

INTERMUNICIPAL COOPERATION AND THE CHOICE OF ORGANIZATIONAL FORM: INDEPENDENT JOINT VENTURES VERSUS CONTRACTUAL AGREEMENTS

ABSTRACT

This article investigates the choice of organizational form in the context of intermunicipal cooperation on fire and rescue services in Norway. The choice of corporate or contractual form is expected to be affected by two main dimensions of transaction costs, horizontal and vertical. It is expected that factors increasing the horizontal transaction costs will increase the benefit from formalizing the collaborative agreement through corporatization. However, establishment of an independent company can also be argued to increase vertical transaction costs related to indirect ownership. Employing survey data from all Norwegian municipalities, this study analyses possible factors explaining the choice of organizational form. It aims to answer whether the organizational form can be explained mainly in response to vertical or horizontal transaction costs. The findings indicate that vertical transaction costs are more central than horizontal to the choice.

Keywords: Intermunicipal cooperation, organizational form, joint venture, institutional collective action, corporate governance.

INTRODUCTION

Intermunicipal cooperation is a popular strategy for municipalities, first of all to increase cost efficiency (Hulst et al. 2009; Bel and Warner 2016) but also to improve service quality. Municipalities are argued to cooperate when they perceive resource benefits through collaboration (May and Winter 2007), and the level of expertise within the local government will be important in affecting its production choice. Intermunicipal cooperation is especially common for small and weakly-performing municipalities which can have considerable potential for increasing the level of competence through cooperation (Steiner 2003). The potential for realizing joint benefit may be large. However, this way of supplying municipal services is also associated with challenges. These challenges may, for example, be related to indirect ownership (Sørensen 2007) and overcoming collective action dilemmas (Feiock and Scholz 2010).

The choice of organizational form has been a popular field of study, largely inspired by Williamson's (1975) classic categorization of markets and hierarchies. Intermunicipal cooperation has also become a broad literature field covering a wide range of topics such as accounting (Miller, Kurunmäki, and O'Leary 2008; Kurunmäki and Miller 2011), networks (Goldsmith and Eggers 2005; Schalk 2013), and negotiations (Agranoff and McGuire 2004). The literature on control mechanisms in intermunicipal service delivery is still limited, but has started to emerge (e.g., Marvel and Marvel 2008; Cäker and Siverbo 2011; Andrew et al. 2015). So far, the main focus has been directed at the drivers of cooperation and the financial consequences (Bel and Warner 2015). There

is a need for more knowledge about control and management issues arising after the point where cooperation between public organizations is achieved.

The selected services for analysis in this study are municipal fire and rescue services. Cooperation between municipalities on these services is very common in Norway, and several municipalities have chosen establishment of an independent legal entity (a municipal joint venture) to organize the joint service production. The alternative is cooperation through contractual agreements between the municipalities. At the heart of this decision lies the issue of transaction costs (Williamson 1979). Factors increasing the risks inherent in the transaction will increase the need for control and safeguarding mechanisms. So far, the literature on intermunicipal cooperation has focused on the horizontal dimension of the cooperation, the relationship between the municipal partners. The author forward, however, two contrasting perspectives highlighting the difference between *horizontal* and *vertical* transaction costs in this type of cooperation. The horizontal perspective is based on the institutional collective action framework (Feiock 2013) which has been widely employed in the study of intermunicipal cooperation. Based on this perspective, the choice of organizational form is a matter of collaboration risks and choosing a governance form to safeguard against these risks. The higher the risk, the greater the need for formalization and safeguarding governance structures. Alternatively, the transaction cost framework can be supplemented with insights from corporate governance and agency theory (Jensen and Meckling 1976). Production of services through an independent joint venture involves the establishment of two additional decision-making bodies and increases the degree of indirect ownership and separation of

ownership and control. Following corporate governance theory, indirect ownership is expected to reduce efficiency (Schleifer and Vishny 1997), and involves risking the loss of municipal influence on service delivery.

The present study investigates which factors explain the choice of different organizational forms, and whether the choice can be seen in response to mainly horizontal or vertical transaction costs in the context of intermunicipal cooperation. In certain areas, the two perspectives will have competing explanations for the expected organizational form, making it difficult to integrate fully the consideration of both the horizontal and vertical dimensions. The data employed in this investigation was collected in a survey undertaken in Norwegian municipalities and included a description of several characteristics of the collaborative arrangements. These factors are expected to have different effects on the choice of organizational form depending on their effect on the level of perceived risk, and thus the level of transaction costs. Characteristics included are the extent to which the partners cooperate in other service areas, income inequality, whether there is a low-income participant, number of cooperating partners, size diversity, presence of a dominant partner, transaction size, duration of the cooperation, municipal revenues, and population. The study contributes to our knowledge concerning possible explanations for the choice of alternative intermunicipal organizational forms which, so far, have not received a great deal of attention in the literature. It further contributes to advance our theoretical approach in the study of cooperation by introducing the difference between a horizontal and vertical perspective on transaction costs in these types of transactions.

THEORETICAL FRAMEWORK: TRANSACTION COST ECONOMICS AND THE EXTENDED MAKE-OR-BUY DECISION

At the heart of the choice of organizational form lies transaction cost economics (TCE). The TCE framework is a common foundation both for analyzing the make-or-buy decision of a single organization (Geyskens, Steenkamp, and Kumar 2006), and for analyzing inter-organizational control, often in combination with other theoretical perspectives (Anderson and Dekker 2010). Transaction cost economics describes the different needs for control based on the characteristics of the transactions to be carried out. According to TCE, the transactional characteristics determining which governance form is most appropriate are asset specificity, uncertainty, and frequency (Williamson 1979). Increasing levels of these characteristics result in excessive transaction costs if market mechanisms were to be used and imply internal production or hybrid forms where transactions can be safeguarded through formal control mechanisms. The basic TCE model is concerned with these three main transactional characteristics, and the initial choice to “make or buy” but has been extended in several ways. It is shown, for example, that these choices are not mutually exclusive and can be combined (Warner and Hefetz 2008; Hefetz, Warner and Vigoda-Gadot 2014). The framework can also be applied more widely to what has been labelled “extended make-or-buy decisions” (Van der Meer-Kooistra and Vosselman 2000). This also incorporates the phases of partner selection and decisions regarding design of the control system *after* the initial decision to make-or-buy. The TCE framework of the extended make-or-buy decision has successfully been applied in the study of control of inter-firm relationships in the private sector (e.g., Van der Meer-

Kooistra and Vosselman 2000; Langfield-Smith and Smith 2003; Dekker 2004; Håkansson and Lind 2004). It has also started to manifest itself in the study of control of outsourcing relationships in the public sector (e.g., Johansson 2008; Cristofoli et al. 2010; Johansson and Siverbo 2011; Ditillo, Liguori and Steccolini 2014; Johansson, Siverbo and Camén 2016). These studies have elaborated on the three initial transactional factors and explored different transactional, environmental and relational characteristics that affect the design of inter-organizational control. Factors explored include, for example, trust, level of competition in the market, “outsourcing misalignment”, political visibility, goal congruence and transaction size. What can be concluded from these studies is that the level of risk and related transaction costs are important for explaining the need for safeguarding and the intensity of control in inter-organizational relationships. In relation to the governance system design, it is expected that the corporate or contractual form will offer different possibilities for safeguarding and control, and that the choice will be related to the level of transaction costs.

