), that public–private partnerships are used more frequently (Hodge and Greve 2007), and that cooperation between the public sector and the non-profit sector is rising (Warner and Hebdon 2001). Such cooperation is called collaborative or joint service delivery when it exists for the delivery of (public) services (Hulst et al. 2009; Hilvert and Swindell 2013); alternative terms, such as ‘joined-up government’ (Hood 2005; Silvestre et al. 2017) and ‘collaborative governance’ (Ansell and Gash 2008), are also used.

Empirical research demonstrates that joint service delivery is often beneficial, albeit not problem-free (Bel and Warner 2015). Problems occur because cooperation requires (partial) externalization of decision-making (Argento et al. 2009), which brings complexities. Collective action problems occur when the interests of individual stakeholders conflict with the collective interest of all stakeholders in the collaboration, leading to sub-optimal outcomes. Stakeholders face transaction costs to mitigate those problems, including regulation and monitoring costs. Collective action problems and transaction costs together affect joint service delivery through ex-post inefficiency, where collaboration is less efficient than it could have been, or ex-ante inefficiency, when otherwise profitable cooperation does not occur. We know less about equity effects: how inefficiencies affect some stakeholders more than others (recent work by Cäker and Nyland 2017 and Spicer 2017 are welcome exceptions).

Many academics have focused on individual collective action problems and solutions to them (McCubbins et al. 1987; Varian 1989; Martimort 1992; Hammond and Knott 1996; Stole 1997; Dixit 2002; Khalil et al. 2007; Gailmard

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1Researchers utilize many terms to describe the problem. We use the term multiple principal problem, as we find that principal–agent theory explains collective action problems well overall; our terminology follows the works of Dixit (2002), Estache and Martimort (1999), Miller (2005), Van Thiel (2016), and Waterman and Meier (1998). Other terms used to describe the same problem include (the problem of) ‘multiple accountabilities’ (Koppell 2005; Schillemans and Bovens 2015), ‘common agency’ (Dixit et al. 1997), ‘principal–principal conflict’ (Young et al. 2002; Su et al. 2007; Ward and Filatotchev 2009; Lin and Chuang 2011), and ‘serving two masters’ (Da Cruz and Marques 2012).
While this endeavour has been fruitful, individual treatment of these collective action problems has brought weak predictive powers for models of joint service delivery. Building a framework to predict outcomes under multiple principals is crucial for understanding joint service delivery (Dehousse 2008) and is this article's ultimate aim.

We illustrate our theoretical case with the practical example of inter-municipal service delivery to demonstrate how our framework emulates actual practice. Inter-municipal service delivery reflects benefits and problems of joint service delivery, as current research shows that it is frequently quite successful (Dijkgraaf and Gradus 2007; Bel and Warner 2015; Teles and Swianiewicz 2018), while many problems can be linked to collective action problems (Bognetti and Robotti 2007; Sørensen 2007; Garrone et al. 2013; Bel and Warner 2015). We will refer to this practical example throughout the text. We emphasize that the framework applies to joint service delivery overall, and not just in the context of our illustration; to show that our framework is applicable in a variety of settings, we incorporate a literature review that explores multiple types of service organizations.

3 FRAMEWORK AND HYPOTHESES

3.1 Framework

Consider a municipality that operates a municipally owned corporation and hires an expert director to manage it, as frequently happens in Europe (Voorn, Van Thiel et al. 2018). The resulting relationship between the municipality and director is a relationship between principal and agent, where the agent acts on behalf of the principal. Principal–agent theory emphasizes the benefits of such relationships, which allow more expert service delivery. However, it also emphasizes problems of asymmetric information and moral hazard (Fama and Jensen 1983): the director may have objectives different from the municipality, and the municipality cannot take the director’s commitment for granted. Therefore, the municipality needs to introduce governance to align the director’s interest with its own.

Under principal–agent theory, steering and monitoring are key governance mechanisms that can encourage agents to act in principals’ interest (Fama and Jensen 1983). For our hypothetical director-agent, steering protocols help: clear municipal directives build awareness of expectations, and give the municipality criteria to audit. Similarly, incentives such as variable pay can align the director’s interest with that of the municipality. Monitoring the director is also practical, presuming that it is not too costly. These steering and monitoring mechanisms increase the agent’s accountability.

