



Management control in public sector Joint Ventures

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ARTICLE INFO

Keywords:

Trust and control
Horizontal control package
Vertical control package
Inverted crowding out
Joint Venture
Public organizations
Municipalities

ABSTRACT

Cooperation among public sector organizations (PSOs) is increasingly important in the management of resources in welfare systems. A Joint Venture (JV) is an organization form that enables PSOs to cooperate with each other in order to achieve economies of scale. However, JVs contain interrelated horizontal and vertical control relationships (between the owners and between the owners and the JV Company) that complicate their control. The first aim of this paper is to map the dynamics in vertical and horizontal control packages in municipal JVs and to describe the relational factors that affect them. Based on three case studies we conclude that vertical control packages are affected by: goodwill trust and competence trust; parent differences in management style and size in combination with control competence; parent diversification (low relatedness between the JV's activity and the parents' other activities); and the horizontal control package (e.g., rules for parent interaction and distribution of work). Horizontal control packages are affected by: goodwill trust, system trust and calculative trust; parent differences in size; and efforts to achieve equality. The second aim of the paper is to contribute to the discussion on the relationship between trust and control. We observed that trust is potentially unaffected by the introduction of formal controls. We also found that trust has an inverted "crowding out" effect on control. A high ambition to maintain trust leads to underdeveloped formal controls. In addition, we found that the ambition to preserve trust may inhibit the realisation of economies of scale.

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1. Introduction

Recently there has been increased interest in research on control across organization boundaries. This interest is a consequence of closer relationships between organizations – for example, Joint Ventures (JV), long-term outsourcing relationships, licensing agreements and franchising arrangements (Håkansson and Lind, 2004) – and of influential researchers' calls for investigation into the governance of these new relationships (Hopwood, 1996; Otley, 1994).

In this paper we focus on municipal JVs. A JV is an organization form used by two or more organizations (parents or owners) to gain access to new capabilities, customers and resources, to reduce risk and to exploit economies of scale (Groot and Merchant, 2000; Kamminga and van der Meer-Kooistra, 2007). Here our interest is municipal JV Companies (joint-stock) that are created to achieve economies of scale.

Even though inter-organizational relationships in the public sector setting are as common as those in the private sector, there is less research on them (Samuel et al., 2009). Increasingly, in many countries public and private organizations, in collaboration with two or more public authorities, provide welfare services, not least at the municipal level (Broadbent and Guthrie, 2008). In this environment, a new management control problem arises

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when municipalities have to develop ways to control the behaviour of other organizations.

At present, public administration and public accounting researchers generally focus on inter-organization relationships such as outsourcing and Public–Private Partnerships (PPPs) (Moll and Humphrey, 2007). The lack of interest in JVs is somewhat surprising since JVs, with their interrelated horizontal and vertical control relationships, increase the complexity in the inter-organizational setting. Both these relationships may create problems as a consequence of cooperation/appropriation and coordination challenges (Caglio and Ditillo, 2008; Dekker, 2004). For instance, parents must develop safeguards against exploitation by other parents (horizontal appropriation concerns), align the JV Company's behaviour with their own interests (vertical appropriation and coordination concerns), and coordinate the JV control process among the parents (horizontal coordination concerns) (Groot and Merchant, 2000; Chalos and O'Connor, 2004).

One way to deal with these challenges is to develop control packages – one for the horizontal, flat relationship between the parents and one for the vertical, hierarchical relationship between the parents and the JV Company (cf. Groot and Merchant, 2000; Kamminga and van der Meer-Kooistra, 2007). While other researchers have studied the transactional, relational and institutional factors that influence the design of these JV control packages, they have not conceptually and empirically separated the vertical controls from the horizontal controls. Consequently, there is insufficient knowledge on how the design of horizontal and vertical control packages fulfils the ambitions associated with JVs. Furthermore, few studies explicitly focus on relational factors or provide adequate information about control package design in municipal JVs where the aim is to exploit economies of scale. These aspects are developed in our study of control packages used in municipal JVs.

In addition, this paper increases our understanding of the dynamic and multifaceted interaction between control and trust. There are studies on control in inter-organizational settings that note the various relationships between control and trust. Yet, because the results of these studies conflict, and therefore are somewhat inconclusive, there have been many calls for further research (Dekker, 2004; Emsley and Kidon, 2007; Free, 2008; Kamminga and van der Meer-Kooistra, 2007; Langfield-Smith, 2008; van der Meer-Kooistra and Scapens, 2008; van der Meer-Kooistra and Vosselman, 2006; Vélez et al., 2008). Some studies on trust and control suggest there is an inverted relationship between them (van der Meer-Kooistra and Vosselman, 2000) while other studies argue that the relationship may be more complex. For instance, Vosselman and van der Meer-Kooistra (2009) argue that while exaggerated control may have a “crowding out” effect on trust, control may also be a trust-enhancing device – through information sharing (Dekker, 2004; Tomkins, 2001) and through monitoring (Vélez et al., 2008). Vosselman and van der Meer-Kooistra (2009) call for increased emphasis on the interaction between trust and control and for less focus on an either/or relationship. In the spirit of Tomkins (2001), van der Meer-Kooistra and Vosselman (2006) foresee

interesting theorizing on the dynamic interaction between trust and control over time (see also Dekker, 2004).

Our aim in this paper is to map the dynamics in vertical and horizontal control packages in municipal JVs and to investigate the relational factors that affect them. In so doing, we also contribute to the discussion on the relationship between trust and control in inter-organizational relationships.

The paper is structured as follows. We next develop a theoretical framework for our research by explaining the core concepts used, the factors expected to influence JV controls, and the relationship between trust and control. Thereafter we present the paper's method and empirical material, followed by a discussion of our findings. In the final section we draw conclusions and offer suggestions for future research.

2. Theoretical framework

2.1. Control packages

Control is about affecting behaviour. Management control is used in organizations to encourage, enable and force managers and employees to act in the interest of the organization. In inter-organizational management control (IOMC), the controlled are on the opposite side of the organizational boundary from the controller, but the objective of control is the same. The core concept of *control package* used in this paper is consistent with several management control research ideas (Malmi and Brown, 2008; Otley, 1980). First, organizations use many interlinked controls in a control package. Second, these control packages are not mere bureaucratic formalities such as management control systems (budgets, responsibility centres, performance measurements, incentives) and organizational forms directly aimed at structuring and influencing behaviour. Control packages also contain informal elements (e.g., social or cultural controls) that influence the member behaviour of the cooperating organizations. Third, the combination of controls in the packages determines their efficacy. Controls must be internally aligned, that is, adapted to each other, and the package as a whole must be externally aligned, that is, adapted to external contingencies (Miller, 1992). However, because controls are often implemented on different occasions (perhaps by different interest groups) they may be poorly coordinated (Malmi and Brown, 2008). In discussing a control package, it is important to recognize that problems may arise when the focus is on a single element in an organization's control package, especially in the search for a link between certain contingency variables and the adoption of a particular control (Malmi and Brown, 2008; Otley, 1980). Consequently, in examining control packages, a holistic view of controls and their relevant context is required.

Researchers have advanced a number of different conceptualisations of control, both in the general literature on IOMC (Langfield-Smith and Smith, 2003) and in the JV literature (Geringer and Hebert, 1989). Yet there is still no consensus in recent JV control studies about the best conceptualisation of control despite clear similarities between some conceptualisations. Inspired by Geringer and Hebert

(1989) and Groot and Merchant (2000), we identify three dimensions in municipal JV control packages: *control mechanisms*, *control focus* and *control tightness*. In accordance with Langfield-Smith (2008), we divide *control mechanisms* into formal and informal controls. We then divide formal controls (sometimes labelled bureaucratic controls) into results control (outcome or output control) and action control (behavioural control). Results control, which is intended to motivate managers to meet strategic goals and objectives, may be expressed as performance targets, possibly in combination with rewards. The main principle is that the manager is allowed ample freedom of action but at the same time is subject to management by exception (cf. Groot and Merchant, 2000). Action control directs and monitors behaviour with the expectation that appropriate actions will lead to the desired result. Examples of action control are (the degree of) delegated decision-making, reporting structures, parent company communications, pre-approved policies and procedures, and contract terms. In JV settings, the involvement of a JV board of directors is an example of action control (cf. Dekker, 2004).

However, there is general agreement in the literature that it is impossible to design a formal control system capable of dealing with all uncertainties and coordination needs. Therefore it is necessary to complement the formal control system with informal and potentially trust-creating devices (Chalos and O'Connor, 2004; Emsley and Kidon, 2007; Langfield-Smith, 2008). Informal controls influence behaviour by promoting shared interests, values and beliefs. Examples of informal controls are personnel control (e.g., expatriate staffing), cultural control (e.g., socialisation practices, peer control), and frequent interactions and meetings (cf. Groot and Merchant, 2000). Since, however, such informal controls (or social controls) may be rather fuzzy, some researchers argue they are best suited to situations where formal controls are difficult to use (Langfield-Smith, 2008; Ouchi, 1979) and where they may “fill the holes” left by formal controls in inter-organizational settings (Cäker, 2008).

Control focus refers to the breadth of controls. A broad control focus means several activities are subject to formal or informal controls; a narrow focus means only a few activities are controlled. *Control tightness* describes the degree to which an actor controls the actions of others (Merchant and Van der Stede, 2007). For example, action controls are tighter if the actor is involved in key decisions, makes frequent and detailed pre-action reviews, communicates unambiguous instructions, monitors behaviour and connects incentives to performance. Results controls are tighter if the result measures are congruent with the parents' true objectives. These measures should be precise, objective, timely, understandable and linked to a formula-based incentive system. Informal controls become tighter with more intensive training and better communication of objectives and values.