The horizontal Transaction: Institutional Collective Action

Concerning the literature on intermunicipal cooperation specifically, the institutional collective action (ICA) framework has been broadly applied in the public administration literature (e.g., Lubell et al. 2002; Feiock 2009; Feiock, Steinacker and Park 2009; Andrew et al. 2015). This framework emanates from TCE and is found to be very useful in understanding the barriers to, and the emergence of collaborative action to realize a potential joint benefit. In resemblance to the mentioned literature on the extended make-

or-buy decision, this approach focuses on transaction costs as the determining factor of the need for control and safeguarding mechanisms—but here the focus is solely upon the horizontal relationships between cooperation partners. The basic assumption in the institutional collective action framework is that cooperation will emerge when the benefits outweigh the transaction costs related to mitigating the risks of “incoordination, unfair division, and defection” (Feiock 2013, 406). Different governance mechanisms are used to align incentives, and safeguard transactions exposed to these risks. The governance of intermunicipal cooperation, therefore, is a result of the ICA dilemmas arising from collaboration risks. The more complex the collaborative tasks, the higher the collaboration risks and the transaction costs. The complexity of ICA dilemmas induces the need for more authoritative mechanisms. “Simple” coordination problems may easily be addressed employing a governance form based on social embeddedness, while tasks imposing defection or division risks are characterized as more difficult to handle and require more authoritative mechanisms. A typical example of the latter is the cooperation of governments to achieve economies of scale that often require long-term commitments and capital-intensive investments (Feiock 2013, 411). Trust is recognized as a central component of cooperation in the ICA framework. It can be the mechanism that helps resolve the ICA dilemma with lower transaction costs than other mechanisms (Thomson and Perry 2006, 28). Studies have pointed to earlier cooperation as a source of trust (Park and Feiock 2006; Percoco 2016). This is supported by several studies of the private sector which find that prior exchanges and partner experience is an important factor in reducing

the use of governance mechanisms (Gulati 1995; Batenburg, Raub and Snijders 2003; Dekker 2008).

Viewing the choice of organizational form from this horizontal perspective, the choice is a matter of integrating the cooperating parties, and formalization in order to safeguard the horizontal transactions. Contractual agreements are more market-oriented than the joint venture form which “can be seen as quasi-hierarchies” (Osborn and Baughn 1990). To foresee every possible future event in a long-term cooperation and account for them in the contract is of course not possible. Thus, there will inevitably be a situation of incomplete contracting between the municipalities. Establishing a joint venture may also be called a type of contract, but a much more institutionalized type that binds the parties together in a different way. Ownership of the company provides a form of security for the involved parties whenever events not accounted for in the contract arise. Say, for example, that there is a question about how certain procedures should be carried out or what should be done with an asset. When such an unspecified event arises, co-owners of the company must come to agreement on a decision, and each owner will have the right to affect decisions, for example through voting in the representative board of directors. Through the joint venture, shared ownership and control is established and interests are aligned through the sharing of profits and losses. Under the contractual form, the fire service department will still administratively be organized within the separate municipalities. When two municipalities have written a contract which, for example, entails that parts of the service are sold from one to the other, the purchasing municipality does not have the same opportunity to affect decisions regarding the service. In such a

case it would need to rely more on bargaining and threats to terminate the contract. The corporate form is thus expected to reduce the risks related to the *horizontal* dimension of the transaction and to be preferred in response to the related horizontal transaction costs.

The Vertical Transaction: Corporate Governance and Agency Theory

When discussing whether to establish an independent company, corporate governance and agency theory arguments may also provide important insights explaining risk inherent in the transaction. Corporate governance theory is concerned with ownership rights, agency and efficiency. In contrast to ICA, where the focus is directed at the horizontal relationships among cooperating partners, corporate governance theory focuses vertically on the relationship between owner and manager. It emanates from agency theory and argues that indirect ownership will impair efficiency (Schleifer and Vishny 1997). There are several arguments for a principal to delegate authority to an agent. These include increased exploitation of the agent's competencies, timely decision-making, and facilitation of the agent's initiative and participation in the relationship (Aghion and Tirole 1997; Colombo and Delmastro 2004). Delegation of authority can be important in reducing the overload for the principal and improve the principal's focus on other strategically important areas. However, agents will pursue their own goals, and information asymmetry will challenge the principal's possibilities for controlling the actions of the agent (Jensen and Meckling 1976; Eisenhardt 1989; Miller 1992). Thus, the cost of delegation of authority to the agent is the principal's loss of control. The benefits of delegation to an agent must then be weighed against the risk related to opportunistic

behavior and the costs incurred to safeguard against it. Municipal service production will always involve delegation to department managers, so agency problems can occur without the establishment of a joint venture. However, the distance between principal (municipal council) and agent (department manager of the fire service) increases dramatically when establishing a joint venture. This requires the establishment of two extra decision-making bodies: the board of directors and the municipal representative board. In addition to making ownership a great deal more indirect than it already is, there is the issue of dispersion. With several owners, each participant will have reduced incentive to monitor the administrator (Fama and Jensen 1983). The result is an extreme example of indirect and dispersed ownership and can be seen as increasing the risk inherent in the *vertical* transaction and related transaction costs. Municipalities are indeed experiencing more control challenges with the corporate form compared to other forms of organization. Oversight over what is going on in the companies is reported to be weak or non-existent (Gjertsen and Martinussen 2006; Ringkjøb, Aars, and Vabo 2008; Leknes et al. 2013; Jacobsen 2014; Bjørnsen, Klausen and Winsvold 2015). Thus, from this perspective, the contractual form is expected to reduce the risks related to the vertical transaction, and that the contractual form will be preferred in the presence of factors increasing these risks and related transaction costs.

To sum up, the establishment of a municipal joint venture company may reduce risks related to the horizontal transaction through increased formalization and transaction safeguarding between the municipal owners. However, establishing a company may also increase the risks related to the vertical relationship and increased degree of indirect

ownership. It is hypothesized that factors characterizing the collaborative arrangement will affect the level of risks in the transaction, which in turn will affect the choice of organizational form in response to minimize the transaction costs.

Hypothesis development

Extent of Cooperation on other Services

The extent of cooperation with the same partner in other services is an important characteristic related to partner experience and as a source of mutual dependence and trust. If the cooperating partners have a large degree of cooperation, this means they have more experience with each other, and the embeddedness of the parties is higher. Since they have chosen to expand their collaborative activities into a higher level, the experiences are presumably of a positive nature. The level of trust between municipalities is argued to be higher when they have a history of cooperation (Park and Feiock 2006; Percoco 2016). Several studies in private sector contexts in interorganizational control find that prior exchanges and partner experience, as a source of trust, is an important factor in reducing the use of governance mechanisms (Gulati 1995; Batenburg, Raub, and Snijders 2003; Dekker 2008). In line with these arguments, a large extent of cooperation is expected to reduce the risk in the horizontal transaction, and again the need for safeguarding transactions between the cooperating municipalities. A negative relationship between extent of cooperation and corporate form is therefore expected.

