



PHD

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# **The formation of a buyer-supplier multiparty alliance: legitimation and the design of governance mechanisms**

by

**Renate Barbara Taubeneder**

**Thesis**

submitted for the degree of

**Doctor of Philosophy**

University of Bath

School of Management

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- Chapter 3 is based on a book chapter, which will be submitted for publication shortly. I declare that I contributed to 70% formulation of ideas, 80% design of methodology, 100% data collection and 100% presentation of data in journal format;
- Chapter 4 is based on a pre-printed manuscript, which has been submitted for publication. I declare that I contributed to 25% to formulation of ideas and 80% presentation of data in journal format;

Renate Taubeneder

Bath, November 2021

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## List of Acronyms

BEIS	Department for Business, Energy and Industrial Strategy
CGN	China General Nuclear Power Group
EDF	Electricite de France
EPR	European Pressurised Water Reactor
JV	joint venture
KPIs	key performance indicators
HPC	Hinkley Point C
HVAC	heating, ventilation, air-conditioning
LCCC	Low Carbon Contracts Company
LPB	large project buyer
MEH	mechanical, electrical and HVAC
MoU	memorandum of understanding
MPA	multiparty alliance
MWh	megawatt hour
NPD	new product development
OSCM	operations and supply chain management
R&D	research and development



# Chapter 1: Introduction

This chapter introduces the research of this thesis. Section 1.1. provides an overarching perspective of how the thesis sits within and contributes to the literature on multiparty alliances. Section 1.2. describes the structure of the thesis.

## 1.1. Background to the research

This section provides the background to the research. It starts by discussing the theoretical motivation of the thesis in section 1.1.1 and its practical motivation in section 1.1.2. Section 1.1.3. clarifies the precise research questions for the two empirical studies in this thesis. Section 1.1.4. clarifies the unit of analysis, and section 1.1.5. overall contribution of the thesis.

### 1.1.1. Theoretical background

A multiparty alliance (hereafter referred to as ‘MPA’) is generally defined as a “single cooperative agreement involving three or more firms bounded by a unifying goal and governed by a single overarching contract” (Heidl et al., 2014, p.1351). As such, multiparty alliances are not a collection of independent dyadic relationships among a group of firms nor are they a network of firms that maintain direct ties to a single focal firm, instead they entail multilateral interactions among all partners and create their own unique dynamics (Lavie et al., 2007).

A key distinction between multiparty and dyadic alliances is the generalised or indirect exchange relationship (Das and Teng, 2002). In a dyadic relationship, each partner can easily detect and monitor what the other contributes to the relationship (Das and Teng, 2002). In a multiparty exchange, however, partners feed their capabilities and resources into a common pool, which makes the monitoring of partners’ equal contribution more difficult

(Zeng and Chen, 2003; McCarter and Northcraft, 2007). This so-called indirect reciprocity inherent to multiparty exchanges creates opportunities for opportunism, in which parties decide to pursue self-interested goals at the expense of their MPA partners (Das and Teng, 2000; Zeng and Chen, 2003). Due to this, research has found that MPAs are inherently less stable and more difficult to govern than dyadic alliances (García-Canal, 1996; Park and Russo, 1996).

Despite its challenges, MPAs have become increasingly popular over the past decades, with studies reporting that between 30 % to 50 % of all alliances have three or more partners (e.g., García-Canal et al., 2003; Makino et al., 2007). For instance, MPAs can be particularly effective for completing large-scale development projects requiring the coordination between and resources of multiple firms (Beamish and Kachra, 2004). Further, firms increasingly enter MPAs for research and development (R&D) purposes to facilitate access to and knowledge share between a diverse set of skills and resources stemming from a wide range of parties (Li, Eden, Michael A. Hitt, et al., 2012; Mishra et al., 2015; Lioukas and Reuer, 2020).

Given their increasing popularity, it is surprising that research on multiparty alliances is very limited (e.g., Lavie et al., 2007a) and skewed in multiple ways. For instance, the most influential thoughts and works on MPAs are based on theoretical assumptions and propositions, and have as such not been sufficiently tested to be confirmed as ‘true’ (e.g., Das and Teng, 2002; Zeng and Chen, 2003). Second, the vast majority of empirical research on MPAs is based on cross-sectional data (García-Canal et al., 2003; Lavie et al., 2007; Mishra et al., 2015; Fonti et al., 2017). This means that existing insights into MPAs are based on the single conceptualisation of time. This is problematic given that MPAs, as any relationship, consist of a process entailing several stages such as its formation, operation, changes, and termination (Ring and Van de Ven, 1994; Doz, 1996). Therefore, a growing number of

researchers call for longitudinal analyses to gain further understanding of the causal mechanisms at play in MPAs (Lumineau and Oliveira, 2018). In other words, my drawing on insights from multiple points in time within a given relationship is desirable to enhance the research analysis and therefore the validity of both empirical and theoretical claims (Lumineau and Oliveira, 2018).

A number of researchers have called for longitudinal field studies to explore the implications of MPAs dynamics over time (e.g. Das and Teng, 2002; García-Canal et al., 2003; Lavie et al., 2007; Mishra et al., 2015), in particular, the formation processes of a MPA (Zhang et al., 2017; Zhang and Guler, 2020). This would be important in two ways. First, it would help to unpack how parties develop appropriate governance mechanisms to overcome the challenges inherent to MPAs such as the increased opportunism facilitated by the indirect exchange relationship in MPAs. For instance, Lioukas and Reuer (2020, p. 380) call directly for longitudinal methods to examine ‘how the appropriation hazards arising from multiparty alliances, partner competition, or other factors potentially influence the dynamics of alliances’ and how parties as a result ‘introduce governance mechanisms to their collaboration’. Similarly, authors have highlighted the criticality of MPA governance and the limited current understanding of it, which requires more analysis and study (Li, Eden, Michael A. Hitt, et al., 2012; Lioukas and Reuer, 2020).

Second, it would facilitate an understanding into social processes behind firms’ motivations to join a MPA (Lavie et al., 2007). Prior research on dyadic alliances has found that during MPA formation partners test and evaluate each other and form perceptions about the future value of the alliance before being able to commit to it (Jap and Ganesan, 2000; Vanpoucke et al., 2014). The dynamics behind this process are not well understood for dyadic collaborations (Vanpoucke et al., 2014) and may be even be more complicated for MPAs,

given that partners often hold idiosyncratic views about the MPAs which they engage with (McCarter et al., 2011). A better understanding of firms perceptions of an MPA during the formation process and its successful management can enable firms to facilitate cooperation and build commitment to the MPA (Human and Provan, 2000; Kumar and Das, 2007).

### **1.1.2. Practical background**

MPAs are increasingly used in completing large-scale infrastructure projects requiring the coordination between and resources of multiple firms (Beamish and Kachra, 2004). Large-scale infrastructure projects are delivered by a multitude of organisations, often from a variety of industrial, cultural and institutional backgrounds, joint in their endeavour to design, manufacture or build a complex and novel outcome (Flyvbjerg, 2014). Often these projects are set up around an integrated project management firm, acting as a buyer, to orchestrate this vast network of suppliers (van Marrewijk et al., 2008). For the project buyer, the MPA acts as a contractual instrument that allows several, formerly contractually distinct suppliers to operate like a single firm, thereby enabling better coordination and planning between suppliers as well as concurrent delivery of site works (HM Treasury, 2014).

Although buyer-supplier MPAs can reduce project time and cost, these benefits heavily depend on MPA members' commitment towards working with each other (Suprpto et al., 2016; Hietajärvi and Aaltonen, 2018). This remains difficult to achieve given that suppliers often share no prior history of working with each other or are competing for similar types of work either in the project or outside of it (Lloyd-Walker et al., 2014; Hietajärvi and Aaltonen, 2018). In fact, conflict emerging between collaborating firms has become one of the biggest risks to large-scale infrastructure projects, prompting buyers to take a strong interest in the formation stage to ensure smooth collaboration between partnering firms

(Heighton, 2016; Plimmer, 2016). For instance, the High-Speed 2 project will spend as much as £900,000 on a team of behavioural psychologists to make sure all the MPAs bidding for work can work together smoothly (Financial Times, 2016). The project buyer argues that this will be beneficial over the long-term, as “companies who argue will waste time and run over budget” (Financial Times, 2016). The psychologists will simulate high-stress environments to understand how teams will react to time pressures or a safety incident. Hence, the formation phase of an MPA has become increasingly important to practitioners with vast sums being spent upfront to build an MPA that is as resilient in the face of future challenges.

### **1.1.3. Research problem**

To better understand the formation processes of a new MPA, this thesis will seek to address two research questions, which are the focus of subsequent chapters. Study 1 in chapter 3 addresses the following research question:

*How do buyer and supplier firms shape the legitimation process of a new MPA?*

Legitimation has been defined as the ‘process that brings the unaccepted into accord with accepted norms, values, beliefs, practices, and procedures’ (Zelditch, 2001, p. 9), and has been found as a key process in gaining firms commitment to a new form of organizing (Human and Provan, 2000; Kumar and Das, 2007). The attainment of legitimacy requires an ongoing process of social negotiation between buyer and suppliers, whereby all firms show a high degree of agency (Suddaby et al., 2017). This process begins in the formation stage, where it starts from the ground and is built over time (Zimmerman and Zeitz, 2002; Fisher et al., 2016).

Scholars have argued that legitimacy is even more important than trust for inter-organisational arrangements (Kumar and Das, 2007). While trust evolves from predictability

in behaviour (e.g. Das and Teng, 1998; Ireland and Webb, 2007), legitimacy implies congruency of values (Lagenspetz, 1992). Kumar and Das (2007) posit that a shared value system takes time to establish, but once it does, it can provide a more durable foundation for success. In other words, if a firm perceives its values to be aligned with partnering firms' values, the firms will accept the decisions and behaviours of the others as their own (e.g. Kostova and Roth, 2002; Brenner and Ambos, 2013). Hence, legitimacy facilitates cooperation and commitment between MPA firms (Human and Provan, 2000; Kumar and Das, 2007). Thus far, limited insights exist on how legitimation applies to the formation of a new buyer-supplier MPA and the roles both buyer and suppliers play during the legitimation process. Hence, the process of MPA legitimation between buyer and suppliers during the formation of a new buyer-supplier MPA remains understudied and will be the focus of study 1.

Study 2 forms chapter four of this thesis and addresses the following research question:

*How are formal and informal governance mechanisms developed in the formation phase of a new buyer-supplier MPA, and what is their interplay?*

A further important component of the formation stage is the development of formal and informal governance mechanisms (Poppo and Zenger, 2002; Cao and Lumineau, 2015). Formal governance includes any legally binding documents that control and coordinate an inter-organisational relationship (Schepker et al., 2014). Informal governance describes the norms that underpin relationships and that are shared expectations about the behaviours and attitudes of each party (Heide and John, 1992; Cannon et al., 2000). Given the important role governance mechanisms play in the limitation of opportunism (Williamson, 1979), and given

the increased opportunities for opportunism existing in MPAs (Zeng and Chen, 2003), the limited research exploring the development of governance mechanisms in MPAs appears to be a serious omission. Prior research has focused predominantly on the application of governance mechanisms post-contract signature; hence, very little is known about their development and interplay during the formation stage (Gulati et al., 2012). Considering that parties test and evaluate the relationship and form perceptions about each other's behaviours during this stage (Jap and Ganesan, 2000), buyers can be expected to propose governance mechanisms to address the potential opportunism they anticipate from suppliers, and all parties can be expected to react to the perceived threats or opportunities related to potential opportunism that emerge prior to contract signature, all of which is an interesting field of study.

Prior literature on informal and formal governance mechanisms has largely focused on their interplay, finding that they act as complements rather than substitutes (Poppo and Zenger, 2002; Cao and Lumineau, 2015). However, these studies have neglected to consider two key areas. The first is the dynamics of this interplay during the formation stage of a relationship when governance mechanisms are still being developed. Given that most studies examine the interplay of governance mechanisms in already established relationships in which formal contracts are fully developed and norms strongly embedded, the dynamics of the interplay might be different in the formation stage when managers do not have a fully developed set of formal and informal governance mechanisms at hand. Second, limited understanding exists on the interplay between horizontal and vertical relationships existing in buyer-supplier MPAs. Prior governance literature largely focuses on either vertical buyer-supplier relationships (Liu et al., 2009; Li et al., 2010) or horizontal relationships such as alliances or joint ventures (Hoetker and Mellewigt, 2009; Ness, 2009; Arranz and de



Arroyabe, 2012). Hence, very limited research has examined structures in which both types of relationships (vertical and horizontal) co-exist and how this impacts the development and interplay of formal and informal governance mechanisms. Overall, it is the aim of study 2 to further understand the lacunae identified in prior research.

#### **1.1.4. Unit of analysis**

Prior management research has predominantly studied MPAs that consist of horizontal interactions only and can be formed as a strategic alliance, joint venture (JV) or consortium (Li, Eden, Michael A Hitt, et al., 2012; Mishra et al., 2015; Fonti et al., 2017; Ranganathan et al., 2018). These different forms of MPAs can be distinguished by their level of formality; for instance, JVs have a smaller number of parties and usually involve equity (García-Canal et al., 2003), while consortia are large-scale cooperative projects often funded by government (Castiglioni et al., 2015). Strategic alliances involving more than three parties can be located between both poles (Castiglioni et al., 2015).

This thesis focusses on an understudied yet increasingly important type of MPA: the buyer-supplier MPA. The buyer-supplier MPA is not a collection of independent dyadic relationships between the buyer and the suppliers, nor is it a network of firms that maintain direct ties with a single focal firm (Lavie et al., 2007). Instead, buyer-supplier MPA have two contractual agreements: one is an umbrella agreement between the buyer and the multiparty supplier alliance and the second is the suppliers' multiparty alliance agreement, which describes the multilateral interactions among the suppliers and how they will jointly provide the contracted services for the buyer as defined in the umbrella agreement. While there are two formal agreements, they are jointly developed and signed the same day, and represent a unique governance form. Hence, the unit of analysis of this thesis is a buyer-

supplier MPA, which can be defined as a single cooperative agreement involving on buyer and two or more suppliers bounded by a unifying goal and governed by two overarching contracts.

### **1.1.5. Contribution**

The thesis makes three main contributions to the MPA literature. First, it extends prior research on MPA governance by conducting an in-depth study on the development of formal and informal governance mechanisms in a new MPA (Poppo and Zenger, 2002; Cao and Lumineau, 2015). Prior MPA research has narrowly focused on the study of equity structures or scope changes as the sole means of MPA governance (Li, Eden, Michael A Hitt, et al., 2012; Lioukas and Reuer, 2020). Or they have studied the manipulation of managerial perceptions to oppress effort-withholding tendencies (Fonti et al., 2017). Study 2 in this thesis presents the first empirical investigation of how MPA parties design clauses and norms to safeguard an MPA from potential opportunism and harm whilst at the same time reaping the benefits of an exchange relationship between multiple parties. Hence, it extends prior MPA research by offering a more fine-grained analysis of the contractual mechanisms (Reuer and Arino, 2007; Faems et al., 2008) as well as the social norms (Heide and John, 1992; Cannon et al., 2000) that facilitate MPA control and coordination.

Second, the thesis contributes to MPA research by investigating the formation process of a new MPA and therefore answers calls for the exploration of the social processes occurring in the formation of MPAs (Lavie and Rosenkopf, 2006; Zhang et al., 2017; Zhang and Guler, 2020). In particular, study 1 in this thesis focuses on the process of legitimation, which has been identified as a crucial process during the formation phase to gather firms' commitment and support to a new form of organising (Human and Provan, 2000; Zimmerman

and Zeitz, 2002). Study 2 explores a second under-researched phenomenon occurring during the formation of a new MPA: the development of governance mechanisms (Lazzarini et al., 2008; Lioukas and Reuer, 2020). Both studies adopt a longitudinal case study approach to illustrate the management of parties' interests over time prior to the creation of the new MPA.

Third, this thesis focusses on an under-studied type of MPA that has become increasingly popular in practice: the buyer-supplier MPA. Buyer-supplier MPAs consist of one buyer and multiple suppliers, which means that they contain both a horizontal supplier-supplier and a vertical buyer-supplier relationship, each formalised through a contract (Lazzarini et al., 2008). Due to this, the buyer-supplier MPA creates its own unique dynamics which are different from MPAs studied in the literature, and thus require further attention. General or R&D MPAs are often initiated by the parties themselves, buyer-supplier MPAs on the contrary are characterised by the strong involvement of the buyer in not just initiating the MPA, but also in shaping its outcome. While prior studies have found that firms often choose MPA members because of compatible resources (e.g. Mitsuhashi and Greve, 2009), this does not hold true for buyer-supplier MPAs, as suppliers often provide overlapping capabilities and resources to the buyer (Wu and Choi, 2005). Because of this, it is difficult for the buyer to achieve high levels supplier commitment to and cooperation in the MPA as suppliers often share no prior working history and are competitors (Lloyd-Walker et al., 2014; Hietajärvi and Aaltonen, 2018). The thesis offers a first attempt in uncovering and analyzing the dynamics of buyer-supplier MPAs.

## 1.2. Structure of the thesis

This thesis comprises five chapters. The current chapter introduces the reader to the knowledge gaps that motivated the research in this thesis. The remaining four chapters are organised as follows:

**Chapter 2** is structured into three main sections. Section 2.1. gives an overview of the literature on MPAs are broadly (section 2.2.1) before discussing the relevant literatures around buyer-supplier MPAs (section 2.2.2) and the formation of buyer-supplier MPAs (section 2.2.3) in more detail. Section 2.2. provides further background on the research context, namely the studied nuclear construction project in the UK. The chapter concludes with a discussion of the methodology of this thesis, starting with the underpinning ontological and epistemological choices of the work (2.3.1.), the chosen method (section 2.3.2.) and the data sources (section. 2.3.3.).

**Chapter 3** contains study 1, which explores the process of legitimising a new MPA between one buyer and five suppliers. This in-depth, longitudinal case study draws on observations, interviews, site visits, board papers, and archival data, and reveals how the formation of a new buyer-supplier MPA was initiated through a mechanism referred to as theorisation: the buyer starts by problematising conventional dyadic contracts, and introduces the buyer-supplier MPA as a novel and superior solution. The subsequent legitimisation process was an interactive negotiation that occurred across both the vertical and horizontal relationships and addressed dimensions of moral and pragmatic legitimacy. The longitudinal nature of our study enabled us to show that the legitimisation process is characterised by episodes of legitimacy build up, break down and repair, but that both types of legitimacy are needed before contract signature. We further found distinct drivers that support the build-up of each type of legitimacy. This study was prepared as a book chapter for a forthcoming

volume *Managing Interpartner Cooperation in Strategic Alliances*, which is edited by Emeritus Professor T.K. Das (City University of New York, USA).

**Chapter 4** discusses study 2 of this thesis, which explores the dynamics and interplay of formal and informal governance mechanisms developed during the formation of a buyer-supplier MPA. It provides an in-depth, longitudinal case study of two under-represented areas in the governance literature: (i) the governance dynamics in the formation phase of a relationship before contract signature; and (ii) the interplay of vertical and horizontal relationships (and their impact on the development of governance mechanisms). Our primary and secondary data sets reveal the important role opportunity search plays in governance, how expected and emergent opportunities become constrained over time as formal and informal governance mechanisms are developed, and how formal and informal governance mechanisms have a strong interdependency across vertical and horizontal relationships, but substitute for one another within vertical and horizontal relationships in a buyer-supplier MPA. This study has previously been submitted for a second round of reviews at the *Journal of Management Studies* (ABS4; FT50 list).

**Chapter 5** is the conclusion to this thesis and elaborates on its theoretical and practical contributions. The chapter first discusses the main theoretical contributions of the thesis (section 5.1) namely to the literatures on the MPA (section 5.1.1), on the development processes of inter-organisational relationship (section 5.1.2) and on supply chain collaboration (section 5.1.3). The chapter further provides the implications for practice (section 5.2) with particular focus on the fostering of commitment (section 5.2.1) and the development of governance mechanisms (section 5.2.2.). Finally, section 5.3 discusses the boundary conditions of the research and offers avenues for future research.



# **Chapter 2:** Context and research approach

The following sections describe the theoretical and empirical background of the thesis as well as the chosen research method. Section 2.1. links the thesis's studies to the wider multiparty alliances (MPA) literature and thus unpacks the contributions to knowledge of this thesis. Section 2.2. presents the empirical context of the research. Finally, section 2.3. discusses key ontological and epistemological considerations including the research approach and chosen method.

## 2.1. Literature Review

The aim of this section is to provide to present a more focussed and expanded literature review on the current state of knowledge on MPAs as well as its relevance for the research presented in forthcoming chapters. Section 2.1.1. discusses the broader literature on MPAs. Section 2.2.2. extends this discussion to the literature on buyer-supplier MPAs in the project sector. Finally, section 2.1.3. offers detail on the formation processes of buyer-supplier MPAs.

### 2.1.1. Multiparty alliances

Research on MPAs started with Das and Teng (2002) seminal paper on alliance constellations or multiple partner alliances noting that as soon as the number of alliance parties reaches three, the exchange relationship changes and becomes generalised or indirect. Das and Teng (2002) argue that this poses a critical difference between direct (dyadic) and indirect or generalised exchange relationships (three or more). In a direct reciprocal exchange, A and B are aware of what each has contributed to the relationship and who may owe a favour to whom. In an exchange between three or more parties, there is no direct reciprocity, as what A gives to B, and is not contingent upon what C gives to B (Das and Teng, 2002). Instead



parties feed their resources into a common pool, which makes the monitoring of equal contribution more difficult (Das and Teng, 2002; Zeng and Chen, 2003). Due to this, MPAs are subject to a significant risk of free riding. In dyadic relationships, accountability is relatively high and free riding can easily be detected and counteracted. In a MPA, exchanges are more ambiguous and disjointed which creates more incentives for parties to free ride on their partners expense (Das and Teng, 2002).

MPA studies have since focussed on studying the social dilemma situations that MPA parties face suggesting that this indirect reciprocal relationship can encourage three types of defection particularly relevant to the management of MPAs (Zeng and Chen, 2003; McCarter and Northcraft, 2007; Fonti et al., 2017). First, ‘free riding’ occurs when an MPA partner attempts to capture the benefits of the MPA without contributing to its creation. Second, ‘hold-ups’ occurs where parties systematically under-invest in creating benefits for the MPA because of the risk of opportunistic behavior by other parties. Finally, ‘leakages’ occur when an MPA partner attempts to use the resources of the alliance to create value outside of the alliance. For example, alliance partners will decide whether to commit their limited resources to the joint endeavor, recognizing that they can “free-ride” on other actors’ activity by withholding their efforts toward the joint endeavor. This course of action increases the likelihood of alliance failure, both directly, due to the limited investments by the parties, and indirectly, by discouraging other partners to invest in the alliance (McCarter et al., 2011). Even if free-riders are detected, it is challenging to establish sanctions against those identified, because once the MPA is established, no partner may be excluded from realizing some of the benefits regardless of their contribution (Heidl et al., 2014).

To overcome the challenge that indirect reciprocity poses to multiparty arrangements, early research has advocated relational governance mechanisms such as the development

broad based trust, cooperative norms, a shared identity and an open approach to the apparent social dilemma (Das and Teng, 2002; Zeng and Chen, 2003). However, an empirical study by Garcia-Canal et al. (2003) found that the effectiveness of MPA arrangements is much more influenced by formal control mechanisms than by relational investments. Specifically, multi-party alliances in which one partner firm held a dominant position or in which the alliance CEO was placed by one of the partners, were found to be more effective due to facilitated decision making and coordination (García-Canal et al., 2003). Further formal control mechanisms pertained the board of directors or incentivisation through changes to the payoff matrix or the establishment of long-term goals (García-Canal et al., 2003). Li et al. (2011) and Lioukas and Reuer (2020) further investigated the role of formal control in MPA management finding two ways in which R&D MPAs can protect themselves from opportunism: either by choosing an equity-based over an non-equity alliance, or by reducing the scope of functional activities that the alliance undertakes, thus making the transaction less complex and easier to monitor. Li et al. (2011) found that the use of equity-based governance structures was more likely to promote knowledge exchange and protect against opportunism, however, less so when MPA scope was more focussed and/or when intellectual property rights were protected otherwise, such as by an effective legal system. Building on these findings, Lioukas and Reuer (2020) found that MPAs were more likely to limit MPA scope rather than choose an equity-based governance structure when there were multiple partners in an alliance and when the partners were from different nations, because monitoring and other control mechanisms would become more cumbersome and problematic in these circumstances. In contrast, firms that are direct competitors are more likely to choose an equity-based governance structure to mitigate exchange hazards, such as knowledge misappropriation, through carefully monitored knowledge sharing.

While prior MPA research is offered valuable insights into the challenges of MPAs and how these may be overcome, it is overly focussed on large-scale MPAs or consortia established for R&D purposes in the high technology sector (Li, Eden, Michael A. Hitt, et al., 2012; Mishra et al., 2015; Fonti et al., 2017; Lioukas and Reuer, 2020). This means that research largely neglects there is an increasing number of MPAs established to provide services for the completion of large-scale development projects (Beamish and Kachra, 2004). While these MPAs suffer from challenges of indirect exchange relationships, they are different to R&D MPAs in multiple ways.

First, while R&D MPAs are often initiated by the parties themselves, services MPAs are initiated by a large buyer procuring the coordinated services of multiple suppliers. In R&D MPAs parties select the parties with a complementary skillset to create a new outcome. In services or buyer-supplier MPAs, the buyer often selects suppliers with overlapping skillsets to foster co-opetitive tension to reap commercial gains and to avoid relational inertia (Wu et al., 2010; Wilhelm, 2011). For instance, a large buyer can ask rival suppliers to collaborate on a new development project and use its buying power to suppress any uncooperative behaviours (Wilhelm, 2011). A buyer can also instigate competition between suppliers by playing them against each other (Wilhelm, 2011).

Second, this type of MPA consists of two contracts: one between the buyer and all suppliers, and one between the suppliers only. This means that the MPA consists of both vertical exchange relationships between the buyer and all suppliers, as well as a horizontal relationship between the suppliers only (Lazzarini et al., 2008). Hence, the buyer-supplier has a unique governance structure, and the contractual solutions to manage MPA challenges outlined by prior research are limited in this context. An equity structure between the buyer and suppliers would make the buyer liable for any negligence caused by suppliers. Similarly,

the limitation of MPA scope depends on the availability of suitable replacement suppliers, which may be limited should the services provided required subject matter expertise and skillsets. Overall, these new and additional dynamics of buyer-supplier MPAs and how these can be managed have thus far not been explored by prior research. The next section provides further detail on buyer-supplier MPAs, which are often established to provide coordinated services in large-scale projects.

### **2.1.2. Buyer-supplier MPAs in the project sector**

Large inter-organisational projects are highly complex and depend on the successful temporary collaboration of a large number of suppliers (van Marrewijk et al., 2008). These projects are an important contributor to numerous sectors, including healthcare, defence, mining, telecommunications and IT, transport, energy and water infrastructure, sporting events, and science (Davies et al., 2017; Gil and Beckman, 2009). It is estimated that project activity comprises around 35 per cent of GDP for some countries (Schoper et al., 2018). It therefore represents an important field of study (Lundin et al., 2015).

An integrated project management firm, acting as the buyer, selects and manages suppliers responsible for the delivery of the project work (Hobday, 2000). Increasingly, buying firms responsible for the management of large inter-organisational projects seek to organise suppliers working on highly interdependent tasks in buyer-supplier MPAs (Suprpto et al., 2016; Aaltonen and Turkulainen, 2018). A buyer-supplier MPA allows several, formerly contractually distinct suppliers to operate like one single entity. In doing so, a buyer can reduce contractual interfaces and combine the capabilities and resources of several firms, thus creating a better response to the highly interdependent and technologically complex project tasks (Laan et al., 2011; Hietajärvi et al., 2017; von Danwitz, 2018). Hence, MPAs are seen as

a preferable solution for buyers to us to reduce managerial complexity and to enable problem-solving between suppliers (HM Treasury, 2014). Hence, the MPA enables time and cost savings to the buyer as it has to manage fewer contractual interfaces and can instead shift coordination responsibility to suppliers.

While MPAs are considered an important tool to successfully overcome the coordination and complexity challenges of large-scale projects, some project features pose challenges to MPA management. First, prior research found that MPA performance on projects highly depends on suppliers' positive attitudes toward working with each other (Suprpto et al., 2016; Hietajärvi and Aaltonen, 2018). It often remains difficult for buyers to achieve high levels of cooperation and commitment from suppliers that are often competing for the same project work, but outside of the project, and that share no prior history of working together (Lloyd-Walker et al., 2014; Hietajärvi and Aaltonen, 2018). In fact, the emergence of conflict between collaborating firms has become one of the biggest risks to large-scale infrastructure projects, often leading to MPA dissolution and costly project delays (Financial Times, 2016).

Generally, this has prompted buyers to take a great interest in the formation stage of MPAs to help foster supplier cooperation and commitment from the very start (van Marrewijk et al., 2016). Here, buyers are not only considering optimal contractual mechanisms to safeguard the MPA from harm but to also develop relational norms to ensure that the MPA is operating smoothly. However, the limited shadow of the past and the future, as well as the ambiguous and changing nature of projects, make it difficult to foresee every future contingency, and can inhibit the development of complete contracts and norms (Carson et al., 2006; Gil et al., 2011). Contracts and norms are important safeguards from opportunism; hence, if they are underdeveloped, they may not be able to protect the relationship sufficiently

(Galvin et al., 2021). Further, the one-off nature of projects and the high investment costs can increase suppliers' bargaining power, and with this the potential for 'hold up' and shirking issues (Gil, 2009; Galvin et al., 2021). Given these increased opportunities for opportunism in projects (Galvin et al., 2021) as well as in MPAs (Zeng and Chen, 2003; Fonti et al., 2017), the formation stage of buyer-supplier MPAs becomes central in developing appropriate mechanisms to safeguard the vertical (buyer and suppliers) and horizontal (between suppliers) relationships. The next section offers further detail on the formation stage of buyer-supplier MPAs.

### **2.1.3. The formation of buyer-supplier MPAs**

Although the formation, development, maintenance and ultimately dissolution of inter-organisational relationships can occur over years, or even decades, scholars have predominantly investigated and drawn insights from the study of relationships at single points in time (Lumineau and Oliveira, 2018). These 'snapshots' are largely taken from established collaborations, leaving the formation stage prior to contract signature comparatively underexplored (Vanpoucke et al., 2014; Lumineau and Oliveira, 2018). To understand more about the formation stage of buyer-supplier MPAs, we have to turn to the limited studies that have investigated the dynamics of dyadic relationships over time (Ring and Van de Ven, 1994; Jap and Ganesan, 2000; Vanpoucke et al., 2014).

The formation stage, although often overlooked by research, has been found to have important implications for the success of the ongoing buyer-supplier relationship (Jap and Ganesan, 2000; Vanpoucke et al., 2014). Uncovering the details and processes of the formation stage is vital as it is when partnering firms question and test the value of a relationship and form perceptions about their partners' behaviour such as possible

opportunism and freeriding (McCarter and Northcraft, 2007). Moreover, a socialisation process takes place in which all parties identify and establish shared values and norms (Dwyer et al., 1987). Evidence shows that antecedents of long-term relationships, such as goal congruence and information exchange norms, reach their zenith in the formation stage and decline modestly once firms have committed to the relationship (Jap and Anderson, 2007). Vanpoucke et al. (2014) find that this assumes critical importance for parties' ability to commit to the collaboration and to formalise it contractually. During the formation stage, parties also decide on and establish the formal governance mechanisms for the relationship (Gulati et al., 2012). Overall, the path-dependent nature of a long-term relationship implies that the circumstances of the formation stage have important implications for the overall outcomes of a collaboration at later stages and thus requires further study (Ring and Van de Ven, 1994; Palmatier et al., 2013).

The lack of research on the formation stage of buyer-supplier MPAs is an important omission, for the following reasons. First, given that MPA failure often stems from misaligned goals and values between firms, it is important to understand how these are aligned in the formation stage to avoid MPA failure and to gain parties' commitment to the MPA (Gulati et al., 2012; Vanpoucke et al., 2014). As relationships between firms are relatively undeveloped in this early phase, and uncertainty about the future value of the MPA is high, the buyer has to build legitimacy with suppliers for the MPA (Human and Provan, 2000; Paquin and Howard-Grenville, 2013). The legitimacy of the MPA will determine whether it is accepted by all participating firms as a viable form of organising they are able to commit to and to fully support (Zimmerman and Zeitz, 2002). Prior research found that if an alliance is perceived as legitimate by participating firms it will improve cooperation and commitment and is, as such, vital to the survival of a new MPA (Kumar and Das, 2007).

Second, during the formation of a MPA, parties establish norms and develop formal contracts to govern and safeguard the buyer-supplier MPA (Cao and Lumineau, 2015); however, until now, little knowledge existed on how this is accomplished. This is an important omission given that governance mechanisms are key in safeguarding the relationship from opportunism. During the formation stage, parties form perceptions about each other's behaviours, such as trustworthiness or opportunism (Vanpoucke et al., 2014). Hence, events in the formation stage may have a direct impact on the development of governance mechanisms. However, further research is required to fully understand and unpack this process (Arino and Ring, 2010). After this overview of the relevant literature on MPAs as well as buyer-supplier MPAs and the formation stage of new relationships we now turn to the empirical background of the thesis.

## 2.2. Empirical background

This section provides detail on the empirical background for both studies. The buyer-supplier MPA studied in this thesis was established as part of a project seeking to build a new nuclear power station in the UK, Hinkley Point C (HPC). The first part of this section discusses the wider context of nuclear projects in the UK (section 2.2.1.), and the second part discusses the buyer-supplier relationships in this context and the move toward MPAs (section 2.2.2.).

### **2.2.1. A new nuclear renaissance in the UK**

In January 2008, the British government declared the beginning of a new nuclear renaissance. The ministry under Gordon Brown released a White Paper that concluded that nuclear was the preferred response to the country's energy 'trilemma': a secure supply of energy that is



affordable to consumers and supports climate targets, which aim to reduce carbon dioxide emissions by 80% by 2050 as compared to 1990 levels (Department for Business, Enterprise & Regulatory Reform, 2008). The decision was confirmed in October 2010 with the expressed intention to build eight new nuclear power stations to support the expiry of existing nuclear plants by 2035, which covered 15 per cent of the country's energy needs (Department for Energy & Climate Change, 2010; Birmingham Policy Commission, 2012). In line with the announcement, the government made clear there would be no public funding, but that it was for private sector companies to construct, operate and commission new nuclear plants (Vaughan, 2010). Subsequently, three consortia showed an interest: NNB Genco, consisting of one French energy provider and one British; Horizon Nuclear Power consisting of two German energy providers; and NuGen containing a Spanish and a Belgium energy firm (Birmingham Policy Commission, 2012).

In December 2011, the Fukushima nuclear disaster garnered attention worldwide. An earthquake-induced tsunami triggered chemical explosions, and a knockout of the reactor cooling system irrevocably caused the leakage of nuclear radiation (BBC, 2021). The incident augmented concerns and escalated safety demands for nuclear new builds (Birmingham Policy Commission, 2012). Investors feared a stark increase of construction costs and time. Seeing the economic case for new nuclear declining, each consortium also saw changes in its ownership structure with firms abandoning and selling their stakes (Birmingham Policy Commission, 2012). After British Gas owner Centrica decided to leave the NNB GenCo consortium, its partner firm *Électricité de France* (EDF) a state-owned French energy firm started discussions with China's state-owned General Nuclear Power Group (CGN), while continuing negotiations with the British government over the strike price (Carrington, 2013).

In 1990, the UK liberalised the energy market, allowing private providers to compete and electricity prices to be determined based on supply and demand (Birmingham Policy Commission, 2012). The increased competition between providers led to cost reductions for consumers, but it also increased the investment risks for electricity providers. While the operating (variable) cost for nuclear stations is comparably low, the upfront construction cost imposes a high capital (fix) cost on investors. Prices in the wholesale market are strongly determined by the cost of the most expensive source needed to meet demand, which is typically gas (Birmingham Policy Commission, 2012). In periods of low gas prices, the cost of nuclear exceeds its revenues, thus making investments highly risky. To safeguard nuclear investors from this risk, the British government agreed to pay the difference to a predetermined strike price in a so-called contract for difference. In the 2013 contract for difference with NNB Genco, the British government agreed to a strike price of £92.50 for each megawatt hour (MWh) produced over a period of 35 years (House of Commons, 2017). Should wholesale electricity prices fall below this strike price, electricity bill-payers would pay the difference.

### **2.2.2. The case for Hinkley Point C**

In September 2016, the Department for Business, Energy and Industrial Strategy (BEIS) approved the construction of the first nuclear new build, HPC, located in the south-west of England (NAO, 2017). This happened after the new government under Prime Minister Theresa May requested a review of the project because of security concerns over Chinese involvement (BBC, July 2016). HPC would be built by NNB Genco, which now consisted of both EDF (66.5%) and CGN (33.5%) (NAO, 2017). In an oral statement to Parliament, BEIS explained that NNB Genco's £18bn investment would satisfy 7 per cent of the country's

energy needs for 60 years. It was further anticipated that the construction project would create 26,000 new jobs in the country and 64 per cent of the overall investment sum would be secured by UK businesses. All in all, a good investment for the country. The anticipated commercial onset day was 2025 (Moylan, 2016).

Shortly after final approval was given, the decision evoked an inquiry by the House of Commons (13.11.2017) because of concerns that the economics for new nuclear projects had deteriorated since 2008: alternative low-carbon technologies had become cheaper, estimated construction costs had increased and fuel price projections had fallen (NAO, 2017). Additionally, three projects using the same European Pressurised Water Reactor (EPR) technology planned for HPC had experienced cost and time overruns, which further deepened concerns. A delayed commercial onset day, even if not involving additional payments to suppliers, would still significantly increase costs for investors who would continue to pay interests on debts for a longer period before receiving any revenues (Birmingham Policy Commission, 2012). For HPC, the first of several new nuclear power stations to be built in the UK, the risks were particularly acute, as project overruns on time and budget would ‘almost certainly see a loss in public confidence and curtailment of the program’ (Birmingham Policy Commission, 2012, p. 60). Therefore, it was seen as crucial by the government and HPC shareholders that HPC would adopt lessons learnt from the problems other EPR projects had faced, in particular the nuclear project Flamanville in France.

With the case for HPC weakening, the House of Commons (2017) urged that the UK government should put a plan in place to secure the wider economic benefits from HPC, such as jobs and skills creation and the opportunities presented to UK businesses. It further emphasised the risks associated with a project delay and requested that the Low Carbon Contracts Company (LCCC), as a government representative, have ‘the skills, capacity and

access rights that enable it to monitor delivery' on HPC effectively (House of Commons, 2017, p. 7). With the project being already delayed by approximately two years (observation, Oct. 2018), and an estimated cost increase of £2 billion in two years since the project started (Vaughan, 2017), it was vital for HPC to explore ways in which costs and time could be saved. To strengthen the case for upcoming nuclear new builds, HPC not only had to set the scene as a successful project, but it also needed to upskill the British workforce to help keep investment in the country.

### **2.2.3. A new way of working**

In mid-2017, a Commercial Team, including the Commercial Director and Senior Commercial Lead at HPC, recognised that potential synergies were missed on the mechanical, electrical and HVAC (heating, ventilation, air-conditioning) contracts (Board Paper, Dec. 2017). The December 2017 Board Paper described how, traditionally, these contracts were awarded according to the different trades of mechanical, electrical and HVAC (MEH), which is referred to as siloed or vertical contracting. The siloed approach meant that during installation of the equipment on the nuclear construction site, formal handovers would have to take place between firms. These handovers would usually take place before and after a supplier accessed a room to install equipment. Given that plan was for the new nuclear power station to consist of 4,000 rooms, it was anticipated that the formal handovers would increase project time and, with this, cost. Additionally, it was found that on previous projects the vertical approach meant that firms would narrowly focus on achieving their own contractual KPIs (key performance indicators) in relation to time, which would often harm the quality and safety of already installed equipment (Senior Commercial Lead, 2018). The Commercial Team concluded that a horizontal contracting approach would help overcome these

challenges. Suppliers responsible for the installation of MEH equipment would be organised under a single MPA, enabling them to deliver their work in parallel and under shared KPIs. It was anticipated that, through a MPA, project cost and time could be reduced while at the same time quality and safety would improve.