2.2. Factors affecting the Cäker package

JV control research has proposed various factors that potentially affect JV control packages. Groot and Merchant (2000) describe a number of factors they think affect

vertical control, (i.e., how the parents control the JV). First, if the parents have *different objectives* for the JV, the control focus will be broader. Second, if the parents use the JV to *diversify* their product offerings, the control will likely be looser. Third, *high trust* among parents reduces the need for tight, formal controls. Fourth, a parent with *specific competence* in some area of the JV's activity tends to control that area broadly and tightly. Fifth, the parents' *management style* (possibly related to national culture) is potentially an important factor that affects JV control (i.e., some organizations have a tradition of tighter control). Sixth, if it is important to the parents that the JV *performs well in the short-term*, the parents are likely to use tight controls.

Kamminga and van der Meer-Kooistra (2007) develop an *extended Transaction Cost Economics (TCE)* framework in which they describe factors that affect JV control packages. In their view, both the nature of the transaction and the nature of the parents' relationship influence the structure of the control package. The transaction factors that affect JV control packages are asset specificity, uncertainty, frequency, knowledge of transformation processes and measurability of results. The relational factors expected to affect the control package are parent differences, information asymmetry, trust and bargaining power. If *parent differences* concerning objectives for the cooperation and/or organization cultures or national cultures are large, the need for control increases. *Information asymmetry* is the situation when one parent has better access than other parents to information (horizontal information asymmetry), complicating control. It is also assumed that parents who lack information about the JV Company (vertical information asymmetry) are forced to consider looser controls. *Trust* refers to each parent's belief that the other parents and the JV Company are able and willing to act cooperatively. A high level of trust reduces the need for formal controls. *Bargaining power* refers to one parent's power to design a control system advantageous to itself because of its influence over other parents. In their exploratory case studies, Kamminga and van der Meer-Kooistra (2007) confirm the importance of these transactional and relational factors, but they also note that institutional factors, such as changes in governmental regulations, affect control packages.¹

In short, transactional, relational and institutional factors influence JV control packages. Whereas Kamminga and van der Meer-Kooistra (2007) incorporate all three factors in their TCE framework, Groot and Merchant (2000) focus only on the relational factors. Since we focus on relational factors in this paper, we merge and slightly reformulate their relational factors as one framework (presented in Table 1).

2.3. The complementary role of the horizontal control package

Since there are behavioural uncertainties in both vertical and horizontal JV relationships, we expect that the

¹ Kamminga and van der Meer-Kooistra (2007) are somewhat unclear on how the relational characteristics affect control. It is also unclear if they are addressing the horizontal relationship or the vertical relationship.

Table 1
Relational factors affecting JV control packages.

| Factor | Explanation |
|--|--|
| Parent differences | Differences may result from different objectives, management styles, organization cultures, national cultures and competences. Parent differences induce control of different aspects, resulting in broader control. |
| Diversification | The JV Company's activity is not related to the parents' other activities, thus increasing vertical information asymmetry and reducing the need for – and interest in – coordination with parents' other activities. |
| Horizontal trust | The parents trust each other, reducing the need for safeguarding against competence spill over. |
| Vertical trust | The parents trust the JV Company (e.g., because of the JV Company's recent performance), reducing the need for control. |
| Bargaining power | One parent can make decisions about the control packages and thereby align control with its own interest. |
| Parents' need for short-term performance | One or more parents need immediate success, resulting in tighter control. |

separation of vertical and horizontal control packages in JV settings will add to our knowledge. A primary function of a JV is to facilitate cooperation between the JV parents. Therefore, we expect the vertical control package to have a primary role in a JV. However, we also argue that horizontal control packages are relevant since vertical control packages cannot be expected to cover all contingencies. When the vertical control package requires adjustment, owing to concerns about appropriation, coordination or cooperation, interaction among the JV parents is needed. The vertical control package may unexpectedly prove inadequate. For example, it may not resolve disputes among owners (Groot and Merchant, 2000). It may also already from the beginning be seen as too complicated to design a vertical control package for all future contingencies (Kamminga and van der Meer-Kooistra, 2007). Consequently, we argue that horizontal control packages are necessary complements to vertical control packages even though few other JV control research studies make this argument.

Some factors that influence horizontal control packages can be traced from earlier research. We expect that horizontal control packages will be more developed when parents consider the JV environment to be dynamic, for example, through regular interactions between parents (Kamminga and van der Meer-Kooistra, 2007). Also, when horizontal trust is low (Groot and Merchant, 2000), we foresee increased control, for example, in exit paragraphs or mandates that cancel or delay implementation of various terms and conditions in JV contracts. Furthermore, based on our expectation that horizontal control packages should complement vertical control packages, a less developed vertical control package suggests the need for a more developed horizontal control package.

2.4. The dynamic interaction between trust and control

As evidenced by numerous articles in accounting journals in the last ten years, trust is an influential factor in inter-organizational settings. In this section, we begin by presenting the different forms of trust that we refer to in this paper. Then we refer to the earlier literature that discusses the dynamic and multifaceted interaction between trust and control over time.

We define trust as the psychological state of accepting vulnerability in situations where there are positive expectations concerning others' behaviour (Emsley and Kidon, 2007; Noteboom, 2002). The management control literature commonly distinguishes between competence trust, goodwill trust and system trust² (see, e.g., Kamminga and van der Meer-Kooistra, 2007; Langfield-Smith, 2008; Barretta et al., 2008). Besides these three forms of trust, we also consider *calculative trust* (Noteboom, 2002). Next we comment briefly on the four forms of trust in partnerships with two or more partners:

- *Competence trust* relates to the partners' technical abilities or, in other words, to their competence in performing activities. One partner accepts vulnerability because the other partner has shown the ability to perform.
- *Goodwill trust* relates to one partner's positive expectation that its partner will not intentionally harm its interests, or, when necessary, will even do more than is required by their formal contract. One partner accepts vulnerability because the other partner has shown its intent to act in the partner's interest.
- *System trust* (or institutional trust) refers to formal institutions (e.g., for property rights and for legislative and judicial matters) and to informal rules (e.g., related to national cultures) in society that constitute the socio-economic system. One partner accepts vulnerability because the other partner has an incentive to follow society's rules and to protect its reputation.
- *Calculative trust* refers to the idea that it is too costly for partners to act opportunistically or to leave the partnership. If there is no real possibility that a partner can act opportunistically, its partner can "afford" to trust (Noteboom, 2002). One partner accepts vulnerability because the other partner, owing to the value of the partnership, has an incentive not to act opportunistically.

The classic view of the relationship between trust and control is that they are alternative ways of dealing with behavioural uncertainty. It may be costly to develop structures for partner interaction. Even when such structures are developed, they are typically incomplete. Therefore an alternative is to build trusting relationships between partners. Conversely, when a setting is perceived as easily controlled, trust is considered less relevant (Free, 2008; for examples of such settings, see van der Meer-Kooistra and Vosselman, 2000; Langfield-Smith and Smith, 2003).

² Several researchers also include contractual trust in their list of trust concepts. In accordance with Langfield-Smith (2008), we argue that it is difficult to distinguish contractual trust from goodwill trust.

As mentioned above, JV research anticipates that high trust will reduce the need for control (Kamminga and van der Meer-Kooistra, 2007; Groot and Merchant, 2000)

However, this fixed relationship between trust and control has been challenged. Since trust is a factor that affects the design of the control package as well as the potential outcome of the control package (Tomkins, 2001; Emsley and Kidon, 2007; Langfield-Smith, 2008), we align our study with Vosselman and van der Meer-Kooistra's (2009: 269) interactive perspective that 'accounts for the inter-related dynamics of control and trust'. In a dynamic view, movement may occur between control patterns in the JV setting. For example, in the JV start-up phase, when there is low competence trust, parents may control the JV Company with broad and tight action controls. When the parents see that the JV Company is competent, they may shift to less ambitious and less expensive controls (Groot and Merchant, 2000; Langfield-Smith, 2008).

Furthermore, viewing trust and control as alternatives may lead to an incomplete understanding of the consequences, including side effects, when controls are changed. Das and Teng (1996) suggest we view the relationship between trust and control as flexible and open-ended (i.e., multifaceted). This view allows us 'to consider the significant issue of the two concepts interacting to supplement each other in special ways' (Das and Teng, 1996: 508).

From this perspective, trust and control may influence each other in other ways than according to the traditional perspective of being complementary or substitutes in reducing uncertainty. Three alternatives have been noted from the literature. First, formal controls, implemented when trust is high, may destroy trust. In a criticism of TCE, Ghoshal and Moran (1996) argue that agents' motivation may decrease when they perceive control as an indication of the principals' distrust, and that the principals' distrust of agents may increase when monitoring tools are used. Taking a TCE perspective, Dekker (2004) and Vosselman and van der Meer-Kooistra (2009) have noted the same dynamic when they suggest trust is endangered when the level of control is higher than necessary, based on the relationship characteristics. To refer to the idea that the existence of control may preclude the existence of trust, we borrow the expression 'crowding out' (Osterloh and Frey, 2000) from the incentives literature that explores it extensively (Baker et al., 1988; Davis et al., 1997).

Second, and conversely, some researchers argue that increased formal controls may support the trust between partners. Tomkins (2001) initiated this discussion with his suggestion that trust develops gradually if supported by accounting information in the early stages of a relationship. Langfield-Smith and Smith (2003) note in their case study that trust is preserved and possibly expanded when controls are broadened and tightened. Vosselman and van der Meer-Kooistra (2009) argue that contract specifications (a tighter and broader form of control) may be positive elements in building trust. Vélez et al. (2008) claim that principals develop trust when, as they exercise control, they see that agent performance and behaviour are satisfactory. Taking the agent's perspective, Vélez et al. (2008) emphasise that in a strong trust relationship, additional controls may offer protection against the unequal

distribution of rewards and may ensure a fair performance evaluation of agents. The conclusion of this research is that control through monitoring may create trust.