Typically, principal–agent theorists consider the dyadic case of one principal, one agent, and one task. This is a simplification of reality. In organizations, relationships typically involve multiple actors. Consider local refuse collection: while some large cities singly own refuse collection firms, many refuse collection organizations in Europe are owned inter-municipally, that is, by multiple municipalities, or by public–private partnerships (Dijkgraaf and Gradus 2007; Sørensen 2007; Da Cruz and Marques 2012; Garrone et al. 2013; Bel et al. 2014; Blåka 2017; Giacomini et al. 2018; Soukopová and Vaceková 2018; Voorn, Van Genugten et al. 2018; Gradus and Budding 2018). In the United States, inter-municipal contracting is more frequent ( Warner and Hebdon 2001; Marvel and Marvel 2008; Hefetz et al. 2012; Bel and Warner 2015). For other types of joint service delivery, such as firms with dispersed ownership, parliaments and agencies, the dyadic model is similarly inaccurate.

Making the dyadic model more inaccurate is the observation that principals’ interests frequently diverge. In refuse collection organizations owned by multiple municipalities, interests between municipalities diverge in pick-up frequency, pick-up times, attitude towards recycling, pricing strategies, and others (Van Genugten 2008). In inter-municipal theatres, interests between municipalities diverge in the prime targeted demographic, focus on local or national culture, types of cultural programmes offered, or focus on tourism. Parliaments, agencies, public–private partnerships, and private firms with dispersed ownership face similar diverging interests among stakeholders. Crucially, since there is asymmetric information between the principals, where principals are not necessarily aware of each other’s behaviour, this creates a collective action problem for governance.
Once multiple principals are introduced, we can no longer presume that it is in individual principals’ best interest to steer or monitor the agent. Worse yet, individual principals can lobby the agent to pursue their interests in lieu of those of other principals.

### 3.2 | Formalization

Consider that $\alpha$ is the extent to which the agent acts in the principals’ interest in a dyadic principal-agent model, and $c(\alpha)$ represents the costs of getting the agent to act that way. Suppose, moreover, that in a non-dyadic model, $\beta_i - \beta_j$ is the extent to which an agent sides with principal $i$ over principal $j$, where $c(\beta)$ represents the costs of getting the agent to side with principal $i$ over principal $j$. This is illustrated in Figure 1.

In the dyadic model, policy to maximize the principal’s interest is straightforward to calculate. There are no lobbying costs $c(\beta)$, so monitoring should take place to the extent that $\alpha' < c(\alpha')$, that is, to the point that the marginal costs of increasing $\alpha$ exceed the marginal increase of $\alpha$. In a non-dyadic model, however, outcomes are less positive. Depending on the extent to which principals can observe $\alpha$ and other’s $c(\alpha)$, the possibility of duplication and free-riding exists, which increases $c(\alpha')$ and thus decreases $\alpha$. (See also Varian 1989.)

An additional problem for overall welfare are lobbying costs $\beta$. In a two-principal model, principal $i$ maximizes expected utility $U_i$:

$$U_i(\beta_i) = \alpha_i + \alpha_j + \beta_i - \beta_j - c(\alpha) - c(\beta_i)$$

$$U_i(\beta_i) = \beta_i' - c'(\beta_i) = 0$$

$$\beta_i' = c'(\beta_i)$$

Lobbying should occur to the extent that $\beta_i' < c'(\beta_i)$. Since this has the outcome that total lobbying is likely non-zero and lobbying provides no benefit for total welfare $W = U_i + U_j$, the model suggests that there will be lobbying costs and that these will constitute inefficiencies. Since these inefficiencies exist in the non-dyadic principal-agent relationship, but do not exist in the dyadic relationship, the implication is that from an agency cost perspective, principal-agent relationships should be kept as dyadic as possible.

![Figure 1](image-url)  
The model visualized
3.3 | A collective action explanation and hypotheses

To simplify the model in collective action terms, consider Table 1. It is unclear whether individual principals benefit from steering when another principal may also steer, and likewise for monitoring. Still, we can make two observations. First, symmetric outcomes are inefficient: when all principals steer, they incur the costs of duplicate steering; when none steer, the agent is autonomous. Second, the asymmetric outcome (one of the principals steers) leaves the controlling principal better off than the non-controlling principal, introducing inequity. This is the multiple principal problem in the absence of organization, and demonstrates the drawbacks of joint service delivery.

We can infer four hypotheses from this framework. First, the framework suggests that multiplicity in the responsibility to steer and monitor reduces steering and monitoring overall (H1). This follows the fact that municipalities have incentives to individually free-ride in steering and monitoring. Second, multiplicity in the responsibility to steer and monitor leads to inequity between principals and may induce lobbying of the agent (H2). Principals with greater bargaining power may find their interests satisfied more than principals with lesser bargaining power. Third, conflict between principals and weaker steering and monitoring increase the agent’s autonomy (H3). In the absence of clear directives, the agent has more freedom to choose its paths. Finally, this all increases inefficiencies under joint service delivery (H4).