At the same time, the Commercial Team was concerned about the implications of introducing an MPA. While some members of the team knew that MPAs had been used in the oil and gas sector, they had not been used much in the construction sector before and not at all for the construction of new nuclear sites. Instead, for over 200 years it had been a common practice in the construction sector in the UK to employ suppliers on a dyadic master-servant basis (Watermeyer et al., 2010). These master-servant contracts were often target or fixed price arrangements whereby the buyer sought to shift as much commercial risk as possible to suppliers. This meant that in turn suppliers looked to blame any changes to the pre-agreed work back on the buyer via claims. All in all, the traditional master-servant working arrangements had been found to foster a hostile working environment with each party trying to extract gain from the relationship on the expense of the other. The shift towards an MPA contract, however, required a much more collaborative relationship (Suprpto, Bakker, Mooi, et al., 2015). The suppliers would take on responsibility for the coordination of work between each other for a significant part of the project which would last for 6 years and an overall contract volume of £2bn, which accumulated 10% of overall projected project cost in 2018. To successfully deliver the work the buyer and all supplier firms would have to collaborate closely and well, focusing all efforts on the successful delivery of the project and not the extraction private gains. Scholars and practitioners alike have stressed that the success of a MPA strongly relies on trust between the buyer and suppliers (Hietajärvi & Aaltonen, 2018; Suprpto, Bakker, & Mooi, 2015; Scott, 2001). However, trust “is unlikely to exist at the

outset” due to a lack of prior relationship experience or competition, and instead firms are required to “make an initial leap of faith” (Scott, 2001, p. 7; Hietajärvi & Aaltonen, 2018). This leap of faith is particularly difficult given the traditionally adversarial nature prevalent in the construction sector (Scott, 2001).

The formation of the MPA meant the introduction of a new contractual form that (a) the contracting parties were relatively unfamiliar with and whose success is still questionable (Jefferies et al., 2006, 2014) and (b) required a sea change in behaviours away from an adversarial, win-lose mentality towards a collaborative win-win approach (Deutsch, 1990). In December 2017, the buyer started discussions with suppliers on the formation of a new MPA.

In November 2017, HPC (thereafter referred to as LPB) arranged a conference call with four suppliers: the electrical joint venture between ElectricalCoA and ElectricalCoA, as well as installation services firms MechanicalCo and HVACCo, to understand their receptiveness of the idea of a MPA (see Table 1 for an overview). They each had been awarded preferred bidder status for the respective work packages. In light of the positive response from suppliers in the conference call, LPB organised a joint workshop in December 2017. Formal negotiations started in April 2018 with the aim to be concluded in September 2018. However, the negotiation of the MPA contract proved to be more complex than anticipated and continued until June 2019, when the alliance contract was signed. On the same date, suppliers signed a separate contract, which created a horizontal MPA between suppliers only. The establishment of a separate legal entity between suppliers was required by LPB to ensure joint and several liability for the installation work. The next section discusses the methodology of the thesis and the role of the researcher in documenting the formation stage of the MPA that lasted until June 2019.

	<b>ElectricalCoA</b>	<b>ElectricalCoB</b>	<b>MechanicalCo</b>	<b>HVACCo</b>	<b>SupportCo</b>
<b>Ownership</b>	Subsidiary of UK public limited company	Family-owned for over 100 years	Subsidiary of UK public limited company	UK subsidiary of South Korean conglomerate	UK subsidiary of French privately owned MNC
<b>Revenue (parent, in 2018; circa)</b>	\$10.5bn	\$650m	\$6.5bn	\$15.6bn	\$3.9bn
<b>Number of employees (parent in 2020; circa)</b>	>20,000	< 3,000	> 30,000	> 40,000	> 40,000
<b>Scope of work</b>	Installation of electrical components		Installation of mechanical equipment	Installation of HVAC components	Scaffolding and other support services
<b>Contractual entity prior to MPA</b>	Non-equity joint venture		Equity joint venture with French manufacturer	Consortium with two French manufacturers	No contract with LPB prior to MPA.

**Table 1** *Overview supplier background*

## 2.3. Methodology

This section reviews the ontological and epistemological choices underpinning the work in this thesis (section 2.3.1). It further discusses the choice of method adopted with specific reference to the methods used in extant MPA literature and given the empirical challenges/opportunities of the chosen research site (section 2.3.2). Finally, it provides detail on the sampling or case selection logic (section 2.3.3) on the data collection methods and sources of data (section 2.3.4).

### 2.3.1. Ontology and Epistemology

Research in the social sciences is based on certain assumptions about the world, referred to as epistemology and ontology. Ontological assumptions are concerned with whether the reality

under investigation is independent, external and objective to human cognition (objectivism), or if it is subjective, internal and thus influenceable by the researcher (subjectivism) (Collis and Hussey, 2003; Saunders et al., 2012). The ontological stance of the researcher informs their epistemology, which is concerned with the origin of knowledge (Easterby-Smith et al., 2015). A researcher with an objective ontology will usually choose a positivistic outlook, which is based on the believe that the social world is based on facts, which can be revealed to derive law-like generalisations, similar to what is produced by researchers in the natural sciences. Contrarily, a subjectivist outlook informs an interpretivist epistemology, which usually takes form in a social constructivist approach. Here, the social scientist believes that there is no single, generalisable truth, as social phenomena emerge from the subjective perceptions and respective actions of social actors (Saunders et al., 2012). As social interactions between individuals, groups, or organisations are a continual process, social phenomena are in constant state of revision. Hence, the social constructivist captures reality by investigating the underlying details of the situation and the way it is constructed and re-constructed by its inherent actors at certain points in time (Saunders et al., 2012).

The research philosophy which informs this study is situated in between both extremes. Critical realism refers to any position that maintains that an objectively knowable, and mind-independent reality exists, whilst acknowledging the role of subjective perceptions and cognition (Kwan and Tsang, 2001). Additionally, critical realism stresses a multi-level reality (Adamides et al., 2012). In the MPA context of this thesis, this means that behaviours of an MPA are the emergent result of the single organisational behaviours, which in turn are instigated by the behaviours of the individuals embedded in these organisations, which again, are formed by their personality traits, and influenced, for instance, by the cultural background and so on (Adamides et al., 2012). In acknowledging both, a single reality and the perceptual differences between human beings, this approach suggests that a coherent picture of a social



reality can be obtained in the triangulation of several perceptions. In order to do so, the use of case study research has been advocated as it aids in capturing subjective variations in sense-makings of situations and processes (Adamides, 2012; Langley et al., 2013).

The critical realist position is selected for this piece of work as the researcher believes that the organisations and their respective relationships are independent of individuals' interpretations. However, the perception of conflict and its management are affected by human interpretation and are thus to some extent constructed. Regarding the epistemological considerations, the researcher accepts the value of multiple data sources, to ensure higher levels of objectivity.

### **2.3.2. Research strategy**

To investigate the formation of the new MPA between December 2017 and June 2019, the thesis author selected a longitudinal single case study approach. The chosen method both supplemented prior MPA work and suited the opportunities and challenges inherent to the chosen research site.

Extant MPA literature has been either informed by theoretical or conceptual work (e.g., Das and Teng, 2002; Zeng and Chen, 2003; McCarter and Northcraft, 2007) or cross-sectional studies utilizing surveys (e.g., García-Canal et al., 2003; Lazzarini et al., 2008; Lioukas and Reuer, 2020), whereby a few studies adopted a multimethod approach in which survey design was informed by a number of interviews (e.g., Mishra et al., 2015; Fonti et al., 2017). Other studies solely utilized archival data to either draw cross-sectional conclusions (e.g., Li, Eden, Michael A Hitt, et al., 2012) or longitudinal insights (e.g., Heidl et al., 2014). The absence of an in-depth longitudinal multimethod case approach in MPA literature was noted by several authors (García-Canal et al., 2003; Lioukas and Reuer, 2020) thus calling for “research

designs that allow for more in-depth observations of [MPA] dynamics (Zhang and Guler, 2020, p.31). For instance, Fonti et al. (2017, p.380) explained that while it was their intention to collect longitudinal data ‘the complexity of securing repeated access to large corporations and government agencies made collecting longitudinal data unrealistic’ and the study was built on a cross-sectional data instead, however, the authors stress that longitudinal data was required to “truly unpack” social dynamics and relationships in MPAs, thus calling for future research to do so.

The nature of the research questions as well as the lack of in-depth longitudinal case research and the opportunities of the chosen research site determined the selection of a single case approach. Adopting a single case approach enables the immersion in and collection of rich data that enables the researcher to get closer to theoretical constructs, which is particularly important in the context of longitudinal research (Siggelkow, 2007). Being able to more directly draw out how key concepts and causal relationships play out over time is a key advantage of a single case approach over large sample empirical work (Siggelkow, 2007; Langley et al., 2013) The single case approach allowed the collection of a rich data set comprising non-participant observations, interviews, contracts and archival data on the formation of the aforementioned MPA consisting of one buyer and five suppliers, as outlined in Table 1. It also allowed us to collect data from all MPA firms, which had been difficult to achieve in prior research (García-Canal et al., 2003), whereby inferences to the overall relationship were drawn based on the perceptions of a single participating firm (Lumineau and Oliveira, 2018).

The multi-method data set facilitated the triangulation of different data sources (Podsakoff and Organ, 1986). The thesis author’s fieldwork allowed data collection while the MPA was in ‘live development’, enabling her to capture real-time data on decisions,

perceptions and expectations. It was a unique opportunity to uncover the social process investigated in this thesis, namely of legitimation and the development of formal and informal governance mechanisms, rather than merely presenting a cross-sectional perspective. The selected methodological approach thus addressed a long-standing request by scholars for more longitudinal, case study research as well as research on matched buyer-supplier relationships (Nyaga et al., 2010; Ketokivi and Choi, 2014; Dong et al., 2016).

### **2.3.3. Case selection**

The selected case had several unique qualities that made it a logical candidate for sampling (Shah and Corley, 2006). First, for over 200 years it has been a common practice in the construction sector in the UK to employ suppliers on a dyadic master-servant basis (Watermeyer et al., 2010). The shift toward more collaborative relationships in the form of MPAs has only occurred in recent years (Suprpto, Bakker, Mooi, et al., 2015). This means that firms are often not used to this novel supply structure, the success of which is still being questioned (Jefferies et al., 2006, 2014). Hence, the formation of a MPA to replace more traditional dyadic arrangements still requires legitimation from the parties involved, which is the focus of study 1. It also means that the knowledge on the governance of buyer-supplier MPAs is still immature and, hence, events in the formation stage impact the design of governance mechanism, which is the focus of study 2.

Second, the research context was a large MPA with initial contract value of approximately \$1bn and the potential to deliver over \$2.6bn until project completion in 2025. Following Schilke and Lumineau's (2018, p. 2849) proposition that 'the contracting process may play a less central role in simpler, shorter, or more exploitation-oriented types of alliances', the selected in-depth case study required a longer type of relationship: a complex

construction project lasting over a decade to complete. Hence, the selected MPA represented an under-researched area as prior work mainly focused on smaller firms delivering products and R&D activities (Lavie et al., 2007; Li, Eden, Michael A Hitt, et al., 2012; Mishra et al., 2015).

Third, the selected MPA requires suppliers to be jointly and severally liable for each other's performance (MPA contract, June 2019). Because of this requirement, suppliers are often reluctant to commit to a MPA, particularly when there is no prior shared working history, and knowledge of partners' future performance is limited (Lloyd-Walker et al., 2014; Hietajärvi and Aaltonen, 2018). Hence, the legitimation of the MPA, as a new supply structure, as well as the careful drafting of governance to protect parties from opportunism, became particularly important. Overall, given these reasons, the selected MPA promised to be a fertile research setting. The next section discusses the data collection methods and data sources obtained by the thesis author.

#### **2.3.4. Data collection and data sources**

The research combined primary (observations, interviews) and secondary (contracts, board papers, emails, personal meeting notes and power point slides; government and industry reports) data sources, which the thesis author collected both live and retrospectively between 2015 and 2021 (see Table 2 for an overview). She collected data using a three-step recursive strategy. At a supplier event organised by LPB in November 2017, she gained initial insights into the company's desire for a more collaborative contracting approach. At the event, she networked with several individuals working in LPB's commercial and supply chain teams. In August 2018, she was invited to a conversation with LPB's commercial director, who described LPB's intentions to establish a MPA with five suppliers. At this meeting, she

received detailed, confidential secondary material, including LPB board papers and presentation slides from a meeting with the UK government, all providing extensive background on LPB's vision in relation to the MPA. After careful study, the thesis author conducted an interview with a senior member of the LPB's negotiations team, to clarify open questions and to gain an understanding of current challenges in the formation process.

In October 2018, the thesis author was granted access to LPB's main office in Bristol, Bridgewater House, where she observed, over numerous visits, the formation of the MPA until contract signature in June 2019. In the next step, the researcher was embedded within LPB to conduct a comprehensive series of non-participant observations of internal LPB meetings as well as of meetings between LPB and the five suppliers. As the observations progressed, the researcher was also able to join meetings between suppliers only. The non-participant observations lasted from October 2018 until June 2019, when the MPA and the supplier contract were signed (marking the end date of data collection for the study). She continued her observations until May 2021; however, that data was not used for the studies in this thesis.

During meetings, the thesis author took extensive notes of activities and observations including direct quotes from meeting participants, which were preserved in a detailed memo within 24 hours after the meeting. Additionally, she gathered any supporting secondary data (e.g. meeting slides) and conducted semi-structured interviews to clarify open questions while she was in the field. Consequently, she was able to collect a rich data set documenting the formation of the MPA while it was taking place, the ongoing negotiations shaping the contract between the five parties and formal and informal mechanisms employed by the buyer to steer the whole process.

The third step of data collection started after careful review of the observational data already collected to deepen her understanding of the formation process. She conducted two series of semi-structured interviews about the contractual history of each supplier as well as the challenges each supplier faced during the formation process. During this time, she acquired all contractual documents between the suppliers and LPB prior to the formation the MPA. The interviews also enabled her to corroborate and refine emerging findings with informants during data analysis, and lasted from December 2018 until October 2020.

To gather reliable and objective information from her informants (Alvesson, 2003), she interviewed stakeholders with different lengths of tenure in the MPA, in disparate hierarchical and functional roles. She was able to access diverse perspectives that allowed the triangulation of data, helping to overcome informants' memory lapses and distortion. To minimise respondents' biases (Golden, 1992), she designed an interview protocol (Alvesson, 2003), which was adapted to the characteristics of different informants and refined over time as the research progressed and theoretical constructs emerged. This final step facilitated an in-depth understanding on the formation process and the relevant concepts for the studies in this thesis. Table 2 provides an overview of the data collected.

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*Data sources*

*Amount and sources*

*Use in analysis*

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<b>Secondary data</b> (414 pages)	6 LPB board papers (86 pages) 10 Presentation material (166 slides) 2 Contract manuals (63 pages) 7 Emails Meeting notes (1st MPA supplier workshop; 7 pages) 3 policy reports (85 pages)	Familiarisation with LPB language, LLPB vision and strategy for the MPA, story line of formation process including changes in strategy between board papers. Understanding of industry and political background of project and resulting pressures on LPB.
	3 Tender documents (177 pages)	<i>Not used in this thesis</i>
<b>Observations</b> (290 hours)	159 meeting hours between October 2018–June 2019	Gathering data on informal governance and impact on supplier cooperation or competition over time.
	Over 131 hours of meetings between July 2019 and May 2021	<i>Not used in this thesis</i>
<b>Interviews</b> (44 interviews, 32 hours ~ 320 pages verbatim)	<b>First round (Sep. 2018–June 2019)</b> 11 semi- and unstructured interviews with LPB and supplier informants all involved in the negotiations and formation process of the MPA including solicitors, commercial managers, and supplier project directors.	Clarification about ongoing processes and their impact on vertical and horizontal relationships.
	<b>Second round (Dec. 2019–Oct. 2020)</b> 16 semi-structured interviews with LPB and supplier informants including solicitors, engineers, commercial managers, and supplier project directors.	Triangulation of initial findings, gathering of further information to address data gaps, collect all contracts prior to MPA and information on prior history between LPB and suppliers.
	<b>Informal conversations (Jul. 2019–Feb 2021)</b> 17 informal conversations with informants in the field	<i>Not used in this thesis.</i>

<b>Contracts</b> (1,547 pages)	<p><b>Contracts pre-MPA</b></p> <p>3 early consulting contracts (383 pages)</p> <p>3 works contracts (373 pages)</p> <p><b>Contracts MPA formation</b></p> <p>Statement of intent (3 pages);</p> <p>Memorandum of understanding (31 pages)</p> <p>5 consulting contracts (465 pages)</p> <p>MPA contract template (ca. 55 pages)</p> <p>MPA contract including appendices (183 pages)</p> <p>Supplier contract (54 pages)</p>	<p>To further understanding about prior vertical contracting approach used by LPB, to draw insights on differences between former contracts and MPA contract, comparison of MPA template with MPA final version to understand context specific changes</p>
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**Table 2** *Main data sources and use*

The thesis author was able to obtain a comprehensive data set on the formation of the buyer-supplier MPA. The data analysis was different for each of the two studies and will be discussed in more detail in their respective sections in Chapters 3 and 4. The next chapter in this thesis, Chapter 3, contains study 1 of this thesis.



# **Chapter 3: The legitimation of a multiparty alliance**

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<b>Statement from Candidate</b>	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature.		
<b>Signed</b>	Renate Taubeneder	<b>Date</b>	20 Nov. 2021

## THE LEGITIMATION PROCESS OF A NEW MULTIPARTY ALLIANCE

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## ABSTRACT

This book chapter explores the process of legitimizing a new multiparty alliance (MPA) between one buyer and five suppliers. While this type of MPA has become increasingly common in practice to deliver a range of highly complex products and services, academic literature has tended to focus on other forms, including consortia, proprietary standards, and joint ventures, which focus primarily on technical innovation (Lavie et al., 2007; Li, Eden, Michael A Hitt, et al., 2012; Mishra et al., 2015). The buyer-supplier MPA is distinct insofar as it is governed by two contracts (a vertical contract between the buyer and the suppliers, and a horizontal contract between the suppliers), and therefore introduces dynamics that would not be present when studying either dyadic vertical buyer-supplier relationships or horizontal strategic alliances alone.

Our in-depth, longitudinal case study, drawing on observations, interviews, site visits, board papers, and archival data, reveals how the formation of a new buyer-supplier MPA was initiated through a mechanism referred to as theorization: The buyer starts by problematizing conventional dyadic contracts, and introduces the buyer-supplier MPA as a novel and superior solution. The subsequent legitimation process was an interactive negotiation that occurred across both the vertical and horizontal relationships and addressed dimensions of moral and pragmatic legitimacy. The longitudinal nature of our study enabled us to show that the legitimation process is characterized by episodes of legitimacy build up, break down, and repair, but that both types of legitimacy are needed before contract signature. We further found distinct drivers that support the build-up of each type of legitimacy.

**Keywords:** *Legitimation; multiparty alliance; inter-organizational relationships; cooperation; longitudinal study*

## INTRODUCTION

*“Because of the complex funding of [this project], we had to procure the contracts in line with the original strategy, but we recognized that particularly for the mechanical and electrical parts of the project, the teams of the contractors were working in a highly integrated space, and coming off the back of a major project, for me that was a recipe for claims. Because if a supplier was delayed and he could not hand over, the next in the queue would say, ‘You have delayed me, here is a claim. Not my fault gov,’ and ultimately the client just pays because the client has to manage those interfaces.” (Commercial Director, LPB)*

Strategic alliances are cooperative arrangements between two firms that aim to pursue mutual strategic objectives (Das and Teng, 2000). Establishing strategic alliances has become a central strategy to many firms as it can enable them to enter new markets quickly, to gain new competencies or resources, to share risk, or to develop new technologies (Eisenhardt and Schoonhoven, 1996). Multiparty alliances (MPAs), defined as inter-organizational arrangements involving three or more firms (Lavie et al., 2007) and having both vertical and horizontal partners (Lazzarini et al., 2008), have become an increasingly popular choice for buying organizations seeking to consolidate formerly discrete dyadic relationships with suppliers to deliver large inter-organizational projects. These buyer-supplier MPAs are distinctly different from R&D consortia, supplier networks, or multiparty production joint ventures, which focus primarily on technical innovation (Lavie et al., 2007; Li, Eden, Michael

A Hitt, et al., 2012; Mishra et al., 2015), as they involve both vertical buyer-supplier and horizontal supplier-supplier relationships (Lazzarini et al., 2008). Their purpose is the delivery of services rather than the development and provision of goods (Aaltonen & Turkulainen, 2018; Jefferies et al., 2006; Suprpto, Bakker, Mooi, & Hertogh, 2016).

Prior strategy literature has argued that strategic alliances require interpartner legitimacy (Kumar and Das, 2007). Interpartner legitimacy refers to the acceptance and support of an alliance by its member firms, and has been found vital to the formation and survival of new organizational structures (Zimmerman and Zeitz, 2002; Persson et al., 2011; Paquin and Howard-Grenville, 2013). The acceptance of and commitment to the alliance itself by its constituent parties, but also of each of the partners by the other partner(s), is essential to the formation and survival of a new alliance (Kumar and Das, 2007). Legitimacy implies a congruency of values (Lagenspetz, 1992); hence, if a firm perceives its values to be aligned with the values of partnering firms, it will accept the decisions and behaviors of the other as their own (e.g., Kostova and Roth, 2002; Brenner and Ambos, 2013).

Legitimacy is vital to the formation of buyer-supplier MPAs, yet more difficult to establish due to the increased number of firms involved, when compared to dyadic alliances, and the unique structure consisting of horizontal and vertical ties (Jefferies et al., 2006; Hietajärvi and Aaltonen, 2018). First, most MPAs, often described as horizontal agreements, and found in high-technology industries, referred to as strategic alliances or joint ventures in which firms decide to collaborate on R&D or new product development (NPD) activities (e.g., Fonti, Maoret, & Whitbred, 2017; Mishra et al., 2015). In contrast to MPAs, buyer-supplier MPAs are initiated by a large buyer who wants to contract the coordinated services delivered by multiple suppliers (Suprpto et al., 2016). Often these suppliers have no prior history of working together, or are competing for similar types of work within or outside the

project (Lloyd-Walker et al., 2014; Hietajärvi and Aaltonen, 2018). These often competing interests mean that it is difficult for the buyer to legitimate the buyer-supplier MPA and achieve high levels of commitment from suppliers (Lloyd-Walker et al., 2014; Hietajärvi and Aaltonen, 2018). Hence, the buyer has to legitimate the MPA with suppliers, who are otherwise opposed to this shared working arrangement.

Second, extant MPA research has shown that exchanges between multiple parties imply indirect reciprocity (Das and Teng, 2002), which make these arrangements more vulnerable to opportunism and free-riding behaviors than dyadic exchanges (Zeng and Chen, 2003; Fonti et al., 2017). Social exchanges in dyadic relationships are based on direct reciprocity as expectations and obligations are established between two parties (Das and Teng, 2002). In a MPA, reciprocity becomes more indirect as buyer and suppliers feed their resources into a common pool with often ill-defined boundaries of who does what and when (Das and Teng, 2002; Fonti et al., 2017). This encourages social dilemma situations in which firms evaluate how much effort they should allocate to the MPA (Zeng and Chen, 2003). To maximize the utility of their own limited resources, firms may choose to free-ride on other partners' efforts while reducing their own (Fonti et al., 2017). The increased number of parties and resulting complexity make it more challenging to develop contracts that are explicit enough to monitor and safeguard the MPA from such opportunism (Lavie et al., 2007; Li, Eden, Michael A Hitt, et al., 2012). Hence, to safeguard their interests and to be able to commit to it, suppliers may take an active stance in shaping the terms and conditions of the buyer-suppliers MPA. However, prior legitimacy research has predominantly focused on the actions of the legitimacy seeker without acknowledging the work or the legitimacy audience. This is an important omission given that the success of a MPA depends on the commitment of all parties involved.

Our research question, therefore, is: *How does a buyer and its suppliers shape the legitimation of a novel buyer-supplier MPA?* To answer this question, we conducted a longitudinal case study on the formation of a new MPA between one buyer and five suppliers, delivering complex services at a nuclear construction site in the UK. We analyzed rich data sets comprised of both primary and secondary data in the form of observations, interviews, and archival data (including board papers) to answer our research question.

Our findings illustrate the legitimation processes underlying the formation of a new buyer-supplier MPA. In doing so, our study offers several contributions. First, we can show the importance of theorization to initiate the legitimation process (Tolbert and Zucker, 1996). Second, our longitudinal study illustrates that the legitimation process is shaped by both the buyer and suppliers equally, which creates episodes of legitimacy build up, break down, and repair as parties negotiate the legitimacy of the MPA. Third, our analysis highlights the drivers for moral and pragmatic legitimacy for the buyer and suppliers during the legitimation process. Finally, we contribute to knowledge by offering a longitudinal analysis of two understudied concepts: the buyer-supplier MPA and the formation stage of an alliance prior to contract signature.

The remainder is structured as follows. First, we review literature on legitimacy and the process of legitimation, highlighting the two dimensions particularly important to this process: moral and pragmatic legitimacy. The methodology section describes the research context, our approach to data collection and analysis, and leads to the presentation of our findings. We conclude by discussing the implications of our findings for existing work and provide avenues for future research.

## **THEORETICAL BACKGROUND**



## **Legitimacy and the process of legitimation**

Institutional theorists understand legitimacy as the perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions (Suchman, 1995). In other words, legitimacy is social approval, which enables the formation and survival of new structures (Zimmerman and Zeitz, 2002) and provides stability to institutions (Suchman, 1995). Early scholarly work on legitimacy focused on how an organization legitimizes itself within its broader external or societal environment (Meyer and Rowan, 1977; DiMaggio and Powell, 1983; Zucker, 1987). Legitimacy was found to be the driving force behind organizational strategies and structures as a firm's survival is dependent upon the support and acceptance of relevant stakeholders (Baum and Oliver, 1992; Dacin, 1997; Ruef and Scott, 1998). While this line of research often sees legitimacy as a static property, created in exchange with external audiences, more recent work focuses on legitimation as a process (e.g, Suddaby, Bitektine, & Haack, 2017), and the legitimation provided by internal audiences (Brown and Toyoki, 2013; Provan et al., 2014). In the case of buyer-supplier MPAs, internal legitimacy refers to the acceptance of the MPA as a viable form of organizing by all of the firms involved (Kumar and Das, 2007).

Processual work on legitimacy has defined legitimation as the “process that brings the unaccepted into accord with accepted norms, values, beliefs, practices, and procedures” (Zelditch, 2001, p. 9). Legitimation arises from the congruency and acceptance between the legitimacy seeker and its audience and, therefore, by definition, depends on consensus as a necessary precondition (Dowling and Pfeffer, 1975; Bitektine, 2011). Prior studies found that the attainment of legitimacy is an ongoing process of negotiation between multiple participants that each have a high degree of individual agency (Human and Provan, 2000; Suddaby et al., 2017).

A primary method of achieving legitimation is through a process of theorization (Greenwood et al., 2002; Suddaby et al., 2017), which consists of two dimensions: (i) the problematization of the status quo; and (ii) the “justification of a particular formal structural arrangement as a solution to the problem on logical or empirical grounds” (Tolbert & Zucker, 1996, p. 183). For example, Greenwood, Suddaby, & Hinings (2002) examined the role of professional bodies and theorization in the major changes in the accounting profession over a 20-year period. They found that the justification of the change was predominantly based on moral values while pragmatic legitimacy played a lesser role. The authors also queried whether this finding would hold true in more commercial environments, where approval of a new solution would be more dependent on efficiency logics (Greenwood et al., 2002).

Prior work on legitimation also lacks an investigation of how the legitimation process is shaped by all parties involved, and not just one “institutional entrepreneur” that single-handedly legitimizes a new venture or firm toward to an external audience (e.g., David, Sine, & Haveman, 2013; Sine, David, & Mitsuhashi, 2007). Hence, scholars have criticized prior work for artificially dividing the social world into legitimacy champions and their passive audience (Suddaby et al., 2017). It is therefore important to investigate the influential role of a buyer *and* its suppliers during the legitimation process to better understand how consensus between the values of the buyer and those of suppliers is achieved. Generally, theorization can be relevant to the legitimation of a new buyer-supplier MPA if firms problematize the previous dyadic organizational structures and convincingly confer the benefits of the MPA as a solution to these problems based on moral and pragmatic reasoning. The following section unpacks two types of legitimacy—moral and pragmatic—in more detail and discusses the potential implications for the legitimation process of a new buyer-supplier MPA.

## **Pragmatic legitimacy**

Pragmatic legitimacy “rests on the self-interested calculations of an organization’s most immediate audiences” (Suchman, 1995, p. 578). In Greenwood et al.’s (2002) study, pragmatic legitimacy depended on members seeing the functional superiority of the new organizational structure over the previous, problematized one. Kumar and Das (2007, p. 1434) reasoned that in the development process of strategic alliances, pragmatic legitimacy depended on members “see[ing] their involvement and contribution as furthering their own interests and the interests of the (larger) alliance.” In the justification of a new MPA this implies that the buyer and suppliers consider their involvement in and contribution to the MPA as advancing their own economic interests.

Pragmatic legitimacy is particularly important during alliance formation as it is here where partnering firms are most uncertain about the value they can expect from joining an alliance (Human and Provan, 2000; Kumar and Das, 2007; Paquin and Howard-Grenville, 2013). This uncertainty stems from two areas: (i) whether the anticipated alliance will generate the desired strategic value; and (ii) whether the partnering firms can and will contribute their fair share to support the undertaking (Kumar and Das, 2007). Hence, prior research suggests that to justify the MPA as the preferred solution, it is important that the buyer reduces uncertainty and communicates the expected value convincingly (Kumar and Das, 2007). However, in order for suppliers to accept the MPA as a preferred solution over a familiar (such as a dyadic) structure, the expected value might have to exceed the previous value given the additional horizontal threats inherent to MPAs due to indirect reciprocity (Zeng and Chen, 2003; Fonti et al., 2017). This may be unsustainable for the buyer, who sees the MPA as an opportunity to reduce costs (Jefferies et al., 2014). While prior studies have suggested that legitimation contains trade-offs between involved parties (Lee et al., 2017),

these studies offer a limited understanding of how competing pragmatic interests shape the internal legitimation process. This is important given that the buyer and suppliers may have diverging understandings of the necessary value to accept the MPA as a legitimate solution.

### **Moral legitimacy**

The second type of legitimacy necessary in the legitimation process has been termed “moral legitimacy,” and depends on judgments about whether the specific organizational structure is “the right thing to do” in terms of aligning with prevailing values and norms (Suchman, 1995, p. 579). It is important to note that despite its altruistic grounding, this legitimacy type is not entirely interest-free but reflects a pro-social logic, which differs deeply from narrow self-interest (Suchman, 1995). For instance, prior work showed that successful legitimation efforts require new organizational structures to appeal to the greater good, and the display of normative dignity by legitimacy seeking firms, such as by placing the legitimacy audiences interests above one’s own, and thus openly rejecting narrow self-interests (e.g., David et al., 2013).

Greenwood et al. (2002) found that moral legitimacy was obtained by appealing to the traditional values inherent to the legitimacy audience’s professional identity and demonstrating congruency with the proposed changes. Kumar and Das (2007) theoretically argued that during the formation of alliances, moral legitimacy depends on whether partners behave properly, and moral legitimacy would be harmed by the violation of justice norms, the use of inappropriate negotiation tactics, as well as opportunistic behaviors or a lack of cooperation.

Persson et al. (2011) uncovered that low levels of moral legitimacy in the formation of a network improved once uncooperative firms were removed, which also impacted on

pragmatic legitimacy as firms found it easier to agree on the strategic goals of the network. Of course, this option may not always be available within buyer-supplier MPAs, particularly where there is a lack of possible substitutes. Further, limited knowledge exists about how the MPA as a preferred solution is morally justified by both the buyer and suppliers. For instance, it may be difficult for the buyer to establish a narrative of how the MPA serves a greater good when it is abundantly clear that it does, in fact, provide much better commercial value to the buyer. Hence, this study fills this gap in prior studies to better understand the role of moral legitimacy during the formation of a new buyer-supplier MPA, and how buyer and suppliers influence the legitimation process.

## **METHODS**

To provide an in-depth study of how buyer and supplier firms shape the legitimation process of a new MPA, we adopted a longitudinal single case study approach to collect rich data (Lee et al., 1999; Siggelkow, 2007). Real-time field observations, interviews, and archival data enabled us to triangulate different data sources and to include each participating firm's view (Podsakoff and Organ, 1986). The selected method also meets persistent calls for longitudinal case study research capturing both buyer and suppliers' perspectives in the same organizational structure (Lumineau and Oliveira, 2018).

### **Research setting and case selection**

To study a MPA's legitimation process, we selected a MPA between one large project buyer (hereafter referred to as LPB) and five suppliers (Table I) delivering complex services at a large nuclear construction project in the UK. LPB was established in 2008 as a subsidiary of a

large French electricity company and a Chinese nuclear energy firm to coordinate the design, construction, and commissioning of a new nuclear power plant in the UK. The timeframe for this study is from December 2017, when LPB approached suppliers with the intention of changing the siloed contracting approach, until June 2019, when the MPA contract was signed.

Our case selection was based on the following key criteria, which made it a logical candidate for sampling (Shah and Corley, 2006). First, for over 200 years it has been a common practice in the construction sector in the UK to employ suppliers on a dyadic master-servant basis (Watermeyer et al., 2010). The shift toward more collaborative relationships in the form of MPAs has only occurred in recent years (Suprpto, Bakker, Mooi, et al., 2015). This means that firms are often not used to this novel supply structure whose success is still questioned (Jefferies et al., 2006, 2014). Hence, the formation of a MPA to replace more traditional dyadic arrangements requires legitimation among parties involved, who may have also different expectations what a MPA should look like and what it can deliver.

Second, scholars as well as practitioners stress that the success of a MPA strongly relies on trust between the buyer and suppliers (Hietajärvi & Aaltonen, 2018; Suprpto, Bakker, & Mooi, 2015; Scott, 2001). However, trust “is unlikely to exist at the outset” due to a lack of prior relationship experience or competition, and instead firms are required to “make an initial leap of faith” (Scott, 2001, p. 7; Hietajärvi & Aaltonen, 2018). This leap of faith is particularly difficult given the traditionally adversarial nature prevalent in the construction sector (Scott, 2001). Hence, parties rely on the legitimation of the MPA with all firms involved to gather support for and commitment to the new organizational structure. Given these reasons, we found the selected MPA to be a fertile research ground to investigate the legitimation process.

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*Please insert Table I about here*  
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### **Data collection and sources**

Our study combined primary data (observations, interviews, and site visits), secondary data (board papers, emails, personal meeting notes, presentation slides, and government and industry reports) sources, which we collected both live and retrospectively between 2017 and 2020 (Table II). We collected data in three stages.

At first, in November 2017, two researchers attended a supplier event organized by LPB's parent company. At the event, we networked with several individuals working in LPB's supply chain and commercial teams, to help us build up an initial understanding of the supply chain and contracting processes at the project. In August 2018, we were invited for a conversation with LPB's commercial director, who informed us about LPB's plans to establish a MPA with five suppliers. During this meeting, we obtained confidential presentation slides and board papers, summarizing LPB's intentions and strategy with regards to the MPA formation. This helped us familiarize ourselves with the context and language used, but also to better understand LPB's vision with regards to the MPA, and challenges thus far.

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*Please insert Table II about here*  
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Second, after carefully studying the obtained materials, the lead researcher was embedded at LPB to observe the formation of the MPA in real time. She conducted non-participant observations of internal LPB meetings, meetings between LPB and suppliers, as

well as internal supplier meetings between October 2018 and June 2019 (marking the formation phase of the MPA). During this time, she also collected any supporting secondary data (e.g., meeting slides, emails, contracts, board papers), to complement the observational data and to triangulate possible findings. She also conducted interviews to clarify open questions or to gather any additional information about the MPA formation.

Third, after MPA contracts were signed, the lead researcher conducted semi-structured interviews to corroborate and refine emerging findings with informants from the field. To ensure the reliability and objectivity of findings (Gibbert and Ruigrok, 2010), she interviewed both supplier's and buyers' informants from different functional roles and hierarchical roles and employed an interview protocol (an example can be found in Appendix C). All interviews were recorded and transcribed, and subsequently reviewed by the respective informants to check for accuracy. Finally, we maintained a database with all data sources used in the analysis to increase transparency and reliability. Further information on the meetings observed and interviews collected can be found in Appendices A and B.

### **Data analysis**

In analyzing our data, we followed the principles of open-ended, inductive theory-building (Corbin and Strauss, 2012), iterating between data and theoretical constructs (Maanen, 1979). The analysis included several phases. The first phase began during fieldwork: As part of her formal recording of meetings, the lead researcher added a section on key observations, which comprised the main events and actions/reactions by parties during meetings and related these to possible theoretical concepts of interest, such as conflicts or legitimacy. In the second phase, we imported all data into NVivo, a qualitative data analysis software, to create an integrated and chronological database, consisting of observations, interview transcripts, and



archival documents. We first coded the board papers, presentation slides, supplier notes, and any other materials relating to the problematization of the previous organizational structure. We then coded the observations and secondary data for moral and pragmatic legitimacy. For pragmatic legitimacy, we coded segments that illustrated financial interests of firms or saw the MPA as a superior organizational structure based on prior literature. We found commercial risk to be an emergent theme and added it to subsequent analysis. For moral legitimacy, we coded behavioral values that saw the MPA as the right thing to do beyond self-interested motivations and cooperative behaviors.

The initial findings informed our interviews with key informants from the field to verify accuracy and gather additional information, such as the events occurring before the fieldwork started. In the second round of coding, we coded the interviews, and subsequently developed a longitudinal process consisting of seven episodes that marked phases of legitimacy build up, break down, or repair. In defining the episodes we followed Ring & Van De Ven's (1994, p. 112) suggestion of “critical incidents when parties engage in actions related to the development of their relationship.” The lead author coded each data source individually before discussing it with the other three authors. This ensured not only a high degree of inter-coder reliability, but also a detailed understanding of the dataset across the author team. An example of a coding tree can be found in Appendix D.

## **FINDINGS**

We wanted to understand how buyer and suppliers shaped the legitimation process of a new MPA. Our analysis discerned three distinct types of episodes occurring in the legitimation process: (i) episodes in which legitimacy was built (episodes 1 and 2); (ii) episodes in which

legitimacy was harmed (episodes 3, 5, and 6); and (iii) episodes in which legitimacy was repaired (episode 4 and 7). Table III provides an overview of episode 1 in which the buyer first problematized the current dyadic structure, and episode 2 in which the buyer justified the new MPA structure based on moral and pragmatic reasoning. Table IV provides detail of the episodes that followed subsequently in the legitimation process. Both tables contain empirical evidence from the data, which is referred to in the text via numbering (e.g., [3]).

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*Please insert Tables III and IV about here*  
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### **Episode 1: Supplier workshop (December 2017)**

In December 2017, LPB invited four suppliers selected as preferred bidders for the work packages connected to the installation of electrical, mechanical, and HVAC (heating, ventilation, air-conditioning) equipment in the nuclear power plant. The installation work was expected to last over six years, and its estimated value was \$2bn (value as of April 2018). The highly interdependent nature of the installation work, which required suppliers to install equipment across 4,000 rooms in 72 buildings, meant that large time and cost savings could be achieved if suppliers were able to deliver the work in parallel (Board Paper, Dec. 2017). However, the separation of the work based on the dyadic structure did not allow this, and instead required formal handovers between trades and meticulous planning work by the buyer to sequence the work of suppliers (Senior Manager, LPB). To overcome these anticipated issues, LPB wanted suppliers to deliver the work in a MPA to enable the benefits from parallel installation and joint planning (observation, Oct. 2018; Board Paper, Dec. 2017)

In the workshop with suppliers in December 2017, LPB first provided an overview of the current structure, which it then problematized by: (i) highlighting the challenges within

this approach [Table II: 1,2]; and (ii) the subsequent implications for project success if these challenges remained unaddressed and the dyadic structure was contained [3,4,5]. The problematic nature of the siloed, dyadic structure as portrayed by the buyer in the workshop was understood and supported by all suppliers [5].