Third, trust may influence and change control processes in other ways than reducing the need for control (Das and Teng, 1996). Cooper and Slagmulder (2004) and van der Meer-Kooistra and Vosselman (2006) claim that high levels of mutual trust allow partners to implement inter-organizational controls (i.e., trust may enable control; see also Tomkins, 2001).

Thus three broad points of view emerge: control may create trust, control may destroy trust and trust may enable control. Formal controls do not shape trust in a specific way, and trust may be a prerequisite for control. Rather, the relationship between trust and control has to be interpreted in context by understanding how actors perceive it. For example, Tomkins (2001) claims that relationships are ready for the introduction of new controls at different stages. To exemplify, Tomkins suggests that in a mature relationship, controls that promote greater transparency of information on profits may be introduced. As long as these new controls are not routinely exercised, parties may expect such controls will be used to strengthen their trust relationship rather than to monitor profits. Tomkins' example implies that it is important to differentiate between the introduction of controls and the use of controls. Introducing controls to monitor profits may signal trust, while using them for this purpose may signal distrust.

The "missing" influence, not extensively discussed in the control literature, is how trust may limit control. In a trusting relationship, controls might for the moment appear unnecessary. Less attention to formal controls due to trust is a potentially relevant relational dynamic if we consider arguments made by Mouritsen and Thrane (2006). They describe how formal controls increase durability (in creating long-lasting trust) and predictability (in handling problems) in an organizational network and how trust creates problems when actors fear its absence. Furthermore, since goodwill trust is easily broken and requires more information to create than to destroy (Bachmann, 2001; Emsley and Kidon, 2007), it may be problematic to rely on goodwill trust. As a psychological state, trust may disappear because of temporary misunderstandings and mistakes that, if dealt with over a longer period, might not cause a break in relationships. Thus, trust replacing control (the traditional view) may be ineffective from a long-term perspective.

3. Method

The empirical material for this paper comes from three qualitative, retrospective case studies of JVs in Swedish municipalities³ that are in the waste disposal business and

³ In Sweden there are 290 municipalities that are responsible for pre-school, nine-year compulsory school, upper secondary school, adult education, youth recreational centres, social care, elder care, care for the disabled, spatial planning and environmental health (in addition to waste disposal). In other words, waste disposal is only a minor part of the municipalities' responsibilities. Swedish municipalities are governed by directly elected politicians who make decisions on a broad range of issues such as

were created to exploit economies of scale. All three JVs are joint-stock companies with the municipalities as the only shareholders. Our choice of the case study method reflects our understanding of the difficulty involved in controlling organizations and in mapping large, complex control packages that are interrelated with organizational processes and their surroundings (Otley, 1980; Malmi and Brown, 2008). When JVs – with multiple owners who need to coordinate control of a company – are the objects of study, this difficulty increases. Case studies are thus appropriate for this research since they allow the researcher to follow and explore new and emerging aspects of control (Emsley and Kidon, 2007) and to describe the interaction of a number of variables (Yin, 2003).

Case studies in general and multiple case studies in particular provide material for analytical generalisations. While case studies are empirical templates for examining and refining theory, they are unsuitable for making statistical generalisations about populations (Yin, 2003). Our conclusions are theories that should be subject to examination in other contexts in an on-going process of developing our knowledge of the studied domain. Our ambition in presenting our cases is to confirm and extend existing knowledge based on a holistic understanding of their settings.

Much of the early research on inter-organizational relationships used a TCE framework. The original assumption in TCE was that the nature of the transaction (where the transaction is the unit of analysis) determined which governance form was most efficient (with the lowest transaction costs). Later researchers have concluded that governance forms that result in the lowest total cost (transaction costs plus production costs) are efficient since they will endure. However, in the extended TCE framework, recently developed in the IOMC literature, institutional and relational factors are also considered. In this paper, our three case studies evolve within the same institutional framework and with similar transactions. This allows us to analyse how control packages develop within different relationships. Therefore relationships (vertical and horizontal) are the units of analysis in this paper.

To explain these relationships, the control packages and their development over time, we chose the research method of retrospective cases studies. This choice allows us to map the interaction between relationships and control packages. Thus we follow the recommendations for process-oriented approaches based on longitudinal or retrospective case studies (Otley, 1980; Groot and Merchant, 2000; Emsley and Kidon, 2007; Kamminga and van der Meer-Kooistra, 2007; Langfield-Smith, 2008). For practical reasons, we conducted retrospective studies rather than longitudinal studies. Admittedly, the choice of retrospective studies means the researcher to some extent must rely on respondents' recollections. Our strategy was to trace the important events in the history of the three JV Companies that have had, or should have had, an impact on

the relationships and the control packages. To increase the credibility of our research, we examined these events using multiple interviews and reading available documentation (e.g., JV contracts and owners' directives⁴). While the three case studies reveal little variation in terms of transaction and institutional characteristics, they show interesting variations and changes over time in the relationships. Thus we believe these case studies suit the purpose of our paper.

We assigned the three municipal JV Companies the fictitious names of North, South and West. (We also use fictitious names for the municipalities and other entities.) We chose the municipalities sequentially – our first case, which provoked our curiosity about certain contingencies, led us to search for a complementary case, and so on, to the third case. In each case we interviewed actors at three levels: the Parent (Municipal) level, the JV Board level and the JV management level (cf. Emsley and Kidon, 2007). See Table 2.

In general, we selected respondents because of their positions at the municipalities or at the JV Companies. Two additional respondents were selected after other respondents described these respondents' central roles. In total, 25 semi-structured interviews were conducted during the spring of 2009. Extensive interview protocols were used as checklists to guide these conversational interviews. The protocols differed, depending on the position of the respondent, but all interviews covered the following themes:

- The history of the JV Company.
- The horizontal relationship (reasons for the cooperation, formal and informal controls, trust, fear of opportunism, changes over time).
- The vertical relationship (how the JV CEO is controlled, the efficiency of the controls, the trust in the JV CEO, the role of the JV Board, changes over time).

The starting point for our studies varied in the three cases. At North, our research begins in 1981 – the year of North's founding. We chose this year because various North respondents had worked there for a long time and because North has had the same CEO since its start-up. At South, our research begins in 1996, the year the current CEO was hired. In the subsequent 13 years, many interesting events occurred. At West, our research begins in 1998, the year of the merger of two organizations that resulted in the founding of West. This is the year referred to as important by many of the West respondents.

We examined the issue of trust through our direct questions to the respondents and through our analysis of their spontaneous descriptions of the relationships. The identification of calculative trust and system trust was based on the respondents' narratives concerning the lack of cooperation alternatives in the JV Companies and the existence of several other co-operative activities among the municipality parents.

Generally, two interviewers conducted the interviews, but on some occasions only one interviewer was present.

taxation, fees, service level, appropriations, access and organization structure. The political executive unit consists of the municipality board and its chairman.

⁴ An owners' directive formally states a principal's contractual terms with its agent company.

Table 2

The respondents in the three case studies.

| | North | South | West |
|--------------------------------|--|--|--|
| Parent level (Municipality) | Four municipality chairmen Four financial directors (a group interview) | Three municipality chairmen Municipality director Financial director | Six municipality chairmen Municipality commissioner Budget secretary |
| JV Board level | Chairman of the Board | Chairman of the Board Board member (former municipality chairman) | Vice chairman of the Board |
| JV management level | CEO | CEO | Administrative manager |

All respondents were guaranteed anonymity. We also promised not to reveal the names of the municipalities or the JV Companies in presentations and reports. The respondents did not object to our tape recording the interviews that later were transcribed. In each case, the case descriptions were presented to those respondents whom we assumed could best validate them. In total four respondents were contacted.

There have been few significant changes in the governing structures at either the JV Companies or the municipalities since the JV Companies were founded. Many respondents have worked in the JV settings for many years. We recognize there may be a potential problem with such stability – actors, wishing to hide or minimize mistakes, may slant their stories. We dealt with this potential problem by contrasting different sources of information in order to obtain credible accounts.

4. Overview of the case studies

The waste disposal activity conducted by the JV Companies of this research has changed greatly in the last 40 years. The original core activity of simply collecting and disposing of trash now includes an enormous environmental responsibility. In this 40-year period, many new laws have been enacted that specify how municipalities should handle ecologically harmful waste. These laws have required municipalities to make major investments in both knowledge and facilities, including, for example, combustion facilities (Östman, 2008).

Three laws enacted in Sweden during the 1970s are especially important. The Environmental Protection Act placed stiffer requirements on final waste disposal. As a result, many Swedish waste disposal facilities closed. In 1972 the Waste Disposal Act gave Swedish municipalities a monopoly on handling the increasing amount of household waste along with the right to charge customers for the collection service. The Waste Disposal Act of 1979 required municipalities to recycle electronic, organic and combustible goods.

Following such legislation, Swedish municipalities began working cooperatively to find solutions for waste disposal. The principal impetus for this cooperation was to take advantage of economies of scale for the needed investments in new facilities and knowledge. Cooperation was sometimes organized through joint ownership of stand-alone companies that collected the compulsory fees for waste removal (Persson, 2006). By 2006, there were 15 such companies in Sweden that were owned by more than one municipality. The geographical proximity of certain

municipalities made such cooperation practical. These companies could also offer their services to the industrial sector. The result was an increasingly complex business that required investments in machinery, disposal sites and knowledge.

4.1. North

Two municipalities, Alpha and Beta, formed North (the joint-stock JV Company) in 1981. Other municipalities initially expressed interest in joining the JV, but concluded, for various reasons, that they could deal with waste disposal on their own. Several years later, after North was judged a success because of its low costs and good performance, two more municipalities joined the JV Company. Gamma joined in 2001 and Delta joined in 2004. Three municipalities (Beta, Gamma and Delta) each owned 20.6 per cent of the JV Company and the fourth (Alpha) owned 38.3 per cent.