4 | EVIDENCE FROM THE LITERATURE

To test this framework and explore these hypotheses in a wide variety of settings, we conduct an exploratory review of the literature on joint service delivery. However, as most organizations have multiple owners, the majority of research into any type of organization describes outcomes of multiplicity of principals. This makes the literature extensive, and a systematic review unfeasible. We opt instead to explore the literature (and indirectly the framework) through a scoping study. Scoping studies are often used as an alternative to systematic literature reviews when the latter are not feasible (Arksey and O’Malley 2005), because fields are broad in scope or terminologies are not yet settled (Levac et al. 2010), as is the case here. Our explorative study is necessarily limited; it serves not as hard proof of our hypotheses but as exploratory evidence for our framework.

We start from the literature on the multiple principal problem we are aware of (Miller 2005; Garrone et al. 2013; Van Thiel 2016). We scanned all the relevant references from these studies for mentions of multiplicity of principals, including them in a database when mentions were found. We repeated this step until we found no further articles. While this approach is not all-encompassing, a more systematic approach might yield fewer important studies, being more contingent on terminology. Our approach yields 26 empirical and theoretical articles across business and management, economics, political science, and public administration, using six different terms to describe the phenomenon (see Table 2).

4.1 | Summary of study backgrounds

Academics have conducted research into the multiple principal problem in five broad clusters. In political science, study of the multiple principal problem is most prevalent in research on the politics–bureaucracy divide. Academics here utilize the idea of multiple principals to understand power balances between the executive and legislative branches of government and to reflect on the autonomy of agencies vis-à-vis the government (Miller 2005). Second,
## Table 2: Literature on the Multiple Principal Problem