LPB then presented a MPA structure as a possible solution to overcome these challenges. In legitimating the new organizational solution, LPB relied on both moral and pragmatic legitimacy. Relatively limited emphasis was placed on highlighting the economic benefits derived from a MPA [14], instead LPB sought to illustrate the organizational structure's superior functionality by inviting a guest speaker who had worked on a construction project that was successfully delivered once the relevant MPA was formed [9]. LPB sought to establish moral legitimacy by stressing the importance of collaborative values and behaviors as key factors to ensure project success [6]. The external guest speaker cautioned that the MPA would only lead to successful outcomes if parties were able to elevate themselves from the antagonism inherent in traditional buyer-supplier relationships (workshop slides Dec. 2017; supplier pers. meeting notes Dec. 2017). This would require a "*quantum leap*" in behaviors (supplier notes from meeting Dec. 2017): The MPA would have to develop its own common identity; it would require the empowerment of suppliers moving from a buyer-led to a joint-led approach, in which decisions are made for the "*greater good*" of the project but not for the interests of individual firms (presenter workshop slides Dec. 2017). Hence, LPB addressed suppliers as partners in the workshop, explaining that while it had "*an idea of where it wanted to go,*" the final solution would be a joint creation in which each party had an equal say [7,8]. Therefore, LPB did not try to sell the MPA as a solution, but rather encouraged suppliers to explore ways to deliver a solution that would work for every party involved and would be in the best interest of the project [12,13]. At the end of the

workshop, all suppliers expressed an interest in continuing to explore the formation of a new MPA.

### **Episode 2: Contract discussions (January–June 2018)**

In January 2018, LPB invited another supplier, SupportCo, to join the monthly discussions related to the MPA formation. To ensure moral legitimacy, LPB continued to be clear that the final solution would be a “*collective model*” and that “*nobody had the monopoly on how this should work*” (commercial director, LPB). Hence, suppliers were asked to equally contribute their ideas. From January 2018 onward, LPB and suppliers developed several MPA options with different degrees of integration [Table III: 1,2]. From April 2018, LPB and all suppliers started to develop the commercial model and contract that would govern the various relationships. In the first meeting, LPB’s commercial director provided survey templates with questions to suppliers, which were then jointly investigated with suppliers to understand where ideas overlapped, or where differences existed. Apparent differences were investigated to understand suppliers’ concerns. The MPA was shaped by each party involved as expressed by a supplier representative: “*It was not like [LPB] had an idea about how it was going to be done and said, ‘There it is. Take a look. Go away.’ There were numerous discussions going on where contractors were saying, ‘We have done this before, and it worked really well in these circumstances. Which bits of that could we absorb into the [MPA] to produce a model that would work’*” (project director, ElectricalCoA). In cases of disagreement, LPB sought to ensure that diverging positions were explored jointly in more detail, rather than employing aggressive negotiation tactics [3, 4].

To create pragmatic legitimacy, LPB and suppliers developed a commercial structure — through a “*generous*” overhead and incentive structure—that would enable suppliers to

have greater profits by committing to the MPA than they would have obtained within traditional dyads (legal manager, LPB) [5,6]. Additionally, LPB accepted carrying significantly more risks than suppliers for the MPA work by limiting suppliers' liability for work, and by employing a fully cost-reimbursable contract, LPB accepted that it would pay for all supplier costs [8]. While this provided additional financial incentives to suppliers, it also ensured that suppliers would be able to focus all resources on the achievement of the MPA works instead of protecting their individual firm's interests [7]: "*[We were] trying to find a mechanism where we were not so heavily focused on managing the commercial tensions between our organizations that it created a huge cost [...] 120 [surveyors] for seven or eight years is a huge number, if we get rid of that, [...] you have that available either as a saving to the project or an incentive mechanism*" (project director, ElectricalCoA). With the removal of any potential commercial tensions through a no-claims contract, firms also expected positive outcomes for the relationships between firms in the MPA, as each firm was able to only focus on delivering their work to the project instead of protecting individual interests. Overall, the developed commercial structure was aligned with suppliers' commercial interests and therefore established pragmatic legitimacy with suppliers for the new MPA.

### **Episode 3: Disagreement and postponed contract signature (June–August 2018)**

In June 2018, LPB's commercial director presented the jointly developed MPA solution to LPB shareholders, who rejected the proposal, as they did not see any pragmatic legitimacy. The shareholders argued that LPB accepted too much risk and did not shift enough risk to suppliers (senior commercial manager, LPB). Additionally, LPB shareholders expected the MPA to be an opportunity for the project to save time and costs, but due to the incentive and overhead structure promised by LPB, LPB's shareholders feared that impact on project costs

would be negative. Shareholders also doubted whether suppliers had the necessary managerial expertise to be in control of the MPA's coordination. Consequently, LBP shareholders questioned whether LBP's commercial director was still representing the interests of LPB, and he was removed from the discussions with suppliers (observation, Oct. 2018). LPB was forced to revisit previously established agreements with suppliers to change the developed MPA. Throughout June 2018, suppliers could not agree to accept any changes, and the pragmatic legitimacy of the MPA was at a breaking point [11,12].

LPB's managing director stepped in and changed the focus of the discussions to the moral legitimacy of the MPA. Together with shareholder and supplier representatives, he conducted visits to other nuclear construction projects in China and France. The visits highlighted to senior personnel from all parties the importance of a MPA to the success of the project. Hence, the legitimation process was moved away from purely focusing on firms' self-interests, and toward serving the best interests of the project [10] by highlighting the general superior functionality of the MPA as opposed to the dyadic contracts [11]. This was done by referring to failures in previous nuclear projects, which could have been prevented through a MPA [10]. These discussions made parties more open to finding a common ground between each other's positions as expressed by a project director (HVACCo): *"It was a mixture of meeting[s], going to see the [Chinese nuclear power station] and other [nuclear] sites, and [was] a vehicle for five days of conversation between [our] MDs and LPB, it was very good and it firmly fixed [the MPA] as a proposition."*

#### **Episode 4: Signing the memorandum of understanding and the supplier contracts (September–October 2018)**

The joint meetings between senior representatives of each of the firms, and the visits to other nuclear construction sites, facilitated a better understanding of why a MPA was needed and surfaced the concerns of each party. While the meetings fostered alignment on critical commercial issues that had hampered the build-up of pragmatic legitimacy of the MPA for shareholders [18], they also reinvigorated a sense of purpose for the MPA. As it became clear to firms that the anticipated contract signature in September 2018 was not achievable, parties sought to sign a memorandum of understanding (MoU) to signal commitment toward each other, and to commit jointly to the further exploration of a MPA structure. The MoU summarized the key principles that parties had been able to agree on up to this time [18]. Yet, given the difficulty of aligning parties' key commercial concerns, the MoU remained a voluntary agreement, ambiguous in its wording, and had no legal consequences for any of the parties involved [19, 20].

LPB and suppliers were still willing to celebrate the MoU signing as a success, and LPB's managing director used the formal occasion to address suppliers: "*We signed the MoU in the middle of 2018 and we had a celebration [...] he gets up and talks about it with such a passion [...] he says I will not speak to anybody about whether this project is possible to deliver, I will talk about probability all day but unless you believe that it is possible, I do not want you on this project*" (project director, SupportCo). All suppliers felt inspired by LPB's commitment to the MPA and the significance of the MPA to project success. Hence, suppliers perceived the MoU signature as what was required as it affirmed a commitment toward each other, and that they should not give up despite the given lack of pragmatic legitimacy of a MPA [14,15].

In October 2018, LPB issued consulting contracts to suppliers to formally employ them for their services related to the MPA formation. In doing so, responsibility for the MPA

formation and necessary planning and consulting work was transferred to suppliers; as described by an LPB manager: *“[It] is a big, brave step for the business to say, well you are the expert Mr. Contractor, you tell me what you want to do first and I will support you. And our job really should be to manage the interfaces between the [suppliers ...] and supporting them to be successful.”* All suppliers took on this responsibility and updated LPB personnel in weekly meetings to discuss the operational structure of the MPA, the interfaces with the wider supply network, and the commercial structure in the contract.

### **Episode 5: Changes to MoU principles, and second contract signature delay (November–December 2018)**

In November 2018, it became clear that LPB wanted to revisit some of the commercial principles agreed in the MoU, particularly in relation to suppliers’ risk exposure [23]. More specifically, this action meant that, potentially, a higher percentage of suppliers’ overhead would be at risk should the MPA fail to achieve performance milestones. Additionally, LPB wanted to move away from a cost-reimbursable contract and reintroduce a target-cost contract. However, suppliers did not want to deviate on the principles that had been agreed on in the MoU [24], and expressed that pragmatic legitimacy was at a breaking point should LPB enforce these changes: *“That was a real challenge and the point where we said, ‘We will not be signing the contract if you insist that we have to put all of our overhead and incentive profit at risk.’ [...] It seemed strange to have to restate something that was known at the signature of the MoU [...] nothing had really changed”* (project director, ElectricalCoA). Suppliers also started to observe a change in the relationship with LPB: In the work to develop the contract and operational structure of the MPA, LPB provided unhelpful comments or its suggestions were punitive. For instance, LPB suggested key performance indicators



(KPIs) that would be very difficult to achieve for suppliers [21]. While in early episodes suppliers had been treated like partners, an asymmetry in power was now apparent, and suppliers felt that the relationship with the buyer moved closer to a “traditional master-servant relationship” instead of a partnership [21].

Doubts emerged at LPB about the suitability of the selected suppliers [25]. During a benchmarking exercise of suppliers’ original cost proposals, it was found that MechanicalCo charged significantly more than other suppliers for a similar type of work. LPB managers were upset when MechanicalCo defended its approach on the basis that it had won the preferred bidder status. As a result, LPB threatened MechanicalCo’s position in the MPA should they not align their rates with other suppliers. LPB also detected that ElectricalCoA had intended to subcontract a lot of the project work, which would enable them to potentially employ their resources for other projects. This fostered doubts in LPB about the moral legitimacy of suppliers. LPB expected suppliers to act in the best interest of the project instead of following narrow firm interests. Doubts also emerged between suppliers, who were concerned about HVACCo’s capability to deliver their part of the work successfully, given that the required work was not a core capability of the firm. Hence, suppliers feared HVACCo would underperform, which would harm overall MPA performance and endanger the achievement of KPI incentives and, with this, the pragmatic legitimacy of the MPA.

Further to the emergent doubts, suppliers were arguing about the incentive share. In late November 2018, a senior LPB manager became aware of some email exchanges between suppliers, which revealed that there was conflict between suppliers about the internal sharing mechanisms for the incentives: *“The emails were all about the share, and what he started to say was that in the background the fighting between them, the reason why [contract signature] has been delayed is because there is in-fighting around share and gain”*

(commercial manager, LPB). The conflict exposed power asymmetries between suppliers, who were fighting for their status and decision-making power among each other [22, 23]. Hence, supplier firms were narrowly focused on their firm interests instead of collaborating on the development of an equitable share mechanism. The conflict deepened already existent doubts about the MPA, and the unresolved moral and pragmatic concerns meant that the anticipated contract signature for December 2018 had to be delayed.

### **Episode 6: Commercial alignment, and shareholder approval (January–March 2019)**

In January 2019, LPB and supplier managers distilled several areas that damaged pragmatic legitimacy, and which stopped the parties from committing to the MPA [31,32]. LPB was increasingly under pressure by the project schedule to sign the MPA contract by March 2019. The project had to adhere to a strict timeline and LPB's managers worried that MPA work was required to start but that suppliers had yet to sign a contract; hence, LPB requested a change in suppliers' personnel who were leading the negotiations: "*We were negotiating with the commercial directors, and we had got to the final ten points that we could not unlock. [...We thought] the MDs are the decision-makers, we will go to the MDs and force the MDs to deliver and concede to these points*" (commercial manager, LPB). LPB managed to agree on five issues with the managing directors during the meeting, and the remaining suppliers were asked to develop a joint proposal for LPB by early February. However, on the date the proposal was due a supplier representative admitted to LPB in a scheduled meeting that no progress had been made (observation, Feb. 2018). One key area of pragmatic legitimacy was that LPB wanted to ensure that the overall incentive scheme for suppliers was fixed at contract signature. Suppliers were opposed to this proposal, worrying that it might lead to LPB asking suppliers to provide more work for the same incentive sum. In turn, LPB feared

that if the incentive amount was not fixed but was instead subject to changes, LPB would end up paying even more to suppliers, on top of what was already perceived by LPB as a very generous incentive scheme. The overhead and incentive structure became a contested cornerstone of pragmatic legitimacy between LPB and suppliers [34, 35].

In February 2019, ElectricalCoA changed their position (reduced overhead for re-works) on a key issue their managing director had previously agreed on based on the commercial director's request: "*[The commercial director] said, 'Who on earth does he think he is? If he does that then I am going to sack him' because he is committing commercial suicide. [The managing director] came back with his tail between his legs saying, 'I cannot agree to that, [the commercial director] has overruled me'*" (commercial manager, LPB). For LPB, this change in agreement presented a breach in trust between LPB and the supplier [30]. LPB's shareholders were still unconvinced of the pragmatic legitimacy of the MPA, and suppliers' resiling from such a commercially important point could endanger the MPA formation [32].

In March 2019, LPB's managers presented the final MPA solution to their shareholders for approval. Prior to the meeting, it seemed clear to them that shareholders would not agree to the MPA as LPB was not able to convince suppliers to agree to the proposed changes to the MoU [33], and thus pragmatic legitimacy was thought to be lacking. In addition, the difficulty of creating pragmatic legitimacy for all parties equally had harmed the moral legitimacy of the MPA: The relationship between LPB and suppliers had become conflicted and polarized [29,30]. LPB felt that suppliers were acting opportunistically and taking advantage of their increasing bargaining power as expressed by their legal manager "*It was like they were already eight-nil but they wanted to win ten-nil*". LPB worried that suppliers would continue to act opportunistically in the future and take advantage of the cost-

reimbursable contract model: “[LPB manager] thinks the biggest issue for LPB is to get the suppliers in the right mindset, because until now it feels like they are just here to make money. They got some emails that show some of their internal communication using phrases like ‘this is an easy fee for us.’ Obviously their first reaction was trying to find out who said that, but then what shall you do? Is it the individual himself that is to blame? Or is it the whole organization, that maybe promotes such thinking?” (informal conversation, Feb. 2019). In March 2019, LPB’s shareholders approved the MPA, but requested LPB managers to reduce the overall budget for MPA work by 20 percent prior to contract signature in April 2019 (observation, Apr. 2019).

### **Episode 7: Third contract signature delay, and scope alignment (April–June 2019)**

In April 2018, LPB negotiated the new MPA budget to legitimate the MPA with its shareholders [38, 39]. Suppliers did not feel confident in the revised budget proposed by LPB, as expressed by a supplier representative: “That became a real problem area because we could not get an agreement over what was in the scope and what was in the [new] budget. There was a lot of arbitrary adjustments that were made, which the [suppliers] will find very difficult just to say, ‘Yes, we agree. We understand what it is, we are signing off on’” (project director, MechanicalCo). Due to this ongoing disagreement, suppliers were not comfortable enough to enter the MPA contract, and contract signature was replaced with a “heads of terms agreement,” which was legally binding, to show that progress had been made since the MoU and that parties were still committed to the MPA. However, suppliers wanted to develop a clear alignment between the new budget and the work scope of the MPA covered within the budget [39,40]. Suppliers thought this was important to ensure pragmatic legitimacy of the MPA: A clear alignment of budget and work would prohibit future scope increases as the

buyer could argue that these were part of the budget. The alignment of budget and scope was also seen as important to the moral legitimacy of the MPA: Ambiguity could lead to future conflicts about what scope was or was not included in the budget [40,41].

Overall, in this final episode, suppliers found that moral legitimacy increased given the vast amount of time all parties had spent on forming the MPA [37]. Although the relationship with LPB was still described as “*polarized*” by suppliers, the relationships between suppliers had improved and were infused with values of equal partnership and a shared identity [42]. Despite this, suppliers were ready to abandon the MPA if LPB were to introduce changes unaccepted to them; as explained by a supplier representative: “*Absolutely at the final signature, there was the idea of going back to target cost [contract...] and I was like, ‘No.’ Everybody in one voice on the contractors side said, ‘This is walk away for us, we just do not sign and we will not be coming back tomorrow.’ Then [LPB] made a phone call, came back, and said, ‘We have deleted that idea.’*” (project director, ElectricalCoA).

Overall, in our analysis of the legitimation of a new MPA between one buyer and five suppliers, we found that this process was initiated when the buyer problematized the previous dyadic, siloed supply structure, and suppliers recognized and accepted this problematization. The new organizational structure the buyer proposed in episode 1 was vague and relied on moral legitimacy in terms of seeing the wider benefits of the MPA. In the second episode, firms focused on establishing the pragmatic legitimacy of the MPA. Moral legitimacy sustained commitment to the MPA formation in episodes in which it was difficult to establish pragmatic legitimacy for all parties (episode 3,4). Although moral legitimacy was harmed in subsequent periods by emerging conflicts and power asymmetries between the buyer and suppliers, as well as between suppliers (episodes 5,6), the final alignment on key commercial

concerns around risk (cost reimbursable contract, incentive fee), reduced budget, and MPA work scope enabled the parties to commit to the MPA (episode 7).

## **DISCUSSION AND IMPLICATIONS**

We investigated how a buyer and its suppliers shape the legitimation process of a buyer-supplier MPA. We analyzed primary and secondary data sets from a longitudinal case study on the formation of a MPA over a period of 19 months. Our longitudinal study offers important implications for the formation and legitimization of MPAs and buyer-supplier MPAs more specifically.

First, our findings highlight the importance of theorization in initiating the legitimation process (Tolbert and Zucker, 1996; Greenwood et al., 2002; Suddaby et al., 2017). In the first step the buyer problematized the status quo. This was done by highlighting the negative impact the current dyadic contracts would have (i) on the delivery of the work and thus the direct negative impact on the work of suppliers and (ii) for overall project success. In doing so, the buyer showed normative dignity in making the issue personal to suppliers: It wanted to smooth the delivery process for suppliers and, second, to focus on the wider implications to the project. In the second step, the buyer proposed the MPA as a preferred solution to overcome these challenges, based on moral and pragmatic legitimacy. Pragmatic legitimacy stemmed from the superior functionality the MPA would provide to the delivery of the work. Moral legitimacy developed from several areas: First, the improved functionality of the MPA had wider benefits to project success, which was beyond firms' narrow self-interests, given the importance of the project to the country's infrastructure. Hence, the MPA was stylized as a project savior: The project was doomed to fail without a

MPA. Second, the MPA would be accompanied by a change in values that would elevate the position of suppliers: The traditional dyadic contracts were characterized by a master-servant culture; the MPA, however, would be characterized by an equal partnership between the buyer and suppliers. The goal of this equal partnership was to jointly develop a MPA solution that was in the best interest of the project.

Second, our study is the first to offer an in-depth examination of the internal legitimation process between the buyer as the legitimacy seeker on one side and suppliers as the legitimacy audience on the other as they developed legitimacy for the MPA. Prior work on legitimation has been criticized for artificially dividing the social world into creators of legitimation and a passively accepting audience, namely the suppliers in our study (Suddaby et al., 2017). Overall, we found that suppliers' agency was vital in shaping the legitimation process. We found that while the legitimation process of the new buyer-supplier MPA was time consuming, it also required buy-in from all parties involved. More specifically, our longitudinal study revealed that the legitimation process of forming a MPA was cyclical and characterized by episodes of build-up, breakdown, and repair. Episodes of breakdown were initiated by a one-sided distribution of pragmatic legitimacy, that is, cost-reimbursable vs target cost contract, where either solution presented pragmatic legitimacy to one party but not the other. Here, moral legitimacy became important in sustaining the legitimation process and initiating repair. This was done by widening participants' attention to the wider benefits of the MPA to the project, and because of this parties were able to continue the formation process and work on a solution that would provide sufficient pragmatic legitimacy for both sides. In order to achieve contract signature and move to the operations phase of a MPA, both types of legitimacy need to be present. Pragmatic legitimacy of the MPA was achieved for the buyer via the reduction of the overall MPA budget, while suppliers were able to preserve the cost-

reimbursable contract or incentive structure. For the buyer, moral legitimacy was given by suppliers agreeing to the MPA. For suppliers, moral legitimacy was presented in the positive horizontal relationships with each other and the insistence on removing any contractual ambiguity, which could potentially create conflict with the buyer in the future.

Third, prior studies offer limited insights into the drivers of moral and pragmatic legitimacy during the formation stage of an alliance (Kumar and Das, 2007). We found that pragmatic legitimacy was closely linked to the commercial aspects of the MPA such as the incentive scheme, cost-reimbursable contract, or budget, which constituted the financial risk of the MPA for the parties involved. Here, the suppliers were able to align their interests toward low supplier risk, increased overall supplier profits, while the buyer focused on increasing supplier risk and decreasing supplier profits. Hence, pragmatic legitimacy became highly contested during formation process and caused episodes of legitimacy breakdown. We found that moral legitimacy came in various shapes and forms. While certain scholars emphasized it stemming from the non-violation of behavioral values between partnering firms (Kumar and Das, 2007), others solely considered it as providing a pro-social logic to a new organizational structure (Paquin and Howard-Grenville, 2013). Our findings illustrate both facets of moral legitimacy. Having pro-social logic or reason for the MPA was particularly important during the initial theorization of the MPA and during episodes of pragmatic legitimacy breakdown, as it enabled parties to lift themselves from narrow self-interests and see the wider purpose of the MPA. The behavioral component of the MPA was particularly important to the horizontal relationship between suppliers to enable them to commit to contract signature.

### **Boundary conditions and further research**



While our study closely examined the legitimization of a MPA for the delivery of services to a project in the nuclear construction industry, we believe that our insights hold true in other settings. We adopted a single case study because we wanted to depict the legitimation process over time. However, the narrow focus on one MPA within a specific setting may limit the generalizability of our findings to other contexts. Hence, we encourage future research to test whether our findings persist under different circumstances, such as in different industries or countries. Future research should also compare our findings to other types of MPAs (e.g., different number and characteristics of suppliers) in other industries (e.g., with different clock speed as this may impact how and why governance is being developed). A further interesting research area, which our study did not address, would be to investigate the whether the legitimacy trade-offs parties agree to in order for the MPA to survive have an impact on the later operational stage of the MPA. For instance, further research should investigate to what extent differing levels of moral and pragmatic legitimacy impact on buyer and supplier commitment to a MPA.

### **Implications for practice**

Our study provides interesting implications for firms and managers seeking to motivate suppliers to form a new (buyer-supplier) MPA. To avoid a lengthy formation process, parties must be aware that it is not sufficient to highlight the challenges of the previous organizational structure and point out the benefits of the new MPA, but that all parties see sufficient moral and pragmatic legitimacy in the new MPA. Moral legitimacy is based on seeing the wider benefits of a MPA as well as trying to build a relationship based on power symmetry and equal partnership. This can be achieved by giving suppliers an equal say in the formation process in relation to all key decisions. Pragmatic legitimacy rests on creating the

right financial incentives for suppliers to join a MPA; if this is not attainable, the buyer can minimize suppliers' risks through a cost-reimbursable contract. Managers and firms need to be aware that each party is expected to make concessions to pragmatic legitimacy, and if parties focus too narrowly on their own self-interests, not only moral legitimacy is harmed through conflicts and struggles for dominance, but also the formation process is either prolonged or dissolved. Additionally, parties should be clear on their expectations as changes to already legitimized organizational structures elongate the formation process.

## **CONCLUSIONS**

This chapter explored how a buyer and suppliers legitimate the formation of a new MPA. We contribute to the alliance literature by studying a unique type of MPA between one buyer and several suppliers, which has become increasingly common in practice but remains relatively unexplored in the strategy and alliance literature. Our in-depth, longitudinal case study revealed how the formation of a new buyer-supplier MPA was initiated by the buyer by problematizing the current dyadic contracts, and by highlighting the benefits of a new MPA arrangement. The subsequent legitimation process consisted of episodes of legitimacy build-up, breakdown, and repair. It required both moral and pragmatic legitimacy to be developed and nurtured, and it was shaped by the buyer and suppliers equally. Moral legitimacy was two-faceted: one focusing on the provision of a pro-social logic for the MPA, the other on the non-violation of behavioral values. Pragmatic legitimacy was built by: (i) either providing more financial incentives to suppliers in comparison to the dyadic contracts; or (ii) reducing supplier risk exposure. The pragmatic legitimation of the new MPA required all involved parties to make trade-offs. We further found that it is sufficient to have either moral or pragmatic legitimacy present to avoid the dissolution of the MPA formation, but for contract

signature both had to be present. We hope that our findings encourage future research to augment our understanding of the legitimation of different organizational structures that include multiple firms.

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## TABLES AND FIGURES

**Table I:** Overview suppliers and buyer organizations

	<b>ElectricalCoA</b>	<b>ElectricalCo B</b>	<b>Mechanical Co</b>	<b>HVACCo</b>	<b>SupportCo</b>	<b>LPB</b>
<b>Ownership</b>	Subsidiary of a UK public limited company	Family-owned for over 100 years	Subsidiary of a UK public limited company	UK subsidiary of a South Korean conglomerate	UK subsidiary of a French privately owned MNC	UK subsidiary of French MNC
<b>Revenue (parent, in 2019; circa)</b>	\$10bn	\$700m	\$6bn	\$16bn	\$4bn	\$87bn
<b>Number of employees (Parent in 2020; circa)</b>	20,000	3,000	30,000	40,000	40,000	165,000
<b>Scope of work</b>	Installation of electrical components		Installation of mechanical equipment	Installation of HVAC components	Scaffolding and other support services	Managing the construction of a new nuclear power station



**Table II:** Overview of data sources and use in analysis

<b>Data sources</b>	<b>Amount and sources</b>	<b>Use in analysis</b>
<b>Secondary data</b> (414 pages)	6 LPB board papers (86 pages) 10 Presentations (166 slides) 2 Contract manuals and implementation plan (63 pages) 7 Emails Meeting notes (1st MPA supplier workshop; 7 pages) 3 policy reports (85 pages)	Familiarization with LPB language, vision, and strategy for the MPA, storyline of formation process including changes in strategy between board papers. Understanding project's industry and political background and resulting pressures on LPB.
<b>Observations</b> (167 hours)	2 site visits (8h) 159 meeting hours between October 2018–June 2019	Gathering data on the legitimization of the MPA during the MPA formation
<b>Interviews</b> (26 hours ~ 298 pages verbatim)	<b>First round (Sep. 2018–June 2019)</b> 11 semi- and unstructured interviews with LPB and supplier informants all involved in the formation process of the MPA including solicitors, commercial managers, and supplier project directors.	Clarification about the ongoing negotiation process including the emergence of formal and informal governance, and their impact on vertical and horizontal relationships as well as vertical and horizontal cooperation and competition.
	<b>Second round (Dec. 2019–Oct. 2020)</b> 16 semi-structured interviews with LPB and supplier informants including solicitors, engineers, commercial managers, and supplier project directors.	Triangulation of initial findings, gathering of further information to address any lack of clarity in the data on the MPA formation





**Table III: Problematization of dyadic structure and justification of new solution**

Episode 1: Supplier workshop (December 2017)			
<i><b>PROBLEMATIZATION</b></i>		<b>Data extract</b>	
Buyer highlights challenges within current approach		<p>[1] “<i>Poorly coordinated planning and sequencing of execution fails system transition requirements</i>” (LPB workshop slides, p.6).</p> <p>[2] “<i>Resource duplication exists across the MPA cope. Delivery of a contract scope does not translate into a functional system. [...] Arrangements for site works bulk commodities and core manufacturing are not optimized. Unacceptable overall risk provisions</i>” (LPB workshop slides, p. 5).</p>	
Buyer highlights implications if no change happens		<p>[3] “<i>The business case imposes some challenging objectives with average installation rates assumed at 5% whereas the best achieved at Flamanville (FA3) was between 1% &amp; 2% (not sure what the measure is but the difference represents a 250% to 500% improvement!)</i>” (Supplier workshop notes).</p> <p>[4] “<i>The Project will not successfully deliver the Installation Phase on Schedule in this current context and so a fundamental change in delivery approach is required</i>” (LPB workshop slides, p.5).</p> <p>[5] “<i>It was agreed by all that the application of the current approach and the use of the current delivery model would result in failure</i>” (Supplier workshop notes).</p>	
<i><b>JUSTIFICATION</b></i>			
<b>Moral legitimacy</b>	<b>Data extract</b>	<b>Pragmatic legitimacy</b>	<b>Data extract</b>
Establish power symmetry	<p>[6] “<i>There needs to be to be a heavy focus on values [...] to achieve the commercial operating date in 2025: Collaboration, Camaraderie and Partnership [have] to be adopted</i>” (Supplier notes from meeting).</p> <p>[7] “<i>Any agreed solution to the [MPA] proposal needs to work for all parties</i>” (Supplier notes from meeting).</p> <p>[8] “<i>[LPB] has an idea of where it wishes to go and how it anticipates getting there but wants to engage with, and hear from, the key members of the [MPA] group</i>” (Supplier notes from meeting).</p>	Superior functionality of MPA	<p>[9] “<i>We brought a guy [...] who formed an alliance arrangement which, essentially, ended up rescuing the North Sea oil platform fleet</i>” (engineering manager, LPB)</p> <p>[10] “<i>Prior to [this MPA], working with our South Korean mothership company, on their new build for nuclear, [a MPA] is the normal term. We have adopted it, people are calling it novel and new, it is not, it is the only way to do these large infrastructure projects well and repeatedly</i>” (project director, HVACCo).</p> <p>[11] “<i>It seem[ed] like a good idea, it takes away all of the difficulties that we might have, in terms of getting this project to the best solution it can be</i>” (project director, ElectricalCoA).</p>
Focus on benefits for the project	<p>[12] “<i>The <b>PROJECT</b> has to be the focus of all parties</i>” (Supplier notes from meeting).</p> <p>[13] “<i>There was not a heavy sell from [LPB]. There was a room of people talking about the best way to deliver the biggest project in Europe and I guess we came up with the conclusion that this was how it should be</i>” (project director, ElectricalCoA).</p>	Highlight economic benefits of new solution	[14] “ <i>Key strategic benefits: [...] organizational efficiencies and economies of scale; commercial rationalization, value generation and risk reduction</i> ” (LPB workshop slides, p.16).

**Table IV: Legitimation process**

Moral legitimacy	Data extract	Pragmatic legitimacy	Data extract
<b>Episode 2: Contract discussions (January – June 2018)</b>			
Equal development of solution (power symmetry)	<p>[1] “All of the businesses worked with the customer to look at how we might be able to take that forward [...] there was three or four different variants, and our senior leadership were involved in what those potential options might be at that point in time. [...] The preferred option was broadly in line with where we are now at in terms of the [MPA]” (project director, MechanicalCo).</p> <p>[2] “[LPB and] our commercial director, they came up with an outline plan and it developed in discussion fairly openly collaboratively really [...] in this true spirit of alliancing” (project director, ElectricalCoA)</p>	Improved supplier financial returns as compared to previous model	<p>[5] “What was the trigger for the suppliers is, once they recognized that they could earn collectively more money, better returns [...] they did not think this was possible. In the early days the [suppliers] did not think it was possible, and we slowly changed them” (Commercial Director, LPB).</p> <p>[6] “We did not know how difficult this was going to be, it seemed like a great idea. There was the potential of unloading very significant amounts of revenue into our businesses” (project director, ElectricalCoA).</p>
Collaborative negotiation tactics (power symmetry)	<p>[3] “We were not going to be aggressive [...] we would say what [are] your concerns? What are you really concerned about, so we understand where you are coming from” (legal manager, LPB).</p> <p>[4] “Often a main meeting will be followed by several sub meetings, because sometimes you can say in rooms of two and three what you cannot say in a room of 40. It is about taking the issue and trying to re-understand it, reshape it” (project director, Supplier D)</p>	Minimize supplier risk exposure and liability	<p>[7] “If those commercial obligations and financial obligations to our shareholders are achieved just in the contract, then we do not need to work hard on that, we just invest more of our people in making the project go well rather than the legal and commercial aspects” (project director, ElectricalCoA).</p> <p>[8] “The traditional construction contracts were all target cost with pain, with liquidated damages, with all of those nasty things that contractors get but the [MPA] contract, none of that existed. None. There were only carrots, no sticks” (legal manager, LPB).</p>
<b>Episode 3: Disagreement and postponed contract signature (June– August 2018)</b>			
Equality	<p>[9] “[We] went out to China and had very lengthy sessions over in China. [...] It was all around how you get [everyone] on board and get them to buy in. [We also] went out to France and met with all the seniors within France [...] There was a lot of toing and froing between what the [suppliers] were willing to accept and what [LPB] was willing to accept” (project director, MechanicalCo).</p>	Increase supplier risk exposure	<p>[11] “They [...] wanted us to take risk on all of our profit and that was a big challenge for us, and we thought we cannot do that” (project director, ElectricalCoA).</p> <p>[12] “[LPB] were pushing very, very hard to get as much risk transferred to the [suppliers] as possible. They wanted us to stand by what we put in our original bids and effectively fix price everything. That was not a position that any of the partners were willing to accept” (project director, MechanicalCo).</p>
Focus on benefits for the project	<p>[10] “The [mechanical, electrical, HVAC work ...] so far, in Taishan, Flamanville and in Finland has been a disaster. In Taishan they had to redo it and pull out all the cables and each of those projects had a silo contracts mentality [...] and it did not work, and it has never worked so [...] what is the lesson learnt” (legal manager, LPB).</p>	Highlight superior functionality of MPA	<p>[13] “If you have got a single coordinated mind, multi-teams working in a single space, it will be safer. And you will get better quality. We [went] to Flamanville [...] and there is a lot of damaged equipment, because people have installed equipment, [...] the next trade has gone in bashed into it, and it gets damaged. So, [the MPA improves] safety, quality, time and cost” (commercial manager, LPB).</p>

**Episode 4: Signature of memorandum of understanding and of supplier contracts (September – October 2018)**

<p>Equal partners (power symmetry)</p>	<p>[14] “<i>The MoU [was] a pretty thing. The principles that were agreed then ... I mean that was the right thing to do. It sent out a very important message about [us] being able to overcome some pretty thorny issues</i>” (project director, MechanicalCo).          [15] “<i>I remember attending the MoU signing and everyone was patting themselves on the back. It was, you know, happy clappy so that was definitely a buzz for a while</i>” (legal manager, LPB).</p>	<p>Re-alignment on commercial concerns</p>	<p>[18] “<i>After long discussions we renamed part of the base fee, and called it overhead, and then the incentive[s] were termed part of the fee, and all of that is at risk. That satisfied their need to [...] say, all the fee is at risk. All of the fee is, but the overhead is not so that is how we got around that, and that was a major sticking point for both sides</i>” (project director, ElectricalCoA).          [19] “<i>There was a degree of constructive ambiguity in the wordings of the MoU to allow different positions to progress at that point in time</i>” (project director, MechanicalCo).          [20] “<i>We had never talked about getting an MoU. The MoU was there because we were not there on the contract. We needed to put something out to say this is positive, it is happening. But it wasn't worth the paper it was written. It had no bearing. It was a paper that reflected some commitment but was non-binding</i>” (project director, SupportCo).</p>
<p>Referring responsibility (project ownership) to suppliers</p>	<p>[16] “<i>A fundamental objective of the [MPA] consultants is to facilitate and encourage cooperation, coordination and collaboration between the [MPA] consultants so that the work they perform, or are to perform, in connection with the [MPA] strategy and the project achieves 'Best for Project' outcomes</i>” (Contract scope document, p.11).          [17] “<i>I am very surprised to find out that [...] are not LPB personnel but from the suppliers. Specifically, as I had the impression from the meeting that [supplier meeting attendee] had taken on a lot of administrative work. [LPB Manager] is happy about my impression, as it shows how well they have integrated the suppliers. He explains that [supplier meeting attendee] has taken lead on most fronts and is a 'controlling mind'</i>” (observation, Oct. 2018).</p>		

**Episode 5: Changes to MoU principles and second contract signature delay (November – December 2018)**

<p>Self-interested behaviours</p>	<p>[21] “<i>We started developing the ancillary documents [...] Some of the stuff [LPB] introduced, was just shockingly bad. The inequality [...] the first draft of the performance table [...] was very much punitive. It made it very hard under the proposed metrics and measures for us to make any money and for us to achieve any milestones. The implementation plan that got put together; it was just rubbish. None of our comments were accepted. So, all our feedback was ignored [...] We still need to agree. We do not accept that.</i>” (project director, SupportCo)</p>	<p>Increase supplier risk exposure</p>	<p>[24] “<i>[LPB] want a lower overhead fee and increase incentivization, however, [ElectricalCoA] want [XX]% on everything [...] they are 'digging their heels in' in internal discussions regarding that</i>” (observation, Nov. 2018).          [25] “<i>[LPB] wanted to renegotiate all of that whereas our view was, we have already negotiated this. We have already agreed it. That is put to bed [...] we are not coming backwards to revisit something which is underpinning the whole contract</i>” (project director, SupportCo).</p>
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Supplier conflict over power	<p>[22] “[LPB Manager] starts with an update: A meeting planned for Monday got cancelled [...] it seems that [suppliers are] not aligned at the moment [...] apparently there are a ‘few cracks’ and he needs to ‘expose who is playing games’” (observation Nov. 2018).</p> <p>[23] “There was quite a bit of infighting and positioning to see who is going to be the dominant force [...] There was an awful lot of squabbling, and disagreements, within the [suppliers...] ‘We’re in charge now’... ‘No, we’re in charge’” (commercial manager, LPB).</p>	Doubts about supplier firms	<p>[26] “[MechanicalCo] should know they are much more expensive than the others. [LPB managers] say that this could potentially end in [MechanicalCo] having to leave the MPA [...] [Supplier representative] is not comfortable with HVACCo [... they are] the biggest risk and could sink productivity for all of them – [HVACCo] are doing something they have never done before [...]. [LPB Manager] adds they should also look at ElectricalCoA as they are sub-contracting a lot more than they originally said they would” (observation, Dec. 2018).</p>
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**Episode 6: Commercial alignment and shareholder approval (January – March 2019)**

Power asymmetry	<p>[27] “[ElectricalCoA] do not want to deviate from the MoU as a matter of principle [... they are] stirring and driving it and influence [the] others [... ElectricalCoA] has said several times [...] ‘this is not the biggest job for us’” (observation, Feb. 2019).</p> <p>[28] “LPB thought that they could strong-arm the managing directors into an agreement, against the commercial directors’ will. They had some success, but it was limited” (commercial manager, LPB).</p> <p>[29] “We have this term the five-headed beast now, you create this monster, they are stronger together” (commercial manager, LPB).</p>	Doubts about MPA	<p>[32] “Between MoU and signature of contract [we] had a very up and down life, on a number of issues [and] as it became more and more difficult [we] thought, do we really want to do this?” (project director, ElectricalCoA).</p> <p>[33] “It seems as if [the shareholders] are aligned regarding [issue], which makes it difficult. [LPB Manager] has sympathy for their view as it is too much and seems ‘soft touch’ [...] It seems like a generous offer, and it is a no-liability contract. [LPB Manager] thinks that [shareholders] will never vote for it [... Shareholder representative] has been whispering to him continuously that they would prefer the [siloe] contracts” (observation, Feb. 2019).</p> <p>[34] “[LPB Manager] thinks that everything will fall apart at the pre-[shareholder] meeting in Paris next Friday. They will ask them questions and after two hours they will tell them (LPB) that they are not ready yet” (observation, Feb. 2019).</p>
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Buyer-supplier conflict	<p>[30] “[EnergyCo] was under a lot of pressure to get it over the line [...] Everyone wanted it signed but we had become quite polarized, and it was getting very emotive [...they] called us, greedy contractors: You are on a great deal, greedy contractors” (project director, SupportCo).</p> <p>[31] “[LPB Manager] explains that this is a big breach in trust for LPB. The [issue] was very important to LPB to convince its shareholders. [...] This is a high-risk contract for LPB and its success will depend on the collaboration and trust between the parties [...] Hence, incidents like this one are not good for building trust and confidence” (observation, Feb. 2019).</p>	Increase supplier risk exposure	<p>[35] “As LPB want fixed profits, depending on base scope, the discussion around this has become emotive because base scope is smaller than the original contract. Hence, if the original scope was £1.1 billion and the new scope is £800 million, the concluding % are a much smaller amount” (observation, Feb. 2019).</p> <p>[36] “I briefly chat with [Project Director, SupportCo] before the meeting, he mentions they are having tough discussions internally as well as with LPB, due to LPB wanting to have fixed profits now while at the same time they are realising that scope might be bigger than expected, hence, discussions are very emotive at the moment” (observation, Feb. 2019)</p>
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**Episode 7: Third contract signature delay and scope alignment (April – June 2019)**