Income Inequality

In the same way as a larger extent of cooperation, mutual interests are found to be a source of trust (e.g., Das and Teng 2001). Feiock, Steinacker, and Park (2009) find that larger economic differences reduce the likelihood of cooperation being established and argue that this may be the result of fewer mutual interests and more difficulties related to bargaining the division of costs and gains. Assuming that fewer mutual interests increase the costs of bargaining and division, greater income inequality is expected to increase horizontal transaction costs and be positively related to corporate form and increased safeguarding between municipalities.

Number of Partners

The effect of an increasing number of partners has been studied in the literature on joint venture performance where most findings suggest it is negatively related to performance (Franko 1971; Park and Russo 1996; Griffith and Chen 1998; Gong et al. 2007). “As the number of partners increases, there is potentially a geometric growth in complexity” (Beamish 2008, p. 117). Gong et al. (2007) present one study that finds a negative relationship between increasing number of parent companies and joint venture performance. This finding is further nuanced by the mediating effects of contract completeness and cooperation. It is found to be more challenging to specify complete contracts when the number of partners increases. An increasing number of partners can also challenge cooperation because it reduces the possibility to establish close relationships with each other, develop common values, and increases the likelihood of free riding. Related to the institutional collective action framework, an increasing number

of cooperating partners is expected to increase horizontal transaction costs through the increased difficulties of bargaining and division in addition to the increased risk of all parties not having the same goals (Feiock 2013). It is therefore expected to be positively related to corporate form because it increases the need for safeguarding through the integration of the cooperating partners.

The increased transaction costs related to coordination between a large number of partners can also be seen as increasing the benefit of delegation to an agent (a joint venture), which is not part of the municipalities' administrative structure. Most of the coordinating activities will then be delegated to the board of the joint venture. The reduction in coordination costs greatly increases the benefit of delegation: it will facilitate an increased initiative and participation of the agent(s) and reduce the principal's overload (Aghion and Tirole 1997; Colombo and Delmastro 2004). This is expected to outweigh the increase in vertical transaction costs related to indirect ownership because it has immediate practical implications for the parties involved. A positive relationship between number of partners and corporate form is therefore hypothesized both from a horizontal and vertical perspective.

Size Diversity/Dominant Partner

These variables will have different expected impact on the choice of organizational form dependent upon whether one focuses on horizontal or vertical transaction costs. From an ICA perspective, increased size diversity and presence of a dominant partner are factors expected to increase bargaining and division costs, and increase the risk of opportunistic behavior for parties that are dominated in the transaction. Having collaboration partners

with more power than the others does not promote trust since the dominant partner(s) could exploit a favorable power situation. Feiock, Steinacker, and Park (2009) find that cities are more likely to enter into cooperation with cities of similar size. For dominated parties, control mechanisms as close as possible to those employed in the hierarchy are preferred (Donada and Nogatchewsky 2006), and integration is the most powerful safeguarding mechanism (Williamson 1975). Langfield-Smith and Smith (2003) also include asymmetric power as a party characteristic associated with more bureaucratic control mechanisms. From this perspective, asymmetric power increases the risk in the horizontal transaction and the need for safeguarding, and therefore a positive association to corporate form is expected.

On the other hand, from a corporate governance perspective, a greater size diversity or presence of a dominant partner can be seen as an opportunity to reduce complexity and reduce transaction costs related to controlling the department manager. From this perspective, the most important issue is to secure municipal control over service delivery. As already described, an increasing number of partners increases complexity, and in several cases is found to be negatively related to performance (Gong et al. 2007). When one cooperating partner is significantly larger than the others, it is natural for this party to take the main responsibility for service production. This party may secure municipal control of the department manager with the smaller, dominated parties in the background. As previously described, delegation can have an important benefit of reduced principal overload (Aghion and Tirole 1997; Colombo and Delmastro 2004). Smaller municipalities handing over responsibility for the service to a large

municipality can be seen as an alternative to establishing a joint venture with the aim to reduce complexity and overload for the principal(s). Instead of delegating authority to the joint venture, the small municipalities delegate authority to the dominant partner, and exploit the greater capacity and competencies of a larger municipality. The principal-agent relationship is then within the municipalities, something which is considered less risky than the company–municipality relationship. This is due to a higher degree of goal congruence between the partners (e.g., Johansson and Siverbo 2011; Andrew et al. 2015). Greater diversity in size and/or presence of a dominant partner therefore provides the opportunity to reduce transaction costs related to coordination, and at the same time reduce risk in the vertical transaction related to indirect ownership by avoiding the establishment of a joint venture. Accordingly, the characteristics size diversity and dominant partner are expected to be negatively related to corporate form seen from this perspective.

Transaction Size

The size of the transaction will affect how important municipalities consider control of the service to be because it affects the consequences of potential suboptimal decisions. This variable will also have an opposite expected impact on the choice of corporate form depending on the perspective. From a horizontal perspective, increasing transaction size is expected to be positively related to corporate form. When more money is at stake, it can be expected to increase risk in the horizontal transaction through increased risk of potential defection or poor division (Feiock 2013). This would again increase the need for

safeguarding between the municipalities and a positive relationship to corporate form would be expected.

From the corporate governance perspective, on the other hand, increasing transaction size increases the need to minimize risks in the vertical transaction related to indirect ownership and the potential of reduced efficiency. The more money at stake, the greater risk will be associated with the possibility that the agent acts opportunistically. Increasing transaction size thus increases the cost related to delegation and the loss of control over the agent (Aghion and Tirole 1997; Colombo and Delmastro 2004). From the vertical perspective, transaction size is therefore expected to be negatively related to corporate form.

Population

The act of contracting services requires a certain level of resources, especially legal competence on behalf of the municipalities. Cooperation through contractual agreements with other municipalities entails that the service provision remains integrated in the municipal administration, while the establishment of an independent company outside the administration is closer to outsourcing. Establishment of a company is therefore expected to require a greater deal of competence on behalf of the municipalities, in order to manage the process of contract design, establishment, and controlling the company in a proper way. The importance of these kinds of resources was highlighted by Brown and Potoski's (2003) discussion of contract-management capacity in municipal and county governments. This capacity is more likely to be found in larger municipalities, which are often more experienced with different forms of organization, and it is common to find

separate legal departments handling these matters. Studies find that Norwegian municipalities in general lack the necessary capacity, competence and awareness for effective corporate governance (Gjertsen and Martinussen 2006; Bjørnsen, Klausen and Winsvold 2015) —a lack that will be especially prominent for small municipalities. Corporate governance of municipal companies is described to “take place within a fine-grained, institutionalized system characterized by high complexity regarding number of positions and bodies, their different roles and relationships between them” (Bjørnsen, Klausen and Winsvold 2015, 186). This system will be especially challenging to navigate for small municipalities. They are found to experience a greater loss of control when cooperating in general, where the corporate form further strengthens this experience of reduced control (Ringkjøb, Aars, and Vabo 2008; Leknes et al. 2013; Jacobsen 2014).