<table>
<thead>
<tr>
<th>Reference</th>
<th>Term</th>
<th>Application</th>
<th>Key Theories</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernheim and Whinston (1986)</td>
<td>Common agency</td>
<td>N/A (Model)</td>
<td>If cooperation is not achieved, common agency is probably inefficient.</td>
<td>1-4</td>
</tr>
<tr>
<td>Da Cruz and Marques (2012)</td>
<td>Serving two masters</td>
<td>Public–private partnerships</td>
<td>When principals diverge in interests, formal contracts often cause problems.</td>
<td>4</td>
</tr>
<tr>
<td>Dixit (2002)</td>
<td>Multiple principals</td>
<td>Tax agencies</td>
<td>Accountability is easily violated under multiple principals.</td>
<td>1</td>
</tr>
<tr>
<td>Dixit et al. (1997)</td>
<td>Common agency</td>
<td>N/A (Model)</td>
<td>Common agency induces lobbying efforts by the individual principals that reduce the overall size of the economic pie.</td>
<td>2, 3, 4</td>
</tr>
<tr>
<td>Estache and Martimort (1999)</td>
<td>Multi-principal</td>
<td>Public sector</td>
<td>Coordination problems between multiple principals lead to inefficiency.</td>
<td>1, 4</td>
</tr>
<tr>
<td>Gailmard (2009)</td>
<td>Multiple principals</td>
<td>N/A (Model)</td>
<td>There is a collective action problem in monitoring among multiple principals.</td>
<td>1, 4</td>
</tr>
<tr>
<td>Garrone et al. (2013)</td>
<td>Multiple principals</td>
<td>Utilities</td>
<td>Managers gain a lot of discretion from the multi-principal nature of multi-utilities.</td>
<td>3, 4</td>
</tr>
<tr>
<td>Hammond and Knott (1996)</td>
<td>Multiple principals</td>
<td>Agencies</td>
<td>Organizations gain autonomy from multiple principals if their interests conflict.</td>
<td>2, 3</td>
</tr>
<tr>
<td>Khalil et al. (2007)</td>
<td>Common agency</td>
<td>N/A (Model)</td>
<td>There is a collective action problem in monitoring among multiple principals.</td>
<td>1, 4</td>
</tr>
<tr>
<td>Koppell (2005)</td>
<td>Multiple accountabilities</td>
<td>Agency</td>
<td>Having to balance the interests of multiple principals can lead to organizational failure.</td>
<td>4</td>
</tr>
<tr>
<td>Lin and Chuang (2011)</td>
<td>Principal–principal</td>
<td>Firms</td>
<td>Conflicts between multiple principals have empirically verifiable costs.</td>
<td>4</td>
</tr>
<tr>
<td>Martimort (1992)</td>
<td>Multi-principals</td>
<td>N/A (Model)</td>
<td>The more the interests of multiple principals diverge, the more welfare is lost.</td>
<td>1</td>
</tr>
<tr>
<td>Miller (2005)</td>
<td>Multiple principals</td>
<td>N/A (Theory)</td>
<td>Summary of the political research into multiple principals: organizations gain autonomy from multiple principals if their interests conflict.</td>
<td>3</td>
</tr>
<tr>
<td>Moe (1984)</td>
<td>Multiple principals</td>
<td>Agencies</td>
<td>Organizations gain autonomy from multiple principals if their interests conflict.</td>
<td>2, 3</td>
</tr>
<tr>
<td>Moe (1987)</td>
<td>Multiple principals</td>
<td>Agencies</td>
<td>Organizations gain autonomy from multiple principals if their interests conflict.</td>
<td>2, 3</td>
</tr>
<tr>
<td>Moe (2005)</td>
<td>Multiple principals</td>
<td>N/A (Theory)</td>
<td>Power between principals affects the allegiance of agents.</td>
<td>2</td>
</tr>
<tr>
<td>Schillemans and Bovens (2015)</td>
<td>Multiple accountabilities</td>
<td>N/A (Theory)</td>
<td>There are seven concerns for accountability under multiple principals: higher transaction costs, conflicting expectations, accountability confusion, negativism, loss of control, blame games, and symbolic accountability.</td>
<td>1, 4</td>
</tr>
<tr>
<td>Sørensen (2007)</td>
<td>Multiple principals</td>
<td>Inter-municipal cooperates</td>
<td>There is a costly collective action problem in monitoring under multiple principals.</td>
<td>1, 4</td>
</tr>
<tr>
<td>Su et al. (2007)</td>
<td>Principal–principal</td>
<td>Firms</td>
<td>Goal incongruence causes problems under multiple principals.</td>
<td>4</td>
</tr>
<tr>
<td>Van Thiel (2016)</td>
<td>Multiple principals</td>
<td>Quangos</td>
<td>Multiplicity of principals can create conflicts.</td>
<td>1, 4</td>
</tr>
<tr>
<td>Van Thiel and Verhof (2012)</td>
<td>Plural principals</td>
<td>Agencies</td>
<td>Multiplicity of principals allows opportunistic behaviour for both principals and agent, and increases transaction costs.</td>
<td>1, 4</td>
</tr>
<tr>
<td>Ward and Filatotchev (2010)</td>
<td>Principal–principal</td>
<td>Mutual funds and stocks</td>
<td>There is evidence of the existence of greater multiple principal problems in mutual funds than stocks due to the lesser multiplicity in shareholders it creates.</td>
<td>4</td>
</tr>
</tbody>
</table>
in business, researchers use the idea of multiple principals to understand the performance of firms where shareholders disagree on objectives (Young et al. 2002; Su et al. 2007; Ward and Filatotchev 2010; Lin and Chuang 2011), utilizing the term principal–principal conflict. Third, theoretical economists focus on individual collective action problems that multiple principals bring, naming it common agency (Bernheim and Whinston 1986; Martimort 1992; Dixit et al. 1997; Khalil et al. 2007; Gailmard 2009). Fourth, the accountability literature considers accountability problems that multiplicity of stakeholders can bring (Koppell 2005; Schillemans and Bovens 2015), coining it the multiple accountability problem. Finally, a body of public administration research uses the idea of multiple principals for theorizing about inter-municipal cooperation, shared services, public–private partnerships, and agencies (Sørensen 2007; Da Cruz and Marques 2012; Van Thiel and Verhof 2012; Garrone et al. 2013). Some of these research clusters inter-cite in some studies, and particularly the theoretical economics stream seems well cited by the other streams, but primarily the different domains of research bring their own theory, leaving the literature somewhat unintegrated.

4.2 | Friction between principals, free-riding and duplication in steering and monitoring

Our first hypothesis predicts that we should observe free-riding and duplication in governance. The steering problem has received the most attention. Theoretical models by Bernheim and Whinston (1986), Dixit (2002), Martimort (1992), and Stole (1997) emphasize problems in building incentive schemes for agents when principals’ objectives diverge and when there is a lack of coordination. Literatures outside economics discuss the steering problem less in terms of incentives, but more in terms of directive ambiguity. The accountability literature emphasizes how multiplicity of principals can lead to confusion among management and employees, blame shifting and lack of real accountability (Schillemans and Bovens 2015). Next, in the business and finance literature, Young et al. (2002) emphasize the problem that goal incongruence can lead to conflict among multiple principals. This problem is also highlighted in the public administration literature by Estache and Martimort (1999) and Van Thiel (2016), who consider this to be a problem for public sector management generally.