<p>Removing contractual ambiguity</p>	<p>[37] “If you get rid of all the uncertainty at that stage, its preferable to leaving unanswered questions which usually only ever raise themselves when there is conflict. When there is conflict people take different positions, and then you would maybe revert it to client contracting, which is not part of the alliance intentions. And it would probably happen early in the alliance contract, before the teams are fully bonded together, and before everybody is fully on board with this, working to the best interests of the project” (project director, ElectricalCoA).</p>	<p>Reduce buyer risk exposure</p>	<p>[39] “[LPB Manager] explains that they got the approval of the CSEC and Genco Board. The final step is the HolCo Board, which meets on Wednesday. However, one of the conditions is that they agree to a fixed cost of £910mio, which was previously at £1.1bn [... supplier representatives] question if board knew the granularity of the scope when they came to that number of £910mio” (observation, Apr. 2018).  [40] “For whatever reason, there was a number, which was something like 835 million. Now we know that if you took each of the delivery partner contracts and deducted the materials which are outside of the base scope, and other small elements which were again agreed to be outside of the base scope, you ended up with a bigger number than those numbers that we are referring to. So, we had to munch the scope” (project director, ElectricalCoA).</p>
<p>Time</p>	<p>[38] “The overall intention and the interest were just increasing as we progressed towards this, there were huge amounts of time, effort, and cost [...] invested in an emotional as well as a physical level [...] There were lots of people who actually had invested in this thinking, ‘It is the right thing to do’” (project director, ElectricalCoA)</p> <p>[42] “The [supplier] team was quite fractious at the beginning because it was like an arranged marriage. We were all forced together. But having been on that journey for all that time, it brought us really close together [...] and] the relationships have lasted. [...] I could ring at any time of the day and they would take my call, they would give me the advice, which is positive” (project director, SupportCo).</p>	<p>Certainty of scope</p>	<p>[40] “From a company’s perspective what was key is about clarity. So, when you’ve got all this uncertainty of scope, being clear about what is the basis of the scope [...] As a result, [...] we have now got a very clear position [...] Whereas before potentially we had a very amorphous position, and the customer going, ‘No, no that was in the budget, No, that is no addition’, which we had learned during our early works [...] The right thing to do [was] definitely getting clarity” (project director, MechanicalCo).</p> <p>[41] “[Getting clarity] was necessary, because without that you would end up having challenges at some point in the future, where somebody said, ‘Well, it was very vague, and I thought you included that in that number’, and we were saying, ‘No, we did not’. We realised that rather than have potential contractual legal argument, which would hurt [...] the collaborative approach that we need to make this project work, we would have the difficult conversations before we entered into the contract [...] it was definitely the right thing to do” (project director, ElectricalCoA).</p>



## APPENDICES

### Appendix A: List of key meetings observed

#	Date	Type of meeting	Purpose of meeting	Duration
1	10/2018	Internal meeting	Update on commercial issues	90min
2	10/2018	Alliance meeting	Update on progress on commercial issues	60min
3	10/2018	Alliance meeting	Update on structural change	120min
4	10/2018	Alliance meeting	Scope negotiations	210min
5	11/2018	Alliance meeting	Update on progress on commercial workstream	60min
6	11/2018	Alliance meeting	Update on progress on commercial workstream	60min
7	11/2018	Alliance meeting	Contract discussions	60min
8	11/2018	External meeting	Update with external stakeholder	120min
9	11/2018	Alliance meeting	Update on progress on commercial issues	120min
10	11/2018	Alliance meeting	Dispute resolution	60min
11	11/2018	Alliance meeting	Update on workstreams	120min
12	11/2018	Alliance meeting	Update on progress on commercial issues	60min
13	11/2018	Alliance meeting	Discussion on alliance structure	60min
14	11/2018	Alliance meeting	Discussion on alliance structure	60min
15	11/2018	Internal meeting	High-level strategy discussion	80min
16	12/2018	Internal meeting	Operational workstream	480min
17	12/2018	External meeting	Update with external stakeholder	180min
18	12/2018	Alliance meeting	Update on workstreams	75min
19	12/2018	Alliance meeting	Contract discussions	60min
20	12/2018	Alliance meeting	Scope negotiations	240min
21	12/2018	Alliance meeting	Update on operational workstream	480min
22	12/2018	Alliance meeting	Update on commercial workstream	180min

23	01/2019	Internal meeting	Discussion on buyer strategies	30min
24	01/2019	Alliance meeting	Update on commercial issues	90min
25	01/2019	Internal meeting	Discussion of buyer actions	75min
26	01/2019	Alliance meeting	Scope negotiations	90min
27	01/2019	Internal meeting	Discussion of buyer actions	60min
28	01/2019	Alliance meeting	Update on commercial issues	60min
29	02/2019	Internal meeting	Discussion of buyer actions	60min
30	02/2019	Alliance meeting	Discussion of commercial issues	60min
31	02/2019	Alliance meeting	Discussion of commercial issues	60min
32	02/2019	Alliance meeting	Discussion of commercial issues	75min
33	04/2019	Alliance meeting	Contract negotiations	300min
34	04/2019	Alliance meeting	Contract negotiations	480min
35	04/2019	Alliance meeting	Contract negotiations	540min
36	04/2019	Alliance meeting	Contract negotiations	240min
37	04/2019	Alliance meeting	Contract negotiations	180min
38	04/2019	Alliance meeting	Contract negotiations	180min
39	04/2019	Alliance meeting	Contract negotiations	90min
40	04/2019	Alliance meeting	Contract negotiations	330min
41	04/2019	Alliance meeting	Weekly update on alliance operational coordination	120min
42	04/2019	Alliance meeting	Weekly update on alliance operational coordination	90min
43	04/2019	Alliance meeting	Contract negotiations	390min
44	05/2019	Alliance meeting	Weekly update on alliance operational coordination	120min
45	05/2019	Alliance meeting	Monthly update meeting on alliance progress	120min
46	05/2019	Alliance meeting	Weekly update on alliance operational coordination	120min
47	05/2019	Alliance meeting	Contract negotiations	390min
48	05/2019	Alliance meeting	Behavioural workshop	540min



49	05/2019	Alliance meeting	Weekly update on alliance operational coordination	120min
50	06/2019	Alliance meeting	Weekly update on alliance operational coordination	120min
51	06/2019	Alliance meeting	Monthly update meeting on alliance progress	120min
52	06/2019	Alliance meeting	Weekly update on alliance operational coordination	135min
53	06/2019	Alliance meeting	Discussion of HR strategies	180min
54	06/2019	Alliance meeting	Behavioural workshop	495min
55	06/2019	Alliance meeting	Weekly update on alliance operational coordination	135min
56	06/2019	Alliance meeting	Discussion of operational issues	90min
57	06/2019	Alliance meeting	Discussion of alliance strategy	150min
58	06/2019	Alliance meeting	Weekly update on alliance operational coordination	90min
<b>Overall: 159 hrs 10min</b>				

**Appendix B:** List of interviews supporting the data analysis

<b>#</b>	<b>Date</b>	<b>Job Title</b>	<b>Duration (in mins)</b>
1	09/2018	senior commercial manager, LPB	90
2	10/2018	commercial manager, LPB	60
3	11/2018	commercial manager, LPB	30
4	12/2018	commercial manager, LPB	100
5	01/2019	senior commercial manager, LPB	35
6	01/2019	commercial manager, LPB	20
7	02/2019	solicitor, LPB	40
8	02/2019	senior commercial manager, LPB	60
9	03/2019	senior commercial manager, LPB	20
10	03/2019	commercial manager, LPB	30
11	04/2019	project director, SupportCo	30
12	12/2019	senior commercial manager, LPB	21
13	12/2019	project director, ElectricalCoA&B	57
14	12/2019	senior commercial manager, LPB	78
15	12/2019	engineering manager, LPB	65
16	12/2019	project director, HVACCo	105
17	12/2019	project director, MechanicalCo	115
18	12/2019	solicitor, LPB	88
19	12/2019	alliance manager, ElectricalCoA	36
20	12/2019	project director, ElectricalCoA&B	57
21	01/2020	project director, SupportCo	96
22	02/2020	commercial director, LPB	70
23	03/2020	project manager, LPB	35
24	03/2020	project manager, LPB	58
25	04/2020	project manager, LPB	40
26	05/2020	project manager, LPB	62

27	10/2020	MPA commercial director (SupportCo)	34
			<b><i>Overall: &gt; 26h</i></b>

**Appendix C:** Example interview guide

## **Interview Guide – On setting up and managing an integrated, industry alliance**

Thank you for agreeing to take part in this research study conducted by the HPC Supply Chain Innovation Lab ([www.supplychainlab.org](http://www.supplychainlab.org)), an exciting partnership between the **University of Bath** and **Hinkley Point C (HPC)**.

The HPC Lab provides a platform for international thought leadership to connect business leaders, policymakers and academics in the fields of supply chain, innovation and complex capital projects. The following interview questions represent an interview guide to steer the data collection period of the research and to ensure consistency and validity. The results of this study will allow HPC, EDF Energy and its partners to identify key challenges with regards to their complex supply network and how to overcome them.

The position and name of the interviewee will be recorded, but confidentiality will be respected at all times.

**Organisation:** *Supplier*

**Name:**

**Position:**

**Contact details (tel./email):**

**Date/time:**

### ***Interviewee's background information***

- What is your role and responsibility in the organisation?
- For how long have you been in the current position?
- What is your role in regards to the MEH Alliance and for how long have you had this position?

### ***MEH Alliance information***

#### **Phase 1: Pre-MOU**

1. Did your organisation have a previous relationship/history with any other alliance organisation before entering the alliance?
  - 1.1 *Prompt: include history of positive interactions with HPC?*
2. How was your organisation approached and convinced by HPC that the alliance was the right thing to do?
  - 2.1. *Prompt: How did HPC's goals align with your self-interests as an organisation?*
  - 2.2. *Prompt: What other, normative factors that HPC brought forward made you think that it was the right approach?*
3. How did this affect your company's expectations of the alliance/HPC at the time the MOU was signed?
  - 3.1. *Prompt: why called 'Affinity'?*
4. How did you experience engagement with other joint venture partners?
  - 4.1. *Prompt: any preferences, coalitions?*

#### **Phase 2: Post-MOU**

5. To what degree were your initial expectations reflected in the relationship with HPC and other alliance firms after the MOU was signed (e.g., collaboration on workstreams, during on-going negotiations)?
  - 5.1. *Prompt: changes in goals?*
  - 5.2. *Prompt: normative evaluation: behaviour in accordance to values?*
6. How did you experience the collaboration with your counterpart in HPC on the workstream?
  - 6.1. *Prompt: regular meetings? Behaviour during meetings?*
7. How did you experience the set-up of the joint venture and the collaboration with your joint venture partners?
  - 7.1. *How decided that Cavendish was Interim and BB alliance manager?*

**Phase 4: Pre-contract signature**

8. How did you experience on-going contract negotiations?
  - 8.1. *Prompt: What were most difficult/emotive discussions between partners and with HPC?*
  - 8.2. *Prompt: JV percentages, overhead fee, 5 thorny issues – how found agreement?*
9. What were the main trade-offs you had to make during contract negotiations? What were major achievements?
  - 9.1. *Prompt: win-win or win-lose contract?*
  - 9.2. *Prompt: meet new budget?*

**Phase 3: Post-contract signature**

10. To what effect did you find that contract negotiations had a lasting impact on your relationship with all firms now?
11. To what extent have your organisation's expectations to the time of the MOU been met in the alliance now?
12. To what degree do your home company's interests align with the overall alliance interests?
13. Whenever these do not align, how do you deal with such situations?
14. Where do you see main challenges currently and for the future?

**Additional information:**

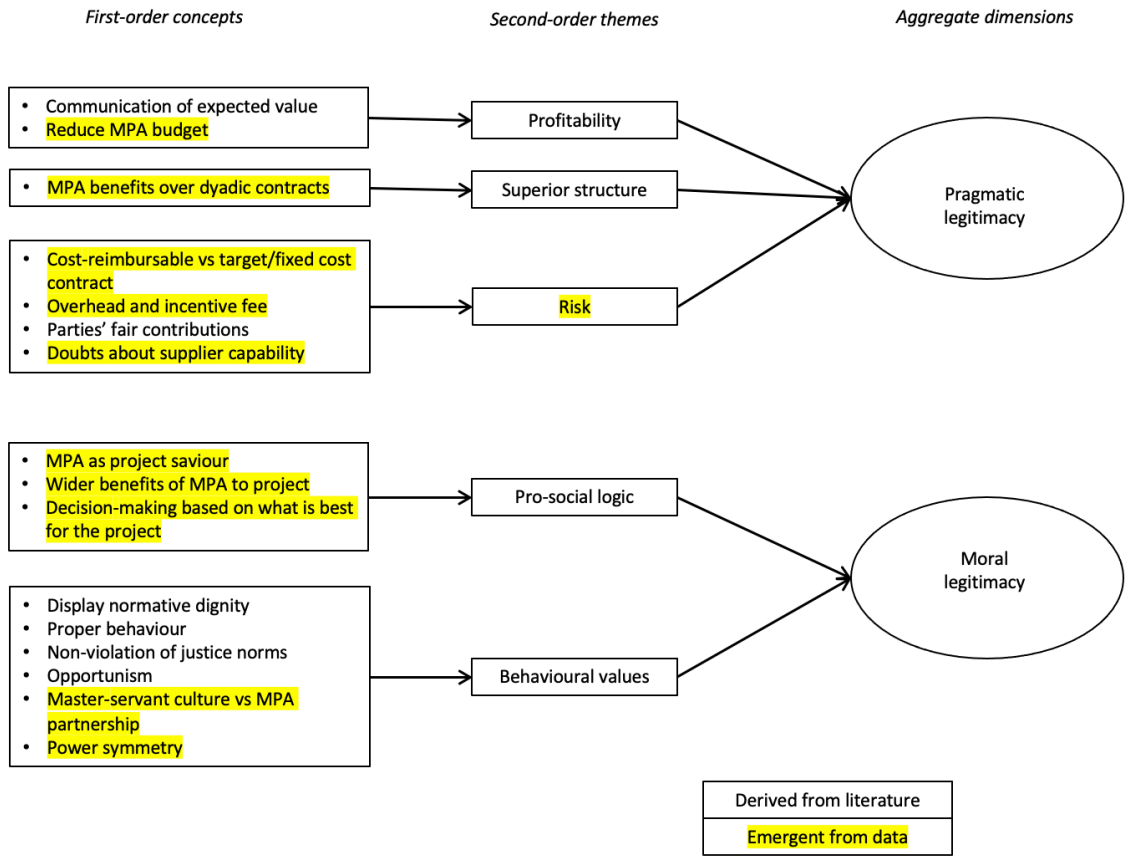
15. Is there anything you would do differently now looking back?
16. Which actions of HPC did you find most useful in terms of building and alliance and encouraging good behaviours?

Indicate on time line

**Contact Information:**

Please do not hesitate to contact us (Renate Taubeneder – [r.b.taubeneder@bath.ac.uk](mailto:r.b.taubeneder@bath.ac.uk)) for any further information.

**Appendix D: Coding structure**



**Chapter 4:**  
The dynamics  
of formal and  
informal  
governance  
mechanisms in  
the formation  
of a buyer-  
supplier  
multiparty  
alliance

**This declaration concerns the article entitled:**

The dynamics of formal and informal governance mechanisms in the formation of a buyer-supplier multiparty alliance

**Publication status (tick one)**

Draft manuscript  Submitted  In review  Accepted  Published

**Publication details (reference)**

This paper has been submitted to a second round of reviews for the Special Issue on 'Trust and Control' at the Journal of Management studies (July 2021).

**Copyright status (tick the appropriate statement)**

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**Candidate's contribution to the paper (provide details, and also indicate as a percentage)**

The candidate contributed to / considerably contributed to / predominantly executed the...  
Formulation of ideas: 40%  
Design of methodology: 80%  
Data collection: 100%  
Presentation of data in journal format: 100%

**Statement from Candidate**

This paper reports on original research I conducted during the period of my Higher Degree by Research candidature. The co-authors of this paper are Prof Beverly Tyler, Prof Jens Roehrich, and Prof Brian Squire.

**Signed**

Renate Taubeneder

**Date**

20 Nov. 2021



## ABSTRACT

We contribute to the governance literature by exploring the dynamics and interplay of formal and informal governance mechanisms developed as a large buyer works with multiple suppliers to form a buyer-supplier multiparty alliance (MPA), including vertical and horizontal relationships. We explore in an in-depth, longitudinal case study two underrepresented areas in the governance literature: (i) the governance dynamics in the formation phase of a relationship before contract signature; and (ii) the interplay of vertical and horizontal relationships (and their impact on the development of governance mechanisms). Our primary and secondary data sets reveal the important role opportunity search plays in governance, how expected and emergent opportunities become constrained over time as formal and informal governance mechanisms are developed, and how formal and informal governance mechanisms have a strong interdependency across vertical and horizontal relationships, but substitute for one another within vertical and horizontal relationships in a buyer-supplier MPA.

**Keywords:** *Contracts; control; coordination; multiparty alliances; relational norms; longitudinal study*

## INTRODUCTION

Formal and informal governance mechanisms are important to control and coordination within inter-organizational relationships (Oliveira and Lumineau, 2017; Schepker et al., 2014), and to their performance outcomes (Mayer and Argyres, 2004; Schilke and Lumineau, 2018). A dominant stream of literature within macro-level governance studies has emphasized the relationship between formal and informal governance mechanisms, with much focus given to their complimentary or substitutive interactions (Cao and Lumineau, 2015; Poppo and Zenger, 2002). Recent evidence appears to point towards a complementary relationship, but with moderating roles for the nature of the context under study (Cao and Lumineau, 2015). Scholars have therefore called for a greater emphasis on contextual research that extends our understanding of the dynamics between formal and informal mechanisms (Lumineau et al., 2020).

Our study contributes to the inter-organizational level governance literature by studying the development and interplay of formal and informal governance mechanisms during the formation phase of a new buyer-supplier multiparty alliance (MPA). Buyer-supplier MPAs represent an inter-organizational arrangement of three or more parties (Lavie et al., 2007) governed by two contracts, one vertical contract connecting the buyer to the multiple suppliers, and one horizontal contract connecting the suppliers. Such arrangements are increasingly common, especially within the projects community as they have the potential to provide the buying firm opportunities for efficiency and cost savings, but also introduces control, coordination, solidarity, and information sharing threats that require novel (to the organization) forms of governance mechanisms. In terms of this study, the formation of a buyer-supplier MPA allows for the simultaneous examination of two areas currently underrepresented in the governance literature. First, we examine the evolution of governance mechanisms at an early stage of the relationship that is before contract signature or the development of embedded norms. This stands in contrast to the majority of the literature that examines governance only after contract signature (e.g., Caldwell et al., 2017; Oliveira and Lumineau, 2017), or within established relationships (Bercovitz and Tyler, 2014; Howard et al., 2019). Given that formal and informal governance mechanisms change over the phases of relationships (Cao and Lumineau, 2015), and dynamics during the formation phase will have implications for the management phase (in which the established relationships will experience further dynamics – Majchrzak et al., 2015), the lack of literature examining the formation phase appears to be an

important omission. We address this limitation through a longitudinal study of the establishment of both formal and informal governance mechanisms from initiation through to contract signature to explore the experimentation and learning that takes place as organizations sequentially introduce and update governance mechanisms to cope with expected and emerging potential threats and opportunities that present themselves within the relationships.

Second, we examine governance dynamics and interplay within a structure that has both vertical and horizontal relationships. While prior governance literature has investigated governance mechanisms and/or the impact of opportunism at either vertical (e.g., buyer-supplier; Argyres et al., 2007; Lumineau and Oliveira, 2020; Poppo and Zenger, 2002), or horizontal (e.g., R&D alliances; Bercovitz et al., 2006; Ryall and Sampson, 2009) relationships, we do not yet know what happens when vertical and horizontal relationships are brought together within the same governance structure. Specifically, we have limited insights into whether there is an interplay between the vertical and the horizontal relationship, or whether they influence each other during the formation phase. Our study addresses this gap through the study of an MPA consisting of two new contracts, one that formalizes the arrangement between the buyer and all the suppliers (vertical contract), and the other arrangement between several suppliers (horizontal contract). While there are two contracts, they are jointly developed and signed on the same day, representing a unique form of governance. Similarly, while the formal governance mechanisms are being designed, informal governance mechanisms are simultaneously being developed in an effort to align the relational norms of the parties involved.

Our research question, therefore, is: *How are formal and informal governance mechanisms developed in the formation phase of a new buyer-supplier MPA, and what is their interplay?* We explore this question through a longitudinal case study of a new MPA arrangement formed to deliver a significant portion of a large UK construction project with an overall value of around \$25 billion dollars, and a duration of at least ten years. We analyze rich data sets comprised of both primary and secondary data in the form of observations, interviews, archival data (including board papers), and contracts to answer our research question. Our findings show how governance mechanisms evolve over the formation phase as exchange partners seek to create and capture opportunities, or control future threats, as well as the interplay created by having both horizontal and vertical relationships.

We make three primary contributions to the governance literature. First, our study identifies and examines governance dynamics particular to the formation phase of inter-organizational relationships. In contrast to established relationships, where options to revise governance mechanisms are relatively constrained, parties have much more freedom at the formation phase to design and develop formal and informal governance mechanisms that will underpin the future management of the relationship. We find that changes made to formal and informal governance mechanisms are balanced during this phase but occur far more often in response to expected and emergent threats than to opportunities. Second, very limited research has explored governance structures where vertical and horizontal relationships are present, and impact on the development and interplay of governance mechanisms. We find a substitutive governance interplay within the vertical and horizontal relationships as parties within each relationship developed a dominant governance mechanism. Third, our findings uncover two interactions between vertical and horizontal relationships. We find that change in the vertical (horizontal) relationship may necessitate change in the horizontal (vertical) relationship. Moreover, findings show that threats can be controlled, or opportunities can be realized, through changes to governance mechanisms across both vertical and horizontal relationships.

## **THEORETICAL BACKGROUND**

### **MPAs, opportunism, and bounded rationality**

Studies of buyer-supplier relationships have recently extended beyond dyadic analyses (i.e., one buyer to one supplier) to examine other arrangements including triads, projects, and networks (Oliveira and Lumineau, 2017; van Burg et al., 2014). One arrangement that has been growing in practice, but that remains under-studied, is the buyer-supplier MPA with multiple suppliers. Critically, these types of MPAs retain and consolidate the element of vertical exchange while simultaneously introducing direct, and usually contractual, horizontal relationships between the suppliers within the agreement. Prior MPA research has primarily explored formal and informal horizontal MPAs in high technology industries often referred to as strategic alliances or joint ventures (JVs) (e.g., Fonti et al., 2017; Zeng and Chen, 2003). We contribute to this literature by introducing an important type of MPA that is motivated and orchestrated by a large buyer in an effort to acquire the coordinated services of several suppliers, and consists of not one but rather two formal contracts. Unlike technology alliances or joint ventures initiated by the parties themselves, MPAs where a large buyer

contracts with a set of suppliers they have brought together to meet their needs have both vertical and horizontal relationships by definition.

More specifically, the type of MPA we study is a buyer-supplier MPA where a large buyer needs to contract with several suppliers for similar services to build a large construction project over ten years, and wants them to jointly provide the necessary services, thus, this type of MPA by definition includes both vertical and horizontal relationships. Such MPAs are becoming more and more common in large projects where a single corporation cannot, for instance, provide the necessary services to the construction company and dyadic contracting between the buyer and suppliers will lead to suboptimal (i.e. expensive and extensive) coordination between suppliers (HM Treasury, 2014). In such cases, organizations design two contracts to govern the horizontal and vertical relationships: one contract between several suppliers defining how they will jointly supply the necessary services, and a second contract between the buyer and this contractually defined group of suppliers. Therefore, this type of MPA has two formal contracts, and also has informal relationships that evolve vertically between the buyer and the various suppliers as well as horizontally between suppliers.

When compared to dyads, this type of MPA creates specific threats and opportunities for buyers. First, the buyer can benefit from a reduction in complexity where the MPA reduces the direct relationships that it has with its suppliers to a single interface. The benefits of complexity reduction are well established within the literature (Choi and Krause, 2006), and may lead to lower transaction costs, disruption risk, and improved responsiveness consistent with transaction cost economics (TCE) logic. Second, the buyer may also benefit from increased knowledge transfer, joint problem solving, and learning by incorporating multiple suppliers, and increasing cooperation and coordination among them as proposed by interpretive perspectives such as social comparison and exchange theories (Das and Teng, 2002; Fonti et al., 2017; Gulati et al, 2012). On the other hand, research based on interpretive perspective also suggests that a buyer-supplier MPA creates threats for the buyer through the shift from a direct, reciprocal relationship with a supplier to a generalized (or indirect) reciprocal relationship with multiple suppliers (Garcia-Canal et al., 2003; Heidl et al., 2014). This indirect reciprocity between the buyer and multiple suppliers fosters competitive tension between the suppliers (Das and Teng, 2002; Zeng and Chen, 2003). While dyadic exchange facilitates the detection and monitoring of what the other party contributes to the relationship (Das and Teng,

2002), buyer-supplier MPAs have multiple suppliers that all feed their resources into a common pool, which makes the monitoring of partners' individual contributions, as well as the identification and attribution of opportunistic behavior more difficult for the buyer to detect (Li et al., 2012).

Given our exploration of the formation phase of a buyer-supplier MPA with multiple suppliers, we consider the ex-ante structural and motivational solutions applied in an effort to align the parties' incentives and suppress opportunism (Gulati, et al, 2012). Thus, in this study we seek to discover how a buyer-supplier MPA with five suppliers addresses problems associated with opportunism and bounded rationality, consistent with TCE (Rindfleisch and Heide, 1997; Williamson, 1985). TCE proposes that opportunism, referred to as a lack of candor or honesty in transactions (Williamson, 1979), poses a problem when the relationship between exchange parties is supported by specific assets whose values are limited outside of the relationship. When assets are specific to the exchange they create a safeguarding problem, because market competition no longer serves as a restraint on opportunism. Opportunism can significantly harm the relationship by creating uncertainty, raising transaction costs, and hindering innovation (Oliveira and Lumineau, 2019; Wever et al., 2012; Williamson, 2008) in buyer-supplier relationships (vertical; Lumineau and Oliveira, 2020; Mellewigt et al., 2018), and alliances and JVs (horizontal; Das, 2006). The fundamental problem of opportunism is one of asymmetric information, where suppliers have better knowledge of their own processes and costs than the buyer (Brouthers, 2013). This creates an opportunity for suppliers to shirk and poach, which may involve deceiving buyers by, for instance, artificial increasing costs, using cheaper materials, withholding resources, deliberately underperforming, and violating buyers' confidentiality (Handley and Benton Jr., 2012). Typical opportunistic behaviors include lying, cheating, free-riding, stealing, shirking, withholding, or distorting information, and violations of contracts (Brown et al., 2000; Cai et al., 2009; Cousins et al., 2006; Vlaar et al., 2007; Wathne and Heide, 2000). In this study of an MPA formation, we consider how the participating firms plan for and respond to potential opportunism ex-ante.

TCE also proposes that bounded rationality creates some constraints on transactional exchanges (Simon, 1979), because transactions cannot be (fully) specified ex-ante, due to environmental and behavioral uncertainty (Foss and Weber, 2016). Environmental uncertainty leads to adaptation problems, as it is difficult to modify contracts when circumstances change, potentially leading to considerable transaction costs associated with ongoing discussions, and behavioral uncertainty

creates a performance evaluation problem, because it is difficult to verify whether parties have complied with established agreements even if relevant aspects of the operations can be measured (Williamson, 1979, 1985). Foss and Weber (2016) argue that bounded rationality is an “alternative source for significant transaction costs” (p. 62) in addition to opportunism that should be considered by exchange parties when establishing ex-ante governance solutions, although Lumineau and Verbeke (2016) warn there should be reasonable limits placed on interpreting all costly conflicts ex post as expressions of bounded rationality.

As a hybrid form of governance, an MPA will need to establish formal and informal governance mechanisms that help to address these problems: safeguarding problems related to potential opportunistic behavior, as well as adaptation and performance evaluation problems that result from bounded rationality. However, the seminal work of Williamson (1979), and later Nooteboom (1996), Wathne and Heide (2000), Carson et al. (2006), and Lumineau and Quélin (2011) suggests that although opportunistic behavior can be minimized by deploying appropriate governance mechanisms, it is more challenging to develop appropriate governance mechanisms ex-ante for unforeseen threats and opportunities resulting from bounded rationality. None the less, during the formation phase of an MPA, buying firms can be expected to propose governance mechanisms to address the potential opportunism they anticipate from suppliers, and all parties can be expected to react to the perceived threats and opportunities related to potential opportunism and bounded rationality that emerge prior to contract signature.

### **Formal and informal governance mechanisms**

Prior governance literature has distinguished between two main types of governance mechanisms: formal and informal (Poppo and Zenger, 2002). While formal governance is manifested in explicit and relatively detailed and legally binding agreements, specifying the roles, and obligations of contracting parties (Poppo and Zenger, 2002); informal governance refers to exchange mechanisms that are manifested in socially derived ‘arrangements’ (Dyer and Singh, 1998; Heide and John, 1992; McEvily et al., 2014). More recent governance studies have started to emphasize the function of governance mechanisms to control and coordinate relationships (e.g., Caldwell et al., 2017). While the control function refers to safeguarding parties against potential opportunism, the coordination function emphasizes communication, interactions, and information sharing (Malhotra and Lumineau 2011;

Schepker et al., 2014), and refer more to issues related to environmental and behavioral uncertainty that result from bounded rationality.

The formal control function defines the rights and obligations of the parties involved, thus supporting the mitigation of appropriation concerns, the management of potential moral hazards via establishing disincentives, the alignment of incentives, and monitoring of performance (Reuer and Arino, 2007; Ryall and Sampson, 2009). By reducing concerns about free riding, hold-up and leakage, forms of opportunism common in MPAs, formal control constrains the ability of a party to extract additional rents from other parties to the agreement by failing to perform as agreed (Gulati and Singh, 1998; Hoetker and Mellewigt, 2009).

The formal coordination function refers to ordering desires and expectations between the transacting parties, and organizing priorities for the future (Ariño et al., 2013; Ryall and Sampson, 2009). These attributes of the contract are necessary to manage adaptation and performance evaluation problems associated with environmental and behavioral uncertainty respectively, resulting from bounded rationality when the formal contract is signed. By explicitly defining formal communication and reporting requirements including mode, frequency, and content, these formal coordination mechanisms foster regular information sharing between the alliance partners, and thus provide a means by which firms can align their expectations (Argyres et al., 2007). Communication may also promote the development of routinized interactions, and shared language that can make it easier for the parties to ensure they meet each other's needs (Faems et al., 2008).

Informal governance mechanisms refer to socially derived 'arrangements' such as relational norms to control and coordinate relationships between partnering firms (Gulati, 1995; Poppo and Zenger, 2002). Shared relational norms generate common understanding, compatible goals, and "a commitment to joint action" (Poppo and Zenger, 2002, p. 710). Such norms also serve as mutual heuristics (Mellewigt et al., 2017), and refer to a relationship's underlying shared expectations about the behaviors and attitudes of each party in working cooperatively together to achieve mutual and individual goals (Cannon et al., 2000; Heide and John, 1992; Kaufmann and Stern, 1988; Long and Sitkin, 2018). Prior studies have evidenced that informal governance mechanisms support the emergence and stability of inter-organizational relationships, because they allow parties to economize on the costs of contracting (Dwyer et al., 1987).



For relationally-governed exchanges, the enforcement and coordination of obligations, promises, and expectations occurs through social processes that promote relational norms such as solidarity, mutuality, and information exchange (Cannon et al., 2000; Kaufmann and Stern, 1988; Macneil, 1980). The relational norm of solidarity focuses on the preservation of the unique and continuing relationship in which the various commercial transactions take place (Cao and Lumineau, 2015; Kaufmann and Stern, 1988). Thus, solidarity is characterized by the extent to which parties place a high value on the relationship (Griffith and Myers, 2005), and prescribes behaviors directed specifically toward relationship maintenance (Cannon et al., 2000), thus promoting a bilateral approach to problem solving (Poppo and Zenger, 2002). Mutuality is described as the attitude that each party's success is a function of everyone's success and that one cannot prosper at the expense of one's partner, expressing the sentiment of joint responsibility (Cannon et al., 2000). Mutuality establishes self-enforcing safeguards to deter opportunism (Cao and Lumineau, 2015; Macaulay, 1963; Poppo et al., 2008). The relational norm of information exchange defines a bilateral expectation that parties will proactively provide (private) information useful to the partners including short- and long-term plans and goals (Heide and John, 1992; Macneil, 1980; Poppo and Zenger, 2002), and thus facilitate goal congruence between partners (Macaulay, 1963). Information exchange represents a safeguard to parties in the sense that the partnering parties can be expected to provide unforeseen information that may affect operations on an ongoing basis to enable parties to cope better with uncertainties.

Early governance studies have positioned formal and informal governance mechanisms as substitutes that may damage (Heide and John, 1992; Macaulay, 1963), or make the other redundant (Gulati, 1995). Over time, with the conceptual work by Das and Teng (1998) and the seminal study by Poppo and Zenger (2002), scholars moved towards the argument that formal and informal governance mechanisms act as complements. For instance, contracts may aid the development of informal governance through the reduction of information asymmetry between parties (Liu et al., 2009). Also, as firms enter into long-term relationships, they become more familiar with each other, and learn to specify more detailed contracts (Poppo and Zenger, 2002; Ryall and Sampson, 2009). While prior governance studies have provided detailed insights into governance mechanisms and their interplay (Cao and Lumineau, 2015; Roehrich et al., 2020), these studies have largely neglected to investigate the following core areas: (i) the governance dynamics during the formation phase of a

relationship when new governance mechanisms are being developed; and (ii) the interplay of horizontal and vertical relationships (and their impact on governance mechanisms) within the same governance structure.

First, given that the interplay between formal and informal governance will change over the phases of the relationship (Cao and Lumineau, 2015), the lack of literature examining the formation phase appears to be an important omission. In this phase, the 'full menu' of governance mechanisms is not yet available to each party, because the final formal contract is not signed and informal relationships have not become embedded. The formation phase enables investigation of the development and experimentation involved as MPA parties sequentially develop new (to the organization) and update governance mechanisms to cope with expected and emergent threats and opportunities. In contrast to the valuable literature on learning to contract (e.g., Mayer and Argyres, 2004; Reuer and Arino, 2007), we do not explore how firms and managers learn from one contract to the next. We instead unpack how the MPA formation process unfolds as firms develop governance mechanisms to address expected threats of possible opportunistic behaviors when forming an MPA in search of opportunities to economize on contracting with multiple suppliers, as well as emerging threats and opportunities unforeseen due to bounded rationality. Prior governance studies have mainly adopted a static perspective (i.e. investigating relationships at one point in time), and largely ignored governance dynamics and their interplay over time (some notable exceptions are the studies by Arino and Ring, 2010; Faems et al., 2008; Oliveira and Lumineau, 2017; Zheng et al., 2008). Arino and Ring (2010) encouraged others to explore the content and processes of alliance formation in detail using qualitative and quantitative techniques to conduct inductive and deductive explorations. We respond to this call by exploring the formation of a buyer-supplier MPA with multiple suppliers to consider more closely the content of the governance mechanisms proposed and selected during the formation of a specific kind of MPA.

Second, extant governance studies can broadly be divided into: (i) vertical relationships (e.g., buyer-supplier relationships; Li et al., 2010; Liu et al., 2009); and (ii) horizontal relationships (e.g., JVs; strategic alliances; Judge and Dooley, 2006; Lee and Cavusgil, 2006). In other words, the vast majority of prior studies have included one but not both of these relationships in one study (Argyres et al., 2007; Bercovitz et al., 2006; Caldwell et al., 2017), and very limited research has explored governance arrangements where both types of relationships (namely vertical and horizontal) are





involved in R&D activities (Li et al., 2012; Mishra et al., 2015), or MPAs with large, geographically dispersed, heterogeneous parties that may or may not involve formal contracts (e.g., Das and Teng, 2002; Lavie et al., 2007).

We conducted our fieldwork while the formation of the MPA was in ‘live development’, allowing us to capture real-time data on decisions, perceptions, and expectations. This resulted in a unique opportunity to uncover how the buyer developed formal and informal governance mechanisms to manage vertical and horizontal relationships. More specifically, we conducted a multi-method, single case study, to collect rich data from multiple data sources on social processes, and the evolution of formal governance (Siggelkow, 2007). The selected MPA consisted of one buyer (hereafter referred to as ‘large project buyer’ – ‘LPB’) and five suppliers (Table I). LPB was a subsidiary established in 2008 by EnergyCo, a large utility company producing circa 20% of the UK’s energy needs, to coordinate the design, construction, and commissioning of new nuclear power stations in the UK.

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INSERT TABLE I AND FIGURE 1 ABOUT HERE  
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In November 2017, LPB approached four suppliers which had been previously selected as preferred bidders for three main work packages concerned with the manufacturing, and installation of electrical, mechanical, and HVAC (heating, ventilation, air-conditioning) components for the nuclear power plant, to be installed in 4,000 rooms across 72 buildings (Figure 1). Overall installation work was valued at over \$1bn (value as of April 2018), and was expected to last for six years. Due to the highly interdependent nature of the installation work, LPB had recognized that the siloed contractual structure of the mechanical, electrical, and HVAC work would create inefficiencies during on-site installation work. The contractual separation would require formal handovers between suppliers for each of the 4,000 rooms. Hence, LPB presumed that large time and cost savings could be achieved if installation services suppliers were enabled to install equipment in parallel.

As a first step, LPB arranged a conference call with four suppliers: ElectricalACo, ElectricalBCo, MechanicalCo, and HVACCo, to understand their receptiveness towards an MPA. Due to positive responses by the suppliers, LPB then organized a joint workshop to discuss an MPA in December 2017. Formal negotiations between the parties started in April 2018, with the expectation

that there would be a signed contract by September 2018. However, the discussion of the MPA and supplier contracts proved to be more complex than anticipated and continued until June 2019, when the MPA contract was finally signed. On the same day, suppliers signed a separate contract, which created an arrangement between the suppliers only, thereafter, referred to as ‘supplier contract’. Figure 1 provides a timeline summarizing key events in the MPA formation process between November 2017 and June 2019. This timeframe is the focus of this study.

### **Data collection and sources**

Our study combined primary (observations, interviews, and site visits), secondary data sources (board papers, emails, personal meeting notes, presentation slides, and government and industry reports), and contracts, which we collected live and retrospectively between 2017 and 2019 (Table II; Gibbert et al., 2008). We collected data using a three-step recursive strategy. First, we attended a supplier event organized by LPB in November 2017, where we networked with several individuals working at LPB’s commercial and supply chain teams. In August 2018, we were invited to a conversation with LPB’s Commercial Director, who described LPB’s intentions to establish an MPA with five suppliers. At this meeting, we were able to receive detailed, confidential material including LPB’s board papers and presentation slides of a meeting with the UK government.

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Second, after careful study of secondary data sources, the lead researcher was embedded within LPB to conduct a comprehensive series of non-participant observations of internal LPB meetings, as well as of meetings between LPB and all MPA suppliers. As the observations progressed, the researcher was also able to join meetings between suppliers only. The non-participant observations lasted from October 2018 until June 2019 (the lead researcher spent on average 3.5 working days/week at LPB’s offices), when the MPA and the supplier contracts were signed (marking the end-date of data collection for this study). Additionally, she gathered supporting secondary data (e.g., meeting agenda, presentation slides), and conducted semi-structured interviews to clarify open questions. Thus, she was able to collect a rich data set documenting the live formation of the MPA, the threat from the dyadic contracting approach, the emerging threats and opportunities, and the subsequent impact on formal and informal governance developed both vertically and horizontally.

Third, after the observations had been completed, the lead researcher conducted a further series of semi-structured interviews, and analyzed both final contracts which were signed in June 2019. This helped to corroborate and refine emerging findings with informants including, but not limited to, emerging threats and opportunities, as well as differences across both final contracts. To gather reliable and objective information from our informants (Alvesson, 2003), she interviewed stakeholders with different lengths of tenure in the MPA, in disparate hierarchical, and functional roles. To minimize respondents' biases (Golden, 1992), we designed an interview protocol (Alvesson, 2003) that we adapted to the characteristics of different informants, and refined over time as the research progressed, and theoretical constructs emerged. Overall, the final step facilitated an in-depth understanding of how formal and informal governance mechanisms developed in response to perceived ex-ante threats and opportunities during the MPA formation phase.

### **Data analysis**

To facilitate data analysis we imported the whole data set into a data analysis software (NVivo), and ordered data sources chronologically. In the first step, we chronologically coded the early board papers in which LPB described the threat if it continued with the vertical, siloed contractual approach, and how these would be addressed through an MPA. The data analysis was facilitated through codes that we had derived from the literature (Figure 3). During the coding process, we realized that the formation of the MPA was not only motivated by expected threats but also by opportunities. Thus, in our subsequent analysis steps, we focused on emergent threats as well as opportunities, and their impact on the development of governance mechanisms.