In the initial owners' JV contract, Alpha and Beta allowed North to dispose of all household waste and gave North the right to sell unused capacity to other customers. The agreement also stipulated that fees should be based on full cost and should be assessed at the same rate for all customers. Each parent was also required to present a yearly capacity plan to North. If a plan differed by more than 20 per cent from the parent's ownership share, this parent was allowed to demand a renegotiation of the ownership percentage. Parents were also responsible for North's losses. The relationship between the two original parents, and later among all four parents, was embedded in a local context with many strong connections among the parents other than their connection through North. The four municipalities were in the same local community and had strong cultural similarities. Also, the four municipality chairmen met regularly to work cooperatively on many issues unrelated to North and to waste disposal.

When North was founded, the company operated without formal, written directions. The most influential politicians in Alpha and Beta were appointed to the JV Board of Directors. Their mission was to ensure that North fulfilled its task. The CEO appointed was inexperienced as a CEO and not very knowledgeable about waste disposal. However, his experience in municipality work proved helpful because he was familiar with political processes. Also, since the most prominent municipality politicians were on the Board, the CEO could easily contact them to learn what the parents expected. While there was no formal financial target for North, the owners had an informal process for determining their return on their investment. North paid the owners a yearly rent for the land it used. This rent was

calculated when the profit for a year was already known and should allow North to earn a profit of five per cent of its turnover. Paying rent instead of dividends was a tax-saving measure since rents are a deductible business expense.

From the start, the CEO made sure he was well informed about the parents' expectations. During his years as CEO, his goal has always been that North would perform to the parents' satisfaction, giving them no reason to worry about waste disposal. The top politicians and officials had other priorities than waste disposal. Therefore, if no problems arose that required their attention, he could manage North without their interference. The CEO put considerable effort into building the owners' trust in North's operations and in its ability to meet its budget. As long as the Board consisted of the most influential politicians, through his regular contact with them, the CEO could assure them that operations functioned smoothly and that there were no budget overruns. If there were problems, he informed them immediately. However, in fact, the CEO ran the business to the owners' satisfaction and avoided conflicts.

Over the years, less influential politicians were appointed to the Board and the new Board members acted more as protectors of North than as representatives for the owners. They were primarily concerned with issues relevant to North.⁵ For the CEO, the consequence was that he could no longer turn to the Board for guidance about the owners' expectations. Instead, he contacted the municipality chairmen and public officials directly in order to learn what the parents expected. He visited each owner twice a year in order to present the company's operations and finances; he also met the owners once a year at the shareholders' meeting. According to the CEO, while these presentations increased his trustworthiness, the major reason for their trust in him was his long-term successful management of the company.

In the late 1990s, due to changes in the Swedish Companies Act, North engaged an auditor to prepare more formal documentation of the JV Board procedures. This formal documentation dealt with meetings and contacts with the CEO, the distribution of work between the Board and the CEO, and the instructions for the CEO. The Board was also given responsibility for making decisions about the organization including budgets, business plans, environmental policies, strategic issues and other matters raised by the CEO. The CEO had the authority to run the business although with certain restrictions as far as significant contracting, investing, purchasing, employing and borrowing decisions. The CEO was somewhat disturbed by this reduced freedom of action since it made his work a bit more complicated. However, he did not think these restrictions meant there was decreased trust in him. When he asked the Board Chairman if he should raise a certain matter at the Board meeting, the Chairman's response was often 'never mind'. The CEO interpreted this response to mean the JV Board Chairman had great confidence in him. Importantly, even if the CEO experienced reduced freedom of action

through more complicated decision processes, he did not consider himself restricted concerning his ability to get his ideas realized.

When Gamma joined the JV Company in 2001, there were two additions to the JV contract. First, North was required to use Gamma's combustion facility (the same terms were given to Delta when it joined a few years later). Second, each owner had to pay for its directly related capital costs. The second addition was a practical way of requiring municipalities that wanted more expensive recycling plants to pay for the extra cost. Furthermore, Gamma took the initiative in promoting an owners' directive. At the time, Gamma had a problematic situation with a subsidiary where more formal controls were needed. Thus Gamma was receptive to the auditor's recommendation that an owners' directive be adopted when it joined North. However, other than general remarks concerning economic efficiency and environmental issues, the directive did not state specifically how North should conduct its operations. The directive required North to organize information meetings at the parents' request and to present important issues at the parents' councils before decisions were taken. This was a formalization of previous routines. The directive also gave each parent the right to summon a meeting with the other parents, the JV Board and the CEO in order to discuss finances, the market, development and administration. Furthermore, a target return of ten per cent on the owners' invested capital was set and an annual rental fee agreement for land was formalized.

The chairmen of Alpha and Beta municipalities said they experienced no significant changes in their relationship with North as a consequence of the owners' directive. The CEO was still subjectively evaluated. In general, the owners' directive had no practical effect as far as their contacts with North. It did not change the number of meetings between the owners and the company, and the chairmen did not exercise their right to call a meeting to discuss North with the other parents, the Board or the CEO. The chairmen interacted only if the CEO or the Board called a meeting. They still thought that North met all their expectations.

The CEO thought Gamma's request for an owners' directive was at least partially motivated by its ambition to gain control over a company it was not familiar with. He found this ambition reasonable. He stated he worked hard to gain Gamma's trust after they joined North. He thought that the time he spent with Gamma explaining how North operated was worthwhile. He now regarded Gamma as just another parent. North's relationship to Gamma had also become more informal than originally expected. On reflection, the CEO did not think his management of North had been affected by the owners' directive. His general impression was that neither the owners' directive nor the CEO instructions had had any major impact. Overall, the CEO appeared satisfied with the freedom he had in developing North into a successful company, even after the administrative changes. However, the CEO said his work with the parents was demanding, especially of his time. When Gamma joined North, he discovered he lacked time to maintain the relationships with both the municipalities and the industrial customers. As a result, he hired

⁵ According to the Swedish Companies Act, the responsibility of board members is to work primarily in the interest of the company and not in the interest of individual owners.

a sales manager to take responsibility for the industrial customers.

At the time of the study, the respondents from the four parent municipalities still thought that cooperation was needed among municipalities as small as theirs. If there was a problem among the parents, the respondents claimed the parents could probably discuss the matter as a group and reach a solution. According to the Board Chairman, the Board's work was easier because all parents had basically the same expectations of North. The Board members could focus on development trends in the business rather than on protection of individual parents' interests. The CEO's active promotion of harmony at the horizontal level seemed to be a deliberate strategy. He stated that he had accepted some restrictions in his work since he wished to avoid conflicts among the parents. For example, as a management principle, he allocated equipment and facilities equally to the municipalities. As the acquisition of such assets lead to jobs creation, which was a high priority for the municipalities, it was essential that there was no impression that North concentrated its operations in any one municipality. Another example related to sensitive political issues that arose internally. The CEO claimed he "killed" such issues before they reached the JV Board or the parents so as to avoid conflict. He believed maintaining the parents' confidence and trust and promoting their cooperation were more important than optimizing North's operations.

Evidently the CEO had maintained the vertical trust during the life of the company. All respondents said they had high confidence in his ability to facilitate their work. The Board Chairman, who had followed the CEO and the development of the JV Company for almost thirty years, spoke of North's and the CEO's sustained success. The municipality chairmen appreciated the CEO's independence in dealing with waste disposal that freed them from worries in this area. They felt that because the CEO understood their situation, they did not hesitate to contact him with their concerns about North's operations. However, they emphasised that they rarely needed to. If there was a problem at North, they assumed they would have heard about it from the household customers. They were satisfied that the CEO took all the necessary steps in making changes in North's operations.

With the formal structure in place, combined with the owners' trust in the CEO, the municipality chairmen were rarely involved with North. Their involvement was essentially limited to appointing the Board members and setting the customer fees. Their only concern was reflected in one municipality chairman's observation that because North was a relatively small company, it might have problems competing in the future. This chairman was instrumental in "recruiting" the fourth parent and now worked actively to attract an additional parent although, at the time of this study, he had not been successful. Except for the worry about future expansion, North appeared to be a success story.

We now turn to the second case study. The JV Company South was similar in many ways to North except that, owing to various events, the trust relationship between South and its parents was damaged.

4.2. South

The neighbouring municipalities of Epsilon, Zeta and Eta formed South (the joint-stock JV Company) in 1972. Thereafter, South handled waste disposal for the three municipalities. Epsilon owned 50 per cent, Zeta 26 per cent and Eta 24 per cent of South. Although Epsilon was the largest owner in South, it had no special authority. The JV contract, which was rather narrow, required that the three parents use South for disposal of household waste and that they provide South with land for disposal sites. The contract also stipulated that demands on guaranteed engagements (parents' responsibility if South is unable to pay its creditors) would be divided among the parents in relation to their ownership share. Furthermore, the contract stated that the parents had to agree on changes in ownership in South and had to take a common approach to waste disposal issues. South was required to base its fee structure on full cost principles and to charge all users the same price.

Because South had structural characteristics that supported cooperation among the parents, it seemed unnecessary to write the terms and conditions of the JV contract more specifically. As the parents cooperated closely on many issues besides waste disposal, and had the same expectations of South, the respondents thought it doubtful that anything could endanger the cooperative spirit among the municipalities. In addition, since the municipalities were too small to handle waste disposal alone, they readily agreed that cooperation was needed.