Having greater contract management capacity reduces the risk in the vertical transaction and related transaction costs. A positive relationship between population and corporate form is thus hypothesized. A summary of the hypothesized effects are found in Table 1.

Table 1. Summary of hypothesized effects of explanatory variables on the choice of corporate form.

| Explanatory variable | Expected effect on corporate form | |
|-----------------------|-----------------------------------|----------------------|
| | Horizontal perspective | Vertical perspective |
| Extent of cooperation | Negative | |
| Income inequality | Positive | |
| Number of partners | Positive | Positive |
| Size diversity | Positive | Negative |
| Transaction size | Positive | Negative |
| Population | | Positive |

DATA AND METHODS

Research Context: Municipal Fire and Rescue Services

Municipalities can establish cooperation on service production if needed, and in Norway this is very widespread among the more technical and capital-intensive services. This is related to the challenges of smaller municipalities providing these services on their own. It is very uncommon to cooperate on what can be considered core activities such as schools, kindergartens, and health and care services. Fire and rescue services are the second most common for intermunicipal cooperation after refuse collection. Based on the survey conducted, 87.6 percent of the responding municipalities cooperate in some form on fire services. Because of institutional circumstances related to income and taxation,

refuse collection is almost exclusively organized as independent companies and was not suitable for this analysis. Fire services was therefore the most suitable context chosen for this study. It represents an interesting service to analyze, also because it is not considered the most contractible service (e.g., Brown and Potoski 2003; Levin and Tadelis 2010). Compared to refuse collection, for example, it is not as easily measured and controlled through use of performance targets. Since the service is more challenging to contract, it also demands that decisions are made more carefully regarding governance system, including organizational form.

The two main forms of cooperation on fire services in Norway are contractual agreements and establishment of a municipal joint venture. Establishing an intermunicipal joint venture involves the introduction of two additional levels of government. First, the representative board of directors, which is the highest level. This consists of elected representatives from each of the owner-municipalities; the number of members elected by each municipality corresponds to its portion of the shares in the company. With relatively few meetings, usually twice a year, the main responsibility of the representative board is to set the budgetary frames for the company. Second, the professional board of directors, elected by the board of representatives. This board oversees the general manager and operation of the company; most decisions are made here. The contractual alternative to organizing cooperation means contract agreements between the municipalities without establishing a new organization. Contract agreements range from informal cooperation with little or no formalization to agreements that are

more formal. A typical form of agreement involves a municipality purchasing the whole, or parts of the service production from another.

The analysis employs selected variables from a survey covering all Norwegian municipalities in 2016. First, an electronic survey was distributed by email to the municipal CEO and CFO. In a second round, the remaining municipalities were contacted by telephone. By the end of the data collection, 363 of 428 municipalities had replied, resulting in a response rate of 84.8 percent. After mapping the collaborative arrangements based on the responses, 136 different forms of collaboration within fire services were identified. Among other things, the survey included questions regarding the organization and characteristics of the collaborative services: organizational form, number of cooperating partners, date when cooperation was established, and the extent of cooperation among the partners in other services. In addition, official municipal data such as transaction size, revenues, and population were collected from Statistics Norway.ⁱ

The data employed in this study is cross-sectional, meaning that it does not capture possible changes in organizational form over the course of time. It can be the case, for instance, that some of the joint ventures commenced as contractual agreements, and that more mature collaborative arrangements are more likely to employ the joint venture form. One effort made to accommodate this was to include the duration of the collaboration as a control variable. Also, crude 2SLS probit models were employed (Appendix 1). These do not indicate great endogeneity problems, but it cannot be excluded. The most problematic were income inequality and transaction size. As with all cross-sectional studies, this weakness must be kept in mind when interpreting the results.

Common method variance (CMV) is another potential issue in behavioral research but was not considered a major concern in this study.ⁱⁱ

Dependent and Explanatory Variables

The dependent variable, *Corporate form*, is a dummy variable coded 1 where the chosen organizational form is an independent joint venture: other contractual agreements is the reference category coded 0.

The variable *Extent of cooperation* is a measure of how much the municipality cooperates with the partners on other service areas in addition to fire services. In the survey, respondents were asked to rank their level of cooperation on a scale of 1–3, where 1 represents no other cooperation other than fire services. A medium level of cooperation is defined as between two and nine collaborative arrangements, represented by the value 2. Municipalities that rate their extent of cooperation as high, have ten or more other collaborative arrangements with the same partners, represented by the value 3.ⁱⁱⁱ *Income inequality* is measured by the Gini coefficient, which expresses the dispersion of income per capita in the range 0–1. The value 1 implies maximal income inequality, and 0 perfect equality. *Duration* represents the duration of the collaborative arrangement measured in years since its commencement. *Number of partners* is a measure of how many municipal partners are participating in the collaborative service. *Dominant partner* is a measure indicating whether there is a dominating party in the collaborative arrangement. In the case of independent companies, a dominant partner is defined as one that controls 50 percent or more of the shares. In the non-corporate case, this is based on population. A dominant partner is defined as one that represents 50 percent or more of the

cooperation's population base. A related but different variable is *Size diversity*. This is measured by the normalized Herfindahl index (H^*)^{iv} ranging from 0 to 1, which expresses the equality of distributions.^v The value 0 indicates a perfectly equal distribution; 1 means maximum dispersion. The variable *Size diversity* provides a more nuanced expression of power asymmetry than the dummy variable dominant partner. For example, if a collaborative arrangement consists of one municipality representing 51 percent and another 49 percent, this would be defined as presence of a dominant partner. This can be of value to capture since 51 percent of shares entails the majority of votes. However, its value on the normalized Herfindahl index would be very low since the distribution is quite even. These two variables therefore measure two related, but different aspects of power asymmetry. *Transaction size* is the cooperating municipalities' combined expenditures per capita related to the services. The variable *Municipal revenues*^{vi} is the total revenues per capita of the cooperating municipalities combined, comprising tax revenues and block grants. *Low-income participant* is a dummy variable given the value 1 for collaborations where one or more of the participating municipalities belong to the lower quartile of income per capita. In contrast to municipal revenues, this variable is based on each municipality's income and not the total income of the collaborating partners combined. *Population* is the population of the cooperating municipalities combined at the beginning of 2015. Descriptive statistics of the variables are found in Table 2; the correlation matrix in Table 3.^{vii} Since the dependent variable is dichotomous, logistic regression is the employed method of analysis.