The literature also discusses the monitoring problem. In the economic literature, theoretical models emphasize the possibility of monitoring duplicity when principals do not coordinate (Khalil et al. 2007). Conversely, Gailmard (2009) emphasizes the possibility of free-riding in monitoring, leaving agents insufficiently checked by the principals. The empirical literature also discusses the possibility of duplicity or free-riding in monitoring procedures to explain their empirical findings, such as Young et al. (2002) in business and Sørensen (2007) in public administration. Some articles discuss problems in steering and monitoring together as ‘transaction costs’ (Estache and Martimort 1999; Van Thiel and Verhof 2012; Schillemans and Bovens 2015).

4.3 | Lobbying of the agent by principals

Our second hypothesis is that we should observe lobbying of the agent by principals. We find evidence for this primarily in economic modelling and in empirical work on the politics–bureaucracy interplay. First, the economic models

<table>
<thead>
<tr>
<th>Reference</th>
<th>Term</th>
<th>Application</th>
<th>Key theories</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitford (2005)</td>
<td>Multiple principals</td>
<td>Agencies</td>
<td>Organizations gain autonomy from multiple principals if their interests conflict.</td>
<td>2, 3</td>
</tr>
<tr>
<td>Wood and Waterman (1991)</td>
<td>Multiple principals</td>
<td>Agencies</td>
<td>Organizations gain autonomy from multiple principals if their interests conflict.</td>
<td>2, 3</td>
</tr>
<tr>
<td>Worsham and Gatrell (2005)</td>
<td>Multiple principals</td>
<td>Agencies</td>
<td>Organizations gain autonomy from multiple principals if their interests conflict.</td>
<td>2, 3</td>
</tr>
<tr>
<td>Young et al. (2002)</td>
<td>Principal–principal</td>
<td>Firms (Theory)</td>
<td>Goal incongruence leads to principal–principal conflicts and increased monitoring costs, which reduce efficiency.</td>
<td>1, 4</td>
</tr>
</tbody>
</table>
of Bernheim and Whinston (1986) and Dixit et al. (1997) show that principals face a collective action problem in how they get agents to pursue their ends: when there are multiple principals, individual principals have incentives to lobby agents to pursue their individual objectives. Since all principals face such incentives, lobbying begets a prisoners’ dilemma. The empirical existence of the lobbying of agents is found in the extensive literature on agencies (Moe 1984, 1987; Wood and Waterman 1991; Hammond and Knott 1996; Whitford 2005; Worsham and Gatrell 2005), but is not addressed much elsewhere. Moe (2005) summarizes the political science literature on public service delivery under multiple principals in stating that when principals have heterogeneous preferences, information asymmetries between principals are created, and the multiprincipal nature of government can start to revolve more around individual principals’ power and less around cooperation.

4.4 | Increased autonomy for agents

Our third hypothesis is that we should observe increased autonomy for agents. We find evidence for this again from economic modelling, the literature on the politics–bureaucracy division and to a lesser extent from public administration research. The models of Bernheim and Whinston (1986) and Dixit et al. (1997) emphasize that lobbying efforts by principals create autonomy for agents. Miller (2005) provides an overview of articles that focus on the politics–bureaucracy interplay and summarizes that the common finding in these articles is that inter-principal conflict can extend the freedom for agents to pursue autonomous goals. For instance, when Congress and the White House pressure agencies to pursue conflicting objectives, the agencies gain a lot of room for manoeuvre, benevolently or opportunistically, capable of cooperating with either principal on a case-by-case basis, able to play out both branches of government against each other. This autonomy of agencies is emphasized in the extensive literature on agencies with multiple principals (Moe 1984, 1987; Wood and Waterman 1991; Hammond and Knott 1996; Whitford 2005; Worsham and Gatrell 2005). Garrone et al. (2013) find such autonomy also in their study of Italian multi-utilities, finding that multiplicity of owners often leads to substantial managerial autonomy. We find no literature in business and finance comparing the autonomy of boards of directors under one principal with autonomy under multiple principals.