In 1996, when the current CEO was appointed, there were top politicians on the JV Board (i.e., the municipality chairmen and politicians from the municipality boards). With such influential and knowledgeable persons on the JV Board, who were capable of safeguarding the municipalities' interests, no one believed it was necessary to formalize control over South in an owners' directive. One respondent stated that in the initial years the JV Board controlled South as if it were an in-house department. However, after some years, as the three municipalities appointed less powerful politicians to the JV Board, it loosened its control over South. According to the CEO, JV Board members began to gradually loosen their control soon after his arrival at South. After that, the JV Board members believed the JV Board's role was to see that South developed strategically, even if this goal sometimes conflicted with the owners' ambitions for South. Since the Board members were perceived more as company advocates than owner representatives, the CEO worked actively to keep the municipality directors (officials) updated on South's operations. In contacting municipal representatives, his goal was to give them a clear picture of South so that their expectations developed harmoniously. The CEO thought in this way the owners were kept well informed about South's activities.

The CEO thought the parents preferred to leave strategic and waste disposal issues to him. It was only at his initiative that the parents met each year in meetings where he took the leading role. As there had been no major financial problems at South, the parents had little reason to discuss South with each other and could concentrate on more pressing municipality issues. Typically, they were content

to receive information from South and to attend meetings when South invited them. From a long-term perspective, the three owners were generally satisfied with South's performance.

Because of their high ambitions for South, the CEO and the Board invested in what was claimed to be one of the best waste reclamation systems in the world. This system allowed South to far exceed the legal requirements for waste disposal. Before this investment, during 2001 and 2002 three different proposals were considered that pointed to fee increases of between 40 and 80 per cent. This proposal information was communicated to the municipality inhabitants (in a survey) and the municipality boards, councils and various committees. The feedback from the survey indicated the preferred choice was the most sophisticated system that would require an 80 per cent fee increase. In 2003, the municipality councils for Epsilon and Eta approved the system, but the Zeta municipality council wanted to see how the new system worked before introducing it. Zeta's hesitation was not an immediate concern since the new system would take some time to implement. In the autumn of 2003, the new system was implemented in the first municipality. The CEO was very proud of this achievement.

During the next two years, South renegotiated supplier contracts and halved the 80 per cent fee increase. However, it was later revealed that this fee reduction was based on inaccurate calculations provided by the supplier of transportation. Therefore, South was forced to reinstate the fees at the original level set in 2003. This was done in a two-step process, beginning in 2006. The announcement of these changes in fees strained the relationships between the parents and between Zeta and South. When the first increase was announced, Zeta said it did not want to pay the higher fees and would be content with a reduced service package. This challenged the original goal of the JV, that is, the realisation of economies of scale by delivering the same service to the customers in the three municipalities. After some discussion, Zeta was allowed to make minor changes in its service package and thus to pay a reduced fee. After the second increase, when Zeta had changed its municipality chairman, Zeta rejected South's entire service package. However, Zeta yielded when the other municipalities accepted the fees, but it paid for the increase with tax revenues instead of increased household fees. Zeta's municipality chairman was also irritated because the CEO had not explained the increases in fees to the parents. The CEO saw the re-instatement of the fees at the original level as less problematic than the newly appointed Zeta chairman who had not followed the development in the previous six years.

Epsilon reacted to the fee increases by pressuring South to use other municipalities' fee structures as benchmarks. The CEO saw this situation as very troubling. Comparison of fees that correctly reflected the high service and environmental care that South provided required consideration of many factors. Epsilon's municipality chairman was also dissatisfied with the benchmarking investigation because this fair comparison required many adjustments. He claimed that the focus of the comparison was South's higher level of service instead of a presentation of 'raw information'.

When our research ended, no action had yet been taken on the benchmarking issue. The CEO was pleased with the service provided and the level of fees, but two municipality chairmen were displeased, both with the fee increases since 2006 and the communication of them.

Furthermore, two owners were displeased with how the JV Board had acted concerning the large investment in a new system and the increase in fees. They found it problematic that the JV Board members generally took the role of advocates for South rather than for the owners. It was evident in the interviews that the JV Board was very satisfied with South's advanced recycling systems for households. However, the Epsilon municipality chairman, who was dissatisfied, therefore attempted to increase his influence over South by appointing a new member to the JV Board and requesting that this member inform him of South's activities. He described this new JV Board member as his 'hit man'.

Although South had worked without an owners' directive for a long time, in mid-2005 the CEO concluded that a directive would clarify and formalize the owners' goals for the JV Company. The JV Board agreed, and in 2005, the CEO and the JV Board chairman prepared a draft of an owners' directive that they sent to the three owners. Within the limits of that directive, the CEO believed he could work with the JV Board to develop South as much as possible. Epsilon ratified the directive in 2007, with small modifications. When South learnt that Eta also wanted to make additional modifications, South requested that all owners agree to the same directive. One disputed modification related to a peripheral issue. Two municipality chairmen thought that South, to some extent, should provide work for the unemployed – a provision that was not in the directive ratified by Epsilon. Except for these problems, the municipality respondents claimed that they generally agreed on important matters. All the municipality chairmen claimed that the issue regarding work for the unemployed is resolvable, given time and opportunity. In the interviews the respondents gave no substantial explanation for the failure to rework and ratify the owners' directive. One chairman said that they simply had not gotten around to signing the directive. One municipality official claimed that even if the owners were dissatisfied with certain matters, the situation was not so worrying that the issue of an owners' directive was prioritized. They had a number of more urgent matters to attend to.

Another incident that affected the relationship between the owners and the JV Company was described as a 'misunderstanding', at least by the CEO and a JV Board member (the owner representatives were more reluctant to view the incident as a misunderstanding). The background to the incident was a discussion about South's long-term development. Some members of the board argued South was too small to bear the future investments required for waste disposal and that expansion was required in order to reduce the financial burden on the municipalities. Two alternatives were available. The first was to accept additional owners. The second was to merge (or replace) South with ABC Company, South's equivalent in nearby municipalities. However, the majority municipal parent of ABC Company was a much larger municipality than any of the three South

municipalities. The chairmen of the three South municipalities rejected both alternatives since acceptance of either would mean loss of influence.

The misunderstanding arose when a former Eta municipality chairman and JV Board chairman (now a JV Board member) met with ABC Company and another company to discuss the future challenges in their area. A joint information project was initiated, and a consultancy firm was hired to prepare a report. The report, which recommended a merger between South and ABC Company, was presented at a regional meeting for municipalities that politicians from Epsilon, Zeta and Eta attended. These politicians were not receptive to the idea of merging South with the bigger ABC Company. They thought that the CEO and South had gone 'behind their back'. Two municipality chairmen interpreted this incident as a part of the CEO's plan to reduce the municipalities' control over South. Although the CEO claimed he was not involved in such a plan, he suspected the parents thought he was. For the first time, the parents called a meeting to discuss South without inviting the CEO or any JV Board members. The municipalities also called a separate meeting with the CEO and the JV Board Chairman, a meeting that the Chairman remembered as slightly hostile. Consequently, owing to this 'misunderstanding' there was an increasing perception that the CEO was too independent. As a result, the owners' trust in South decreased.

In the next section we present a case study when one parent is dominant over other parents. The West case study contrasts with the North and South case studies where the parents stated clearly that they wished to avoid such single owner dominance.

4.3. West

Eleven municipalities formed West (the joint-stock JV Company) in 1998. West was the result of a merger between a waste disposal company that the eleven municipalities had owned since 1966 and a public cleansing department in the municipality of Bigcity. By far, Bigcity was (and is) the largest of the eleven municipalities with many more inhabitants than all the others combined. Throughout the period of this study, Bigcity owned 83.7 per cent of West and the other municipalities individually owned between 0.8 and 3.6 per cent of West. West was said to exemplify the cooperative spirit in the region that started to develop in the late 1990s. The respondents believed the former chairman of Bigcity, a well-known politician locally and nationally, played an important role in promoting this cooperative spirit. He argued convincingly that since all municipalities in the region were interdependent, they must cooperate beyond their own borders. The chairmen in the smaller municipalities, who agreed that their well-being depended on Bigcity, seemed to accept Bigcity as the driving force in the region. Many respondents thought this cooperative spirit was evident in the many examples of successful cooperation among the municipalities in the past 15 years.

The owners' JV contract stated that the municipalities were required to cooperate on waste disposal and to employ West to handle combustible household waste. The cost of the combustion was to be allocated among the

parents' households according to the unit weight of the waste. Since Bigcity had a mandate to appoint the majority of the JV Board members, it was evident it held a dominant position among the owners. The articles of association also stated that the JV Board should be located in Bigcity.

In its early years, the owners exerted little formal control over West. There were only some very general instructions in the articles of association concerning the treatment and storage of waste, the production of heat and electricity, and the performance of other activities related to waste and energy. There were no operational or financial targets. Some municipality chairmen were said to have had informal contacts with their Board representatives, but these contacts occurred on an infrequent, ad hoc basis. West submitted its yearly budget to the owners, but there were no sanctions if there were budget overruns. The owners only checked that the finances balanced over longer periods. If West had a deficit in one year, it was expected to budget a surplus in the next year.

The JV Board was also fairly weak in its control of West. Since the JV Board consisted mainly of politicians with no waste disposal expertise, the owners lacked trust in their competence. The JV Board's primary role was to advise West's management on public opinion and to act as information conduits to the owners. While it was generally agreed that the JV Board members were part of West, and acted in its interest, the JV Board Vice Chairman claimed the JV Board members made no decisions about important issues without first consulting Bigcity representatives. A Bigcity representative agreed that the JV Board lacked independence as evidenced by the fact that the JV Board even asked for advice on matters well within its own discretion. This rather weak control by the JV Board has persisted throughout West's existence.

A new CEO was appointed in 2001. Almost immediately, he requested an owners' directive because he wanted clarity on both his and the JV Company's responsibilities. At the same time, Bigcity's officials had begun working on owners' directives for all their various companies. According to one respondent, the primary reason was that owners' directives were 'modern'. An additional reason was that some companies, such as West, tried to be too autonomous. Therefore Bigcity selected West as one of the first candidates for an owners' directive. In the preparation for the directive, Bigcity's dominant position was again evident. Formally, all the municipalities collaborated on the owners' directive, but in practice Bigcity's officials wrote the directive. It was indicative of the JV Board's limited influence that Bigcity involved the JV CEO on the directive and not the JV Board members.