Table 2. Descriptive statistics

| <i>Variable</i> | <i>N</i> | <i>Min–Max</i> | <i>Mean</i> | <i>St.dev.</i> | <i>Skewness</i> | <i>Kurtosis</i> |
|---------------------------------------|----------|----------------|-------------|----------------|-----------------|-----------------|
| Corporate form | 135 | 0–1 | 0.2 | 0.401 | 1.5 | 3.25 |
| Extent of cooperation | 126 | 1–3 | 2.562 | 0.504 | -0.482 | 1.799 |
| Income inequality† (Gini coefficient) | 133 | -6.22 – -1.04 | -2.837 | 0.868 | -0.884 | 4.462 |
| Number of partners | 133 | 2–10 | 3.248 | 1.990 | 1.738 | 5.156 |
| Size diversity (H*) | 134 | 0–0.981 | 0.322 | 0.295 | 0.722 | 2.180 |
| Dominant partner | 134 | 0–1 | 0.590 | 0.494 | -0.364 | 1.133 |
| Transaction size† | 133 | -0.406–1.006 | 0.107 | 0.289 | 0.651 | 3.308 |
| Population† | 133 | 7.74–12.81 | 10.209 | 1.076 | 0.296 | 2.858 |
| Municipal revenues† | 133 | 2.482–3.950 | 3.116 | 0.278 | 0.796 | 3.199 |
| Low-income participant | 135 | 0–1 | 0.437 | 0.498 | 0.254 | 1.064 |
| Duration† | 120 | 0–4.078 | 2.150 | 0.920 | -0.760 | 3.110 |

Note: †*Income inequality, Transaction size, Population, Duration, and Municipal revenues* are log transformed. *Transaction size and Municipal revenues* are *per capita*. A normally distributed variable has a skewness=0 and kurtosis=3 in Stata.

Table 3. Correlation matrix for units included in the analysis, $N = 110$.

| Corp. form | Ext. of coop. | Num. of part. | Duratio n | Income ineq. | Dom. part. | Size div. | Tr. size | Low inc. | Rev. | Pop. | |
|------------------|---------------------|---------------------|--------------|-----------------|---------------|--------------|-------------|-------------|--------|--------|-------|
| Corp. form | 1.000 | | | | | | | | | | |
| Ext. of coop. | 0.044 | 1.000 | | | | | | | | | |
| Num. of part. | 0.513 | 0.101 | 1.000 | | | | | | | | |
| Duration | 0.112 | -0.019 | 0.105 | 1.000 | | | | | | | |
| Income ineq. | 0.051 | 0.072 | 0.373 | -0.031 | 1.000 | | | | | | |
| Dom. partner | -0.190 | -0.052 | -0.342 | -0.098 | -0.082 | 1.000 | | | | | |
| Size div. | -0.273 | -0.047 | -0.243 | -0.137 | -0.027 | 0.680 | 1.000 | | | | |
| Tr. size | -0.379 | 0.156 | -0.195 | -0.010 | 0.060 | -0.041 | -0.043 | 1.000 | | | |
| Low inc. | 0.212 | -0.068 | 0.211 | 0.086 | 0.093 | 0.136 | 0.127 | -0.423 | 1.000 | | |
| Reven. | -0.189 | 0.262 | -0.102 | -0.079 | 0.030 | -0.295 | -0.342 | 0.632 | -0.712 | 1.000 | |
| Popul. | 0.351 | -0.135 | 0.444 | -0.072 | 0.051 | 0.149 | 0.267 | -0.632 | 0.647 | -0.662 | 1.000 |

RESULTS

The model for contractual versus corporate form is presented in Table 4 and the effects are illustrated in Figure 1. The results show that *Extent of cooperation* has an insignificant effect on the choice to establish an independent joint venture. *Income inequality* is, somewhat surprisingly, negatively related to corporate form and significant

at the 10 percent level. Greater differences in income reduces the likelihood of choosing corporate form. The variable *Number of partners* has a positive and significant effect on corporate form as expected. *Size diversity* has a negative and significant effect on corporate form. The greater the differences in size between the partners, the lower the likelihood for choosing corporate form. *Dominant partner* has a positive, but insignificant effect. The variable *Transaction size* has a negative and significant effect on corporate form. Increasing transaction size therefore reduces the likelihood of corporate form. *Municipal revenues* and *Low-income participant* both have positive but insignificant effects on corporate form. *Population*^{viii} has a negative, but not significant effect. Finally, the control variable *Duration* has a positive but insignificant effect. This variable is included to control for the possibility that the choice of organizational form may be affected by maturity or trends over a certain time. Thus, it is not indicated that contractual agreements have developed into corporate form after some time.

Table 4. Logistic regression on *Corporate form*, coefficient (std. err.)

| | | |
|------------------------|----------|---------|
| Constant | -7.042 | (9.053) |
| Extent of cooperation | 0.517 | (0.639) |
| Income inequality† | -0.733* | (0.437) |
| Number of partners | 0.778*** | (0.262) |
| Size diversity (H*) | -5.418** | (2.470) |
| Dominant partner | 1.394 | (0.907) |
| Transaction size† | -4.105** | (1.799) |
| Population† | -0.205 | (0.560) |
| Municipal revenues† | 0.489 | (2.116) |
| Low-income participant | 0.205 | (1.073) |
| Duration† | 0.302 | (0.394) |

| | |
|------------------------------|---------|
| <i>N</i> | 110 |
| Log-Likelihood | -34.830 |
| Pseudo <i>R</i> ² | 0.421 |

Note: ***significant at 1%; **significant at 5%; *significant at 10%. †*Income inequality, Transaction size, Population, Municipal revenues* and *Duration* are log transformed. *Transaction size and Municipal revenues* are per capita.

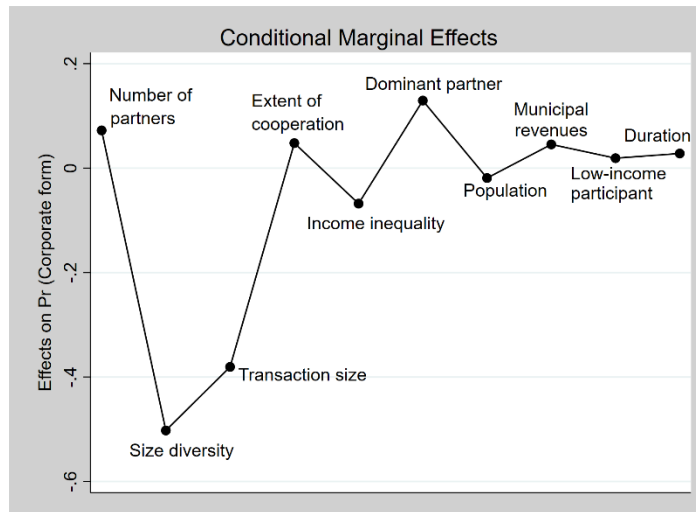


Figure 1. Conditional marginal effects of independent variables on corporate form; other variables set at their mean.

Table 5. Summary of the support of hypothesized effects.

| Explanatory variable | Support for effect on corporate form | |
|-----------------------|--------------------------------------|-----------------------------|
| | Horizontal perspective | Vertical perspective |
| Extent of cooperation | Not supported | |
| Income inequality | Not supported | |
| Number of partners | Supported (Positive) | Supported (Positive) |
| Size diversity | Not supported | Supported (Negative) |
| Transaction size | Not supported | Supported (Negative) |
| Population | | Not supported |

DISCUSSION AND CONCLUSION

While the literature on intermunicipal cooperation is becoming quite extensive, little attention has been paid to the possible reasons for differing ways of organizing cooperation on services. The present study aims to investigate which characteristics of cooperation may affect the choice to establish a joint venture company to rely on contractual agreements, and which can be considered as part of the extended make-or-buy decision. It also aims to investigate whether the choice can be understood in response mainly to horizontal or vertical transaction costs. The characteristics found to significantly affect the choice of corporate form are number of partners, size diversity, transaction size, and income inequality (significant at 10 percent). See Table 5 for a summary of support for the hypotheses.