4.5 | Inefficiencies under multiple principals

Given that we observe free-riding and duplication in monitoring, lobbying by principals, and increased autonomy for agents, the framework predicts that we should observe inefficiencies under multiple principals (H4). We find evidence for this in both theoretical models and empirical studies. First, the models of Bernheim and Whinston (1986) and Dixit et al. (1997) point out that lobbying increases agency costs and brings a larger wealth transfer from principals to agent than would occur under one principal. Models focusing on monitoring emphasize the welfare loss that comes from monitoring duplicity when multiple principals do not coordinate (Khalil et al. 2007), and increased agency costs that follow insufficient monitoring (Gailmard 2009). Empirical studies also find inefficiencies. Garrone et al. (2013) emphasize the coordination costs of increased managerial autonomy. Sørensen (2007) confirms costs of collective action problems in monitoring in inter-municipal cooperation. Other empirical tests find inefficiency related to multiple principals, attributing them to governance problems (Koppell 2005; Su et al. 2007; Ward and Filatotchev 2010; Lin and Chuang 2011; Da Cruz and Marques 2012). Multiple studies emphasize that transaction costs are higher under joint service delivery (Estache and Martimort 1999; Young et al. 2002; Van Thiel and Verhof 2012; Schillemans and Bovens 2015; Van Thiel 2016). While the literature on political transaction costs does not specify problems under multiple principals, it has emphasized accountability problems associated with autonomy (cf. Warner and Hefetz 2002; Tavares and Camões 2007; Carr et al. 2009; Rodrigues et al. 2012; Overman et al. 2015).

4.6 | Summary of findings

Notwithstanding the multiplicity of terms and limited synthesis of the different fields, findings in the literature fit the framework presented in section 3. Complexities in steering and monitoring are key drawbacks under multiple
principals; without coordination between principals, we observe friction between principals and free-riding and duplication in monitoring (H1), lobbying of agents by principals (H2), and increased autonomy for agents (H3), leading to inefficiencies (H4). However, coordination is not easy to achieve. Diverging objectives can bring a prisoner’s dilemma, as principals have individual incentives to advance their own objectives in lieu of the joint objective. Inefficiency and a power transfer to the agent results, and accountability is diminished, particularly in public sector organizations built around cooperation of principals. We predict that this problem exists in all types of joint service delivery organizations, including inter-municipal service organizations, parliaments and agencies, public–private partnerships, and private firms with dispersed ownership.

5 | INSTITUTIONAL RESPONSES

The typical response to the multiple principal problem—if any—is to counter it with institutions (see e.g., Tavares and Feiock 2017 for a review of regional governance options). Yet direct institutional solutions are rarely considered in the articles found in section 4 (Dixit 2002 and Waterman and Meier 1998 are welcome exceptions). In this section, we consider findings in the field of inter-municipal service delivery, link them to the principal–agent framework, and use the combination of literature and theory to propose a research agenda into institutional solutions to the multiple principal problem. We consider four typical institutions used for inter-municipal service delivery in practice (informal coordination, formalized coordination through contracts, delegation, and centralization) and their drawbacks from the perspective of solving the multiple principal problem.²

5.1 | Informal coordination

One response to the multiple principal problem in joint service delivery is informal coordination, common at the local level in the United States (Feiock 2009). If governance tasks can be shared or divided among municipalities, the multiple principal problem may disappear. However, informal coordination does not prevent the prisoner’s dilemma that the economic literature forewarns. Individual principals continue to have incentives to defect from common agreements (Dixit et al. 1997). Consider our refuse collection example. Individual municipalities may lobby the director to pursue their objectives regardless of informal agreements. Next, individual municipalities may focus on auditing only objectives important to them; when they uncover problems, they have incentives not to share these with their partners. For instance, a recycling-concerned municipality is less likely to report higher costs of recycling policies, while municipal principals opposed to recycling are less likely to report positive outcomes. Similarly, for inter-municipal theatres, tourism-concerned municipalities are less likely to report high costs of international advertising, while municipalities concerned with cultural education are less likely to report high costs of that programme. Table 3 illustrates the prisoner’s dilemma that exists here.

Thus, for short-run cooperation, principals have incentives to renege on informal agreements. When cooperation becomes lengthier, there are increasing incentives to cooperate and build trust between the parties. In the public sector, electoral cycles may stand in the way of such trust-building, and voluntary agreements become more difficult to safeguard when the number of parties involved gets larger. However, if those problems can be avoided, informal coordination may work.