In the second step, we chronologically coded the observations and secondary data relating to the MPA formation (e.g., meeting notes and slides). This allowed us to identify emergent threats and opportunities during the MPA formation phase, as well as the subsequent development of formal and informal governance mechanisms. It also provided us with more detail on the vertical and horizontal relationships, and the development of formal and informal governance mechanisms across both relationships. While we sought to code for all informal norms identified in prior literature (mutuality, solidarity, and information exchange), we only found evidence for solidarity and information exchange in the data.

In the third step, we chronologically coded the contractual documents (including the MPA contract, and the supplier contract). This allowed us to track the development of formal governance mechanisms during the formation phase. We were further able to compare the MPA contract with the supplier contract, and identified key differences (Appendix C). With regards to formal governance mechanisms in the contracts, our codes were informed by definitions of formal control and coordination. For control, we coded sub-clauses that defined: (i) supplier duty details; (ii) buyer's decision rights; (iii) monitoring and supervision; (iv) contingencies and directives; and (v) (dis-)incentives. For coordination, we coded sub-clauses that specified: (i) processes of who does what when; and (ii) how to interact.

As a final step we coded the interview transcripts, which added further detail, and evidence to previously identified threats, opportunities, and the development of governance mechanisms across vertical and horizontal relationships. For each step, the lead researcher collided her findings in tables, highlighting the emergent threats and opportunities as well as the impact on governance mechanisms. All co-authors extensively discussed the threats and opportunities identified to determine if they were related to contract development, or the development of relational norms, sometimes requiring the lead researcher to go back to the data to find additional information. We repeated this final step until all co-authors agreed on the codes, and the key themes that had emerged.

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INSERT FIGURE 2 ABOUT HERE  
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## FINDINGS

### **Threat from the dyadic contracting approach, and expected threats and opportunities for the MPA**

Between November and December 2017, LPB presented a new contracting strategy to the main suppliers of the mechanical, electrical, and HVAC equipment. Originally, the work had been contracted vertically, separated on the basis of the different trades (i.e. type of works to be delivered for the buyer). However, LPB anticipated that this approach would create threats to the various vertical buyer-supplier relationships during the delivery of the work. Not only would a disintegrated approach between different suppliers burden the buyer with managerial complexity, and the cost of



performance inefficiencies as highlighted in Table III. LPB further assumed that by moving suppliers into an overarching horizontal contract, a number of additional opportunities to the buyer could be realized. In enabling suppliers to coordinate their work, complexity and cost for the buyer would be reduced. Supplier self-governance was perceived as a further benefit, who would be able to better observe each firm's contributions.

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***Vertical threat due to siloed contracts (1. in Table III):*** The original vertical contracting strategy had been modeled on the siloed procurement strategy, for which LPB had carved out work packages based on the trades required for the execution of the work (i.e., mechanical, electrical, HVAC). However, once the preferred bidder for each work package had been selected, LPB realized that a similar siloed and trade-focused approach would negatively impact project time as it required formal handovers between individual suppliers before and after installation work was conducted [1; further data extracts can be found in Table III to guide the reader]. LPB's managers further learned during a visit to another new nuclear new build in France, how the siloed vertical contracting approach had fostered self-centered behaviors in suppliers leading to damaged equipment and decreased work quality [2].

Overall, LPB realized that the vertical siloed contracting strategy (dyadic contract with each individual supplier) would pose a threat to project time, cost, and quality. In December 2017, LPB proposed the integration of seven suppliers, which had been selected as preferred bidders for highly interdependent installation work, into one over-arching vertical contract [3]. LPB envisaged that these suppliers would be horizontally controlled through an equity-based MPA enabling not only joint coordination and parallel delivery of work, but also shared liabilities and a reduced involvement of parent firms, hence, reducing coordination complexity and costs for LPB [4, 5].

***Horizontal opportunity to capitalize on synergies, and transfer risk to suppliers (2. in Table III):*** As LPB revised the original contracting strategy due to anticipated threats, they also recognized opportunities to capitalize on synergies, and to shift costs and scheduling risks from the vertical relationship to the horizontal relationship [6]. LPB proposed that suppliers plan and manage the delivery of their individual work packages through a joint project management office (PMO). This

would shift coordination requirements from the buyer to a single supplier team conducting all planning and sequencing work for the supplier MPA [6, 7, 8]. Further, suppliers should accept risks for their program management through horizontal key performance indicators (KPIs) with which LPB sought to financially incentivize suppliers *“on successful coordination of MPA delivery to schedule and budget [...and] incentivize joint sharing of resources to support integrated planning and delivery to drive efficiencies with the MPA as a whole”* (LPB Board Paper, Dec. 2017) [9, 11]. In addition, LPB expected to shift costing risks to suppliers through a target-cost regime, which limits overall cost to target prices agreed prior to contract signature [9, 10]. Hence, any increases in cost would have to be absorbed by the suppliers. By employing a progressive approach to the target cost pricing, LPB wanted to ensure that year-to-year improvements in performance and learnings are accounted for and reflected in the pricing [10]. In other words, target-cost prices would progressively decline over time. In summary, the proposed shifts in risk and realization of opportunities required suppliers’ support and therefore careful work by LPB to achieve this.

***Vertical and horizontal threats to achieve alignment of expectations, concerns for future success (3. in Table III):*** LPB expected suppliers to oppose the proposed change from several individual vertical contracts to one horizontal supplier and one MPA contract (governing the vertical relationship), particularly as suppliers were expected to assume joint and several liability for each other’s work [12]. To address this threat, LPB’s Managing Director sought to develop an informal relationship with suppliers’ Managing Directors to meet on a monthly basis to review progress, and to build relationships between the parties [13]. Additionally, a working group was formed to support progress in forming the MPA and enabling information exchange between LPB and the suppliers [14]. LPB tried to ensure that each supplier was heard equally to ensure that suppliers ‘bought into’ the mechanisms developed [15]: *“[LPB’s Managing Director] wanted commitment from the CEOs of our organization knowing that if he got senior people but not the top, the top could overrule, so he wanted [... to ensure the] the expectations were understood and vice versa”* (Project Director, ElectricalACo).

To further strengthen vertical solidarity norms, LPB invited SupportCo to the MPA in January 2018. There was a long-standing collaborative relationship between SupportCo and LPB’s parent EnergyCo. Many senior managers at LPB knew SupportCo, and welcomed their participation in the MPA, because they expected their presence in the MPA would facilitate a similar collaborative

relationship with the other suppliers. Initially, the remaining suppliers were concerned about SupportCo’s involvement, fearing it would harm their own work scope and profits. When they realized that SupportCo’s capabilities were limited to the provision of support services, and that the firm did not have the competencies required for delivering main work packages, the other suppliers became more receptive to SupportCo joining the MPA. Moreover, at first, SupportCo also felt some apprehension towards the other suppliers that were known to be commercially aggressive. However, SupportCo continuously sought to promote support and commitment to LPB and to “*not be seen*” as the “*poor relations*” to other suppliers (SupportCo, Project Director).

Despite careful communication of expectations by LPB, the proposed changes created unexpected responses from suppliers. The next section discusses how LPB and the MPA suppliers responded to emerging threats and opportunities that resulted largely because of bounded rationality when they were envisioning the MPA, and how this affected the development of formal and informal governance.

#### **Emerging threats and opportunities during the MPA formation phase**

Table IV provides an overview of new formal and informal governance mechanisms that were developed to respond to emerging threats and opportunities.

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***Responses to changing from siloed contracts to an integrated structure (1. in Table IV):*** During the commercial workshops that LPB held between April and June 2018, it became clear that suppliers opposed LPB’s intention to form an MPA with an equity-based supplier group including seven suppliers. Particularly, ElectricalACo, that perceived itself as the financially strongest firm among the selected suppliers, was not willing to accept liability for suppliers they had no prior shared working history with, or which they saw as a competitive threat [16, 17]. This opposition meant that LPB had to revise the originally proposed governance structure to forming an MPA with: (i) a non-equity contracted group of suppliers consisting of supplier only five suppliers; and (ii) a low liability vertical contract between the buyer and the supplier group [18, 19, 20, 21]. In limiting the potential losses from the MPA failure to 20% of the contract volume (which represents only 1/5 of any potential loses

for each individual supplier) in a low liability vertical contract, the five suppliers felt comfortable to agree to a 'joint and several agreement', which meant for LPB that suppliers would guarantee for each other's performance [20]. LPB agreed to this realizing that increasing supplier liability would harm the informal relationship at later stages as explained by a Legal Manager: *"The only way you can do [an MPA] is if you go really light on liability because [...] if the [suppliers] are worried about sticks that will create the wrong behaviors and they will not be an MPA and partners, they will not tell us bad news, they will defend their position, they will have lawyers involved"*. LPB also saw opportunities in forming an MPA with fewer suppliers (five instead of seven) as requested by suppliers as this meant that excluded suppliers could be kept as a competitive alternative to the MPA: *"Let us suppose [one of the MPA suppliers] is not working out, they cannot fix the problems, what is your alternative? [...but] this [supplier] does a lot of high integrity nuclear welding. It was decided to keep it separate [...so] you have a competitive alternative"* (Commercial Director, LPB).

Despite agreeing to an MPA (with fewer suppliers than initially anticipated by LPB) that are comfortable with each other [19] and limited liabilities, LPB was concerned about the suppliers persisting on each having their own representatives present for meetings instead of one joint representative for all suppliers [22]. As a response to this threat, LPB developed a number of formal and informal governance mechanisms to foster horizontal integration [20, 21]. In June 2018, LPB proposed that 'profit fees' for the achievement of KPIs would be paid the supplier MPA and not individual suppliers to ensure equality between suppliers [23]. In October 2018, LPB requested suppliers to co-locate and develop MPA branding which would base all suppliers on site where they would be *"joined up with LPB's personnel"* after contract signature [24]. It was believed that having the employees of all six firms co-located would encourage cooperative norms, such as solidarity and information exchange (observation, Apr. 2019). However, doubts persisted within LPB as expressed by a Manager after supplier co-location in February 2019: *"[Suppliers] have now got a joint office, with [branded] mugs and batches, and they also want to get an [MPA] web site. But he admits that people sitting next to each other will not mean they are good at collaborating with each other."*

**Responses to horizontal opportunity to transfer schedule and cost risks to suppliers (2. in Table IV):** The responses to this horizontal opportunity can be divided into three parts, one focusing on the shift in program management to the suppliers, the second on the establishment of a target cost mechanism in the MPA contract, the third focusses on emerging opportunities.

a) *Proposed horizontal program management of schedule and cost to improve efficiencies (2. Table IV, a):* In September 2018, concerns emerged at LPB that in shifting program management responsibilities to suppliers, too much control was given to suppliers, who did not have sufficient experience in managing an MPA [25]. As a response to this concern, LPB planned to introduce experienced personnel from EnergyCo's foreign subsidiaries into the MPA to act as "guiding minds" (Project Director, MechanicalCo). In November 2018, however, LPB appeared again unsure to what extent LPB's managers (or managers from its' mother firm) should be involved in the MPA as expressed during a meeting with suppliers: "[LPB] are considering 'to what degree they want to get their hands' dirty on the job'. For now, it seems better having a contract with the [supplier MPA] and leave it more to them. But they also want to keep contractual flexibility as the project and its requirements are evolving" (observation, Nov. 2018).

The second delay of contract signature in December 2018 re-sparked concerns with LPB's managers that too much control was given to the suppliers, which would provide them with opportunities for misappropriation of bargaining power as expressed by LPB's Legal Manager: "We needed the MPA; we did not really have an alternative, they [suppliers] knew that and frankly used it to their commercial gain". Respectively, in February and March 2019, LPB strengthened formal control by increasing its representation in the main governance body of the MPA from 17% to 50% [26]. Furthermore, LPB established that key decision-making roles in the MPA, such as quality management, finance, and commercial would be executed by LPB employees only [27]. In doing so, LPB ensured that they would retain decision making control over key aspects in the MPA.

b) *Proposed progressive target-cost contract to improve performance (2. Table IV, b):* In spring 2018, LPB merged the siloed work packages to create one overarching scope of work for the MPA. In doing so, LPB's managers gained insights into the bid proposals of the selected MPA suppliers for each of the work packages. LPB was surprised to find out that suppliers had applied very different assumptions (norms) around the time it would take them to achieve a similar task [28]. This caused concern that if norms between MPA suppliers were not harmonized, suppliers would apply the norms of the most expensive supplier, which were those of MechanicalCo. As a response, LPB informally threatened MechanicalCo that they would lose its place in the MPA, and any other work in the project, should they not align their norms with the other suppliers [29]. From January 2019 onwards, LPB negotiated a 'book of harmonized norms' with all

suppliers as a formal control mechanism to achieve equality between suppliers: “[LPB] got sample of factors from [other mechanical suppliers]. It was found that while everyone factored around 2, MechanicalCo factored at 5. It is better to have one big fight about a common baseline now, than one with every task order. [...Suppliers] should have an internal meeting to align before general meeting [with LPB]” (observation, Jan. 2019). Hence, the ‘norms book’ would provide a formal baseline of the norms to be applied for each type of work once the MPA was operating and therefore acting as a measure of labor productivity.

While LPB achieved horizontal alignment of supplier norms, it could not convince suppliers to adopt a progressive target-cost regime for the vertical contract [31]. Suppliers insisted that due to an insufficiently developed design (for the work to be delivered by the MPA), it was impossible to agree to a fixed or target prices, which had been the preferred option for LPB to shift costing risks to the suppliers. It was difficult for LPB to settle for a cost-reimbursable contract (vertical) as it meant that all costing risks would stay with LPB. Throughout the formation phase, LPB pressured suppliers to accept a target-cost regime: “At the final signature [day], there [...] was the idea of going back to target cost or a fixed price [...] and I was like, ‘No’. Everybody in one voice on the contractors’ side said, ‘This is a walk away for us, we just do not sign, and we will not be coming back tomorrow” (Project Director, ElectricalACo). LPB agreed with suppliers to add a clause to the vertical contract which would force suppliers to adopt target- or fixed-pricing should design be sufficiently mature [32]. Additionally, LPB worked with suppliers on the development of ‘cost books’ starting in November 2018, to define the costs that are recoverable under the cost reimbursable regime such as equipment, plant, materials, and people [33]. Hence, while the ‘norms book’ is concerned with the time certain tasks should take and labor productivity, the ‘cost book’ focusses on what constitutes as a cost that suppliers would have to be reimbursed for. While the ‘cost book’ constituted a part of the MPA contract, the ‘norms book’ was only finalized after contract signature.

Not only was it difficult for LPB to accept costing risks for the MPA, LPB was concerned that suppliers would take advantage of the cost-reimbursable mechanisms[34]: “It has always been a concern [...] the suppliers may [...] milk the cow and maximize profits because the construction market is difficult, banks are on to these construction contractors so if you are reporting back to the board that you are bringing in profits and those people get bonuses and doing the right thing that does not maximize profit might not be seen as a terribly good thing” (Legal Manager, LPB). As a

response to this threat, LPB reduced the overall budget for the work to be delivered by the MPA suppliers [35]. As a first step, LPB negotiated with MechanicalCo in December 2018 to deduct \$70mio off their budget, which was used to fund SupportCo's services. In April 2019, LPB negotiated with all MPA suppliers to deduct a further \$270mio of the overall MPA budget. Suppliers were not pleased about these budget reductions [36, 37], and MechanicalCo influenced the other suppliers to postpone contract signature to develop a clearer understanding of how the new budget would align with the work scope to be delivered by the MPA suppliers [38]. Suppliers feared that an amorphous understanding of the work scope would increase the likelihood of future conflict that would harm the vertical relationship: *"[We] realized that if you get rid of all of the uncertainty at that stage, its preferable to leaving unanswered questions, which usually only ever raise themselves when there is conflict. When there is conflict people take different positions, and then you would maybe end up in a position where you revert it to client contracting, which is not really part of the MPA intentions"* (Project Director, ElectricalACo). In addition to the clear definition of the MPA work scope, suppliers also negotiated a material change clause [39]. The material change clauses determined that suppliers' KPI profits would be adjusted in line with future increases (or decreases) of the MPA work scope.

LPB further considered a possible decline in performance after contract signature as an emerging threat and included three safeguarding mechanisms to the MPA contract [40]. First, the allocation of work scope within the MPA would be determined via the 'best athlete principle', meaning that in order to be eligible to carry out work, a supplier would have to prove its suitability with regard to expertise, costing, performance, and collaborative working behavior in comparison to the other MPA suppliers [41]. Subsequently, suppliers would have to continuously compete for work scope. Suppliers reacted to this horizontal threat in different ways: (i) SupportCo had the smallest work scope and thought that the clause might enable it to gain additional work scope; (ii) similarly ElectricalACo and ElectricalBCo perceived the clause as an opportunity to win additional work scope; (iii) HVACCo increased its efforts to secure work outside of the MPA scope; and (iv) MechanicalCo saw the 'best athlete principle' as a threat as they had the largest work scope but lacked resources and capabilities. However, MechanicalCo's bargaining power had been limited by LPB's informal threats to remove them from the MPA [29]. During meetings, LPB's managers informally reassured suppliers that *"naturally the preferred bidder should be the favored one anyway"* to carry out the

work for the tendered work packages (observation, Feb. 2019). Another mechanism included in the MPA contract to foster performance improvements were KPI incentives [42] and performance metrics [43]. The latter allowed LPB to track MPA suppliers' performance and entitled them to remove scope from the MPA should performance decline. Hence, the performance metrics acted as a similar mechanism to the initially envisioned progressive target-cost contract.

*c) Emerging opportunities (2. Table IV, c):* LPB recognized two opportunities that emerged during the formation phase: (i) the potential to minimize sub-contracting [44, 45]; and (ii) further cost reductions through the removal of risk premiums [46]. In reducing suppliers' ability to sub-contract, LPB sought to control for shirking, the threat that suppliers would send their best resources to more lucrative projects while sub-contracting most of the MPA work. LPB perceived shirking as a threat: "*[LPB] wanted to drive the behaviors that would facilitate achievement and progress on the contract, so the base level of fee was only just enough to wipe our nose, not enough to invest our best people and make this happen*" (Project Director, ElectricalACo). LPB also saw the removal of risk premiums as an opportunity of the cost-reimbursable contract, and by adapting the delivery strategy to designer outputs [47]. In their original target-cost pricing for the vertical contracts, suppliers had added high-risk premiums to their prices to safeguard from design uncertainty. By strengthening coordination between MPA suppliers and LPB's design engineers, and letting the delivery strategy be determined by readiness of design, uncertainty would be removed.

***Response to vertical and horizontal threat to achieve alignment of expectations, concerns for future success (3. in Table IV):*** LPB increasingly realized its dependence on a positive informal vertical relationship as exemplified by the following statement: "*The [MPA] contract will be a disaster unless the right behaviors are approached. It is, for [LPB] a leap of faith in the behaviors of the suppliers. If they misbehave for this period, for six years, we have got very little we can do about it under the contract because it is a liability light contract*" (Legal Manager, LPB). In response, LPB developed both formal and informal governance mechanisms to support the development of the vertical relationship [48]. Formally, LPB sought to implement its own procedures and processes within the MPA, presuming that suppliers would act closer to LPB's requirements than to their parent organizations [49]. Informally, LPB held regular events for suppliers that were used to facilitate to build and strengthen norms of vertical solidarity [50]. Suppliers recalled these events as inspiring and as a



source of identification with LPB and project [50]. Finally, LPB shared confidential board papers with all MPA suppliers, containing information about LPB's strategies and motives of why LPB wanted to realize the MPA [51]. LPB hoped that this would demonstrate transparency and help to gain suppliers' sympathy for LPB's position during the development of formal governance mechanisms. After shareholder meetings, LPB would also provide feedback to suppliers about shareholder decisions and the subsequent impact on the contracting process, which was appreciated by suppliers (observation, Apr. 2019).

To strengthen vertical information sharing, LPB introduced daily update meetings, which turned into twice daily updates, during which one supplier representative would inform LPB Senior Managers on the progress that had been made during the day with regards to readiness for contract signature [53]. This was perceived as very challenging by suppliers [54], who felt that the relationship with LPB had become "*emotive*" and "*polarized*" (Project Director, SupportCo). To foster vertical solidarity, a series of behavioral workshops commenced in April 2019 [56]. The intent of these workshops was to develop a more "*cooperative working culture*" between parties to the MPA. It also provided a platform for MPA parties to voice their concerns, and to meet and get to know each other in a more informal setting, because this had been historically very restricted (observation, Dec. 2018). Although these workshops were well received, some key personnel from the buyer and suppliers were still too involved in on-going contract discussions to attend the workshops, which increased frustrations with LPB as well as suppliers (observations, Apr./May 2019). The prolonged discussions with suppliers had begun to damage the vertical relationships between buyer and suppliers as they started to blame each other for the lack of progress towards contract signature. Even SupportCo, who had been invited to the MPA by LPB to strengthen vertical solidarity aligned with suppliers. In May 2019, SupportCo sent an official email to all Senior Managers of the MPA to complain about LPB's lack of attendance in important meetings: "*It was all very professionally put. It was just this is disgraceful that we can be treated like this. [Later] I got on a call [... and] all I could hear was [the LPB Manager, who ...] didn't even acknowledge me [...]. Just because I had gone and copied the [supplier] board members in and all that saying this has gone far enough. Other people came on the call, and then throughout because [the LPB Manager] chaired it, he spoke about me in the third person like I wasn't there [...] That's how petty and polarized it had become*" (SupportCo, Project Director).

Hence, LPB's efforts to strengthen vertical solidarity through the series of workshops was not very successful and solidarity mainly manifested itself in the horizontal relationship as summarized by the Project Director of SupportCo: *"The [supplier] team was quite fractious at the beginning, because it was like an arranged marriage. We were all forced together. But having been on that journey for all that time, it brought us really close together [... and] the relationships have lasted. [...] I could ring at any time of the day and they would take my call, they would give me the advice, which is positive"*. The emergence of horizontal solidarity was also observed by LPB Managers, who noted that suppliers formed a single voice in discussions with LPB and supported each other's positions (observations, Jan. and Feb. 2019).

In June 2019, LPB and the five suppliers signed the MPA contract and the supplier contract on the same day. In comparison, the supplier contract was much shorter than the MPA contract, which included numerous annex documents. However, the supplier contract contained much more detail on the allocation of payments and scope between suppliers, both of which had intently been left ambiguous in the vertical contract to foster better performance from suppliers (see Appendix C).

Overall, Figure 3 summarizes our findings, depicting when and why changes were made to the formal and informal governance mechanisms, across both vertical and horizontal relationships, as well as their interplay across both these dimensions. Starting with a comparison of formal and informal governance mechanisms, the figure highlights a fairly even number of changes but a preponderance of changes that were made as a result of threats rather than opportunities. Over time, and as new information and behaviors emerge, the MPA parties (in particular the buyer) reacts to possible opportunistic behavior by making substantive changes to the developing contract. For example, the introduction of the 'best athlete principle' whereby the buyer identified the potential for ex-post opportunistic behavior, and therefore introduced a range of incentives to help reduce opportunistic behavior.

We also find a strong contrast between the number of changes made to governance mechanisms by the buyer when compared to the supplier. With the existence of two separate contracts (one MPA contract – vertical; and one supplier contract - horizontal) the opportunity set for change was equal at the point of initiation. The data also indicate the importance of informal governance. The suppliers were able to create very strong relational norms of solidarity and information sharing, and put far less emphasis on the initial development of the horizontal contract.

On the other hand, and despite their initial intentions, the buyer largely failed to build informal governance with the suppliers (vertical relationship), and emphasized the development of a detailed MPA contract (vertical) . Without informal governance in place at the vertical relationship, the MPA contract became the main vehicle for controlling suppliers' possible opportunistic behavior, and therefore development of new contract clauses were required as potential threats emerged. Having analyzed our data sets in depth, it is interesting to note the reasons for the different emphasis. The suppliers could see that the development of relational norms put them in a better bargaining position with (against) the buyer, that by coming together with a single, rather than fragmented, voice, the buyer had to take their concerns more seriously, and make greater concessions than what the buyer had initially planned. The buyer, on the other hand, appeared content that the MPA contract was the most important form of governance to develop during the formation phase, and that by *"getting this right"* they could possible develop informal governance in the later management phase.

Finally, Figure 3 also reflects the interplay between vertical and horizontal relationships. We find that developments in governance mechanisms were often made sequentially, and in response to changes in the other relationship. So for example, a change in vertical governance mechanisms could lead to change in horizontal governance mechanisms, which in turn might lead to another change in vertical governance mechanisms. As shown in Table IV, the introduction of the proposed progressive target contract necessitated sequential changes to formal and informal governance mechanisms across both vertical and horizontal relationships. This example also illustrates the broad options that are available in governance mechanisms following the introduction of vertical and horizontal relationships. Parties might choose to respond to events by developing formal or informal governance mechanisms in either the vertical or horizontal relationship depending on their potential effectiveness.

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INSERT FIGURE 3 ABOUT HERE  
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## **DISCUSSION AND RESEARCH DIRECTIONS**

We sought to understand how a buyer and five suppliers form an MPA by developing formal and informal governance mechanisms to address threats and opportunities to vertical and horizontal relationships. After reviewing the relevant literature, we conducted an in-depth, longitudinal case analysis of an MPA. We analyzed our data sets consisting of observations, archival data including board papers, contracts, and interviews. We coded our data sources to assess the development of formal and informal governance mechanisms in response to buyers' expected threats and opportunities, and threats and opportunities that emerged during the formation of the MPA. We revealed the evolution of the formal governance mechanisms applied, and initiatives by the parties intended to influence relational norms in vertical and horizontal relationships.

### **Theoretical contributions**

Our study offers important implications for the inter-organizational governance literature in general, and the study of the interplay between formal and informal governance mechanisms within multiparty alliances in particular. While prior governance studies have provided detailed insights into governance mechanisms and their interplay (Cao and Lumineau, 2015; Roehrich et al., 2020), these studies have largely neglected to investigate: (i) the governance dynamics during the formation phase of a relationship when new governance mechanisms are being developed; and (ii) the interplay of vertical and horizontal relationships (and their impact on governance mechanisms) within the same governance structure.

First, our study identifies and examines governance dynamics particular to the formation phase of inter-organizational relationships. In contrast to prior governance studies of established relationships (e.g., Oliveira and Lumineau, 2017; Poppo and Zenger, 2002), where options to revise governance mechanisms are relatively constrained, parties have much more freedom at the formation phase to design and develop formal and informal governance mechanisms that will underpin the future management of the relationship. More specifically, we find that changes made to formal and informal governance mechanisms are balanced during this phase, but occur far more often in response to threats than to opportunities. We suggest that fears of opportunistic behavior (Williamson, 1985) are therefore the dominant concern of parties during this phase, and this might be exacerbated by the relative uncertainty created by the introduction of a novel MPA, rather than the more usual arrangement of a series of dyads. Interestingly, the threats lead to innovative

approaches to governance, especially to contracting, where the buyer seeks to control opportunism through a combination of incentivization, control of key committees, supplier rationalization, and a reduction in budget and scope. This leads to our first proposition:

***P<sub>1</sub>: The development of formal and informal governance mechanisms during the formation phase is largely guided by concerns for expected and emergent opportunistic threats, rather than the realization of expected and emergent opportunities.***

Second, extant governance studies can broadly be divided into: (i) vertical relationships (e.g., buyer-supplier relationships; Li et al., 2010; Liu et al., 2009); and (ii) horizontal relationships (e.g., JVs; strategic alliances; Judge and Dooley, 2006; Lee and Cavusgil, 2006). In other words, the vast majority of prior studies have included one but not both of these relationships in one study (Argyres et al., 2007; Caldwell et al., 2017), and very limited research has explored governance structure where both types of relationships (namely vertical and horizontal) are present, and impact on the development and interplay of governance mechanisms (Cao and Lumineau, 2015). Our study examines the contextual effect of an exchange that includes both vertical and horizontal relationships, and we can therefore examine differences in the development of formal and informal governance mechanisms.

We find a substitutive governance interplay within the vertical and horizontal relationships as parties within each relationship developed a dominant governance mechanism. The buyer tended towards formal governance as they sought to extend formal control over the horizontal relationship (between suppliers), while the suppliers increasingly shifted towards relational norms as they forged a joint understanding and collective identity. More subtly, we also find an effect for the management phase in the governance interplay debate (Cao and Lumineau, 2015; Poppo and Zenger, 2002), where substitution is rational for parties with the buyer-supplier MPA during the formation phase. Our findings indicate that the buyer made a deliberate choice to focus on formal governance during the formation phase in the belief that informal governance could be developed in the later management phase. Similarly, the suppliers focused on informal governance in the belief that solidarity would help strengthen their bargaining position relative to the buyer. This leads to our second proposition:

***P<sub>2</sub>: Formal and informal governance mechanisms are substitutive within the vertical and horizontal relationships during the formation phase of a buyer-supplier MPA.***

Third, while previous literature has shown that vertical and horizontal relationships may face different exchange hazards (Mayer and Teece, 2008), and each relationship may have a different governance interplay (Cao and Lumineau, 2015), extant governance studies have not yet examined governance structures that include both vertical and horizontal relationships simultaneously. Our findings uncover two interactions between vertical and horizontal relationships. First, we find that changes in the vertical (horizontal) relationship may necessitate change in the horizontal (vertical) relationship. For example, in response to the buyer's reduction in budget, and lack of clarity in scope (a vertical change), the suppliers had to form a strong coalition to ensure clarity in the scope (a horizontal change). Second, we find that threats can be controlled, or opportunities can be realized, through changes to governance mechanisms across both vertical and horizontal relationships. Parties therefore have a broader 'menu' of governance options that is created by having access to both a vertical and horizontal relationship. This leads to our third proposition:

***P<sub>3</sub>: There is a strong interdependency between formal and informal governance mechanisms across vertical and horizontal relationships in the formation phase of a buyer-supplier MPA.***

### **Boundary conditions and further research**

While our study closely examined a buyer-supplier MPA formation for the delivery of services to a project in the construction industry, we believe that our insights for governance literature holds true in other settings. Future research should compare our findings to other types of MPAs (e.g., different number, and characteristics of suppliers) in other industries (e.g., with different clock speed as this may impact how and why governance is being developed). We also encourage future research to consider other countries, and less mature legal systems to explore the impact of the wider institutional and legal environment on changes in governance mechanisms to drive competition. This study leveraged many sources of data including observations, interviews, archival data, and contracts. Future studies drawing more on (scenario-based, or field) experiments would further inform the literature on the process established by a buyer and its suppliers to change both governance mechanisms across vertical and horizontal relationships to address expected and emerging threats and opportunities. For instance, future work may study who at what level

(subsidiary, business, and corporate), and in what job role (e.g., engineering, legal, and procurement) requests that certain clauses are added or deleted, and wording changed to address threats and realize opportunities (Argyres and Mayer 2007; Bercovitz and Tyler 2014).

### **Implications for practice**

Our study has important implications for firms and managers seeking to solve the problem of contracting, and building cooperative relationships with multiple suppliers in an MPA. While buyers in many industries delivering large projects may increasingly rely on MPAs, managing the various challenges associated with such arrangements is beneficial. Thus, buyers and suppliers need to design jointly their contracts to consider how control and coordination clauses contribute to vertical and horizontal relationships in addressing threats and opportunities. These changes should drastically curb common issues with MPAs such as free-riding, hold-up, and leakage problems. Informal governance mechanisms should also be initiated to complement (or substitute), where appropriate, the formal governance mechanisms designed to support cooperative relationships, and yet encourage sufficient incentives and performance measures to avoid the consolidation of power by the suppliers. Here, buyers should particularly pay attention to strengthening solidarity and information exchange, and amongst partner firms, both vertically and horizontally.

### **CONCLUSIONS**

In this paper, we explore how a large buyer worked with five suppliers to form a buyer-supplier MPA to deliver services for a large construction project. We contribute to the governance literature by revealing the evolving dynamics of governance mechanisms developed during the formation phase of an MPA, which was large based on overall costs but with only six firms, and the governance interplay within a structure with both vertical and horizontal relationships. Analyzing rich observational, archival, contract, and interview data, we find empirical evidence to inform underrepresented areas of research in the governance literature: (i) the governance dynamics during the formation phase of a relationship when new governance mechanisms are being developed; and (ii) the interplay of vertical and horizontal relationships (and their impact on governance mechanisms) within the same governance structure. Our data sets reveal the important role opportunity search plays in governance research, how potential opportunities become more and

more constrained over time as formal and informal governance mechanisms are employed, and how formal and informal governance mechanisms relate to one another across vertical and horizontal relationships, and substitute for one another within relationships in a buyer-supplier MPA. We hope that our findings encourage future governance research to augment our understanding of how to better develop formal and informal governance mechanisms in MPAs to simultaneously strengthen vertical and horizontal relationships.



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**TABLES AND FIGURES**

	<b>ElectricalCoA</b>	<b>ElectricalCoB</b>	<b>MechanicalCo</b>	<b>HVACCo</b>	<b>SupportCo</b>
<b>1. Ownership</b>	Subsidiary of a UK public limited company	Family-owned for over 100 years	Subsidiary of a UK public limited company	UK subsidiary of a South Korean conglomerate	UK subsidiary of a French privately owned MNC
<b>2. Revenue (parent, in 2019; circa)</b>	\$10bn	\$700m	\$6bn	\$16bn	\$4bn
<b>3. Number of employees (parent in 2020; circa)</b>	>20,000	< 3,000	> 30,000	> 40,000	> 40,000
<b>4. Scope of work</b>	Installation of electrical components		Installation of mechanical equipment	Installation of HVAC components	Scaffolding and other support services

**Table I** Description of suppliers in the MPA



Data sources	Amount and sources	Use in analysis
<b>Secondary data</b> (414 pages)	6 LPB board papers (86 pages) 10 Presentations (166 slides) 2 Contract manuals and implementation plan (63 pages) 7 Emails Meeting notes (1 <sup>st</sup> MPA supplier workshop; 7 pages) 3 policy reports (85 pages)	Familiarization with LPB language, vision, and strategy for the MPA, storyline of formation process including changes in strategy between board papers. Understanding project's industry and political background and resulting pressures on LPB.
<b>Observations</b> (167 hours)	2 site visits (8h) 159 meeting hours between October 2018 – June 2019  During meetings, the lead author took extensive notes of activities and observations including direct quotes from meeting participants, which she typed up in detail within 24 hours after the meeting.	Gathering data on suppliers and key site challenges, as well as on formal and informal governance and their impact on vertical and horizontal relationships.
<b>Interviews</b> (26 hours ~ 298 pages verbatim)	<b>First round (Sep. 2018 – June 2019)</b> 11 semi- and unstructured interviews with LPB and supplier informants all involved in the negotiations and formation process of the MPA including solicitors, commercial managers, and supplier project directors.  <b>Second round (Dec. 2019 – Oct. 2020)</b> 16 semi-structured interviews with LPB and supplier informants including solicitors, engineers, commercial managers, and supplier project directors.  During these interviews, she took careful notes and typed them up for analysis within 24 hours.	Clarification about the on-going negotiation process including the emergence of formal and informal governance, and their impact on vertical and horizontal relationships.  Triangulation of initial findings, gathering of further information to address data gaps, and collect all contracts prior to MPA contract.
<b>Contracts</b> (1,544 pages)	<b>Contracts pre-MPA</b> 3 early consulting contracts (383 pages) 3 works contracts (373 pages) <b>Contracts MPA formation</b> Statement of intent (3 pages); Memorandum of Understanding (31 pages) 5 consulting contracts (465 pages) MPA contract template (52) MPA contract including appendices (183 pages) Supplier contract (54 pages)	To further understand about prior vertical contracting approach used by LPB, to draw insights on differences between former contracts and MPA contract, comparison of MPA template with MPA final version to understand context specific changes.