An increasing number of partners was expected to increase both the risk in the horizontal transaction, and the benefits of delegating the service coordination to an independent company. The positive effect of this variable thus supports both a horizontal and vertical perspective on transaction costs. What is interesting in the findings as a whole is that none of the other expected effects related to horizontal concerns for safeguarding against collaboration risks (Feiock 2013) are significant. These variables are the extent of cooperation, income inequality, size diversity and transaction size. Besides number of partners, all the hypothesized relationships between horizontal transaction costs and the choice of corporate form lack support in the findings.

Increasing extent of cooperation in several service areas does not reduce the likelihood of establishing a company compared to contractual agreements, although this

is expected to be a source of trust, mutual dependence and to reduce horizontal risks. Similarly, a higher level of income equality is expected to represent smaller differences between the cooperating partners, more mutual interests, and less difficulty in bargaining the division of expenditures and gains. On the contrary, increasing income inequality reduces the likelihood of choosing to establish a company, significant at the 10 percent level. Perhaps income inequality can increase the less wealthy participants' focus on cost efficiency, and thus the need for tighter control of the department manager. This is best achieved without the establishment of a company. Such a reasoning also assumes that the less wealthy municipality is in control, something which is difficult to confirm. Correlation analysis shows that income is negatively correlated to population.^{ix} This could add support to the suggestion that the less wealthy participant is in control because of its larger size. On the other hand, weak negative correlation was found between income inequality and size diversity/dominant partner.^x Thus the size differences seem to be small. We conclude that there is still much to be learnt about intermunicipal cooperation and income inequalities.

The presence of a dominant partner was not found to be significantly related to corporate form. Increasing size diversity, however, is an important and significant explanatory variable negatively related to corporate form. This implies that it is not a potential majority of votes that matters, but larger differences in size. It also suggests that it is not *who* is in control that matters—but that *someone* is in control. When one partner is much larger than the others, it is natural for this partner to take charge of service delivery and follow up the department manager. In one way, it can be seen as an opportunity to

avoid the coordination challenges encountered by multiple owners. By letting this larger partner take control without the establishment of a joint venture, a more direct influence from the larger owner is secured and consequently vertical transaction costs are reduced. The negative effect of increasing transaction size is also in line with the expectations based on reducing risks in the vertical transaction. It is expected to increase the risks related to poor performance of the agent, and increase the need for municipal control.

The results do not give perfect support for either of the perspectives, but clearly stronger support for the vertical than the horizontal perspective of transaction costs. One explanation of this pattern in the results could be that municipalities are not as concerned with the horizontal collaboration risks. This can be understood in the light of the arguments of goal congruence and shared mission (Wise 1990; Cohen 2003; Van Slyke 2007; Marvel and Marvel 2008; Johansson and Siverbo 2011; Andrew et al. 2015). They are not in it to maximize their own profits on behalf of others, but to produce the best services as cheaply as possible. This can lead to the consideration of other municipalities as more trustworthy partners, reduced concern for collaboration risks, and reduced horizontal transaction costs. Alternatively, parish-pump politics can be very up front in these kinds of cooperation. This can be a source of misalignment between prescribed and actual choice of organizational form. The increasing influence on local governance from management theory stemming from the private sector promotes greater management flexibility and management freedom to operate less supervised by politicians (Skelcher 2008). The corporate form is an embodiment of this increased flexibility and increased detachment from municipal supervision. However, it can be counteracted by local

interests even in the situations where it is “theoretically prescribed.” The management of an independent company can make decisions focusing on efficiency gains for all, although decisions can be unpopular in the local community. Such matters could make local politicians reluctant to detach the service from the municipal administration, with the potential loss of votes.

The findings thus suggest that the choice of contractual or corporate form, at least to a certain extent, can be understood in response to vertical transaction costs (related to size diversity, transaction size and number of partners). Minimizing horizontal transaction costs, on the other hand, does not seem to be of much relevance in this choice. When studying the governance of intermunicipal cooperation, it is perhaps easy to over-emphasize the role of the horizontal relationships. This is natural, since that which differentiates interorganizational governance from intra-organizational governance is precisely the new dimension of horizontal relationships between cooperating partners. Even though the horizontal dimension is unique to intermunicipal cooperation, the vertical dimension of the contracting relationship is still relevant to the governance of these transactions and should not be neglected.

The cross-sectional design has its limitations and potential endogeneity can never be ruled out completely. The novelty of the research question, however, warrants the cross-sectional design as a starting point. Future research employing longitudinal data will be needed to investigate whether the results also stand up to a stricter causality test. Also, data from other service areas and data containing detailed information about control

mechanisms implemented in contractual agreements would be valuable contribution to this area of research.

REFERENCES

- Agranoff, R. and M. McGuire. 2004. "Another look at bargaining and negotiating in intergovernmental management." *Journal of Public Administration Research and Theory* 14(4): 495–512. doi: 10.1093/jopart/muh033
- Anderson, S. W. and H. Dekker. 2010. "Accounting in Networks – The Transaction Cost Economics Perspective." In *Accounting in Networks*, ed. Håkan Håkansson, Kalle Kraus, and Johnny Lind, 235–267. London: Routledge.
- Andrew, S. A., J. E. Short, K. Jung and S. Arlikatti. 2015. "Intergovernmental cooperation in the provision of public safety: Monitoring mechanisms embedded in interlocal agreements." *Public Administration Review* 75(3): 401–10. doi:10.1111/puar.12312
- Batenburg, R.S., W. Raub and C. Snijders. 2003. "Contacts and contracts: dyadic embeddedness and the contractual behavior of firms." Pp. 135–88 in V. Buskens, W. Raub and C. Snijders, ed., *The Governance of Relations in Markets and Organizations*. Bingley, West Yorkshire, England: Emerald Group Publishing Limited.
- Beamish, P. W. 2008. *Joint venturing*. Charlotte, NC: Information Age Publishing.
- Bel, G, and M. E. Warner. 2015. "Inter-municipal cooperation and costs: Expectations and evidence." *Public Administration* 93(1): 52–67. doi:10.1111/padm.12104