²Competition can also be an indirect solution to the problem of inefficiency under multiple principals (see Dixit 2002). Over time, the presence of competition forces principals to maximize the efficiency of their management set-up, or else lose ground to more efficient competitors. Indeed, there are known cases where private sector organizations are introduced to compete with public sector organizations to allow such innovation to occur (Bognetti and Robotti, 2007; Albalate et al. 2012). However, most of the time, competition is notably absent in the public sector. In cases where there is ex-ante competition (for instance through competitive tendering) there is evidence of ex-post haggling and entrenchment of such organizations once they have won the first bid (Williamson 1985; Dyer and Chu 2003; Marques and Berg 2011). Thus, problematically for the public sector, outside competitive pressure is usually low.
5.2 | Formal coordination

Formalizing coordination through contracts is a means to solve the prisoner’s dilemma inherent to informal coordination, as contracts disincentivize defecting from joint agreements. For inter-municipal service organizations, if the municipalities jointly draft a contract for the director containing directives and incentives, it may inhibit them from lobbying the director, safeguarding joint agreements. However, this solution has limitations too. When principals embed objectives in extensive contracts, this may inspire managerial performance only to the letter of the contract (Weber and Mayer 2011). Second, while lobbying may be limited to provisions in the contract, it continues to exist and may intensify for topics outside of the contract. Third, there are costs associated with drafting contracts and verifying adherence to them, which reduce efficiency; to account for changing circumstances, contracts might need to be perennially redrawn, and such continued investment leads to ex-post haggling (Williamson 1985; Dyer and Chu 2003; Whinston 2003), placing the agent in a continually stronger bargaining position (Marques and Berg 2011). Finally, individual principals, especially in the public sector, may fear that joint contracts undermine their autonomy, reducing their short-term control over the service. Formal coordination can help mitigate the multiple principal problem, but is no panacea.

5.3 | Delegation to one principal

The third potential solution, delegation to one principal, is also limited. In this scenario, multiple principals essentially contract out the governance to one among them. An example of this is inter-municipal contracting, where one municipality (typically the largest) assumes responsibility for the service delivery (Bel and Warner 2015). Both this scenario and the formal coordination scenario involve negotiations between principals about contract terms, but compared to formal coordination, power is transferred between principals, as the controlling party can now dictate terms not included in the contract. Moreover, the controlling party will have individual interests to monitor primarily the objectives it privately considers important. Even if contracts are salient, we know that in such a scenario, the agent is likely to focus his attention on the monitored, rather than the directed, task (Bevan and Hood 2006), allowing the monitoring party to essentially steer the agent’s objectives.

This so-called ‘benefit from control’ is well understood in the finance literature. Corporate governance scholars have found that for monitoring in private firms, the straightforward solution of appointing one of the shareholders is ill-advised from a performance perspective (La Porta et al. 2000; Yeh and Woidtke 2005; Kim et al. 2007). Monitoring by individual shareholders gives them greater access to information, encouraging them not to share important details about the firm with their colleague shareholders to gain an advantage in capital markets. Especially when a larger shareholder is appointed for monitoring, this can lead to entrenchment of their position on boards and exclude minority shareholders from effective corporate control, to the detriment of performance (Yeh and Woidtke 2005).

5.4 | Centralization

The last alternative to inter-municipal cooperation, one also frequently employed, is centralization. For our inter-municipal service organization, centralization would mean taking service delivery out of the hands of local authorities and making it a regional or national task. Centralization can be a solution to the multiple principal problem, reducing the service delivery to a single principal, but it is a limited solution. First, a problem of centralization is its involuntary

| Principal B | Cooperates | Mutually beneficial outcome. | Defects | Costly for A. B gains over mutually beneficial outcome. |
| Principal A | Cooperates | Costly for B. A gains over mutually beneficial outcome. | Defects | Costly for A and B. Both parties lose. |

Table 3 The prisoner’s dilemma in informal coordination
nature (removing municipalities’ ability to opt out). Second, there is no guarantee that the centralized service would be tailored to local preferences. Third, centralized organizations are easier to lobby, and losses can arise from acts seeking to influence the organization and its subsequent need to respond (Milgrom and Roberts 1992, p. 58). For local service delivery, the literature has argued that for these reasons centralization may not be a desirable alternative (see Tavares and Feiock 2017). Recent reviews of amalgamation outcomes by Tavares (2018) and Swianiewicz (2018) show that scale economies are only captured for a small subset of amalgamations. Thus, while centralization is a potential solution to the multiple principal problem, it is often an inefficient solution.

6 | RESEARCH AGENDA: AN ELECTORAL SOLUTION?

Previously we turned to evidence from finance to argue against delegation to a single principal. Indeed, it has become best practice in private firms to select outside directors or a variety of stakeholders (Hill and Jones 1992), and not an individual shareholder with strong private incentives, for monitoring. We find, moreover, that shareholders’ meetings typically elect these outside directors or stakeholders.