By 2003 all West's owners had ratified the owners' directive. The directive outlined general guidelines for environmentally friendly treatment of waste disposal and for recycling. It specified that West's strategic plan should meet the requirements stated in a regional waste plan. The regional waste plan was a 52-page document that presented a vision of how the parents should work with the environment in the region through synchronization of their initiatives. The plan set quantified objectives for all kinds of waste disposal. In connecting the regional waste plan to the owners' directive, the parents' aim was to ensure that West's work took into consideration the work that the

different parents – individually or jointly – performed. The joint compliance with the regional waste plan was another example of Bigcity's influence. While all the municipalities were involved in the preparation of the plan, Bigcity was expected to oversee the execution of the plan. Furthermore, the owners' directive referred to the importance of economic performance and competition and required that the eleven municipalities approve every major change in the waste and recycling operations. West was also obligated to inform the parents of its plans and its financial position in protocols and budgets at annual meetings. The directive stated that West was expected to finance investments and development through reinvestments of its profits. Despite these provisions in the directive, it was not very extensive. For instance, there were no financial targets for the JV Company. West's administrative manager was surprised that the control was very loose and limited; in his previous employment he had experienced much more ambitious owner control. According to one Bigcity respondent, this weak control was the result of Bigcity's relative inexperience in managing jointly-owned companies. However, even at the time of this study, the directive was unchanged.

Simultaneously with the development of the owners' directive, the owners decided to amend the JV contract. The owners wanted a forum where they could discuss West from an owners' perspective rather than a company perspective. The JV Board was inappropriate for this purpose since its members represented the JV Company. An advisory council (the owners' council) was established, and each parent appointed a representative to the council. All owners appointed prominent politicians to the council except Bigcity who appointed budget secretaries. It was decided that the owners' council should meet at least annually to discuss issues of major importance regarding strategic changes in West. In addition, although any parent could summon a meeting of the owners' council, Bigcity was responsible for organizing the meetings. This responsibility also reflected Bigcity's dominant position in the cooperation.

In accordance with the amendment in the JV contract, Bigcity regularly invited the other municipalities to owners' councils to discuss issues concerning West. For some respondents, the practical purpose of these meetings was somewhat unclear; some chairmen even stated they attended JV meetings only to maintain their relationships with other municipality chairmen. Other respondents recognized that the meetings were helpful in maintaining contact in case problems arose, for instance, when there were slight disagreements among owners. An example was a situation when Bigcity representatives suggested a merger of West with the energy company, Bigcity Power. The smaller municipalities opposed this merger because they wanted West to focus on waste disposal only. The chairmen from the smaller municipalities then developed arguments against the merger that they presented to Bigcity and the other municipalities at an owners' council. As a result of this resistance, Bigcity abandoned the merger proposal because of its desire to maintain the regional cooperative spirit. Another example with the same outcome was Bigcity's suggestion that West should sell a combustion facility to Bigcity Power. Thus, although the

smaller municipalities influenced West's long-term development, they were careful not to directly antagonize Bigcity. Most of the municipalities also emphasised that, even when they disagreed with Bigcity, they had fairly high trust in Bigcity. One chairman described Bigcity as a 'super big brother'. Other representatives from the smaller owners explained that they could trust Bigcity since Bigcity probably would not want to damage the cooperative spirit in the region.

In sum, throughout the period under study Bigcity acted as the 'real' owner and was perceived as the 'real' owner by the JV management. The other owners agreed it was reasonable that Bigcity had the primary responsibility for controlling West. They approved of this situation, because of their fear that shared control would mean no one would take responsibility and because Bigcity had more resources and greater competence. Moreover, since West was not a high priority on their political agendas, they were content to let Bigcity run the JV Company. Accordingly, West's management participated in the management meetings with other companies that were fully owned by Bigcity and followed the same reporting instructions for annual reports and other communications that these companies did. At one point Bigcity began to demand more detailed reports from all these companies, including West, that showed their contribution to meeting Bigcity's objectives.⁶ According to West's administrative manager, West sent its reports to all municipalities although only Bigcity responded.

Although Bigcity made most decisions related to West, the administrative manager claimed that the CEO maintained contact with all municipality parents. The municipality chairmen stated that the CEO visited the smaller parents' municipality boards approximately every other year. Several chairmen said they could approach the CEO informally with questions. However, they said they rarely needed to since they were generally satisfied with West and the CEO. Almost all respondents said they had high trust in the CEO. One respondent said West's good performance resulted from his competent management.

Even with this competence trust in the JV management, and despite the attempts to increase the control, there were concerns that West had become too independent. Therefore, several owners thought that West's management needed strategic guidance. While they generally wished to avoid active intervention, they were ready to intervene if they thought West had exceeded the boundaries of its responsibility. The chairmen of the smaller municipalities thought that in such discussions with West, it was good to rely on Bigcity's expertise and power. This confidence in Bigcity mitigated their concerns.

5. Discussion

In this section, we first describe the evolution of vertical and horizontal control packages in theoretical terms and

⁶ These objectives include the following: "the amount of involuntary part-time work should be reduced" and "the amount of long-term sick leave should be reduced" (such objectives are unrelated to West's core business).

Table 3
Mapping horizontal and vertical control package dynamics in North.

| Event | JV start-up | Good JV performance | Changed legislation | Gamma joins |
|------------------------------------|--|--|---|---|
| | Time | | | |
| <i>The vertical relationship</i> | | | | |
| Vertical control package | Tight, broad action control | Loosened and narrower action control | Broader and tighter action control | Broader and tighter action control; results control |
| Empirical observation | Prominent board politicians | Gradually less prominent board politicians | Formalized JV Board procedures, distribution of work and CEO instructions | Introduction of owners' directive: higher demands on information sharing; increased possibility for intervention; profit target |
| Trust | Fairly high goodwill trust | Increased vertical trust (goodwill and competence) | No change in use of control or trust | Vertical trust not affected |
| Empirical observation | Selection of trustworthy but inexperienced CEO | Judgment of good JV performance; Active work by CEO to build trust | | CEO active in obtaining goodwill and competence trust in the company from the new owner |
| <i>The horizontal relationship</i> | | | | |
| Horizontal control package | Loose and narrow action controls | | | Addition of action control |
| Empirical observation | JV contract with rules for the agreement | | | Rules about the allocation of direct investment costs and use of Gamma's facilities |
| Trust | Calculative, system and goodwill trust | | | |
| Empirical observation | Geographical proximity, interdependence, long-term relationships | | | |

analyse the factors that have affected their evolution. Then we analyse the reciprocal relationship between trust and control.

5.1. The dynamics in vertical and horizontal control packages

A summary of the evolution of the vertical and horizontal control packages in North is presented in Table 3. In the start-up phase, the parents' highly influential politicians on the JV Board exerted tight and broad vertical control. They controlled North very much as they controlled their traditional in-house departments. Because the parents saw quite early that North operated successfully, within budget, they felt they could appoint less influential politicians to the JV Board (i.e., formal vertical control from the parents was loosened and narrowed). The CEO worked actively to maintain the parents' trust by continuously providing the parents with accounting information, communicating good performance results, and keeping sensitive issues off the table. Increases in formal control had little practical effect since the CEO did not see formal control mandated by national legislation as an indication of mistrust. Nor did Gamma's request for an owners' directive signal more than legitimate mistrust. The original parents' trust was preserved, and the new owners were socialized into the existing, trust-based relationship. Therefore, after trust in

the CEO was established, the CEO had the freedom to act since the owners exerted only loose and narrow control.

Our general impression is that North's horizontal control package throughout the period was narrow and loose as a result of trust. North's parents had several reasons to trust each other. They had developed goodwill trust through multiple personal interactions. They had system trust since they knew that no parent was willing to risk damaging other cooperative efforts. Furthermore, they had calculative trust as demonstrated by the fact that no parent had a better option than participation in North. When Gamma joined the JV, some new formal rules about cost allocations and facilities were implemented to facilitate the cooperation, but these rules and allocations did not change the mainly trust-based horizontal relationship.

The evolution of South's control packages is presented in Table 4. From the beginning, the development in South was similar to that in North where the JV Board gradually became less active in safeguarding parental interests. However, South illustrated how trust may be damaged in a JV with narrow and loose horizontal and vertical control packages. The increase in waste disposal fees and the miscommunication on the rumoured merger diminished the parents' goodwill trust in South. An important difference in South compared to North was that the CEO in South focused on informing the owners' officials, not the top politicians. This may partly explain the adverse reaction by the Zeta

Table 4
Mapping horizontal and vertical control package dynamics in South.

| Event | Entrance of new CEO | Good JV performance | Large increase in fees | Misunderstanding |
|------------------------------------|--|---|--|--|
| | | | | |
| <i>The vertical relationship</i> | | | | |
| Vertical control package | Tight, broad action control | Loosened and narrower action control | Initiating loose results control | Broader and tighter action control |
| Empirical observation | Prominent board politicians | Gradually less prominent board politicians | Benchmarking request | Involvement by municipality chairmen; appointment of 'hit man' |
| Trust | Fairly high competence and goodwill trust | Increased goodwill and competence trust in CEO | Reduced goodwill trust in the board and the CEO | Reduced goodwill trust in the board and the CEO |
| Empirical observation | Selection of trustworthy CEO | Good performance increased the trust in JV management | Owners experience the JV acts too much in its own interest | Owners experience the JV acts too much in its own interest |
| <i>The horizontal relationship</i> | | | | |
| Horizontal control package | Loose and narrow action control | | | |
| Empirical observation | JV contract with vague rules | | | |
| Trust | Calculative, system and goodwill trust | | | |
| Empirical observation | Geographic proximity, interdependence, long term relationships | | | |

chairman when the waste fees were re-set to the original level.