**Table II** Main data sources and use

Expected threat/opportunity in vertical/horizontal relationship	Data extract	(In)formal governance purpose and mechanism proposed	Data extract
<p>1) <b>Vertical threat due to siloed contracts</b></p> <p>Resulted in inefficiencies between suppliers during delivery of work on site</p>	<p>[1] <i>"In the contract you have something called unvetted access [...] because we couldn't tell them at the time who they'd be working with, the best thing to say was, give me a price and a program based on you working on your own. Reality is that everyone is working there at the same time [...] We worked out that there are about 18 handovers, handbacks [...] that's a lot of wasted time"</i> (Commercial Manager, LPB).</p> <p>[2] <i>"We've been to Flamanville two years ago, there is a lot of damaged equipment, because [suppliers...] have installed equipment, the next trade has gone in bashed into it, stood on it, and it gets damaged"</i> (Commercial Manager, LPB).</p>	<p><b>Vertical and horizontal formal control:</b></p> <p>Contract with 7 Tier 1 suppliers jointly in an equity-MPA</p> <p><b>Vertical and horizontal formal coordination</b></p> <p>Contractually specify their responsibility to coordinate parallel work between suppliers</p>	<p>[3] <i>"The MPA would be formed between [LPB] and the seven Tier 1 Supply Chain Partner resources tied by a single contract"</i> (LPB Board Paper, 20.12.2017).</p> <p>[4] <i>"We initially said we want [the suppliers] to be incorporated [...] That would mean, for us it is one company, we don't have to deal with the parent companies, and we don't have to deal [with] warranties in the parent companies"</i> (Commercial Manager, LPB).</p> <p>[5] <i>"Multi-skilled erection gangs would bring clear benefits to the erection area construction sequence. It would enable the project to consolidate this scarce resource and remove any duplication at the erection area"</i> (LPB Board Paper, Feb. 2018).</p>
<p>2) <b>Horizontal opportunity to capitalize on synergies and transfer risk to suppliers:</b></p> <p>a. Capitalize on synergies</p>	<p>[6] <i>"Synergies in the Site Command Centre and in the areas of workface management would be optimized by taking a collective approach to delivery. Principally, this would be centered on a single leadership and management organization and through adopting a single building/area management core team approach"</i> (LPB Board Paper, Dec. 2017).</p>	<p><b>Horizontal formal control and coordination:</b></p> <p>Contractually defined co-located Project Management Office (PMO) managed by suppliers to improve efficiencies</p>	<p>[7] <i>"The proposed contracting strategy is to introduce an 'Integrated' MPA with an integrated PMO organization which offers efficiencies driven through PMO head count saving [...] and improved integration of installation activities"</i> (LPB Board Paper, Dec. 2017).</p> <p>[8] <i>"Commercial models/contracts are created that incentivize joint sharing of resources to support integrated planning and delivery to drive efficiencies with [the MPA] as a whole, rather than a single Partners own individual contract"</i> (LPB Board Paper, Dec. 2017).</p>

<p>b. Shift schedule and cost risk to suppliers</p>	<p>[9] <i>“Reward and Incentivize Supply Chain Partners for ‘Added-Value’ activities and value extraction from earning fee on [procurement]”</i> (LPB Board Paper, Dec. 2017).</p>	<p><b>Vertical formal control:</b> Progressive target cost contract with horizontal KPIs</p>	<p>[10] <i>“Taking a progressive approach to target cost setting based on year-on-year improvement rather than a single target set at the commencement of the contract”</i> (LPB Board Paper, Dec. 2017). [11] <i>“The [MPA] would work on a combined Target Cost basis with shared incentive mechanism for efficient delivery”</i> (LPB Board Paper, Dec. 2017).</p>
<p>3) <b>Vertical and horizontal threats to achieve alignment of expectations, concerns for future success</b></p>	<p>[12] <i>“As this [planned] level of integration goes deep into the Contract structure, careful drafting of liabilities for integrity of permanent works will need to be considered, together with the ability and willingness of the Parties to be responsible for key aspects of other organizations’ obligations”</i> (LPB Board Paper, Feb. 2018).</p>	<p><b>Vertical and horizontal informal solidarity and information sharing norm:</b> Joint workshops and meetings to encourage suppliers’ willingness to be responsible</p>	<p>[13] <i>“[LPB] set up a steering group with chief execs, MDs and vice presidents from each of the organizations, initially every month [...] making sure that the senior guys started pulling together as a team”</i> (Project Director, SupportCo). [14] <i>“Through the establishment of a [...] Working Group, led by [LPB], the team have continued to develop, in accordance with an agreed plan, working level delivery processes, tools and optimizations as part of a collaborative approach”</i> (LPB Board Paper, Dec. 2017). [15] <i>“When we first started of the workshops, we gave a template [to] every supplier [...] it was about their views on the commercial model, where they saw the commercial risk [...] nobody had the monopoly on how this should work, you knew what the intent was, contribute your ideas”</i> (Commercial Director, LPB)  [16] <i>“Our friends [SupportCo], were just brought by [us] because [we have] got a really good relationship on generation business and initially [the MPA suppliers] were very suspicious of them: ‘what are they doing in here? They going to steal our scope?’”</i> (Commercial Manager, LPB).</p>

**Table III** Buyer’s threat from the dyadic contracting approach, and expected threats and opportunities for the MPA [Please note: number, e.g., [1], are used to guide the reader in the findings text]





Emergent threat or opportunity	Data extract	(In)Formal governance purpose and mechanism proposed	Data extract
<b>1) Responses to changing siloed contracts to an integrated structure</b>			
<p><b>I Horizontal supplier threat:</b> ElectricalA Co perceives unequal distribution of risk</p>	<p>[17] <i>“The issue you had in this contract [...] was cross indemnification, so each of the organizations becomes responsible for the actions or omissions of the other parties [...] so that is a big risk. [...] If they go into receivership, if they stop trading, we jump in and we finish off their work [...] because we’d worked together before, there was a degree of comfort but a new party coming in, you would then have to go through a diligence process to assess their competences, capabilities because we’re going to guarantee their performance. That was why it ended up being limited to a discreet number of players who had worked together before”</i> (Project Director, ElectricalACo).</p> <p>[18] <i>“[ElectricalACo, MechanicalCo, HVACCo] had all worked together on the existing fleet, this was the new one. But this partner [...] had worked [at a Finnish new nuclear new build], and these guys did a brilliant job! There was a bit of competitive, ‘Hang on, you now let somebody in my backyard”</i> (Commercial Director, LPB).</p>	<p><b>Horizontal formal control:</b> Contractually limit the number of suppliers and formed supplier MPA</p>	<p>[19] <i>“It’s a very soft contract for the [suppliers]. They can’t lose their shirt. For other construction companies [the] liability is a hundred percent of the prices”</i> (Legal Manager, LPB).</p> <p>[20] <i>“The total Liability of the [suppliers] is limited in aggregate to an amount equal to twenty per cent (20%) of the Total Price”</i> (MPA contract, clause X18.2).</p> <p>[21] <i>“The low liability regime for the [suppliers] is a necessary by-product [...] without such a low liability regime in place, it would be unrealistic that the [suppliers] would commit to joint and several liability”</i> (LPB Board Paper, Sep. 2018).</p> <p>[22] <i>“If one of the companies fails to perform and we want to change one of them out. If it was an incorporated company you would have to dissolve the whole company and start again, if it’s non-incorporated one of the partners can move and you can bring someone new in, so actually there is a big advantage, being non-incorporated”</i> (Commercial Manager, LPB).</p>
<p><b>II Vertical and horizontal buyer and supplier threat:</b> Suppliers continue to act in siloed way despite integrated structure</p>	<p>[23] <i>“Every [...supplier] sat around the table, instead of [...] LPB negotiating with one [supplier] representative, who then goes and fixes it between the [supplier] parties? [...] the MPA was for LPB to manage one commercial interface, not LPB managing five interfaces [...] as a client [...] you’ve done an MPA to make your job easier, and less risky. [...] otherwise, I’m just dressing something up, but I’m behaving as normal”</i> (Commercial Director, LPB).</p>	<p><b>Horizontal formal control:</b> KPI incentives are paid to MPA not individual suppliers</p> <p><b>Vertical and horizontal solidarity norm:</b> Single organization, branding and culture</p>	<p>[24] <i>“Fee is equitably shared across [suppliers] and a common arrangement is adopted for all incentive payments, so there is no ability for ‘one member’ to prosper at the expense of the ‘others”</i> (LPB Board Paper, Jun. 2018).</p> <p>[25] <i>“We will merge our team with the [...] suppliers and it is one organization. [...] that is difficult for the [suppliers] to manage, how can they allow the client to be part of their team? [...] they are a bit worried about it. We are not quite there, how it is going to work. But we have set out an ambition”</i> (Commercial Manager, LPB).</p>
<b>2) Responses to horizontal opportunity to transfer schedule and cost risk to suppliers:</b> a. Proposed horizontal program management of schedule and cost to improve efficiencies			

<p><b>I Vertical buyer threat:</b> Shifting too much control to suppliers</p>	<p>[26] <i>“There was a perception that [LPB] was giving too much control to the [suppliers] and giving us too much authority and not clear enough accountability plus there was a concern that the five partners, whilst all significant players in the UK nuclear industry haven’t built a nuclear power station and haven’t got that experience of building a nuclear power station for 30 odd years”</i> (Project Director, MechanicalCo).</p>	<p><b>Vertical formal control:</b> Contractually retain control of key governance bodies</p>	<p>[27] <i>“Improvements compared to the memorandum of understanding [...] Increase in [LPB] representation in the Steering Committee, from 17% to 50% of the attendees”</i> (LPB Board Paper, Mar. 2019). [28] <i>“MPA organization, headed by the MPA Manager and included a joint team of individuals ([MPA] and [LPB] employees) [...] albeit with certain roles in the MPA organization being nominated [LPB] roles (to assist efficiency of the [MPA] and support internal [LPB] governance measures)”</i> (LPB Board Paper, Feb. 2019).</p>
<b>b. Proposed progressive target cost contract to improve performance</b>			
<p><b>I Vertical buyer opportunity:</b> Able to get horizontal alignment across suppliers</p>	<p>[29] <i>“The individual contracts, they are all different. [...] they all have different expectations, different set-up, even things like different fees, different management structures, different ways of paying. We have had to really re-align a lot”</i> (Commercial Manager, LPB).</p>	<p><b>Vertical formal control:</b> Book of Harmonized Norms <b>Vertical solidarity norm:</b> Meetings to encourage solidarity based on fairness</p>	<p>[30] <i>“We had to negotiate with MechanicalCo separately, and say, [...] ‘If this went back out to bid now, you would not have any work MechanicalCo, you would not be sat here”</i> (Commercial Manager, LPB). [31] <i>“Developing a book of agreed and standard and harmonized norms, utilization factors and effective metrics in order to measure productivity and help costings for future task orders under the Alliance”</i> (LPB Board Paper, Feb. 2019).</p>
<p><b>II Vertical buyer threat:</b> Suppliers refuse to accept target cost contract due to uncertainty of design</p>	<p>[32] <i>“The available design information [was] insufficient to get anywhere near a target cost or a fixed price [contract], which would have been the preference of the customer”</i> (Project Director, ElectricalCoA).</p>	<p><b>Vertical formal control:</b> Cost reimbursable contract with option to change to target cost contract later</p>	<p>[33] <i>“The [MPA] members have agreed, where circumstances allow, to consider the adoption of an alternative pricing and/or payment arrangement, which may include unit rates, target and/or fixed price arrangements. [...] Where the Partners do not act reasonably in considering the adoption of alternative pricing and/or payment arrangements, the Client may remove Scope from the Partners and engage another entity to carry out the relevant MPA Activities instead of the Partners”</i> (MPA contract, clause 53.2&amp;4). [34] <i>“Development of cost books as basis of estimating future task order under the MPACoA”</i> (LPB Board Paper, Feb. 2019).</p>
<p><b>III Vertical buyer threat:</b> Suppliers take advantage of cost-reimbursable contract</p>	<p>[35] <i>“[LPB] was thinking, ‘We’re just paying them whatever their costs are and then paying them a fee on top,’ they were uncomfortable with that”</i> (Project Director, ElectricalCoA).</p>	<p><b>Vertical formal control:</b> Reduced budget</p>	<p>[36] <i>“I said, ‘Well, I can’t agree to \$1.5 billion because we haven’t got that much money in the bank, and to get that I’d have to go back to the business and say I need \$410 million more to pay the [MPA], and they’ll just go, ‘Why? I thought this was an opportunity, not cost”</i> (Commercial Manager, LPB).</p>

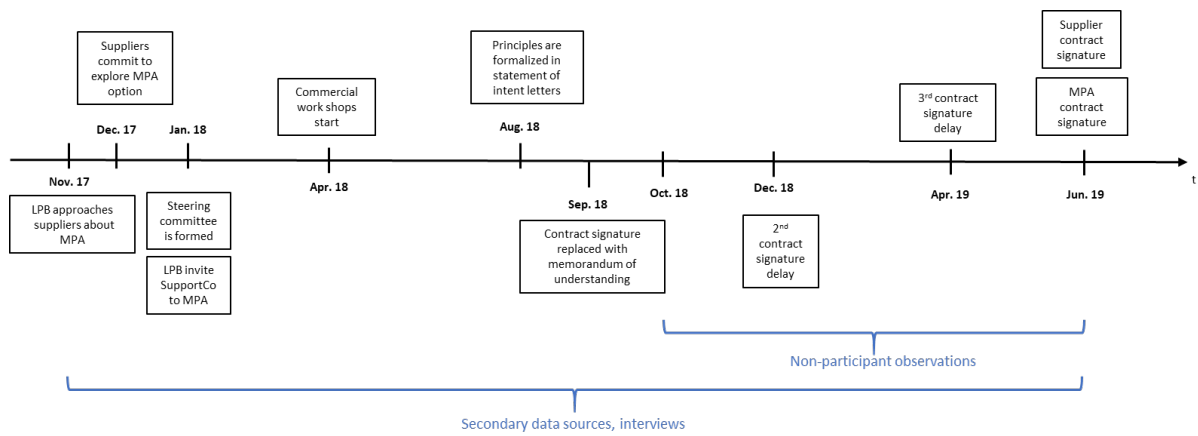
<p><b>IV Vertical supplier threat:</b> Ambiguity in how the budget would be reduced and the work scope aligned</p>	<p>[37] “We were talking about contract worth \$1.9 billion. Budget affordability here was \$1.1 billion [...] so you’re thinking, are we getting taken for a ride here.” (Project Director, SupportCo)</p> <p>[38] “We had to renegotiate the budget with them, and they weren’t happy” (Commercial Manager, LPB).</p>	<p><b>Vertical formal control:</b> Contractually define bridge scope with budget with materiality clause</p> <p><b>Horizontal solidarity norm:</b> Suppliers form coalition versus buyer</p>	<p>[39] “The other partners were willing to sign up with a much more ambiguous scope definition than we ended up with. As a result, we [suppliers] have now got a very clear position that we can manage from. Whereas before potentially we had a very amorphous position, and the customer going, ‘No, no that was in the budget.’” (Project Director, MechanicalCo).</p> <p>[40] “Where there is a Material Change Event, the Incentive Pot shall be adjusted as set out in the Performance Table” (MPA contract, clause 56.2).</p>
<p><b>V Vertical buyer threat:</b> Possible decreasing supplier performance once contract has been signed</p>	<p>[41] “The incentive mechanism was made just enough to – so that we weren’t making losses but not really making profit, and then the incentive which is based on performance criteria and behaviors would be the bit that would incentivize us to drive the project forward in the best possible way” (Project Director, ElectricalCoA).</p>	<p><b>Vertical and horizontal formal control:</b> Contractually define best athlete principle, performance measures (rewards) and performance metrics (penalties)</p>	<p>[42] “Best Athlete is the most appropriate person (whether a company or an individual) to enable the delivery of the best outcome for the relevant Works or Services having regard to that person’s suitability, expertise, relevant knowledge and experience, demonstrable value, cost, understanding of and commitment to collaborative working and behaviors, and · hitherto level of performance in respect of the Works and/or Services (including by reference to the Performance Metrics)” (MPA contract, clause 1.2(19)).</p> <p>[43] “A major component of the [supplier]’s fee (approx. 50%) will only be paid on the achievement of KPI’s and milestones that are aligned to critical activities” (LPB Board Paper, Jun. 2018).</p> <p>[44] “Consistent underperformance entitles [LPB] to de-scope work and award it to another party” (LPB board paper presentation slides, Mar. 2019: 9).</p>
<b>c. Emerging opportunities</b>			
<p><b>I Vertical buyer opportunity:</b> Potential to minimize subcontracting</p>	<p>[45] “The primary driver of the [MPA] Strategy [...] is [...] to create greater alignment and synergies between ‘all’ site erection companies, together with optimizing the sub-contract procurement and fabrication to the wider benefit of [LPB]” (LPB Board Paper, Jun. 2018).</p>	<p><b>Vertical formal control:</b> Contractually define subcontracting clause</p>	<p>[47] “The Partners are responsible for participating in Providing the MPA Activities as if they had not subcontracted. The contract applies as if a Subcontractor’s employees and equipment were that Partner’s” (MPA contract, clause 26.2).</p>

<p><b>II Vertical buyer opportunity:</b> Possible removal of risk premiums</p>	<p>[46] “Contractors were proposing high risk premiums to the contract prices (to protect perceived client risks, e.g., interface delays, unknown access constraints, design and scope maturity)” (LPB Board Paper, Sep. 2018).</p>	<p><b>Vertical formal coordination:</b> Improve designer and delivery coordination</p>	<p>[48] “Coordination of design interfaces with [designers] and delivery of the execution design (supporting Design Management team) [...] Early intervention with [designers] to optimize design and if late minimize impact by adjusting schedule etc. to mitigate” (LPB Board Paper, Jun. 2018).</p>
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**3) Response to vertical and horizontal threat to achieve alignment of expectations, concerns for future success**

<p><b>I Vertical buyer threat:</b> Concerned about reliance on good faith and positive vertical relationships</p>	<p>[49] “The success of alliancing is dependent on the participants being prepared to commit to its ethos and to provide adequate resources to understanding and managing the contract, positive relationship management, appropriately calibrated incentive arrangements and continual alignment of interests. Where relationships falter, so does the effectiveness of the alliance. The track record of success on alliancing arrangements is where the parties have a long history of working together and have future projects in the pipeline such that they are prepared to take appropriate long-term commercial and pragmatic views” (LPB Board Paper, Sep. 2018).</p>	<p><b>Vertical and horizontal formal coordination:</b> Contractually defined shared processes</p> <p><b>Vertical solidarity and information sharing norm:</b> Meetings and information exchange to support transparency</p>	<p>[50] “By embedding the [LPB] Project Delivery Model in the [MPA] Delivery Model the right cultures and behaviors will be driven, and a single identity will form” (LPB Board Paper, Jun. 2018). [51] “When [LPB’s MD] gets up and speaks in front of a room of people, and normally it’s just straight from the heart like he doesn’t read from a script. [...] It’s just inspiring and helped to pull us all together” (SupportCo, Project Director). [52] “We shared all our board papers with them [...] we didn’t see their board papers [... but we] wanted to do that to show transparency. This is what we’re telling our shareholders and therefore these are the points that we have to do” (LPB, Project Manager).</p>
<p><b>II Vertical buyer threat:</b> Lack of vertical information sharing</p>	<p>[53] “[LPB Manager] brings up the Level 2 schedule and that he feels that at the moment the suppliers and LPB are not working together but separately. He worries that this will make it difficult for them to converge again in the end and build a common understanding. [Supplier representative] says that they asked them to do a very complex task, which needs to achieve some maturity before it can be shared” (observation, Nov. 2018). [54] “[LPB’s MD] is confused because information sharing has been built into the Alliance, so why is it not happening?” (observation, Nov. 18).</p>	<p><b>Vertical information sharing norm:</b> Scheduled regular daily meetings to resolve disagreements</p>	<p>[55] “[LPB] introduced daily updates which became twice daily updates. You’d have a meeting at eight o’clock in the morning and [...] at 4:30 on the same day, you would have another meeting to discuss the same thing and then at eight o’clock the next morning, even though you had discussed it at 4:30 the night before, you would have another one to say is there anything that you discussed at 4:30 been resolved? How are we going to get anything resolved between 4:30 and eight o’clock the next morning? That was a real challenge” (Project Director, SupportCo).</p>
<p><b>III Vertical buyer threat:</b> Continued self-serving rather than collaborative supplier mindset</p>	<p>[56] “[LPB Manager] thinks the biggest issue for [LPB] is to get the suppliers in the right mindset, because until now it feels like they are just here to make money. They got some emails that show some of their internal communication using phrases like “this is an easy fee for us”. Obviously their first reaction was trying to find out who said that, but then what shall you do? Is it the individual himself, that is to blame? Or is it the whole organization, that maybe promotes such thinking?” (observation, Feb. 19).</p>	<p><b>Vertical solidarity norm:</b> Scheduled behavioral workshops to encourage commitment to the MPA and to the achievement of joint goals</p>	<p>[57] “We started having some behavioral workshops to help strengthen our relationships” (LPB, Commercial Manager).</p>

**Table IV** Emergent threats and opportunities during the formation phase

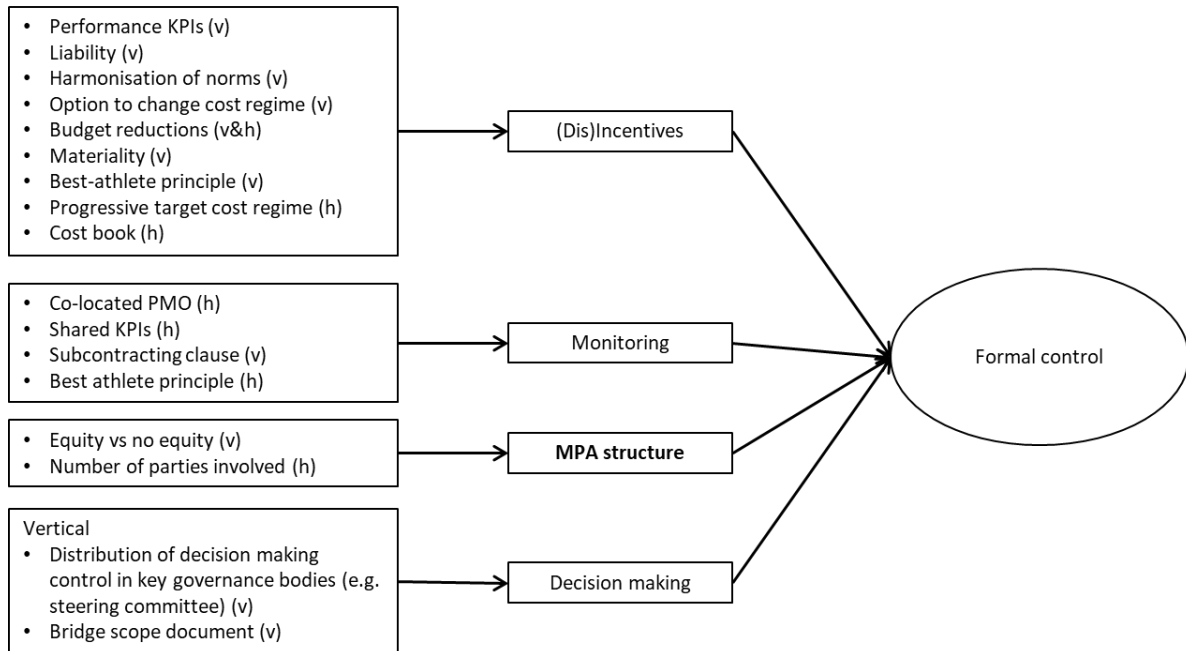


**Figure 1** Timeline of the MPA formation phase (including some key events), and our data collection phase

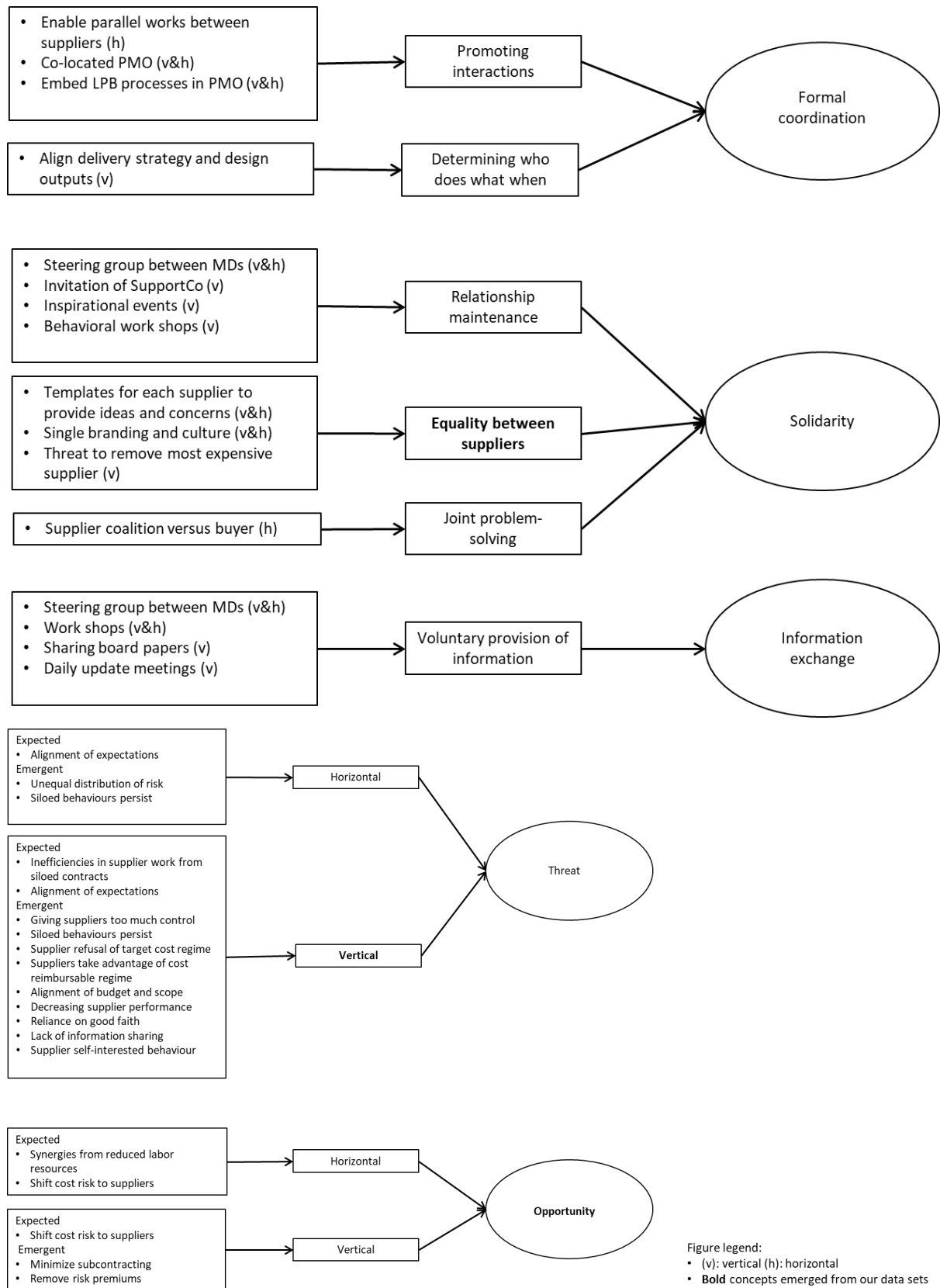
*First-order concepts*

*Second-order themes*

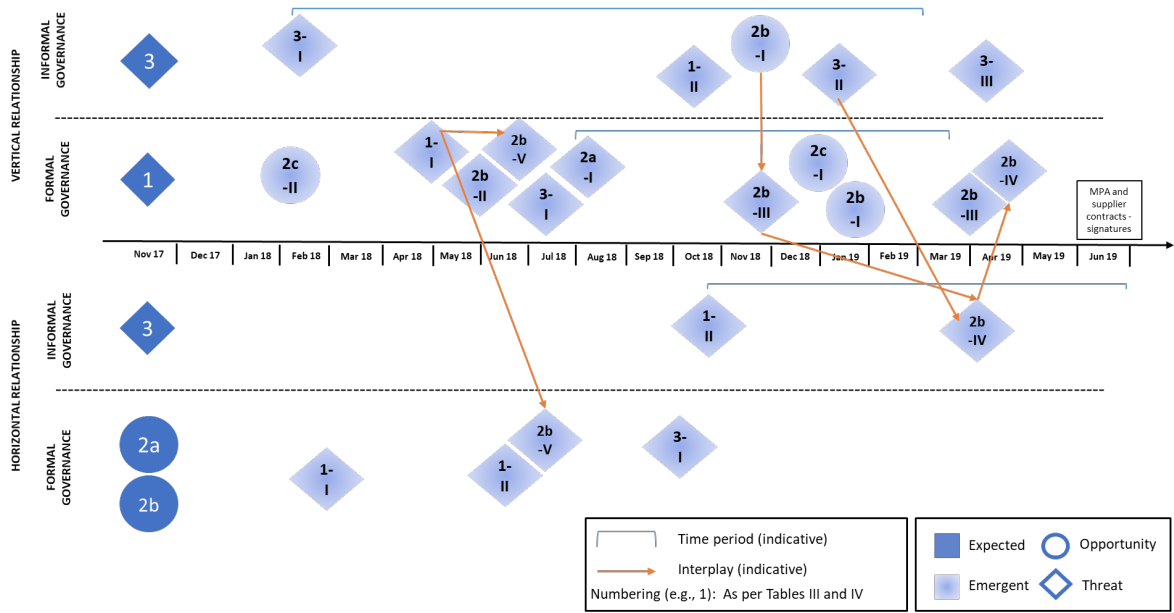
*Aggregate dimensions*







**Figure 2** Coding structure



**Figure 3** Timeline of expected and emergent threats and opportunities, their impact on the development of formal and informal governance, and governance interplay and dynamics across vertical and horizontal relationships



# **Chapter 5:**

## Conclusions and implications

This chapter provides an overview of the theoretical contributions and practical implications of this thesis, the limitations of the studies, and opportunities for future research. Section 5.1 discusses the main theoretical contributions of the thesis. Section 5.2 provides the implications for practice. Lastly, section 5.3 discusses the boundary conditions of the research and opportunities for future studies.

## 5.1. Theoretical contributions

While each study provides contributions to specific sets of the literature, in this section, the thesis author re-connects the findings back to the broader research domain. Section 5.1.1. discusses the overall contribution to the MPA literature. Section 5.1.2. the contribution to literatures on the development processes of interorganizational relationships. Section 5.1.3. discusses the implications of the findings for the wider literature on supply chain collaboration.

### 5.1.1. Multiparty alliances

This thesis contributes to the MPA literature by introducing and studying an important type of MPA that is motivated and orchestrated by a large buyer in an effort to acquire the coordinated services of several suppliers at a single site location and consists of not one, but rather two formal contracts. Prior MPA research has primarily explored formal and informal horizontal MPAs in high-technology industries often referred to as strategic alliances, joint ventures (JVs), or consortia (e.g., Das and Teng, 2002; Fonti et al., 2017; Lavie et al., 2007; Li et al., 2012; Mishra et al., 2015). Contrarily, the buyer-supplier MPA with one buyer and multiple suppliers retains and consolidates the element of vertical exchange while

simultaneously introducing direct, and usually contractual, horizontal relationships between the suppliers in the agreement. The unique characteristics of the buyer-supplier MPA create dynamics which are different from MPAs studied in the literature, and thus require further attention.

Study 2 in this thesis investigates the development of formal and informal governance mechanisms during the formation of a new buyer-supplier MPA (Poppo and Zenger, 2002; Cao and Lumineau, 2015). Prior MPA research has narrowly focused on the study of equity structures or scope changes as the sole means of MPA governance (Li, Eden, Michael A Hitt, et al., 2012; Lioukas and Reuer, 2020). Or they have studied the manipulation of managerial perceptions to oppress effort-withholding tendencies (Fonti et al., 2017). Study 2 in this thesis presents the first empirical investigation of how MPA parties design clauses and norms to safeguard an MPA from potential opportunism and harm whilst at the same time reaping the benefits of an exchange relationship between multiple parties. Hence, it extends prior MPA research by offering a more fine-grained analysis of the contractual mechanisms (Reuer and Arino, 2007; Faems et al., 2008) as well as the social norms (Heide and John, 1992; Cannon et al., 2000) that facilitate MPA control and coordination. It further offers several findings unique to the development of formal and informal governance mechanisms for a new buyer-supplier MPA. The findings of study 2 reveal a substitutive governance interplay within the vertical and horizontal relationships as parties within each relationship developed a dominant governance mechanism. The buyer tended toward formal governance as it sought to extend formal control over the horizontal relationship (between suppliers), while suppliers increasingly moved toward a relationship governed by norms as they forged a joint understanding and collective identity. More subtly, the study showed an effect on the management phase in the governance interplay debate (Cao and Lumineau, 2015; Poppo and

Zenger, 2002), where substitution is rational for parties with the buyer-supplier MPA during the formation phase. The study suggests that the buyer made a deliberate choice to focus on formal governance during the formation phase in the belief that informal governance could be developed in the later management phase. Similarly, the suppliers focused on informal governance in the belief that solidarity would help strengthen their bargaining position relative to the buyer. Further, the findings of study 2 unearth two interactions between vertical and horizontal relationships. First, changes in the vertical (horizontal) relationship may foster change in the horizontal (vertical) relationship. Second, threats can be controlled, or opportunities can be realised, through changes to governance mechanisms across both vertical and horizontal relationships. Parties therefore have a broader 'menu' of governance options that is created by having access to both a vertical and horizontal relationship.

Study 1 in this thesis focusses on the legitimation process of a new buyer-supplier MPA. Unlike traditional horizontal MPAs, which are initiated by the parties themselves, the buyer-supplier MPA is motivated and set up by a large buyer to acquire the coordinated services of multiple suppliers. Buyer-supplier MPAs contain multiple parties but are much smaller than consortia and imply strong involvement by the buyer in not just initiating the MPA, but also in shaping its outcome. While prior studies have found that firms often choose MPA members because of compatible resources (e.g. Mitsuhashi and Greve, 2009) this does not hold true for buyer-supplier MPAs, as suppliers often provide overlapping capabilities and resources to the buyer (Wu and Choi, 2005). Because of this, it is difficult for the buyer to achieve high levels supplier commitment to and cooperation in the MPA as suppliers often share no prior working history and are competitors (Lloyd-Walker et al., 2014; Hietajärvi and Aaltonen, 2018). Study 1 provides an in-depth study of the actions of both the buyer and suppliers to legitimate the new MPA. The legitimation process of a new buyer-supplier MPA

is induced, first, by problematising the current way of working, which was based on several separate vertical contracts, and second, by proposing the MPA as a preferred solution based on moral and pragmatic legitimacy. In doing so, the study is one of the first to present the distinct drivers of moral and pragmatic legitimacy in the formation of a new buyer-supplier MPA. Study 1 found that pragmatic legitimacy was closely linked to the commercial aspects of the MPA such as the incentive scheme, cost-reimbursable contract, or budget, which constituted the financial risk of the MPA for the parties involved. Moral legitimacy came in various shapes and forms such as the non-violation of behavioral values between partnering firms (Kumar and Das, 2007), as well as by providing a pro-social logic for the new buyer-supplier MPA (Paquin and Howard-Grenville, 2013). Having pro-social logic or reason for the MPA was particularly important as it allowed the buyer and suppliers to lift themselves from narrow self-interests and see the wider purpose of the MPA. The behavioral component of the MPA was particularly important to the horizontal relationship between suppliers to facilitate commitment to contract signature.

### **5.1.2. Development processes in interorganisational relationships**

The longitudinal case study approach adopted in this thesis has implications for process theories on change in interorganisational relationships. There are four theories that have been used to describe development and patterns of change in inter-organisational relationships over time: evolution, teleology, lifecycle and dialectics (van de Ven and Poole, 1995). Evolution explains development as a continuous, cumulative, and probabilistic cycle of variation, selection and retention as organisations seek to survive within a given organisational landscape or ecosystem (van de Ven and Poole, 1995). Hence, evolution theory sees organisational action and the formation of relationships as the result of this struggle for



survival and their learning over time. Teleological theory explains development in interorganisational relationships as a continuous cycle of goal formulation, implementation, evaluation and modification of goals based on experience and learning (Ring and Van de Ven, 1994; van de Ven and Poole, 1995; Doz, 1996). Unlike evolution theory, teleologists assume the existence of an ideal end-state, which they actively seek to accomplish, by continuously assessing the status quo, hence prescribing more freedom and self-determination to organisations than evolution theory. Lifecycle theory conceptualises development as the succession of several stages that interorganisational relationships pass through as they grow and mature (van de Ven and Poole, 1995; Jap and Ganesan, 2000). The stages are commonly referred to as awareness, exploration, expansion, commitment and dissolution (Macneil, 1980; Dwyer et al., 1987; Jap and Ganesan, 2000). Finally, dialectical theory is based on the assumption that organisations exist in a pluralistic world of colliding interests and contradictory values that compete with each other for domination and control (van de Ven and Poole, 1995; Das and Teng, 2000; De Rond and Bouchikhi, 2004). The theory explains development in interorganisational relationships on the balance or imbalance of power between opposing organisations. Change to the status quo can occur through conflict when a party has sufficient power to confront and engage the status quo to create a new synthesis. Sufficient power also enables organisations to maintain a certain status-quo and oppress any opposition (van de Ven and Poole, 1995).

Study 1 has highlighted how the legitimisation of the new MPA was characterised by conflicting interests and the pursuit of domination. The legitimisation process was initiated by the buyer as a powerful agent that contested the status quo. However, the legitimisation of the preferred solution went through multiple cycles of legitimacy build up, break down and repair. These cycles were initiated by an imbalance in pragmatic legitimacy, whereby a

preferred solution was perceived as disadvantageous or one-sided by either the buyer or a supplier party. Similarly, study 2 in this study highlighted that suppliers increasingly developed solidarity norms amongst each other in an attempt to increase their bargaining power and to negotiate more favourable contractual conditions with the buyer. Hence, the observed legitimation process aligns with the dialectical theory in that it illustrates that the relationship between the buyer and suppliers was characterised by opposition and the instrumentalization of power during the formation of the new buyer-supplier MPA, and that the buyer-supplier MPA solution was highly contested.

In conclusion, each of the described theories may prove valid within certain contexts, only the dialectical view seemed appropriate to explain the development patterns of the formation process of a new buyer-supplier MPA. Both evolution and lifecycle theory underplay the agency of firms in contesting and shaping the formation process. Evolution theory overemphasises the external environment as a key determinant of firms' motivations and actions. Whilst lifecycle theory is too structurally determined in its explanation of relationship patterns. The formation process was characterised by various cycles not specific stages. The teleological theory over-simplifies the formation process for instance our findings revealed that 'goal formulation' was a highly disputed between the MPA parties before any 'implementation' was possible.

Overall, thesis more closely aligns with emergent research on the endogenous and discretionary nature of change in buyer-supplier relationships (Sting et al., 2019), as supported by the dialectical view. Prior research has predominantly focused on the structural drivers of change in supply chains (Pathak et al., 2014; Vanpoucke et al., 2014; Park et al., 2018), as supported by the evolution and lifecycle views. For instance, Vanpoucke et al. (2014) proposed that the formation of inter-organisational relationships follow a lifecycle

process whereby the formation contains a discrete linear process of several stages – only as the relationship matures the process becomes more cyclical. The findings in this thesis paint a different picture highlighting the cyclical and dialectical character of the formation process of a new inter-organisational relationship. Future research may further test and evolve this finding.

### **5.1.3. Supply chain collaboration**

The thesis contributes to the wider OSCM literature on buyer-supplier relationships and supply chain collaboration. By definition, a supply chain collaboration consists of two or more independent parties (Cao and Zhang, 2011). However, prior research has predominantly collected data from or made observations about a single party, often the buyer, which have been used to infer about and to generalise to the overall buyer-supplier relationship (Lumineau and Oliveira, 2018). While this approach may have facilitated data collection it has created a skewed view of reality within the OSCM literature.

Prior OSCM research often assumes that the locus of control in buyer-supplier arrangements sits with the buyer (Tate et al., 2010; Fayezi et al., 2012) and that a supplier's commitment is easily gained through buyer power (Zhao et al., 2008). For instance, works by Wu and Choi (2005) and Wu et al., (2010) portray seemingly passive suppliers that are (more or less) willingly placed into triadic supply structures with competitors in the hope that they would be considered for further business. Generally, 'suppliers had little say in setting up the arrangements' where main purpose was the hedging of buyer risk from an uncertain future (Wu and Choi, 2005, p. 43). This simplistic view can also be found in more recent studies. For instance, Sting, Stevens, and Tarakci's (2019) study highlights Nissan's deliberate altering of its supply structures to satisfy the buyer's short-term needs. By temporarily

dissolving and subsequently resuming the same supply structure, Nissan maintained a hot-and-cold type of relationship with its suppliers to ensure continued performance improvements. In taking such a one-sided view, prior literature is overly simplistic and neglects that the formation of a new supply chain collaboration, like any form of relationship, requires the acceptance and commitment of all parties involved.

The findings in this thesis are derived from a single case study approach that includes the perceptions of all parties involved, hence, any inferences made on the whole buyer-supplier MPA are based on the triangulation of findings between the parties involved. The findings clearly show that suppliers' involvement in the formation process was far from being passive or powerless. The process of moving from a dyadic supply structure to a MPA is time-consuming and requires agency from all parties involved. The research shows that buyer and supplier firms act as strategic agents, taking an active role in not only facilitating, but also shaping the MPA formation process. Study 2 illustrates that suppliers took an active stance in shaping the terms and conditions that would enable them to participate in the MPA. Suppliers' active engagement in the development of governance mechanisms contributed to the elongation of the formation process until a commonly accepted solution was found. Study 1 illustrated how suppliers took an active stance in shaping what an acceptable and legitimate MPA would look like.

In conclusion, the research contributes to OSCM literature by portraying a more realistic and holistic picture of the formation of new supply structures, such as a buyer-supplier MPA. It offers evidence of both buyer and supplier agency during this process and thus negates prior research that has downplayed the involvement of suppliers in the set-up of new collaborative supply structures.

## 5.2. Implications for practice

The research findings of this thesis offer helpful advice to the challenges practitioners may face in the formation of a new MPA. Section 5.2.1. offers advice on the challenge of how to achieve high levels of commitment from suppliers that often: (i) are competitors in the same industry and/or on other projects; and (ii) do not share a (sufficient) prior history or future options of working together. Prior studies found that conflict emerging between collaborating suppliers has become one of the biggest risks in setting up MPAs for projects (van Marrewijk et al., 2016). Therefore, building commitment to the MPA (including, but not limited to, its objectives and deliverables) is necessary during the formation phase of the MPA to achieve buy-in from all parties and to build a strong foundation for MPA success.

Section 5.2.2. offers advice on the design of contracts and norms for a new MPA to protect the MPA from opportunities for opportunism in MPAs exacerbated by the limited shadows of both past and future as well as the high specificity of the tasks to be delivered and the ambiguous and changing nature of the end-product (e.g., poor maturity of scope).

### 5.2.1. Fostering commitment

To avoid low commitment to the MPA, it is important for the buyer to: (1) highlight the superior functionality of a MPA structure over traditional ways of working (i.e., individual buyer-supplier relationships); (2) minimise suppliers' risk exposure; (3) ensure equality between all MPA parties; and (4) emphasise the importance of the MPA to overall project success.

The formation phase of the MPA (prior to contract signature) is vital to ensure suppliers' support and to strengthen commitment to the MPA. First, it is important that

suppliers understand the benefits a MPA structure as opposed to a siloed vertical contracting approach whereby the buyer contracts with each supplier separately. Our research has shown that to achieve this the buyer has to communicate the problems and challenges caused by a siloed approach and by illustrating how these problems/challenges can be overcome by a MPA structure. Here, it was helpful to draw on examples where the siloed approach was used and led to poor performance outcomes. By highlighting how such negative results are prevented (or at least mitigated) through a MPA, suppliers are more likely to accept and commit to the formation of a MPA structure.

Second, an integral component in creating commitment and support to the MPA is the negotiation of risk. Suppliers will be more willing to commit to a MPA with other suppliers, that they have limited working experience with, if they perceive the MPA as low risk (or lower risk than individual buyer-supplier relationships). The negotiation of risk between the buyer and suppliers depends strongly on the maturity of the work scope before and during the MPA formation phase. The buyer will be in a better position during risk negotiations if the work scope is clear and fully developed. If the work scope is still in development (with more major changes and uncertainties likely causing future alterations), it will be difficult to convince suppliers to pre-determine a target or fixed pricing without substantial risk premiums priced in. In such cases, it is advised that the buyer accepts cost risk through, for instance, a cost-reimbursable option to secure supplier commitment to the MPA.

Our research revealed that a third important component in gaining firm commitment to the formation of an MPA: the promotion of equality between all MPA parties, not only between collaborating suppliers (horizontal relationship) but also between the buyer and all suppliers (vertical relationship). To achieve commitment to the MPA, firms must elevate themselves from a traditional 'master-servant' mentality that is characterised by a us-versus-

them thinking and behaviours. Instead, both buyer and suppliers have to perceive one another as ‘true partners’. This implies a behavioural power symmetry between the buyer and suppliers and equally between suppliers. Struggles for dominance and the pursuit of self-interested motives with a ‘win-lose’ mentality will harm commitment to the MPA and create faultlines which often lead to abandoning the idea of a MPA during the formation phase.