- Bel, G. and M. E. Warner. 2016. "Factors explaining inter-municipal cooperation in service delivery: a meta-regression analysis." *Journal of Economic Policy Reform* 19(2): 91–115. doi:10.1080/17487870.2015.1100084
- Brown, T. L., and M. Potoski. 2003. "Transaction costs and institutional explanations for government service production decisions." *Journal of Public Administration Research and Theory* 13(4): 441–68. doi:10.1093/jpart/mug030
- Cäker, M. and S. Siverbo. 2011. "Management control in public sector joint ventures." *Management Accounting Research* 22(4): 330–48. doi:10.1016/j.mar.2011.08.002
- Cohen, S. 2003. "A conceptual framework for devolving responsibility and functions from government to the private sector." *Revista de Economía Institucional* 3(4): 13–31.
- Cristofoli, D., A. Ditillo, M. Liguori, M. Sicilia, and I. Steccolini. 2010. "Do environmental and task characteristics matter in the control of externalized local public services?" *Accounting, Auditing & Accountability Journal* 23(3): 350–72. doi:10.1108/09513571011034334
- Das, T. K. and B.-S. Teng. 2001. "Trust, control, and risk in strategic alliances: An integrated framework." *Organization Studies* 22(2): 251–83. doi:10.1177/0170840601222004
- Dekker, H. C. 2004. "Control of inter-organisational relationships: Evidence on appropriation concerns and coordination requirements." *Accounting, Organizations and Society* 29(1): 27–49. doi:10.1016/S0361-3682(02)00056-9

- Dekker, H. C. 2008. "Partner selection and governance design in interfirm relationships." *Accounting, Organizations and Society* 33(7-8): 915–41.
doi:10.1016/j.aos.2007.02.002
- Ditillo, A., M. Liguori, M. Sicilia and I. Steccolini. 2014. "Control patterns in contracting-out relationships: It matters what you do, not who you are." *Public Administration* 93(1): 212–229. doi:10.1111/padm.12126
- Donada, C., and G. Nogatchewsky. 2006. "Vassal or lord buyers: How to exert management control in asymmetric interfirm transactional relationships?" *Management Accounting Research* 17(3): 259–287. doi:10.1016/j.mar.2006.06.002
- Eisenhardt, K. M. 1989. "Agency theory: An assessment and review." *Academy of Management Review* 14(1): 57–74. doi:10.5465/amr.1989.4279003
- Fama, E. F. and M. C. Jensen. 1983. "Separation of ownership and control." *The Journal of Law & Economics* 26(2): 301–325. doi:10.1086/467037
- Feiock, R. C. 2009. "Metropolitan governance and institutional collective action." *Urban Affairs Review* 44(3): 356–377. doi:10.1177/1078087408324000
- Feiock, R. C. 2013. "The institutional collective action framework." *Policy Studies Journal* 41(3): 397–425. doi:10.1111/psj.12023
- Feiock, R. C., A. Steinacker and H. J. Park. 2009. "Institutional Collective Action and Economic Development Joint Ventures." *Public Administration Review* 69(2): 256–70. doi:10.1111/j.1540-6210.2008.01972.x

- Feiock, R. C., and J. T. Scholz, ed. 2010. *Self-organizing federalism: Collaborative mechanisms to mitigate institutional collective action dilemmas*. New York: Cambridge University Press.
- Franko, L. G. 1971. *Joint venture survival in multinational corporations*. New York: Praeger.
- Geyskens, I, J. B. E. Steenkamp and N. Kumar. 2006. "Make, buy, or ally: A transaction cost theory meta-analysis." *Academy of Management Journal* 49(3): 519–43. doi:10.5465/AMJ.2006.21794670
- Gjertsen, A. and K. Martinussen. 2006. "Styring og kontroll av kommunale selskaper og foretak." [Management and control of municipal companies and enterprises]. Nordlandsforskning NF-rapport nr 18/2006. <https://docplayer.me/31077727-Styring-og-kontroll-av-kommunale-selskaper-og-foretak.html>
- Goldsmith, S., and W. D. Eggers. 2005. *Governing by network: The new shape of the public sector*. Washington, DC: Brookings Institution Press.
- Gong, Y., O. Shenkar, Y. Luo, and M.-K. Nyaw. 2007. "Do multiple parents help or hinder international joint venture performance? The mediating roles of contract completeness and partner cooperation." *Strategic Management Journal* 28(10): 1021–34. doi:10.1002/smj.626
- Griffith, D.A., M. Y. Hu, and H. Chen. 1998. "Formation and performance of multi-partner joint ventures: A Sino-foreign illustration." *International Marketing Review* 15(3): 171–87. doi:10.1108/02651339810221025

- Gulati, R. 1995. "Does familiarity breed trust? The implications of repeated ties for contractual choice in alliances." *Academy of Management Journal* 38(1): 85–112.
doi:10.2307/256729
- Hefetz, A., M. Warner and E. Vigoda-Gadot. 2014. "Concurrent Sourcing in the Public Sector: A Strategy to Manage Contracting Risk." *International Public Management Journal* 17(3): 365–386. doi:10.1080/10967494.2014.935242
- Hulst, R., A. van Montfort, A. Haveri, J. Airaksinen, and J. Kelly. 2009. "Institutional shifts in inter-municipal service delivery: An analysis of developments in eight western European countries." *Public Organization Review* 9(3): 263–85.
- Håkansson, H., and J. Lind. 2004. "Accounting and network coordination." *Accounting, Organizations and Society* 29(1): 51–72. doi:10.1016/S0361-3682(02)00058-2
- Jacobsen, D. I. 2010. "Evaluering av interkommunalt samarbeid etter kommunelovens §27 – omfang, organisering og virkemåte." [Evaluation of Intermunicipal Cooperation under The Local Government Act section 27–Extent, Organization and Functioning]. Report, Ministry of Local Government and Regional Development.
<https://www.regjeringen.no/contentassets/fd472d06b6ff45a9acedb717d4870057/rappport.pdf>
- Jacobsen, D. I. 2014. *Interkommunalt samarbeid i Norge. Former, funksjoner og effekter.* [Intermunicipal Cooperation in Norway. Forms, Functions and Effects]. Bergen: Fagbokforlaget.

- Jensen, M. C. and W. H. Meckling. 1976. "Theory of the firm: Managerial behavior, agency costs, and ownership structure." *Journal of Financial Economics* 3(4): 305–360. doi:10.1016/0304-405X(76)90026-X
- Johansson, T. 2008. "Municipal contracting out: Governance choices, misalignment and performance in Swedish local government." *Financial Accountability & Management* 24(3): 243–64. doi:10.1111/j.1468-0408.2008.00452.x
- Johansson, T. and S. Siverbo. 2011. "Governing cooperation hazards of outsourced municipal low contractibility transactions: An exploratory configuration approach." *Management Accounting Research* 22(4): 292–312. doi:10.1016/j.mar.2011.01.001
- Johansson, T., S. Siverbo, and C. Camén. 2016. "Managing cooperation, coordination, and legitimacy: Control of contracted public services." *Accounting, Auditing & Accountability Journal* 29(6): 1012–1037. doi:10.1108/AAAJ-08-2014-1805
- Kurunmäki, L., and P. Miller. 2011. "Regulatory Hybrids: Partnerships, Budgeting and Modernising Government." *Management Accounting Research* 22(4): 220–41. doi:10.1016/j.mar.2010.08.004
- Langfield-Smith, K. and D. Smith. 2003. "Management control systems and trust in outsourcing relationships." *Management Accounting Research* 14(3): 281–307. doi:10.1016/S1044-5005(03)00046-5
- Leknes, E., A. Gjertsen, A. K. T. Holmen, B. Lindeløv, J. Aars, I. Sletnes, & A. Røiseland. 2013. "Interkommunalt samarbeid: konsekvenser, muligheter og utfordringer"