Such elections to determine control over service delivery can be a solution to the multiple principal problem. If governance can be delegated to one party whose interest approximately represents the joint interest of the principals, the multiple principal problem is reduced. Since median voter theorem tells us that the outcomes of elections typically represent the interest of the median voter (see Downs 1957), using such a procedure to select the governing party for joint service delivery is ceteris paribus most likely to represent the ‘median’ joint objective of the principals, while avoiding problems related to principal multiplicity. There are caveats: this does not work for dual principals, principals may not always vote according to their interests, and Arrow’s Impossibility Theorem implies that it is difficult to devise electoral systems that perfectly aggregate social preferences under specific sets of preferences (Arrow 1963). Moreover, minority principals need to be involved and protected in this process.

There is preliminary evidence also from the literature on inter-municipal cooperation that delegation of this kind works in practice. For inter-municipal joint service delivery, we find that there is a difference between countries in the success in dealing with the multiple principal problem. As Bel and Warner (2015) argue in their review of inter-municipal cooperation, inter-municipal cooperation seems to show better performance when its management is delegated to a single authority, as can happen in Spain, than when municipalities are directly on the board, as occurs in Italy (Garrone et al. 2013), the Netherlands (Voorn, Van Genugten et al. 2018), and Norway (Sørensen 2007; Torsteinsen and Van Genugten 2016). While both models create an interface (middle tier) between principals (municipalities) and agent (service organization), the middle tier in the case of Italy, the Netherlands, and Norway still has multiple principals, while in the Spanish case the middle tier can be a single separate government (Bel et al. 2014; Bel and Warner 2015), where elections may mitigate the possibility of lobbying. Consequently, the Spanish model solves collective action problems, whereas the Dutch, Italian, and Norwegian models do not (interestingly, in Italy, municipal unions have been developed that share characteristics of such separate governments; Ferraresi et al. 2018). Figure 2 shows the difference between the two models.

Inter-municipal cooperation in Spain works through comarcas (counties) and mancomunidades (associations of municipalities). Within those institutions, elections take place to delegate the daily governance of service delivery to a single actor. In comarcas, members of the comarca elect a consejo comarcal (the comarca government) to be directly in charge of daily governance, and in mancomunidades, members elect not a government but a president. This kind of delegation to a single actor through a democratic process does not occur in countries like the Netherlands and Norway, where such elections either do not take place or are not formalized (Torsteinsen and Van Genugten 2016; Voorn, Van Genugten et al. 2018). The unitary governance in the Spanish model solves collective action problems in steering and monitoring, and the good outcomes of the Spanish approach described by Bel and Warner (2015) lend provisional corroboration to the idea that the Spanish model mitigates the multiple principal problem intrinsic to inter-municipal cooperation better than other countries’ models do. However, more research is necessary.
DISCUSSION, CONCLUSION AND RECOMMENDATIONS

The multiple principal problem that organizations face when they must balance the (competing) interests of multiple stakeholders is severe and constitutes one of the primary obstacles to organizational effectiveness in joint service delivery. We know little about how organizations approach the multiple principal problem in practice, or how they should in theory.

In this article, we have extended a framework based on principal–agent theory to multiple principals to understand the issues that multiple principals can bring for joint service delivery in the public sector. Next, we found that a broad literature corroborated the principal–agent framework. We found support for four key hypotheses drawn from this framework: in joint service delivery, we often observe (i) free-riding and duplication in monitoring, (ii) lobbying by principals, and (iii) increased autonomy for agents, leading to inefficiencies. We further found that coordination is difficult to achieve, as diverging objectives between principals bring a prisoner’s dilemma, where principals have individual incentives to advance their own objectives instead of the common good. Altogether, the multiple principal problem can lead to large inefficiencies and powerful agents if not properly dealt with.

We also find that there has been little research describing and testing institutional solutions to the multiple principal problem. We combined our framework with literature on inter-municipal cooperation to tentatively suggest that an interface approach, in which principals delegate governance to an elected party whose objectives align most with the common good, could be a solution to the multiple principal problem under joint service delivery. Alternative coordination mechanisms, such as informal networks, formal contracts, centralization, and delegation to principals with individual interests, might be less effective. We encourage further research to test different organizational models in practice, as we still lack empirical data describing and comparing different types of organization to deal with multiple principals.

While we have found substantial evidence of the existence of the multiple principal problem, not all organizations will suffer from principal–agent problems. We do not preclude the existence of stewardship and trust both between principals and between principals and agents in organizations, which help protect against the multiple principal problem. If we presume stewardship among the principals and agents, the multiple principal problem disappears.

Still, we have found substantial evidence of the existence and severity of the multiple principal problem, and we encourage future research into possible solutions to contribute to more effective joint service delivery in the public sector.
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