Throughout the period of study, the South horizontal control package was characterized by fairly loose and narrow action control. The reason appears to be the same as at North, that is, the existence of goodwill trust, system trust and calculative trust. When vertical trust broke down, there were no horizontal controls to use to re-establish control. This may explain why the parents individually took the initiative to try to control South (by appointing a 'hit man' to the JV Board and by requesting benchmarks for fees). They lacked a structure for agreement on how to improve the vertical control package.

The evolution of the vertical and horizontal control packages at West is presented in Table 5. West has a dominant owner, a situation the North and South parents wanted to avoid. West's formal vertical control package developed somewhat more broadly and more tightly than North's and South's vertical control packages. The explanation is that Bigcity took an increasingly active role as an owner. Through the owners' directive and the reporting obligations, West's parents gradually broadened and tightened action control and initiated results control. In part, the increased results control was an outcome of the application of Bigcity's general management policy to their companies. Specific events at West did not cause these changes. However, the most notable difference at West was Bigcity's ability to intervene proactively. Bigcity thereby used (strategic) action control to counterbalance West's efforts to increase its autonomy. Since South's parents did not use such action control, the result was that they did not react until the problems were evident. Although West tried to exert its independence, trust in West did not diminish since such efforts were considered a normal response that Bigcity needed to control. In fact, the board sometimes sought

guidance from the Bigcity's representatives on operational issues.

The West parents had a trusting relationship, similar to the relationships at North and South. However, due to Bigcity's dominant position, there were some important differences. The other West parents were aware of Bigcity's intention to preserve system trust and they also had competence trust in Bigcity's ability to control West. The smaller parents used their goodwill and calculative trust in each other to jointly influence Bigcity when necessary. Subsequently, the social control at the horizontal level was later facilitated by a formal structure (owners' council) that supported the owners' continued interaction by providing them with a forum they could use to focus on the control of West. Therefore, at West, unlike at North and South, the horizontal control was not allowed to become inactive although trust was high. The South case shows the negative effects of an incomplete horizontal control package.

We conclude that the primary role of horizontal control packages is to compensate for shortcomings in the vertical control packages. The importance of a horizontal control package becomes evident if one takes a dynamic perspective. When challenges to vertical and/or horizontal cooperation arise, a well functioning horizontal control package is useful in finding solutions that allow continued cooperation.

In this section we map the dynamics in vertical and horizontal control packages. In the next section, we address the relational factors that cause these dynamics.

5.2. Relational factors affecting the vertical and horizontal control packages

Although the three vertical control packages existed in similar institutional environments, with similar

Table 5
Mapping horizontal and vertical control package dynamics in West.

| Event | West is founded | Initiative from CEO and Bigcity | Good JV performance | Initiative from dominant owner |
|--|---|--|---|---|
| | | | | |
| <i>The vertical relationship</i> Vertical control package | Fairly loose and narrow control | Broadened and tighter action control; results control | Controls unaffected | Broadened result and action control; occasional tight action control |
| Empirical observation | Budget review | Implementation of owners' directive: environment policy, cooperation requirements, financial targets, pre-action review of strategy changes and information requirements | | Increased reporting obligations; follow same reporting standards as all other Bigcity companies |
| Trust | | | Increased goodwill and competence trust in JV management CEO works actively to develop trust | No change in trust |
| Empirical observation | | | | No negative relational signalling |
| <i>The horizontal relationship</i> Horizontal control package | Loose and narrow action control; social control | Social control | | |
| Empirical observation | JV contract; informal meetings between owner representatives | Formal meetings between owner representatives | | |
| Trust | Competence and system trust in the dominant owner (other owners also have calculative and goodwill trust in each other) | | | |
| Empirical observation | The other owners trust Bigcity's competence in controlling West and rely on Bigcity's interest in keeping a good reputation | | | |

transactional characteristics, they developed differently. This observation supports theories that incorporate relational factors in the analysis of control package change. Furthermore, after an initial period of tight and broad action control at North and South, none of the three vertical control packages was tight or broad. On the contrary, sometimes they were loose and narrow. From the perspective of TCE, this development of the control packages seems somewhat surprising since the operations of the JV Companies in our study appear to promote the adoption of a fairly ambitious set of controls (cf. Kamminga and van der Meer-Kooistra, 2007). This further justifies the conclusion of incorporating relational factors in the analysis. We argue that the somewhat undeveloped vertical control packages and their interesting dissimilarities may be explained by four relational factors.

First, this study establishes that a clear connection exists between vertical goodwill trust and competence trust and formal controls. Increased trust is followed by narrower and looser control; impaired trust is followed by broader and tighter control. This finding supports the classic view of the inverted relationship between trust and control. For example, after the parents at North and South observed good performance (e.g., a satisfactory price/quality ratio),

they relaxed the tight action controls (e.g., by replacing politically powerful JV Board members with less powerful ones). The conclusion is that good performance by JV Companies increases the goodwill trust and competence trust parents have in them. On the other hand, failure to follow parents' strategic intentions (even when not clearly communicated by the parents) decreases goodwill trust in JV Companies. At South, problems arose that caused the parents to lose goodwill trust in South's management. As a result, they introduced new, formal controls.

Second, formal controls are affected by parent differences but differently than described by earlier research. Differences in parent size that lead to one owner's dominant position affect the control package. This was true at West where Bigcity's dominant position allowed (or required) it to take responsibility for designing formal controls for West. This situation means that the control package design will evolve in a manner similar to the design of the control packages in other companies owned by the dominant owner. In turn, the design depends on the development of the dominant owner's general competence in controlling subsidiaries. At North and South, since the parents were approximately the same size, there was no dominant owner to take this overall responsibility.

Consequently, the control packages for North and South were narrower than those for West. When Bigcity's general expertise in managing subsidiaries developed, they could easily transfer these controls (e.g., reporting systems and routine processes) to West, which broadened the control package. Another example of how parent differences affect control packages is found in the North case study. At North, Gamma initiated results control and broader and tighter action control owing to its previous experience with uncontrolled subsidiary activity. In an attempt to learn from that unfortunate experience, Gamma required the adoption of an owners' directive when it joined North. Thus, the addition of a parent with a more controlling management style may affect the vertical control package.

Third, the lack of a linkage between the JV's activity and the parents' other municipal activities seems to affect controls. One explanation for the narrow and loose control of JVs is that municipalities are diversified (i.e., their activities are not closely related). Consequently, parents do not need to coordinate the JV activity with their other activities. Furthermore, diversification also makes it more difficult for parents to impose broad and tight controls since such controls are difficult to design without specific knowledge about the controlled activity (cf. Ouchi, 1979). The finding that parent diversification leads to less ambitious control packages agrees with Groot and Merchant's study (2000). In our study we also note that diversification in combination with low political interest in the JV Company's activity further diminishes the ambition for formal control. Since waste disposal is one of the least interesting activities politically, parents are content if they do not have to deal with waste disposal issues at all. However, even if, for various reasons, parents are willing to allow JVs a large amount of devolution, JV managers must not signal they seek greater autonomy. Such signals worry parents, leading them to consider broader and tighter controls.

Fourth, horizontal control packages may affect vertical control packages. At South, an incomplete horizontal control package made it more difficult to develop a vertical control package with elements of proactive controls. Although joint proactive control (i.e., an owners' directive) was recommended, no decision was made to exert such control. Also, when vertical goodwill trust in South decreased, results control was imposed and action control was broadened and tightened. However, these control measures were poorly coordinated at the horizontal level. Given the poor structure for parent interaction and decision-making, reactive and uncoordinated solutions for the vertical control problem were proposed. Since the underdeveloped horizontal controls to some extent were a consequence of high trust among the parents, horizontal trust indirectly led to inadequate proactive vertical controls. In contrast, at West, more developed horizontal controls were used to deal with West's attempts to be more autonomous. West's parents initiated a structure (i.e., regular parent meetings) for dealing with such issues. Established horizontal control packages, which regulate continuing interaction among parents, seemed to help the parents deal with problems in the vertical structure. Such packages were especially important when the JV Companies wanted greater autonomy.

These observations both corroborate and complement other findings about the relational factors that affect vertical control packages. In our agreement with theory on the importance of parent differences we add that size difference is also an influential factor. In our confirmation of earlier research on diversification and vertical trust we add corollaries about dilution and political importance. Our specific contribution is our analysis of how horizontal control packages affect vertical control packages and the indirect connection between horizontal trust and vertical control. Since our case studies show little variation in horizontal trust, future research is needed in this area. More research is also needed on other theorized relational factors such as the use of bargaining power and parents' need for evidence of short-term performance (presented in Table 1) that are not very prominent in our case studies.

We next turn to the relational factors that affect the horizontal control packages that are generally rather narrow and loose. Three factors appear to affect their evolution. *First*, we note the importance of trust. In each of our three cases the parents are close geographically and have a history of cooperation on many activities. This inter-connection explains the general prevalence of goodwill trust, system trust and calculative trust in all cases and the importance of competence trust at West. Goodwill trust is the result of strong personal relationships among the municipal representatives. These relationships have developed over time in numerous interactions. System trust is a consequence of each municipality's need for functional cooperation in the region. No municipality can risk being perceived as opportunistic since such a perception would damage its reputation and endanger other inter-organizational, cooperative activities. Calculative trust results from the lack of alternatives (i.e., the parents have no realistic alternatives to the present cooperation arrangement). These three forms of trust reduce the need for formal control at the horizontal level. Also, the fact that the minority parents of West have competence trust in Bigcity means they hand over the responsibility to control West. All in all, this horizontal trust decreases the need for broad and tight horizontal controls.