- [Inter-Municipal Cooperation – Consequences, Possibilities and Challenges].
Rapport IRIS – 2013/008.
- Levin, J. and S. Tadelis. 2010. “Contracting for government services: theory and evidence from US cities.” *Journal of Industrial Economics* 58(3): 507–41.
doi:10.1111/j.1467-6451.2010.00430.x
- Lubell, M., M. Schneider, J. T. Scholz and M. Mete. 2002. „Watershed partnerships and the emergence of collective action institutions.” *American Journal of Political Science* 46(1): 148–63. doi:10.2307/3088419
- Marvel, M. K., and H.P. Marvel. 2008. "Government-to-government contracting: Stewardship, agency, and substitution." *International Public Management Journal* 11(2): 171–192. doi:10.1080/10967490802095870
- May, P. J. and S. C. Winter. 2007. “Collaborative service arrangements: Patterns, bases and perceived consequences.” *Public Management Review* 9(4): 479–502.
doi:10.1080/14719030701726473
- Miller, G. 1992. *Managerial dilemmas: The political economy of hierarchy*. New York: Cambridge University Press.
- Miller, P., L. Kurunmäki, and T. O’Leary. 2008. “Accounting, hybrids and the management of risk.” *Accounting, Organizations and Society* 33(7-8): 942–67.
doi:10.1016/j.aos.2007.02.005
- Osborn, R.N. and C. C. Baughn. 1990. “Forms of interorganizational governance for multinational alliances.” *Academy of Management Journal* 33(3): 503–19.
doi:10.2307/256578

- Park, H. J. and R. C. Feiock. 2006. "Institutional collective action, social capital and regional development partnership." *International Review of Public Administration* 11(2): 57–69. doi:10.1080/12294659.2003.10805085
- Park, S. H., and M.V. Russo. 1996. "When competition eclipses cooperation: An event history analysis of joint venture failure." *Management Science* 42(6): 875–90.
- Percoco, M. 2016. "Strategic planning and institutional collective action in Italian cities." *Public Management Review* 18(1): 139–58. doi:10.1080/14719037.2014.969758
- Podsakoff, P. M., S. B. MacKenzie, and J.-Y. Lee. 2003. "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies." *Journal of Applied Psychology* 88(5): 879–903.
doi:10.1037/0021-9010.88.5.879
- Ringkjøb, H.-E., J. Aars and S. I. Vabo. 2008. "Lokalt folkestyre AS. Eierskap og styringsroller i kommunale selskap." [Representative Local Government Inc. Ownership and Roles of Control in Municipal Companies]. Bergen: Røkkansenteret Report 1 2008.
https://www.regjeringen.no/globalassets/upload/krd/vedlegg/komm/rapporter/rapport_lokalt_folkestyre_febr08.pdf?id=2261317
- Schalk, J. 2013. "Interorganisational relations and goal consensus: An exploratory study in two local Dutch service delivery networks." *Local Government Studies* 39(6): 853–77. doi:10.1080/03003930.2011.615837
- Shleifer, A. and R. W. Vishny. 1997. "A survey of corporate governance." *Journal of Finance*, 52(2): 737–83. doi:10.2307/2329497

- Skelcher, C. 2003. "Governing Communities: Parish-Pump Politics or Strategic Partnerships?" *Local Government Studies* 29(4): 1–16.
doi:10.1080/03003930308559386
- Steiner, R. 2003. "The causes, spread and effects of intermunicipal cooperation and municipal mergers in Switzerland." *Public Management Review* 5(4): 551–71.
doi:10.1080/1471903032000178581
- Sørensen, R. J. 2007. "Does dispersed public ownership impair efficiency? The case of refuse collection in Norway." *Public Administration* 85(4): 1045–58.
doi:10.1111/j.1467-9299.2007.00681.x
- Thomson, A. M. and J. L. Perry. 2006. "Collaboration processes: Inside the black box." *Public Administration Review* 66(s1): 20–32.
- Van der Meer-Kooistra, J. and E. G. J. Vosselman. 2000. "Management control of interfirm transactional relationships: The case of industrial renovation and maintenance." *Accounting, Organizations and Society* 25(1): 51–77.
doi:10.1016/S0361-3682(99)00021-5
- Van Slyke, D. M. 2007. "Agents or stewards: Using theory to understand the government-nonprofit social service contracting relationship." *Journal of Public Administration Research and Theory* 17(2): 157–87. doi:10.1093/jopart/mul012
- Warner, M. E. and A. Hefetz. 2008. "Managing Markets for Public Service: The Role of Mixed Public-Private Delivery of City Services." *Public Administration Review* 68(1): 155–166. doi:10.1111/j.1540-6210.2007.00845.x

Williamson, O. E. 1975. *Markets and hierarchies: Analysis and antitrust implications*.

New York: Free Press.

Williamson, O. E. 1979. "Transaction-cost economics: The governance of contractual relations." *The Journal of Law and Economics* 22(2): 233–61.

doi:10.1086/466942

Wise, C. R. 1990. "Public service configurations and public organizations: Public organization design in the post-privatization era." *Public Administration Review*

50(2):141–55. doi:10.2307/976862

NOTES

ⁱ The data from Statistics Norway can be accessed at: <https://www.ssb.no/en/>

ⁱⁱ Most variables are based on archival data (transaction size, population, size diversity/dominant partner, municipal revenues and partly number of partners and organizational form). The variables relying on survey questions (extent of cooperation on other services, duration of the cooperation, partly number of partners and organizational form) are objective rather than opinion data. CMV is mainly a concern when the response requires interpretation, retrieval and judgment by the respondent (Podsakoff et al. 2003). In this case, because of the objective nature of the questions, only retrieval was considered a potential source of CMV. To minimize this problem, responses from different respondents taking part in the same cooperation was compared to exclude possible deviations. Respondents were also given time and possibility to check information in documents or talk to colleagues in cases of uncertainty.

ⁱⁱⁱ Ideally, this variable could have consisted of the exact number of collaborative agreements. This alternative was considered demanding on the respondent and would risk a high amount of missing data.

$$\text{iv } H = \sum_{i=1}^N s_i^2 \quad H^* = \frac{(H - \frac{1}{N})}{1 - 1/N}$$

^v The normalized index was chosen over the regular Herfindahl index, which is more a measure of concentration related to number of partners.

^{vi} Transaction size and Municipal revenues are both given in 1000 NOK units.

^{vii} There were 26 missing units in the analysis. How the missing units relate to important variables can be found in Appendix 2. A model employing multiple imputation as robustness check can be found in Appendix 3. Missing data were not found to have any substantial effects on the results.

^{viii} Multicollinearity tests showed that the highest variation inflation factors were related to population and Municipal revenues, so robustness tests were carried out leaving out the variable Population (see Appendix 4 and 5). This did not substantially affect the results.

^{ix} Pearson's $r = -0.64$.

^x Municipal revenues and size diversity: Pearson's $r = -0.351$. Municipal revenues and dominant partner: Pearson's $r = -0.306$.