Finally, it should be noted that the MPA formation is characterised by cycles of high and low commitment as all firms seeking to form the MPA need to align their individual interests and objectives with the MPA’s overarching interests and objectives. Cycles of low commitment are induced by changes to: (i) previously formalised expectations (e.g., around budget, scope or risk allocation ); or (ii) changes in senior (buyer and/or supplier) personnel that (e.g. key MPA advocates leaving during the MPA formation phase) During such periods, in which commitment is low and uncertainty around the MPA is high, it is important that all parties are reminded of the overall purpose and benefits of the MPA, such as its contribution to the success of an infrastructure project that will enhance society and have an impact on the lives of many. It may also be the positive impact on firms’ reputation or a reminder of the lack of or the limitations of other contracting alternatives. Particularly, during difficult times when commitment to the MPA is low, the recognition of the wider purpose of the MPA to the project (and of the project itself) may support firms in continuing the formation of a MPA structure.

### **5.2.2. Developing governance mechanisms**

The limited shadows of both past and future as well as the high specificity of the tasks to be delivered and the ambiguous and changing nature of the end-product (e.g. poor maturity of scope) create opportunities for opportunism in the on-going MPA relationship. Our research

investigated how partners in a buyer-supplier MPA design contracts and embed relational norms during the formation of the buyer-supplier MPA to safeguard the relationships from future harm. We found that key concerns of the buyer evolved around (i) the cooperation of suppliers, (ii) increase of supplier control and bargaining power through the MPA, (iii) the cooperation of suppliers with the buyer. For suppliers, the concerns evolved around (i) supply partner free riding, (ii) buyer opportunism due to scope ambiguity.

For the buyer it was important that suppliers think and act link a single entity to enable the synergetic benefits of an MPA. If this would not be the case the buyer feared that suppliers would dis-integrate, and organisational silos would continue to exist hindering the efficient coordination and delivery of work. Due to this, the buyer fostered the establishment of a equity joint venture between suppliers, which would mean the set-up of a new legal entity between suppliers with its own processes, infrastructure and culture. Work scope would be released not to individual suppliers but to the joint venture on a best-person for the task basis. Incentive payments would be paid to the supplier joint venture as a whole and not to individual supplier firms, therefore, ensuring that suppliers work together efficiently to achieve shared milestones. Further, suppliers were required to co-locate and to establish shared office space, develop its own organisational structure, culture, and values.

Second, the buyer feared that in creating the MPA too much control and power was given to suppliers, who would be responsible for the coordination and delivery of the MPA works. This fear exacerbated during the negotiations as suppliers increasingly aligned their interests and with this developed a stronger bargaining position in relation to the buyer. Hence, while on the outset of the MPA the buyer wanted saw its role as an enabling function serving the work of suppliers this increasingly shifted to retaining oversight and control over supplier work. The buyer increased the number of buyer representatives on the MPA steering



committee as well as for key positions within the MPA organisation's structure. The buyer also retained options in the contract to de-scope work from the MPA should there be a progressive decline in performance over the course of the delivery of work, and much effort went into determining the measurement of MPA performance.

Third, as the formation of the MPA evolved the buyer observed how the formerly dis-integrated supplier group increasingly aligned its interests – sometimes in opposition to the interests of the buyer and the project. Hence, the buyer sought to implement stronger norms of information sharing and solidarity between itself and suppliers. Information sharing was fostered through the establishment of shared work streams and regular update meetings. During these update meetings, supplier representatives would inform senior buyer personnel over progress made on MPA set-up as well as about possible sticky points, which needed resolving. Similarly, he shared work streams facilitated communication and information exchange between supplier and buyer personnel on a regular basis and enabled a shared understanding of how decisions were made. The buyer sought to foster solidarity with suppliers through the invitation of a new suppliers with which the buyer had a highly collaborative relationship outside to the project; but also through regular events, which exposed suppliers to the project site and importance of the shared cause. The buyer also organised a series of behavioural workshops, which touched on any on-going tension. In these workshops but also increasingly in negotiations buyer personnel would display vulnerability instead of aggression to facilitate a shared understanding and solidarity between the parties.

Suppliers, who had limited prior working history were concerned about each other's capability and fit for the MPA. Particularly one supplier who saw themselves as the commercially strongest and most capable MPA party were concerned that should one of the

parties fail or free-ride it would happen on their expense. Due to this, the liability of the contract was strongly limited meaning that should the work provided by the MPA fail to meet quality standards, the MPA could only be prosecuted for a pre-defined sum and not more, hence, limiting the risk exposure of the MPA drastically.

Finally, the negation of the MPA contract took place on the basis of immature or ill-defined work scope to be delivered by the MPA. As the buyer continued to make adaptations to the previously agreed MPA budget under which the scope would have to be divided suppliers feared that this would invite future opportunistic behaviour by the buyer demanding more scope to be delivered under limited budget. Hence, suppliers strongly advocated for a detailed alignment between budget changes and scope revisions to enter the contract with a clear picture of what it entails.

Our research has highlighted that during the formation of the MPA buyer and suppliers develop contract and norms to protect the future relationship from potential harm. The perceptions of what might occur is strongly influenced from anticipated threats but also from lived experiences as the relationships are established and evolve. While the buyer's concerns evolved around suppliers' cooperation with each other as well as with the buyer and the loss of control over the MPA, suppliers were concerned with possible buyer opportunism and supplier free-riding.

### 5.3. Limitations and opportunities for future research

While each study in this thesis discusses the individual limitations and opportunities for future research, there are some overarching limitations and directions for future research that this thesis has to offer. This section explores the limitations of the research undertaken in this

thesis, but it also focuses on expanding the discussion of the opportunities for future research arising from the studies (particularly given the propositions developed in chapter IV).

### **5.3.1 Generalisability (external validity)**

External validity is concerned with the generalisability of case study findings. However, it is not the aim of case study research to generate statistical generalisations, but to explore an under-researched issue and to draw initial conclusions by comparing how the event under investigation has been found to behave across a number of temporal occasions (Yin 2018; Siggelkow 2007). Hence, the purpose of case study research is to build and develop theory, which can then be further testified through statistical methods.

Both studies adopted a single case approach to thoroughly depict the formation stage of a buyer-supplier MPA over time. While both studies closely examined a buyer-supplier MPA in the context of a mega construction project in the nuclear sector in the UK, the insights provided are believed to hold true in other settings. However, future research is encouraged to test whether the findings of both studies persist in other contexts, such as in different industries or countries. For instance, future research could test the external validity of the studies' findings by deploying cross-sectional studies in the form of a surveys or scenario-based experiments to provide further validation. Such validation studies should expand the contexts in which legitimation of a new MPA is explored to include different industries and MPAs. This could prove fruitful, as it would enable researchers to disentangle the effects of context differences and draw conclusions across industry boundaries and strengthen theoretical generalisability of the thesis findings.

### 5.3.2 Reflexivity

Reflexivity is an important part of achieving rigour in qualitative research. It refers to the awareness of underlying biases, values and belief systems that inform one's thinking, that of the researcher herself but also of all other individuals involved in the research project (Archer, 2010; Cunliffe, 2016). Although reflexivity has been practiced by the researcher throughout the research process there are a number of limitations pertaining to non-participant observations, interviews as well as data analysis.

Both during the observations and the interviewing process, it is especially the concept of social location that affects the relationship between the interviewer and the interviewee (McDonald, 2013). Social location refers to an individual's position in the research context but also society. The often-unconscious dynamics of power and identification that shape every human encounter, derive from similarities or differences in the parties' social location and respective habitus (McDonald, 2013). Hence, it is important for the researcher to be aware of such differences and how they may reflect in the establishment of trust between herself and the interviewee. Although the researcher had sought to position herself as a neutral observer throughout her field work, interviewees and representatives of the supplier firms had been aware that her research was funded by the buyer firm. This may have impacted suppliers' by portraying events in a more favourable light.

Reflexivity is also a critical part during data analysis. Alvesson et al. (2008) point out that the synthesis and analysis of findings is not necessarily based on 'discoveries' but often constructed by the researcher and can potentially reveal more about the researcher herself than the subject of analysis. Hence, it is important to triangulate findings but also to share data with other researchers to gain objectivity. Although the insights drawn from the data by

the thesis author have been shared with the individual studies' co-authors, inter-coder reliability of the findings can be further strengthened if the data was shared with and coded by other researchers. All data obtained by the researcher as part of her association with the HPC Supply Chain Innovation Lab – whether used or not used in this thesis (see Table 2 in Chapter 2) – remains with the University of Bath and should thus be used to inform future research.

### **5.3.3 Further opportunities for future research**

The propositions developed in study 2 (chapter IV) should be tested and elaborated in future research. Proposition 1 poses that the development of formal and informal governance mechanisms during the formation phase is largely guided by concerns for expected and emergent opportunistic threats, rather than the realisation of expected and emergent opportunities. Future studies should further test this proposition and investigate the mechanisms behind this finding. Our observations highlighted that the governance mechanisms developed during the early phases of the formation were more guided by opportunities, however, as time proceeded parties were increasingly aware of the potential threats and harms that the MPA could pose. One potential reason for this might have been that lawyers were not involved during the early stages of the formation process but that their later involvement focussed the development of the vertical contract and norms towards potential threats (Bercovitz and Tyler, 2014). Future studies could further investigate the link between timing and entry to the MPA formation process and impact on opportunity versus threat-based changes in informal or formal governance mechanisms.

Proposition 2 in study 2 suggests that formal and informal governance mechanisms are substitutive within the vertical and horizontal relationships during the formation phase of

a buyer-supplier MPA. In other words, our observations showed that the vertical buyer-supplier relationship was more focussed on the development of formal governance mechanisms, the horizontal supplier-supplier relationship, on the contrary, relied more on the development of informal norms. To further understand this finding, future studies could apply balance theory (Heider,1958). Social balance theory seeks to understand inter-group sentiments arguing that individuals and group seek to achieve a balanced state. Our observations showed that the increasing negative sentiments in the vertical relationship, where accompanied by increasingly positive sentiments in the horizontal supplier-supplier relationships. Governance researchers could investigate the link between group sentiments in vertical and horizontal MPAs and the implications for developing either more formal or more informal governance mechanisms in order to achieve an overall 'balanced' MPA governance.

Finally, proposition 3 argued for a strong interdependency between formal and informal governance mechanisms across vertical and horizontal relationships in the formation phase of a buyer-supplier MPA based on the finding that changes in vertical governance mechanisms caused changes in horizontal governance mechanisms. In line with proposition 1, these changes often appeared in response to perceived threats rather than opportunities, creating a tit-for-tat like dynamic between the horizontal and vertical relationship and respective governance developed, which prolonged the formation process (see Axelrod, 1984). Future studies could further explore the motivations behind responses to changes in governance mechanisms in horizontal and vertical MPAs and the impact on contract signature delays.

Overall, future research could compare the findings from both studies in this thesis to other types of MPAs (e.g. different number and characteristics of suppliers) in other industries (e.g. with different clock speed as this may impact how and why governance and

legitimacy are established). The studies encourage future research to consider other countries and institutional contexts to explore the impact of the wider legal environment on changes in governance mechanisms.

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# Appendix

<b>This declaration concerns the article entitled:</b>			
GOVERNING COOPETITION IN BUYER-SUPPLIER MULTIPARTY ALLIANCES TO DELIVER LARGE INTER-ORGANIZATIONAL PROJECTS			
<b>Publication status (tick one)</b>			
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<b>Statement from Candidate</b>	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature. The co-authors of this paper are Prof Beverly Tyler, Prof Jens Roehrich, and Prof Brian Squire.		
<b>Signed</b>	Renate Taubeneder	<b>Date</b>	16 April 2022

## DELIVER LARGE INTER-ORGANIZATIONAL PROJECTS

### ABSTRACT

Drawing on governance and cooperation literature, we explore how a large buyer uses governance mechanisms to motivate suppliers to form a multiparty alliance (MPA). Prior research offers very few insights into how buyers apply formal and informal governance mechanisms to manage vertical and horizontal relationships in MPAs, and the dynamics behind the interplay of cooperation and competition. Governance mechanisms are important to consider in this context, because the buyer cannot easily detect and monitor what the various suppliers contribute to the MPA. We build on rich datasets comprised observations, interviews, contracts, and archival data. We contribute to extant research by assessing how a buyer develops both governance mechanisms to manage vertical and horizontal relationships. We also unpack how the effects of formal and informal governance mechanisms on vertical and horizontal relationships drive cooperation and competition during the formation of an MPA.

**Key words:** *Contracts; control; cooperation; coordination; multiparty alliances; relational norms*

## INTRODUCTION

Prior governance literature has positioned formal and informal governance mechanisms as vital to manage relationships at the micro, meso, and macro levels (e.g., Bercovitz and Tyler, 2014; Das and Teng, 1998; Long and Sitkin, 2018). Macro-focused scholars have examined ways in which both governance mechanisms interrelate (e.g., Cao and Lumineau, 2015; Poppo and Zenger, 2002), and their individual and joint role in controlling and coordinating inter-organizational relationships to drive performance outcomes (e.g., Caldwell et al., 2017; Mayer and Argyres, 2004; McEvily et al., 2014; Schilke and Lumineau, 2018). This governance research has primarily focused on either vertical (e.g., buyer-supplier; Argyres et al., 2007; Poppo and Zenger, 2002; Poppo et al., 2008), or horizontal (e.g., R&D alliances; Bercovitz et al., 2006; Ryall and Sampson, 2009) relationships, but increasingly firms need to form and manage organizational arrangements that combine both vertical and horizontal relationships, thus presenting unique governance dynamics.

Multiparty alliances (MPAs), defined as inter-organizational arrangements involving three or more firms (Lavie et al., 2007) and having both vertical and horizontal partners (Lazzarini et al., 2008), have become an increasingly popular choice for buying organizations seeking to consolidate formerly discrete dyadic supplier relationships to deliver large inter-organizational projects. When compared to a series of dyadic relationships, MPAs introduce specific control and coordination challenges that require novel (to the organization) forms of governance mechanism that remain under-researched. One immediate impact for formal governance is the introduction of two new contracts, one that formalizes the arrangement between the suppliers (supplier contract), and the other between the buyer and all the suppliers (MPA contract). While there are two contracts, they are jointly developed and signed on the same day, representing a unique governance form. Yet, prior research offers limited insights into how a buyer develops both formal and informal governance mechanisms to manage vertical and horizontal relationships when forming an MPA.

Similarly, informal governance has to transfer from norms around direct reciprocity between a buyer and a supplier to include indirect forms of reciprocity. MPAs make monitoring and the attribution of opportunism more challenging, and has been found to lead to free-riding, hold-ups, and leakages (McCarter and Northcraft, 2007). Existing studies have overlooked how a buyer might actively create informal governance mechanisms that foster and encourage relational norms within MPAs.

In addition to the structural challenges inherent within MPAs, organizations face the tension of simultaneous cooperation and competition (Mathias et al., 2017) that occurs vertically and horizontally between alliance partners over time (Hoffmann et al., 2018). Studies have shown that competitive behavior within alliances can influence cooperation as parties seek to concurrently create and capture value from the arrangement (Lavie et al., 2007). This dynamic, known as *coopetition* (Gnyawali and Charleton, 2018), is different within an MPA than in a series of vertical dyadic relationships in several key ways. First, suppliers are consolidated into a single horizontal contract that creates new opportunities for cooperation and competition that are simply not present within dyads where suppliers remain contractually separate. For example, horizontal cooperation may enable suppliers to share and exchange resources, while horizontal competition might reduce commitment, and even lead to the early termination of the arrangement (Gnyawali and Park, 2009). Second, the shift to an MPA changes the power dynamics between the buyer and suppliers, whereby a consolidated supplier alliance can use its increased bargaining power to capture more value (Ozmel et al., 2017). While the *coopetition* literature brings out the need to balance cooperation and competition in inter-organizational relationships (Lavie et al., 2007), prior research has not considered how both governance mechanisms influence vertical and horizontal relationships, and in turn encourage shared alliance goals required for cooperation, but also competition over private gains from the overall alliance benefits.

We address these gaps in the governance and competition literature in the context of MPAs by exploring the following research question: How does a buyer develop formal and informal governance mechanisms to manage vertical and horizontal relationships in an MPA to balance cooperation and competition? Building on prior governance and competition literature, we frame our in-depth case study of the establishment of an MPA between a large buyer and multiple suppliers in the context of a UK-based subsidiary of a multi-national company (MNC) contracted by the United Kingdom (UK) government to deliver a major construction project. We consider how a large buyer establishes an MPA with five suppliers using formal and informal governance mechanisms to manage the vertical and horizontal relationships, which in turn motivates them to simultaneously cooperate and compete. We analyze rich datasets comprised both primary and secondary data in the form of observations, interviews, contracts, and archival data to discover the governance mechanisms developed and enacted by the buyer, and their effect on vertical and horizontal relationships and competition.

We contribute to the governance and competition literature in two primary ways. First, we investigate the changes in contract terms, and the development of norms of solidarity, mutuality, and information exchange as a large buyer works with a number of suppliers to establish an MPA. We assess how formal and informal governance mechanisms change, and emerge during the formation of this type of MPA to extend the governance literature by revealing why and how various governance mechanisms control and coordinate the horizontal and vertical relationships in an MPA. In so doing, we reveal the complexity of an MPA consisting of both vertical and horizontal relationships, thus directly respond to calls for research that considers how vertical and horizontal relationships influence one another (Lazzarini et al., 2008). Second, we assess how the effects of formal and informal governance mechanisms on vertical and horizontal relationships drive cooperation and competition during the formation of an MPA. We are thereby able to unpack the simultaneity of

cooperation and competition, and how they are balanced via governance mechanisms' effect on relationships to achieve the most beneficial outcomes for the parties in the MPA.

## THEORETICAL BACKGROUND

### **Managing cooperation in MPAs**

Studies of buyer-supplier relationships have recently extended beyond dyadic analyses (i.e., one buyer to one supplier) to examine other arrangements including triads, projects, and networks (Oliveria and Lumineau, 2017; van Burg et al., 2014). One arrangement that has been growing in practice, but that remains under studied, is the MPA. Critically, buyer-supplier MPAs retain and consolidate the element of vertical exchange while simultaneously introducing direct, and usually contractual, horizontal relationships between the suppliers within the agreement.

When compared to dyads, MPAs create benefits and risks for buyers that are specific to their structure. First, the buyer can benefit from a reduction in complexity where the MPA reduces the direct relationships that it has with its suppliers to a single interface. The benefits of complexity reduction are well established within the literature (Choi and Krause, 2006), and may lead to lower transaction costs, disruption risk, and improved responsiveness. Second, the buyer may also benefit from increased knowledge transfer, joint problem solving, and learning (Fonti et al., 2017) by incorporating diverse partners, and increasing cooperation among the suppliers. On the other hand, social exchange theory (SET) suggests that an MPA creates risks for the buyer through the shift from a direct, reciprocal relationship with a supplier to a generalized (or indirect) reciprocal relationship with multiple suppliers (Garcia-Canal et al., 2003; Heidl et al., 2014). This indirect reciprocity between the buyer and multiple suppliers fosters competitive tension between the suppliers (Das and Teng, 2002; Zeng and Chen, 2003). In a dyadic exchange, a buyer and their suppliers can detect and monitor what the other party contributes to the relationship (Das

and Teng, 2002). In an MPA, suppliers feed their resources into a common pool, which makes the monitoring of partners' contributions, as well as the identification and attribution of opportunistic behavior more difficult (Li et al., 2011).

Research has suggested that this indirect reciprocal relationship can encourage three types of defection particularly relevant to the management of MPAs, and their vertical and horizontal relationships (McCarter and Northcraft, 2007). First, 'free riding' occurs when an MPA partner attempts to capture the benefits of the MPA without contributing to its creation. Second, 'hold-ups' occurs where parties systematically under-invest in creating benefits for the MPA because of the risk of opportunistic behavior by other parties. Finally, 'leakages' occur when an MPA partner attempts to use the resources of the alliance to create value outside of the alliance. For example, alliance partners will decide whether to commit their limited resources to the joint endeavor, recognizing that they can "free-ride" on other actors' activity by withholding their efforts toward the joint endeavor. This course of action increases the likelihood of alliance failure, both directly, due to the limited investments on part of the buyer, and indirectly, by discouraging other partners to invest in the alliance (McCarter et al., 2011). Even if free-riders are detected, it is challenging to establish sanctions against those identified, because once the MPA is established, no partner may be excluded from realizing some of the benefits regardless of their contribution (Heidl et al., 2014).

The dynamics established by indirect reciprocity mean that successful MPAs will arguably be those where the buyer actively manages cooperation and competition both vertically and horizontally through the MPA lifecycle. From the buyer's perspective, if cooperation is too high, or competition is too low, suppliers may become over-embedded and will not feel sufficient commercial pressure required to induce high levels of performance (Villena et al., 2011). Concomitantly, if competition is too high, or cooperation is too low, then suppliers are less likely to engage in knowledge sharing or joint problem



solving (Dyer and Nobeoka, 2000). Therefore, levels of co-opetition, defined as simultaneous competition and cooperation among firms with value creation intent (Gnyawali and Charleton, 2018), are critical to the management of MPAs.

Co-opetition can be deliberately created within an MPA through the formal and informal elements of the exchange. For instance, a buyer can introduce financial incentives into the contract that induce cooperation (Terpend and Krause, 2015), or can develop norms that act as a social control on no-cooperative behaviors. Similarly, a buyer can also induce competition between suppliers by playing them against each other (Wilhelm, 2011). While the literatures on co-opetition and governance mechanisms are relatively mature, little is known about the dynamics of formal and informal governance mechanisms within MPAs, that require control and coordination of both vertical and horizontal relationships simultaneously, and how those mechanisms influence the tension between cooperative and competitive forces (Das and Teng, 1998; Hoffmann et al., 2018).

### **Governance mechanisms to manage MPAs**

Prior governance literature has distinguished between two main types of governance mechanisms: formal and informal (Poppo and Zenger, 2002). While formal governance is manifested in explicit and mostly detailed and legally binding agreements, specifying roles and obligations of contracting parties (Poppo and Zenger, 2002); informal governance refers to exchange mechanisms that are manifested in socially derived 'arrangements' that are more social in comparison (Dyer and Singh, 1998; Heide and John, 1992; McEvily et al., 2014). More recent governance studies have started to emphasize the function of governance mechanisms to control and coordinate relationships (e.g., Caldwell et al., 2017). While the control function refers to safeguarding parties against potential opportunism, the coordination function emphasizes communication, interactions, and information sharing (Malhotra and Lumineau 2011; Schepker et al., 2014).

The formal control function defines the rights and obligations of the parties involved, thus supporting the mitigation of appropriation concerns, the management of potential moral hazards via establishing disincentives, the alignment of incentives, and monitoring of performance (Reuer and Arino, 2007; Ryall and Sampson, 2009). By reducing concerns about free riding, hold-up and leakage, forms of opportunism common in MPAs, formal control constrains the ability of a party to extract additional rents from other parties to the agreement by failing to perform as agreed (Gulati and Singh, 1998; Hoetker and Mellewig, 2009). Research has also found that organizations are likely to emphasize more formal control mechanisms when knowledge that is complex, tacit, or less codified is transferred, and when transactions are negotiated that involve specific assets or proprietary knowledge to safeguard partner investments, and minimize exchange hazards (Parmigiani and Rivera-Santos, 2011).

The formal coordination function refers to ordering desires and expectations between the transacting parties, and organizing priorities for the future (Ryall and Sampson, 2009; Ariño et al., 2013). By defining explicitly formal communication and reporting requirements including mode, frequency, and content, these formal coordination mechanisms foster regular information sharing between the alliance partners, and thus provide a means by which firms can align their expectations (Argyres et al., 2007). Frequent communication may also promote the development of routinized interactions, and shared language that can make it easier for the parties to ensure they meet each other's needs (Faems et al., 2008). Research has also found that the development of shared expectations and routinized interactions lowers the likelihood of misinterpretations and misunderstandings, that may raise questions about the intentions of the other party (Gulati and Singh, 1998; Mayer and Argyres, 2004). More specifically, Lumineau and Henderson (2012) found that increasing formal coordination mechanisms significantly fosters cooperation, especially in the context of buyer-supplier conflicts.

Informal governance mechanisms refer to the extent to which a buyer-supplier MPA is governed by more socially derived 'arrangements' such as relational norms to coordinate and control relationships between partnering firms (Gulati, 1995; Poppo and Zenger, 2002). Shared relational norms generate common understanding, compatible goals, and "a commitment to joint action" (Poppo and Zenger, 2002: 710). Such norms also serve as mutual heuristics (Mellewigt et al., 2017), and refer to a relationship's underlying shared expectations about the behaviors and attitudes of each party in working cooperatively together to achieve mutual and individual goals (Heide and John, 1992; Cannon et al., 2000) Kaufmann and Stern, 1988; Long and Sitkin, 2018). Prior studies have evidenced that informal governance mechanisms support the emergence and stability of inter-organizational alliances, because they allow parties to economize on the costs of contracting (Dwyer et al., 1987). For relationally-governed exchanges, the enforcement and coordination of obligations, promises, and expectations occurs through social processes that promote relational norms such as solidarity, mutuality, and information exchange (Cannon et al., 2000; Macneil, 1980; Kaufmann and Stern, 1988).

The relational norm of solidarity focuses on the preservation of the unique and continuing relationship in which the various commercial transactions take place (Cao and Lumineau, 2015; Kaufmann and Stern, 1988). Thus, solidarity is characterized by the extent to which parties place a high value on the relationship (Griffith and Myers, 2005), and prescribes behaviors directed specifically toward relationship maintenance (Cannon et al., 2000), thus promoting a bilateral approach to problem solving (Poppo and Zenger, 2002). Mutuality is described as the attitude that each party's success is a function of everyone's success and that one cannot prosper at the expense of one's partner, expressing the sentiment of joint responsibility (Cannon et al., 2000). Mutuality establishes self-enforcing safeguards to deter opportunism (Cao and Lumineau, 2015; Macaulay, 1963; Poppo et al., 2008). Building on Macneil (1980), mutuality does not require equality in the division of the

exchange surplus, but required an 'even' distribution that assures adequate returns to each party. Kaufmann and Stern (1988) agree that even distribution could be on a transaction-by-transaction basis, or across the whole exchange (including a myriad of transactions). The relational norm of information exchange defines a bilateral expectation that parties will proactively provide (private) information useful to the partners including short- and long-term plans and goals (Heide and John, 1992; Macneil, 1980; Poppo and Zenger, 2002), and thus facilitate goal congruence between partners (Macaulay, 1963). Information exchange represents a safeguard to parties in the sense that the partnering parties can be expected to provide unforeseen information that may affect operations. Hence, it is an expectation of getting all known information on an ongoing basis to enable parties to cope better with the uncertainties.

While research has made progress articulating which formal provisions in contracts help to control and coordinate parties in MPAs (e.g., Reuer and Ariño, 2007; Ryall and Sampson, 2009), little is known about how formal and/or informal governance mechanisms relate to vertical and horizontal relationships, and even less about how relationships in MPAs influence the balance between cooperation and competition. Because the complexities that influence the governance of MPA relationships increase geometrically as the number of alliance partners increase, the appropriate governance mechanisms for a large buyer to use when forming an MPA with several suppliers is likely to differ from those used in a dyadic or bilateral alliance (Li et al., 2011). For instance, some MPA studies suggested that there are fewer incentives for making the relation-specific investments needed to build relational norms, arguing that potentially formal governance mechanisms are a more appropriate way of managing MPAs (Garcia-Canal et al., 2003). However, other MPA studies argue that if partners have not previously had a cooperative relationship, they may need to develop informal governance mechanisms in the contract negotiation stage through relational investments and unilateral commitments before they can design a mutually agreed upon

contract (Madhok and Tallman, 1998; Hoffmann et al., 2018). This gap in the literature motivated Hoffmann et al. (2018) to call for detailed studies exploring how “interfirm trust, joint governance, and routines emerge in cooperative relations” (p. 3036), as well as approaches to manage the tension between cooperation and competition using a longitudinal case study approach.

## METHODS

### **Case selection, research setting and design**

The case we selected had a number of unique qualities that made it a logical candidate for sampling (Shah and Corley, 2006). First, we had a rare opportunity to investigate the formation stage of an MPA where governance mechanisms are designed to manage vertical and horizontal relationships to create an environment that fosters the right balance between cooperation and competition. During this phase of an MPA it is difficult for buyers to achieve high levels of cooperation between suppliers, because they often share little experience working together or are competitors. In fact, issues emerging between collaborating firms have become one of the biggest risks to large inter-organizational project success, encouraging buyers to use the formation stage to foster cooperation between partner firms (Davies et al., 2017). However, buyers also are careful to simultaneously ensure competition between suppliers to prevent suppliers from forming a collective group against the buyer to increase supplier bargaining power and profits.

Second, we are studying a large MPA with initial contract value of approximately \$1bn and the potential to cost over \$2bn until project completion in 2025. Following Schilke and Lumineau’s (2018) proposition that “it seems likely that the contracting process may play a less central role in simpler, shorter, or more exploitation-oriented types of alliances”

(p. 2849), we selected an in-depth case study that required a longer type of relationship: a complex construction project lasting over a decade to complete. The vertical relationships between the buyer and individual suppliers were traditionally characterized as transactional with a strong focus on formal governance mechanisms. Hence, our case context represented an under-researched area as prior work has mainly focused on smaller firms delivering products and R&D activities (e.g., Lavie et al., 2007). Furthermore, we conducted our fieldwork while the formation of the MPA was in ‘live development’, allowing us to capture real-time data on decisions, perceptions, and expectations. This resulted in a unique opportunity to uncover how the buyer developed formal and informal governance mechanisms to manage vertical and horizontal relationships, and balance cooperation and competition between their suppliers and themselves over time, rather than merely presenting a cross-sectional perspective.

We conducted a multi-method, single case study, to collect rich data from multiple data sources on social processes, and the evolution of formal governance (Siggelkow, 2007). The selected MPA consisted of one buyer (hereafter referred to as large project buyer or LPB) and five suppliers (Table 1). LPB was a subsidiary established in 2008 by EnergyCo, a large utility company producing circa 20% of the UK’s energy needs, to coordinate the design, construction, and commissioning of new nuclear power stations in the UK.

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INSERT TABLE I AND FIGURE 1 ABOUT HERE  
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In 2014, LPB concluded the competitive tendering process for three main work packages concerned with the manufacturing and installation of electrical, mechanical, and HVAC (heating, ventilation, air-conditioning) components for a new nuclear power plant, to be installed in 4,000 rooms across 72 buildings (Figure 1). Overall installation work was valued at over \$1bn (April 2018) and was expected to last for six years. LPB selected two

joint ventures and one consortium as preferred bidders (Table 1 row 5), and then issued them consulting contracts for early design activities for each work package in 2015. In parallel, LPB negotiated target-cost prices for the main scope contract with them for each work package, which was difficult for LPB because the design for the work packages were not yet sufficiently developed. Because preliminary work on each work package was due to be carried out by each supplier group, but parties had not been able to find an agreement on target cost prices, LPB signed works contracts with each supplier group between November 2017 and early 2018.

In November 2015, internal teams within LPB had recognized that the siloed contractual structure of the mechanical, electrical, and HVAC work would create inefficiencies during on-site installation work. The contractual separation would require formal handovers between suppliers for each of the 4,000 rooms. Hence, LPB presumed that large time and cost savings could be achieved if installation services suppliers were enabled to install equipment in parallel. In November 2017, LPB arranged a first conference call with four suppliers: the joint venture between ElectricalACo and ElectricalBCo, as well as installation services firms MechanicalCo and HVACCo, to understand their receptiveness towards an MPA. Due to positive responses by the suppliers, LPB then organized a joint workshop to discuss an MPA in December 2017. Formal negotiations between the parties started in April 2018, with the expectation that there would be a signed contract by September 2018. However, the negotiation of the MPA contract proved to be more complex than anticipated and negotiations continued until June 2019, when the MPA contract was signed. On the same date, suppliers signed a separate contract, which created a non-equity joint venture between suppliers only, thereafter, referred to as 'supplier contract' (it describes the multilateral interactions that will take place among the suppliers, and how they will jointly provide the contracted services for the buyer as defined in the MPA contract). LPB required the suppliers to establish a separate legal entity to ensure 'joint and

several liability' for the installation work, which means all the suppliers are held responsible for the joint installation work. Figure 1 provides a timeline summarizing key events in the MPA contracting process, but for this study the main focus is on the MPA formation period between November 2017 and June 2019.

### **Data collection and sources**

Our study combined primary (observations, interviews, site visits), secondary data sources (board papers, emails, personal meeting notes, presentation slides, government and industry reports) and contracts, which we collected live and retrospectively between 2015 and 2019 (Table 2; Gibbert et al., 2008). We collected data using a three-step recursive strategy. At a supplier event organized by EnergyCo in November 2017, we gained first insights into the company's desire towards a more collaborative contracting approach. At the event, we managed to network with several individuals working in LPB's commercial and supply chain teams. In August 2018, we were invited to a conversation with LPB's Commercial Director, who described LPB's intentions to establish an MPA with five suppliers. At this meeting, we were able to receive detailed, confidential material including LPB's board papers and presentation slides of a meeting with the UK government, all providing extensive background on LPB's vision with regard to the MPA. After careful study and two site visits, the lead researcher conducted an interview in September 2018 with a senior member of the LPB's negotiations team, to clarify any open questions, and to gain an understanding of the challenges they faced in the formation stage.

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INSERT TABLE II ABOUT HERE  
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In the next step, the lead researcher was embedded within LPB to conduct a comprehensive series of non-participant observations of internal LPB meetings, as well as of



meetings between LPB and all MPA suppliers. As the observations progressed, the researcher was also able to join meetings between suppliers only. The non-participant observations lasted from October 2018 until June 2019, when the MPA and the supplier contracts were signed (marking the end-date of data collection for this study). During meetings, the lead author took extensive notes of activities and observations including direct quotes from meeting participants, which she typed up in detail within 24 hours after the meeting. Additionally, she gathered any supporting secondary data (e.g., meeting agenda, presentation slides), and conducted semi-structured interviews to clarify open questions while she was in the field. During these interviews, she took careful notes and typed them up for analysis within 24 hours. Consequently, she was able to collect a rich dataset documenting the live formation of the MPA, the ongoing negotiations shaping the contract between the five parties, formal and informal governance mechanisms employed by the buyer to steer the whole process, and their impact of vertical and horizontal relationships, and the balance of cooperation and competition in the MPA.

The third step started after fieldwork was concluded. To deepen our understanding of LPB's contracting process prior to the MPA, she conducted a series of semi-structured interviews around the contracting history of each supplier with the buyer, as well as differences across these contracts. During this time, she acquired the contracts between suppliers and LPB prior to their involvement in the MPA. The interviews also allowed her to corroborate and refine emerging findings with informants through October 2020. To gather reliable and objective information from our informants (Alvesson, 2003), she interviewed stakeholders with different lengths of tenure in the MPA, in disparate hierarchical, and functional roles. Thus, she was able to access diverse perspectives that allowed us to triangulate data, helping to overcome informants' memory lapses and potential distortion. To minimize respondents' biases (Golden, 1992), we designed an interview protocol (Alvesson, 2003) that we adapted to the characteristics of different informants and refined

over time as the research progressed and theoretical constructs emerged. Overall, the final step facilitated an in-depth understanding of how LPB's formal and informal contracting approach changed and emerged between early supplier contracts and the MPA contract.

### **Data analysis**

We analyzed the data through an iterative, abductive process, moving between data and theoretical concepts in several steps, starting with the analysis of all the contracts (Golden-Biddle and Locke, 2007). As a first step, we analyzed and coded the three early consulting contracts and the three works contracts, the suppliers signed prior to their involvement in the MPA between 2015 and 2017. These contracts were coded to identify differences in terms identified as control or coordination clauses across these early contracts. For control, we coded sub-clauses that defined: (i) supplier duty details; (ii) buyer's decision rights; (iii) monitoring and supervision; (iv) contingencies and directives; and (v) (dis-) incentives. For coordination, we coded sub-clauses that specified: (i) processes of who does what when; and (ii) how to interact. We determined through analysis that the six early contracts (three early consulting contracts and three works contracts) were very consistent in their use of control and coordination clauses.

In the next step, we coded the MPA contract for control and coordination using the same list of coded clauses. This allowed us to recognize the main differences between the MPA and prior contract. We also coded and compared the MPA contract template for the construction industry in the UK with the final MPA contract, to understand differences unique to the MPA contract we studied, such as (sub)clauses that became part of the final contract due to the nature of the negotiations (purposeful differences in MPA contracting). The lead researcher developed tables, which highlighted the unique features of the MPA contract in comparison to previous contracts, and the implications for vertical and horizontal relationships, and vertical and horizontal cooperation and competition. These were then

jointly discussed between all researchers to identify any discrepancies in the interpretation, which required the lead researcher to shift back to data coding until the key themes had emerged (Figure 2).

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INSERT FIGURE 2 ABOUT HERE  
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After completing the contract analysis, we focused on the process for the formal negotiation of the contract and informal governance. At first, we read through all relevant secondary data, interview transcripts, and observational notes to develop a comprehensive timeline of buyer's actions between the first conference call (November 2017) and the signature of the MPA contract (June 2019). Next, we coded these actions dependent on whether they were related to the negotiation of the MPA and supplier contracts, or the establishment of relational norms between partners. Events and actions that could be linked directly to the negotiation of the formal contract were coded as formal, and those that were not were coded as informal governance mechanisms. We coded for three social norms, which were derived after an extensive review of the literature: solidarity, mutuality, and information sharing (Heide and John, 1992; Cannon et al., 2000; Bercovitz et al., 2006). Again, the lead researcher collated her findings in tables, highlighting the various actions taken and how they related to formal contracting, or the formation of norms. All co-authors extensively discussed the actions coded for each event to determine if they were related to contract negotiation, or the formation of norms, sometimes requiring the lead researcher to go back to the data to find additional information. We repeated this final step until all co-authors agreed on the actions identified for each formal (control and cooperation), or relational norms, and their impact on the vertical and/or horizontal relationships, and in turn vertical and horizontal cooperation and competition.

## FINDINGS

This section presents our analysis of the formal and informal governance mechanisms, which changed and emerged when a large buyer moved from dyadic supplier relationships to a MPA with five suppliers, and how these mechanisms influenced cooperative and competitive dynamics in the vertical and horizontal relationships. Figure 3 provides a timeline of key events for formal and informal governance mechanisms discussed in more detail in the following section.

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INSERT FIGURE 3 ABOUT HERE  
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### **Formal governance**

In reviewing our rich dataset, we identified six formal control and three formal coordination sub-themes negotiated during the formation of the MPA. Appendix C highlights the specific changes between the previous contracts and the MPA contract to illustrate changes in control and coordination clauses. Table III focuses on the nine sub-themes, providing more detail in terms of how they influenced the vertical and horizontal relationship leading to cooperation and competition.

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INSERT TABLE III ABOUT HERE  
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### ***Control***

*Performance related changes:* The MPA contract introduced *performance metrics* (penalties and incentives), with targets selected by the buyer for each task order (see Table III and Appendix C, lines 6 and 7). The performance metrics (based on quality, safety, time, and cost) allowed LPB to identify and penalize underperformance by removing work from the MPA. The performance measures are based on schedule dates, MPA work efficiency, and

collaborative (vertical) behaviors, and are connected to incentive payments upon achievement. Both penalties and incentives are applied to the MPA as a whole, and not to any supplier individually. For instance, should suppliers fail to achieve particular work targets, the incentive reward will not be paid and work will be removed from the MPA. Thus, rewards and risks are jointly assumed by MPA suppliers, and either all of them are rewarded, or all are penalized, which should encourage suppliers to cooperate to maximize overall rewards. Additionally, it allowed the buyer to increase horizontal control as it encouraged suppliers to self-monitor, and to detect and punish free-riding behaviors before they lead to harmful consequences for overall MPA performance.

In December 2018, LPB became aware of a conflict between suppliers over how to share the incentive rewards. While ElectricalACo wanted to fix the share mechanism upfront, SupportCo opposed this as their work scope was still ambiguous would lose out should suppliers agree to fix percentages upfront. LPB applied pressure on suppliers to find a solution that would fit the interests of all parties as expressed by an LPB Manager: *“We wanted them to just share the [rewards] equally, so it doesn’t matter who is doing which work because they all take an equal share. In the background [they] were saying, ‘No, we want 40% of the pie’. [...] ‘We want 30% of the pie’. ‘I’ll have 20%, you can have 10% of the pie’. We had to intervene in that”*. At the end, all suppliers agreed on a flexible mechanism that allowed the supplier JV board to revisit and change the percentages on an annual basis dependent on the actual work scope delivered by each supplier. Hence, we found that incentive rewards encouraged vertical and horizontal competition allowing suppliers to strive for a greater share of overall MPA work, and with this of the incentive rewards.