Second, for the same reasons that explain the vertical control package, parent differences in size (one dominant, professional parent) make it easier to develop horizontal controls (e.g., structures for parent interaction and social control). Bigcity developed horizontal controls (e.g., annual owner councils) that proved valuable. This formal aspect of the horizontal control package ensured there was a specific arena for cooperation among the parents in addition to the wider context for their cooperation. In fact, this social mechanism forum allowed the minority parents to argue, successfully, against the merger of West with Bigcity Power. This was an example of how the horizontal control package created a structure in which cooperation problems could be addressed. The North and South parents tried to avoid the kind of parent structure that existed at West (i.e., a JV with one dominant parent). Yet, at West, this structure seemed to facilitate the development of formal processes. South, as was clearly revealed when trust broke down, lacked these processes.

Third, even if trust dominates at the horizontal level, formal changes in the horizontal control package may be driven by the ambition to ensure equal treatment of the owners. When Gamma and Delta became co-owners of North, action control was used to ensure that the JV Company would use the new owners' facilities. In addition, action control was used to make sure that the owners who wanted improved service (more recycling stations) paid the additional investment costs.

These observations corroborate and complement earlier findings about relational factors that affect controls in JV settings. In this study, horizontal control packages seem predominately to be affected by trust. However, we also note the importance of parent differences and equal treatment in the design of horizontal control packages.

5.3. Trust and control

As noted above, vertical trust and horizontal trust affect vertical and horizontal control packages. Our study supports earlier research on how trust may replace formal controls by reducing uncertainty of behaviour (Groot and Merchant, 2000; Langfield-Smith, 2008). In our three cases, goodwill trust, system trust and calculative trust in horizontal cooperation and competence trust and goodwill trust in vertical cooperation created by good performance were important explanations of the adoption of narrow and loose control packages. We also found that broader and tighter controls were introduced when trust diminished, which is in accordance with Emsley and Kidon (2007) and Langfield-Smith (2008). However, our case studies contribute to previous research in three areas.

An inverted crowding out: Our cases show how the ambition to build and preserve trust may lead to underdeveloped formal controls, both in the vertical and the horizontal dimensions. In the vertical dimension, we see how CEOs work to build trust in order to create space for developing the JV Companies. The CEOs look at the JVs as projects that require freedom of action that in turn requires trust from parents. The high level of trust affects both the development and implementation of controls. At South, after the first period of JV Board monitoring, essentially there were no vertical controls for a long time. At North, while the parents imposed an owners' directive that restricted the CEO's freedom of action, the directive had little practical effect. The North and South parents, who trusted their CEOs, were willing to accept vulnerability. In South, this had the consequence that some of the parents' representatives were not updated on the reasons for fee increases, had not communicated their increased focus on low fees and had not felt certain about their communication of their emphasis on South not merging or expanding with other municipalities. The controls needed to avoid miscommunication that led to trust breaking down were not in place. Also in the horizontal dimension, we observed that trust inhibited control. At North and South, formal controls for the interaction between the parents were limited to legal requirements that were little used. We noted no negative consequences at North, but at South the lack of a horizontal structure for communication caused a problem when there was a loss of trust in the vertical

relationship. The long and unsuccessful process to establish an owner's directive and the uncoordinated control initiatives are proof of this shortcoming in the control system.

It is not surprising that trust may inhibit control. If trust and formal control are alternative ways to reduce uncertainty (van der Meer-Kooistra and Vosselman, 2000), and if control can crowd out trust (Ghoshal and Moran, 1996), then it is possible that trust in certain situations may lead to underdeveloped formal controls. We propose two explanations of this "inverted crowding out" effect. First, if partners are perceived as trustworthy, control may be unnecessary in their trusting situation. Second, if partners think they risk loss of goodwill trust when imposing controls due to the "crowding out" effect, they may wish to avoid such controls. Our finding that trust may inhibit formal controls agrees with Mouritsen and Thrane (2006) and Free (2008) who question the sole, positive influence of trust. They are sceptical about relying on trust, since trust is fragile and may be broken by new experiences (Free, 2008) and since a lack of formal controls may cause instability and uncertainty (Mouritsen and Thrane, 2006).

Our case studies show that it may be advisable to develop formal controls that will be useful in the future even if they are unnecessary in the present. As trust is fragile, formal controls provide a framework of stability and predictability. This conclusion is further supported by our observation that controls need not impair trust, as explained below.

Formal controls impair trust when installed or drawn upon as a result of relationship failures: Based on our research, we find several examples of the introduction of formal controls that do not impair trust in vertical or horizontal relationships. Some new controls were introduced as the result of institutional factors and thus were unrelated to issues of trust. For example, trust was not involved when horizontal and vertical controls changed to meet governmental regulations or when Bigcity forced their standard management controls on West. New, formal controls, implemented as a consequence of changed relational factors, do not damage trust if they are only superficially imposed or do not indicate distrust. This was true when Bigcity imposed a structure for horizontal interaction with the other West parents and when Gamma imposed an owners' directive on North. We conclude that it is possible to impose new, formal controls without impairing trust. This observation supports Vélez et al.'s (2008) conclusion that trust may survive implementation of formal controls in mature relationships. Two JV Companies (South and West) even asked for owners' directives. If JV Companies in general want more autonomy, it is puzzling that they should request more formal control. However, this observation is consistent with Tomkins' (2001) conclusion that mature relationships may be ready for additional controls and Vélez et al.'s (2008) conclusion that subordinates may gain greater transparency and fairer evaluations from additional control. In addition, we conclude that trust is not endangered by formal controls if they are not imposed as the result of failures in specific relationships.

Preserving trust affects efficiency: Another observation from our case studies is that the ambition to create or preserve trust can affect a JV Company's efficiency. This

observation is based on the North case. Everyone involved with North judged its performance as successful. Goodwill trust was strong in all relationships and competence trust in the CEO was high. However, based on the interview with the CEO, we see that he worked actively to create the parent's trust in him. Much of his time was devoted to informing and listening to the parents and to ensuring that North's actions would not upset them. A marketing manager was hired since the CEO did not have time to handle business relationships other than those involving the four parents. He also avoided challenging the cooperative spirit in both the vertical and the horizontal relationships. He claimed he stopped offering suggestions that might be perceived as politically sensitive. He also said his investment proposals were based, not only on efficiency calculations, but also on his belief in the equitable distribution of investments among the owners. Efficiency was thus subordinate to trust. He made a trade-off between working toward economies of scale and maintaining vertical and horizontal trust to preserve his autonomy. The examples show how trust comes at a cost, in our case driven by a CEO's interest in preserving autonomy. We do not argue that trust must come at a cost, but in North a part of the explanation of why trust was built comes from decisions explicitly motivated by trust building, and not as a side-effect from activities motivated by economic efficiency.

6. Conclusions

Our first aim in this paper is to map the dynamics in vertical and horizontal control packages in municipal JVs and to investigate the relational factors that affect them. Based on our three case studies of municipal JVs in the waste disposal business, all of which were founded to exploit economies of scale, we conclude that four relational factors affect vertical control packages. A higher degree of vertical goodwill and competence trust reduces the need for broad and tight action controls, and (inversely) a reduction in vertical goodwill trust may result in broader and tighter action control and results control. Broader results control and action control (although not necessarily more tightly used) may be caused by parent differences in size (in combination with control competence) and in management style. Parent diversification, that is, a limited relationship between the JV's activity and the parents' other activities, leads to narrow and loose control since it increases information asymmetry, reduces the need for coordination, and dilutes parents' attention (especially if the activity is politically uninteresting). Also, a well-designed horizontal control package (e.g., rules for parent interaction and the distribution of work) leads to proactive controls and a readiness to impose new formal controls in the vertical dimension. Regarding the horizontal control packages, we conclude that the existence of goodwill trust, system trust and calculative trust limit control to fairly narrow and loose action control. We also conclude that parent differences in size make it easier to develop structures for parent interaction and social control, and that equality of treatment among the parents may drive horizontal action control.

Our second aim in this paper is to contribute to the discussion on the relationship between trust and control

in inter-organizational relationships. In our case studies, we observed that over time goodwill trust and competence trust made action control narrower and looser and that diminished trust was followed by broader and tighter action control and results control. We found many instances where new, formal control did not destroy trust. This conclusion supports the theoretical view that new, formal controls may be implemented without damage to established trust, that is, without signalling distrust. Furthermore, we observed an inverted "crowding out" effect of trust on control (i.e., the high ambition to maintain trust may lead to underdeveloped formal controls). Trust appears to lead to loose and narrow control that perhaps is suitable for the present situation but insufficient for future contingencies. This may be because trust inhibits consideration of the need for control and because control is thought to endanger goodwill trust. Well-designed horizontal controls make it easier to deal with emerging control gaps in vertical relationships.

In addition, we found that the ambition to preserve trust may inhibit the realisation of economies of scale. JV Companies that value autonomy and manage their activities to preserve vertical and horizontal trust may not take advantage of economically justified opportunities. This strategy contradicts the very reason for the creation of municipal JVs.

An important generalization of this study is that the relationship between control and trust is multifaceted. However, this generalization (as well as the interrelations presented above) should be regarded as tentative due to the nature of case study research. While we offer some insights about how control processes create or impair trust, we call for additional studies in this area. We conclude that formal control is not a homogenous factor that influences trust. We need to pay attention to the different processes and techniques of control. In general, research needs to acknowledge the potential of control as a positive force in coordination and as an indication of trust. Furthermore, our choice of case studies narrows our findings to the situation of fairly homogeneous parents. Future research may determine if vertical and horizontal control packages for heterogeneous parents are broader and tighter.

Acknowledgements

We are grateful for the helpful comments we received from the editors of this special issue, two anonymous reviewers and the participants at 33rd EAA Annual Congress. Additionally, we thank Torsten Söderbergs stiftelse, Jan Wallanders & Tom Hedelius stiftelse, and Kommunforskning i Västsverige (Local Government Research Institute in West Sweden) for financing this research.

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