*Changes in payment:* In transitioning to the MPA, LPB merged the previous separate work scopes to one overall MPA scope, which was initially valued at over \$1.5bn with additional incentives worth around \$250m. In November 2018, LPB revised this sum because it was not affordable. To help in estimations, LPB asked an independent consulting firm to

assess the MPA work, and they found that MechanicalCo overestimated their prices relative to the other suppliers. Thus, LPB deducted 15% from MechanicalCo's price estimate as a requirement for their participation in the MPA. MechanicalCo felt treated "unfairly": "*[LPB] were taking huge chunks of cost out and there wasn't a good understanding of what was being taken out. The other partners didn't have anywhere near the same level of adjustments being made. Our business was feeling very exposed*" (MechanicalCo representative). In March 2019, LPB negotiated with all suppliers to arrive at a final cost of around \$850m for MPA work, and incentive fees of approximately \$100m. As a response, suppliers delayed contract signature until they saw a clear link between the new budget and respective MPA work assignments. Overall, this buyer initiative increased vertical competition over time.

In line with the aforementioned initiative, LPB also conducted comparisons between the rates suppliers applied for similar types of installation work. Given the variance revealed, LPB placed great effort into developing standardized rates for all MPA work, a form of vertical control, starting in January 2019 and lasting until after the MPA contract was signed in September 2019. LPB feared that if a standard was not established, some suppliers would have an unfair advantage contractually, which could affect norms by damaging horizontal mutuality, or the suppliers could decide to give work to the most expensive supplier to increase overall profits, which would violate vertical mutuality norms. Suppliers eventually agreed to work with LPB on the standardization of rates but required LPB to agree to allow suppliers to apply higher rates for more complex installation work. Suppliers believed this addition was necessary to alleviate some of the vertical competition that resulted from the standardization process.

*Changes related to structure:* The MPA contract introduced a new control mechanism the '*best athlete principle*', which increased vertical control to ensure that work issued to the supplier JV was carried out by the most suitable supplier (Appendix C, line 5). This means

that in contrast to previous contracts, no supplier had a guaranteed amount of work scope, instead suppliers were encouraged to continuously compete for work, particularly as suppliers' skillsets are partially overlapping. For instance, ElectricalACo was able to not just do electrical but also mechanical and HVAC work. This illustrated an effort by the buyer to create vertical competition, and more importantly horizontal competition between suppliers:

*“As a customer, we want [suppliers] to have a bit of friction. We need some commercial tension [...] What we would be concerned about is that they'll carve out the work amongst themselves and not compete against each other. [...] but of course, if they are competitive [...] as a customer we're saying that it's a good thing because if you perform, you'll win, and if you don't perform, you'll lose”* (LPB Project Manager).

Suppliers agreed to the best athlete principle, despite discomfort expressed by some suppliers during several commercial meetings (e.g., MPA meeting, February 2019). LPB reassured the preferred bidder of each work package should “naturally” be the best athlete (LPB Project Manager). Nonetheless, the inclusion of the best athlete principle in the MPA contract gave the buyer increased vertical control by creating horizontal competition.

The *steering committee*, while led by an appointee of the buyer consisted of an even share of buyer and supplier representatives, with the latter being selected via the best athlete principle (Table III). The steering committee meets monthly and assumes rights previously controlled by the buyer, such as changes to the budget, completion dates, scope, or the termination of a supplier (Appendix C, line 3; Table III). The buyer's appointee selects the suppliers' representatives after they are authorized by the supplier board, the governance body of the supplier JV, following a best athlete principle, and therefore do not necessarily represent each supplier (Appendix C, line 3).

The participation of suppliers' representatives on the steering committee allowed the buyer to retain control, while shifting the responsibility for operations to the supplier JV. According to comments made in a vertical work stream meeting (November, 2018), LPB

remained unsure *“to what degree they want to get their hands dirty on the job”* and wanted *“to leave it more to”* suppliers while maintaining contractual flexibility as requirements were still evolving. To allow the buyer to keep decision-control, while reducing involvement in the operational delivery of the work, it was necessary to involve suppliers in decision-making (Table III). Hence, the introduction of the steering committee ensured buyer’s vertical control while increasing suppliers’ vertical control, and fosters vertical cooperation, as steering committee’s decisions have to align with interests of the suppliers’ JV board.

### **Coordination**

*Commercial workshops:* In April 2018, LPB started negotiations with the five suppliers to develop the commercial framework for the MPA contract required to coordinate the suppliers’ activities. LPB’s Commercial Director stressed the need to find a *“a collective solution that all parties have full alignment [with] and commitment to delivering”* (Email, March 2018). Suppliers developed their own preferred solutions before meetings, and during meetings LPB would focus on finding commonalities across the solutions along which negotiations could continue. Generally, the suppliers believed the commercial workshops were very positive: *“[LPB Commercial Director] brought us together and led the negotiations [...] He understood there would be tensions and because he was very charismatic and very experienced, he knew how to bring us along with him”* (SupportCo representative). The commercial workshops facilitated the alignment of expectations required to coordinate vertical and horizontal activities formalized in the ‘Statement of Intent’ in August 2018, and a ‘Memorandum of Understanding’ (MoU) in September 2018 (Figure 3; Table III).

*Structural changes:* The MPA contract also introduced two structural changes that supported coordination between suppliers: (i) the introduction of the Alliance Manager role; and (ii) the formation of a project management office – PMO (Appendix C, line 4; Table III). In prior contracts the buyer appointed a project manager to manage each supplier



agreement. In the MPA contract, the Alliance Manager is appointed by the steering committee to lead the PMO, to supervise performance, to report and make recommendations to the steering committee and buyer, and to facilitate vertical and horizontal coordination. In this MPA, the person selected for the alliance manager role was proposed by ElectricalACo and MechanicalCo, and interviewed by the remaining suppliers and LPB to confirm their suitability before he was appointed. The MPA contract states that the Alliance Manager is empowered to facilitate vertical and horizontal coordination (and thus facilitate cooperation), and expected to focus on the interest of the project: *“The Alliance Manager is empowered to act as a leader of collaboration, actively promoting the spirit of mutual trust and co-operation by leading by example [... and] in a manner which is independent and free from conflicts of interest and in the interests of the Project”* (Implementation Plan, May 2019, p. 11).

The main purpose of the *PMO* is to facilitate horizontal coordination between suppliers, because according to the MPA contract it is responsible for coordinating the delivery of the MPA work (Table III). In November 2018, LPB issued consulting contracts to suppliers that required them to co-locate, and to coordinate in the set-up of the PMO. The establishment of the PMO provided a platform on which suppliers could align their efforts towards the joint delivery of the project work, hence, stimulating horizontal cooperation. Furthermore, the MPA contract states that selection of roles for the PMO must follow the best athlete criteria, to encourage suppliers to provide the best resources to the MPA. Thus, we find that the structure of the PMO increases both horizontal cooperation and competition.

### **Informal governance**

In reviewing our data, we found that the buyer endorsed three relational norms: solidarity, mutuality, and information exchange. Table IV provides an overview of the buyer’s

initiatives to strengthen these norms, and their implications for vertical and horizontal relationships, as well as cooperation and competition.

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INSERT TABLE IV ABOUT HERE  
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### ***Solidarity***

We identified three buyer initiatives that strengthened the solidarity norm vertically and horizontally, characterized by actions directed at establishing and maintaining a supportive and committed long-term relationship. We found that the buyer was able to leverage their existing solidarity with SupportCo to encourage solidarity with the other suppliers. They also set-up an informal monthly meeting between the buyer and suppliers' top executives and initiated behavioral workshops at the end of contract negotiations.

*Invitation for SupportCo to join the MPA:* In January 2018, LPB decided to invite a new supplier to join the MPA. There was a long-standing collaborative relationship between SupportCo and LPB's parent EnergyCo. Many senior managers at LPB knew and trusted SupportCo, and welcomed their participation in the MPA, because they expected their presence in the MPA would facilitate a similar collaborative relationship with the other suppliers. Initially, the remaining suppliers reacted suspiciously towards SupportCo's involvement, fearing it would harm their own work scope and profits. When they realized that SupportCo's capabilities were limited to the provision of support services, and that the firm did not have the competencies required for delivering main work packages, the other suppliers became more receptive to SupportCo joining the MPA. Moreover, at first, SupportCo also felt some apprehension towards the other suppliers that were known to be commercially aggressive. However, SupportCo continuously sought to promote support and commitment to LPB and to "*not be seen*" as the "*poor relations*" to other suppliers

(SupportCo, Project Director). Over time, both vertical and horizontal relationships became more cooperative as solidarity among the partners increased.

*Monthly meetings between chief executives:* The purpose of this was to strengthen the senior level relationships between the buyer and suppliers, and to provide a platform for an open dialogue as expressed by ElectricalACo's Project Director: "[LPB] wanted commitment from the CEOs of our organization knowing that [...] the top could overrule [...] and the expectations were understood and vice versa". In August 2018, LPB invited all CEOs to a joint visit of a large infrastructure construction site in China, which further strengthened vertical and horizontal relationships as it provided "a vehicle for five days of conversation between the senior executives and [LPB]" and "firmly fixed [the MPA] as a proposition" (HVACCo, Project Director). Sometimes, operational and negotiation teams would escalate concerns or unacceptable behavior from another party via their CEO in the informal monthly meetings, which helped to resolve issues in the MPA formation process. In January 2019, LPB involved CEOs to join in the commercial negotiations, hoping that they would facilitate the process. A quote by the LPB's Commercial Manager expressed this motivation: "We were negotiating with the Commercial Directors, and we got to the final ten points that we couldn't unlock [... we] thought [we] could strong-arm the CEOs into an agreement, against the Commercial Director's will. [We had] some success, but it was limited". ElectricalACo's Commercial Director later revoked some of the concessions the company's CEO had made, showing that the support and commitment suppliers showed in senior executives' meetings did not always translate to the commercial negotiations.

*Behavioral workshops towards the end of negotiations:* In April 2019, LPB engaged an external consultancy to conduct a series of behavioral workshops to strengthen vertical and horizontal solidarity. The intent of the workshops was to develop a more cooperative working culture between the partners. It also provided a platform for members to voice their concerns, and to meet and get to know each other in a more informal way, because

this had been historically very restricted. Although well received, some key personnel from each party was still too involved in on-going negotiations to attend the workshops regularly.

Overall, the prolonged negotiations had begun to damage the vertical relationships with buyer and suppliers blaming each other for the lack of progress. In May 2019, SupportCo sent an official email to all senior managers of the MPA to complain about LPB's lack of attendance in important meetings:

*"It was all very professionally put. It was just this is disgraceful that we can be treated like this. [Later] I got on a call [... and] all I could hear was [the LPB manager, who ...] didn't even acknowledge me [...]. Just because I'd gone and copied the [supplier] board members in and all that saying this has gone far enough. Other people came on the call, and then throughout because [the LPB manager] chaired it, he spoke about me in the third person like I wasn't there [...] That's how petty and polarized it had become"* (SupportCo, Project Director).

Despite LPB's initiative to strengthen vertical solidarity, the initiative was not very successful due to the prolonged negotiations of the formal contract. Instead of improving vertical solidarity, horizontal solidarity was mainly increased as summarized by the Project Director of SupportCo: *"The negotiation team was quite fractious at the beginning, because it was like an arranged marriage. We were all forced together. But having been on that journey for all that time, it brought us really close together [... and] the relationships have lasted. [...] I could ring at any time of the day and they would take my call, they would give me the advice, which is positive"*. Consequently, we found that despite buyer's efforts, it was difficult to achieve overall high levels of vertical solidarity due to on-going negotiations resulting in vertical competition. On the other hand, horizontal solidarity increased over time, supporting horizontal cooperation.

### **Mutuality**

To strengthen the mutuality norm, characterized by actions that foster a spirit of joint responsibility and a sentiment of joint problem-solving, we identified two buyer initiatives: (i) sharing confidential LPB board papers with suppliers; and (ii) a site event.

*Sharing confidential LPB board papers with suppliers:* We found that this initiative strengthened vertical mutuality as it made suppliers aware of the internal challenges LPB managers were facing in terms of the MPA. LPB's shareholders remained skeptical about the MPA and believed that the traditional vertical contracting approach would be sufficient. However, sharing these papers caused some doubts for the suppliers as illustrated in a quote from LPB's Senior Commercial Manager: *"Their [suppliers] main concern was they thought it wouldn't fly with our shareholders. They thought that at a certain level we wanted this [...] but they thought our shareholders [...] would say no, it's too risky"*. Hence, LPB determined it was important to share all the board papers with the suppliers to both demonstrate transparency, and gain sympathy for LPB's position during negotiations. After shareholder meetings, LPB would also provide feedback to suppliers about shareholder decisions. Overall, this improved vertical mutuality, and had a positive impact on vertical cooperation, as suppliers were able to sense a spirit of joint responsibility and a need for joint problem-solving.

In September 2018, when the MPA buyer and suppliers signed the 'Memorandum of Understanding' (MoU), LPB held a celebration on site (*site event*) to strengthen vertical mutuality as expressed by following quote of SupportCo's Project Director: *"There's been many [events] since I've been here but [LPB's MD] just gets up and talks about [the project] with such a passion and [...] it's just straight from the heart like he doesn't read from a script. [...] It makes you want to go, I want to do that. I want to be part of this [project]. It's just inspiring. [...] inspiration and wanting you to go the extra yard"*. Hence, we found that LPB used the event to inspire a sense of joint responsibility for the project with suppliers, which strengthened vertical mutuality and vertical and horizontal cooperation respectively.

### ***Information sharing***

The information sharing norm is characterized by the provision of unforeseen information, which enables partners to better cope with uncertainties. We found two buyer initiatives to strengthen this norm: (i) vertical integration work streams; and (ii) daily update meetings.

*Vertical integration work streams:* Starting in October 2018, each work stream was directed by a buyer and a supplier representative who updated each other on progress on key milestones across four areas: commercial, operational, industrial, and engineering. These work streams were identified as necessary areas of work to be defined before the parties could sign the MPA contract initially anticipated to be signed in December 2018. From October 2018 onwards, LPB started weekly updates across work streams to share news and progress, which were found to be useful for participants. During this time, LPB experienced “*overwhelming support from the supply chain*” as stated by a LPB manager. However, after several meetings the work streams lost momentum, because LPB’s managers were too busy with other work responsibilities to participate, and the on-going contract negotiations consumed most of the resources. Thus, vertical information flow was improved, strengthening cooperation at least in the short term

*Daily update meetings:* From January 2019 onwards, LPB introduced daily update meetings, which soon became twice daily updates, for suppliers to share progress with LPB. Hence, co-headed work streams were having a positive impact on vertical information sharing and vertical cooperation. Daily update meetings were considered by suppliers to be sometimes too time-consuming: “*You’d have a meeting at eight o’clock in the morning [...] At 4:30 on the same day, you’d have another meeting to discuss the same thing and then at eight o’clock the next morning [...] How are we going to get anything resolved between 4:30 and eight o’clock the next morning? That was a real challenge*” (MechanicalCo, Project Director). We found that vertical information sharing via the work streams helped vertical

coordination and increased vertical cooperation, while the daily update meetings proved to be a means of control that increased vertical conflict and competition.

## **DISCUSSION AND RESEARCH DIRECTIONS**

We sought to understand how a large buyer adapts their formal and informal governance when shifting from supplier relationship to an MPA with many suppliers, how these changes influence vertical and horizontal relationships, and in turn cooperation and competition. After reviewing the relevant literature, we conducted an in-depth, longitudinal case analysis of a large buyer working to form an MPA with five suppliers. We analyzed previous dyadic contracts, the MPA contract, and the agreement between MPA suppliers to determine changes in the formal governance mechanisms. We then coded our primary and secondary data sources to assess the formal and informal governance mechanisms implemented by the buyer, or emerging during the formation of the MPA. We revealed changes in the formal governance mechanisms applied and initiatives by the buyer intended to influence relational norms that discouraged or encouraged vertical and horizontal relationships, and in turn contributed to cooperation and competition between MPA partners.

### **Theoretical contributions**

We contribute to the governance and cooperation literature by exploring how governance mechanisms evolve to govern vertical and horizontal relationships, and their impact on cooperation and competition. First, we investigate the changes and emergence of formal and informal governance mechanisms as a large buyer works with a number of suppliers to establish an MPA. Prior governance research on MPAs has focused on structurally similar horizontal partners at one point in time rather than the formation of MPAs involving a large buyer and several suppliers of different sizes (Das and Teng, 2002; Lavie et al. 2007). Prior work also has offered limited insights into the evolution of the formal and informal





Hoffmann et al., 2018)(Bengtsson and Raza-Ullah, 2016; Gnyawali and Charleton, 2018; Hoffmann et al., 2018)(Bengtsson and Raza-Ullah, 2016; Gnyawali and Charleton, 2018; Hoffmann et al., 2018)(Bengtsson and Raza-Ullah, 2016; Gnyawali and Charleton, 2018; Hoffmann et al., 2018)(Bengtsson and Raza-Ullah, 2016; Gnyawali and Charleton, 2018; Hoffmann et al., 2018)(Bengtsson and Raza-Ullah, 2016; Gnyawali and Charleton, 2018; Hoffmann et al., 2018)(Bengtsson and Raza-Ullah, 2016; Gnyawali and Charleton, 2018; Hoffmann et al., 2018)(Bengtsson and Raza-Ullah, 2016; Gnyawali and Charleton, 2018; Hoffmann et al., 2018)(Bengtsson and Raza-Ullah, 2016; Gnyawali and Charleton, 2018; Hoffmann et al., 2018)(Bengtsson and Raza-Ullah, 2016; Gnyawali and Charleton, 2018; Hoffmann et al., 2018). While we find that formal control mechanisms lead to competition, and formal coordination mechanisms and informal governance mechanisms encourage cooperation, we see a more nuanced connection between vertical and horizontal relationships and coopetition.

Our findings reveal that formal control and informal governance mechanisms were more effective in managing vertical than horizontal relationships, that the formal control mechanisms tend to weaken vertical relationships and encourage competition, and informal mechanisms typically strengthen the vertical relationships and reinforce cooperation (Table III and IV). For example, when we explore the formal control mechanisms, we see that the re-calculation of and alignment to the new budget, the alignment of supplier rates, and the best athlete principle all strengthened the buyers vertical control over the MPA and create horizontal competition. However, the new steering committee structure allowed the buyer to retain control over major decisions but shift control over operational decisions to the suppliers thereby increasing horizontal competition. Furthermore, the four informal governance initiatives intended to encourage mutuality and information exchange as well as the behavioral workshops focused on improving solidarity all except the daily update meetings strengthened vertical relationship norms, and fostered vertical cooperation

between all the parties. The daily update meetings had an unintended opposite effect and created a more competitive relationship between the buyer and suppliers.

Two formal coordination mechanisms, unsurprisingly, had a strong effect on horizontal relationships and fostered horizontal cooperation among the suppliers, while three formal control mechanisms, and two initiatives intended to strengthen solidarity had positive vertical and horizontal effects. The revised alliance manager role and responsibilities, and the project management office (PMO) did a great deal to enhance the coordinated work of the suppliers and in turn supported horizontal cooperation. The commercial workshops, with all parties involved, strengthened vertical and horizontal relationships that in turn encouraged vertical and horizontal cooperation. As mentioned earlier, the new steering committee structure shifted control over operational decisions to the suppliers and increased horizontal competition, and the two formal control mechanisms related to performance metrics (penalties and incentives) affected both the vertical and horizontal relationships, which in turn resulted in vertical and horizontal competition. Finally, two informal initiatives, inviting SupportCo to join the suppliers and setting up informal monthly meetings of the chief executives from each of the organizations, affected horizontal as well as the vertical relationships, encouraging vertical and horizontal cooperation.

We also found evidence to suggest that vertical and horizontal relationships influence each other, and thus impact cooperation and competition. For example, while the buyer negotiated to include two performance metrics and the best athlete principle into the MPA contract, which created a more adversarial relationship vertically, this also caused competition between the suppliers (horizontal relationship). We also saw that the new steering committee structure allowed the buyer to retain control over major decisions (vertical relationship) but shifted control over operational decisions to the suppliers, thus increasing horizontal competition. The informal mechanisms, inviting a new supplier to join the group, initially helped to strengthen vertical cooperation (vertical relationships) and

created competition horizontally between suppliers. Over time, the suppliers became more cooperative, and thus supporting cooperation at the horizontal relationship.

### **Boundary conditions and further research**

While our study closely examined a buyer-supplier MPA formation for the delivery of services to a project in the construction industry, we believe that our insights for governance and competition literature holds true in other settings. Future research should compare our findings to other types of MPAs (e.g., different number and characteristics of suppliers) in other industries (e.g., with different clock speed as this may impact how and why governance is being developed). We also encourage future research to consider other countries, and less mature legal systems to explore the impact of the wider institutional and legal environment on changes in governance mechanisms to drive competition. This study leveraged many sources of data including observations, interviews, archival data, and contracts. Future studies drawing more on (scenario-based or field) experiments would further inform the literature on the process established by a buyer and its suppliers to change both governance mechanisms across vertical and horizontal relationships to ensure cooperation and competition. For instance, future work may study who at what level (subsidiary, business, and corporate), and in what job role (e.g., engineering, legal, and procurement) requests that certain clauses are added or deleted, and wording changed to drive competition (Argyres and Mayer 2007; Bercovitz and Tyler 2014).

### **Implications for practice**

Our study has important implications for firms and managers seeking to solve the problem of contracting and building cooperative relationships with multiple suppliers in an MPA. While buyers in many industries delivering large projects may increasingly rely on MPAs, managing the various challenges associated with such arrangements is beneficial. Thus,

buyers and suppliers need to design jointly their contracts to consider how control and coordination clauses added or deleted contribute to vertical and horizontal relationships as well as cooperation and competition. These changes should drastically curb common issues with MPAs such as free-riding, hold-up, and leakage problems. Informal governance should also reinforce the changes made to formal governance to support cooperative relationships, and yet encourage sufficient competition to avoid the consolidation of power by the suppliers. Here, buyers should particularly pay attention to strengthening informal solidarity, mutuality, and communication, and amongst partner firms, both vertically and horizontally.

## **CONCLUSIONS**

In this paper, we explore how a large buyer formed an MPA with five suppliers to deliver services to deliver a large project. We are particularly interested in how adaptations to formal and informal governance mechanisms influence vertical and horizontal relationships, which in turn drives cooperation and competition in an MPA. Analyzing rich observational, interview, archival, and contract data, we find empirical evidence to address our theoretically grounded research question. We investigate changes in control and coordination clauses embedded in formal governance consolidating the buyer's responsibility over performance, the shift of operational rights to the suppliers by creating a steering committee, changes in structures and roles to manage information flows and decision-making authority. We also observed efforts by the buyer to initiate informal governance mechanisms to encourage solidarity, mutuality, and information exchange, by sharing internal board papers with suppliers and setting up site events. These changes in both formal and informal governance mechanisms to manage an MPA's vertical and horizontal relationships were required to address common challenges associated with MPAs. We hope that our findings encourage future research to augment our understanding of how to better design MPAs using formal and informal governance mechanisms to strengthen

vertical and horizontal relationships, and simultaneously balance cooperation and competition.

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## TABLES AND FIGURES

	<b>ElectricalCoA</b>	<b>ElectricalCoB</b>	<b>MechanicalCo</b>	<b>HVACCo</b>	<b>SupportCo</b>
<b>1. Ownership</b>	Subsidiary of a UK public limited company	Family-owned for over 100 years	Subsidiary of a UK public limited company	UK subsidiary of a South Korean conglomerate	UK subsidiary of a French privately owned MNC
<b>2. Revenue (parent, in 2019; circa)</b>	\$10bn	\$700m	\$6bn	\$16bn	\$4bn
<b>3. Number of employees (parent in 2020; circa)</b>	>20,000	< 3,000	> 30,000	> 40,000	> 40,000
<b>4. Scope of work</b>	Installation of electrical components		Installation of mechanical equipment	Installation of HVAC components	Scaffolding and other support services
<b>5. Contractual entity prior to MPA</b>	Non-equity joint venture		Equity joint venture with French manufacturer	Consortium with two French manufacturers	No contract with LPB prior to MPA

**Table I** Overview supplier background

<b>Data sources</b>	<b>Amount and sources</b>	<b>Use in analysis</b>
<b>Secondary data</b>		
(414 pages)	6 LPB board papers (86 pages)	
	10 Presentations (166 slides)	
	2 Contract manuals and implementation plan (63 pages)	
	7 Emails	
	Meeting notes (1 <sup>st</sup> MPA supplier workshop; 7 pages)	
	3 policy reports (85 pages)	Familiarization with LPB language, vision, and strategy for the MPA, storyline of formation process including changes in strategy between board papers. Understanding project's industry and political background and resulting pressures on LPB.
<b>Observations</b>		
(167 hours)	2 site visits (8h)	
	159 meeting hours between October 2018 – June 2019	Gathering data on suppliers and key site challenges, as well as on formal and informal governance and their impact on vertical and horizontal relationships and vertical and horizontal cooperation and competition.
<b>Interviews (26 hours ~ 298 pages verbatim)</b>		
		<b>First round (Sep. 2018 – June 2019)</b>
	11 semi- and unstructured interviews with LPB and supplier informants all involved in the negotiations and formation process of the MPA including solicitors, commercial managers, and supplier project directors.	
		<b>Second round (Dec. 2019 – Oct. 2020)</b>
	16 semi-structured interviews with LPB and supplier informants including solicitors, engineers, commercial managers, and supplier project directors.	Clarification about the on-going negotiation process including the emergence of formal and informal governance, and their impact on vertical and horizontal relationships as well as vertical and horizontal cooperation and competition.
		Triangulation of initial findings, gathering of further information to address data gaps, collect all contracts prior to MPA contract and information on prior history between LPB and suppliers.
<b>Contracts (1,544 pages)</b>		
	<b>Contracts pre-MPA</b>	
	3 early consulting contracts (383 pages)	
	3 works contracts (373 pages)	
	<b>Contracts MPA formation</b>	
	Statement of intent (3 pages); Memorandum of Understanding (31 pages)	
	5 consulting contracts (465 pages)	
	MPA contract template (52)	
	MPA contract including appendices (183 pages)	
	Supplier contract (54 pages)	To further understand about prior vertical contracting approach used by LPB, to draw insights on differences between former contracts and MPA contract, comparison of MPA template with MPA final version to understand context specific changes.

**Table II** Main data sources and use

Theme	Sub-theme	Quote	Description	Governance function	Outcome
<b>FORMAL CONTROL</b>					
Performance related changes	Performance metrics (penalties)	<i>“Consistent underperformance entitles [LPB] to de-scope work and award it to another party”</i> (LPB board paper presentation slides, March 2019: 9).	MPA suppliers are penalized for failure to meet performance metrics (time, cost, quality, safety) over two consecutive task orders. Metrics are selected by buyer and entitle the removal of work from the MPA.	Increases vertical buyer and horizontal control	Vertical and horizontal cooperation
	Performance metrics (incentives)	<i>“The performance measures are set up so that [suppliers] share the risk of performance – they either all succeed or fail based upon achievement (or otherwise) of the performance objectives”</i> (MPA contract, July 2019: 4).	Incentive payments are awarded upon the achievement of performance measures which are selected by the buyer. The share mechanism for these incentives created a lot of tension between suppliers before contract signature and LPB needed to help.	Increases vertical buyer and horizontal control	Vertical and horizontal competition
Changes in payment	Recalculation of and alignment to new budget (Jun. 18 – Apr.19)	<i>“We were talking about a contract worth c. \$1.5bn. Budget affordability for LPB was around \$1bn. [...] So, you’re thinking, are we getting taken for a ride here? [...] We’ve now virtually halved what we are going to get”</i> (SupportCo, Project Director).	Buyer created a single MPA scope from former disparate contracts and asks independent consultancy firm to benchmark cost of overall MPA work. Over the course of the negotiation, suppliers had to align cost estimations to new affordable budget	Increased vertical buyer control	Vertical competition
	Alignment of supplier rates (Jan.- Jun.19)	<i>“[We] had a very specific issue because our [rates] seemed to be high, and the customer was challenging us on those. That took a lot of work to get to a point where we could reach an agreement”</i> (MechanicalCo, Project Director).	Buyer found that MPA suppliers had applied different rate estimates for similar work. Subsequently, great effort was placed in standardizing norms across MPA work so suppliers cannot give work to most expensive supplier.	Increased buyer vertical control	Vertical competition
Changes related to structure	Best athlete principle	<i>“Task Orders are issued by [LPB] on a pure best athlete basis, meaning the most appropriate company to enable delivery of the best outcome having regard to (1) suitability, qualification, relevant knowledge and experience; (2) demonstrable value; (3) cost; (4) understanding of and commitment to collaborative workings and behaviors; (5) performance on base scope delivery. Accordingly, there are no guarantees of minimum % of works allocation for the members of the [MPA]”</i> (Extract from MPA contract, July 2019, p.15).	In contrast to the previous contract, no supplier had a guaranteed percentage from the overall MPA work scope. Instead, suppliers will have to continuously prove that they are the most suitable firm amongst suppliers to provide a specific task, encouraging horizontal competition as suppliers have partially overlapping skillsets.	Increased vertical buyer control	Horizontal competition

	Steering committee	<i>“There are an equal number of representatives from both [LPB] and the MPA suppliers with the aim that representatives attending will be on a best athlete basis (rather than focusing on representation from each member of the MPA suppliers). All decisions of the steering committee require unanimous decision making” (MPA contract, July 2019, p.9).</i>	MPA contract established new committee to monitor the MPA, which had 50% supplier representation. It is involved in key decisions such as changes to budget, scope (unrelated to performance), partner termination, all of which were previously only owned by the buyer. Supplier representatives need prior authorization from the supplier board to participate in decisions. The steering committee also supervises application of the best athlete principle.	Ensured vertical buyer control and increased vertical supplier control	Vertical cooperation and horizontal competition
<b>FORMAL COORDINATION</b>					
	Commercial workshops	<i>“When the first workshops started [...] we got them all to contribute, we asked some questions [and...] what we were trying to show was that nobody had the monopoly on how this should work and everyone should share their ideas. So, it was a collective model at the end of it” (LPB, Commercial Manager).</i>	Buyer started to meet with suppliers on a monthly basis to develop a commercial framework for the MPA contract. LPB pursued a solution that every supplier would be comfortable with and no legal participation was allowed, to keep focus on what is best for the MPA and the wider project. While initial workshops were more cooperative, later workshops were characterized by LPB trying to align suppliers to their interests and suppliers (partially) resisted.	Coordination	Vertical and horizontal cooperation
	Structural changes	<i>“The Alliance Manager is the person appointed by the steering committee to manage the work on behalf of the steering committee” (MPA contract, July 2019, p.2).</i>	The Alliance Manager reports to the steering committee and leads the project management office. The Alliance Manager monitors MPA performance and makes recommendations to the steering committee and the buyer. The alliance manager must be independent and act in the best interest of the project.	Vertical and horizontal coordination	Vertical and horizontal cooperation
	Project management office (PMO)	<i>“The focus of the PMO is to support the Alliance Manager and to provide the MPA activities using the best people and/or organizations in the most efficient way. The PMO has day-to-day responsibility for the MPA activities and the co-ordination and management of the delivery of work within the MPA” (Implementation plan, May 2019, p.11)</i>	The PMO takes over the project management function of the buyer from the previous contracts and coordinates the MPA work as well as interfaces with other suppliers or the buyer. The PMO consists of the best athletes from each of the supplier firms and in turn proposes the best athletes for work to the steering committee.	Horizontal coordination	Horizontal cooperation and competition

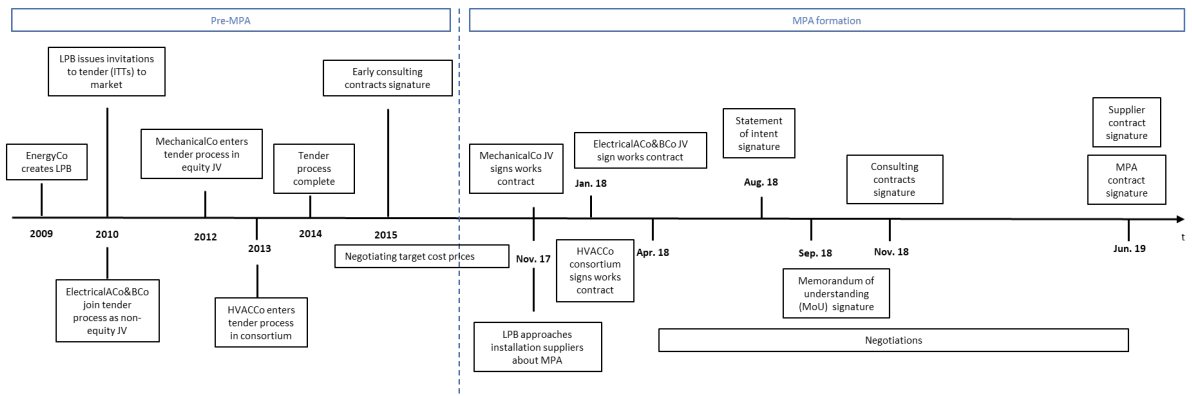
**Table III** Formal governance mechanisms

Norm	Initiative	Quote	Description	Governance	Outcome
Solidarity	Invitation of SupportCo to join the MPA (Jan.-Feb. 18)	<i>“Our friends [SupportCo], were just brought by [us] because [we have] got a really good relationship on generation business and initially [the MPA suppliers] were very suspicious of them: ‘what are they doing in here? They going to steal our scope?’”</i> (LPB, Commercial Manager).	SupportCo has very good, long-standing relationship with LPB’s mother firm EnergyCo. LPB expected that by inviting this supplier to the MPA, it would strengthen overall vertical cooperation. Initially this created suspicion and competition between suppliers, however, over time, SupportCo was accepted by other suppliers and vertical and horizontal solidarity was strengthened.	Control - Positive effect on both vertical and horizontal solidarity	Vertical cooperation, initially horizontal competition but later horizontal cooperation
	Monthly meetings between chief executives (starting in Jan. 18)	<i>“[LPB] set up a steering group with chief executives [...] from each of the organizations initially every month [...] making sure that the senior guys started pulling together as a team”</i> (SupportCo, Project Director).	After first workshop, buyer started an informal monthly meeting group with suppliers’ senior executive and MDs, involving a joint trip to China, to strengthen top-level relationships.	Coordination – Positive effect on vertical and horizontal solidarity	Vertical and horizontal cooperation
	Behavioral workshops towards the end of negotiations (Apr. – Jun. 18)	<i>“We started having some behavioral workshops to help strengthen our relationships”</i> (LPB, Commercial Manager).	Towards the end of the MPA formation phase, the buyer initiated several behavioral workshops with external consultants to foster a cooperative working culture. However, as a result from prolonged negotiations, solidarity had shifted to the horizontal level. SupportCo complained to LPB and felt more solidarity towards other suppliers.	Coordination – increased horizontal solidarity	Vertical and horizontal cooperation
Mutuality	Sharing confidential LPB board papers with suppliers (Dec. 17, Feb. 18, Jun. 18, Sep. 18, Feb. 19)	<i>“We shared all our board papers with them [...] we didn’t see their board papers [... but we] wanted to do that to show transparency. This is what we’re telling our shareholders and therefore these are the points that we have to do”</i> (LPB, Project Manager).	Throughout the MPA formation phase, the buyer shared all internal board papers with suppliers to make them aware of internal shareholder pressures LPB managers were facing, which impacted negotiations.	Coordination - Increased vertical mutuality	Improved vertical cooperation
	Site event (Sep. 18)	<i>“When [LPB’s MD] gets up and speaks in front of a room of people, and normally it’s just straight from the heart like he doesn’t read from a script. [...] It’s just inspiring and helped to pull us all together”</i> (SupportCo, Project Director).	Signature of MoU coincides with event on site where buyer’s MD gives an inspirational speech to foster supplier excitement and commitment to the project and the MPA.	Coordination - Positive effect on vertical mutuality	Improvement in vertical and horizontal cooperation

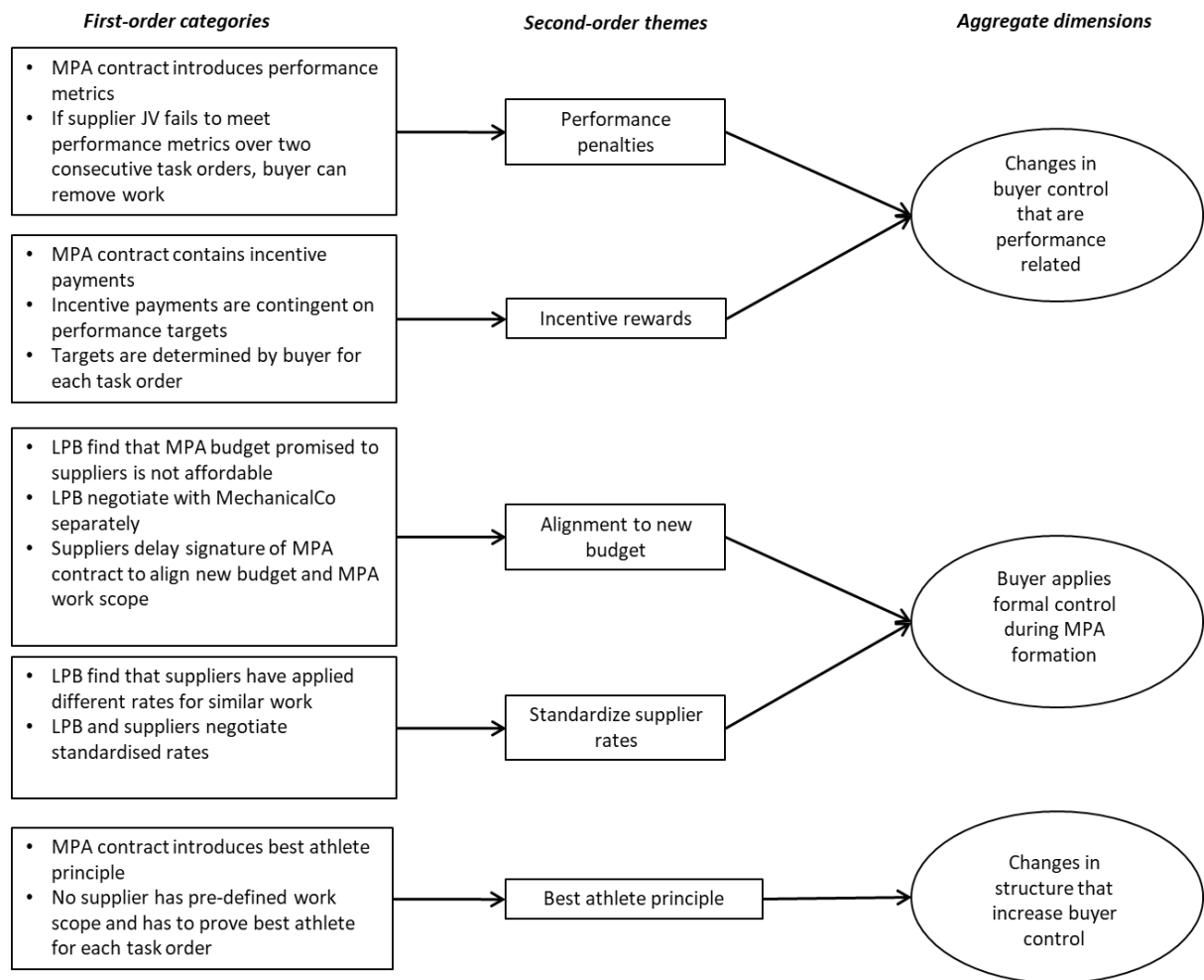
Information exchange	Vertical integration work streams (Oct. – Dec. 18)	<i>“I am very surprised to find out that [MechanicalCo and SupportCo] are not [buyer] personnel but from the suppliers. Specifically, as I had the impression from the meeting that [MechanicalCo] had taken on a lot of administrative work. [LPB] is happy about my impression, as it shows how well they have integrated the suppliers. He explains that [MechanicalCo] has taken lead on most fronts and is a ‘controlling mind’” (Notes from meeting, 29.10.18).</i>	After MoU signature, the buyer started an initiative with four work streams (commercial, operational, engineering, industrial), each co-led by a supplier and buyer member. However, the work streams commenced after some time as negotiations consumed most resources.	Coordination – Increased vertical information exchange	Improved vertical cooperation
	Daily update meetings (Jan. – Feb. 19)	<i>“[LPB] introduced daily updates which became twice daily updates [...] That was a real challenge in terms of time and commitment from our side” (SupportCo, Project Director).</i>	LPB started daily informal update meetings in which suppliers report how much they have progressed on MPA work and negotiations.	Control–increased vertical information exchange	Increased vertical competition

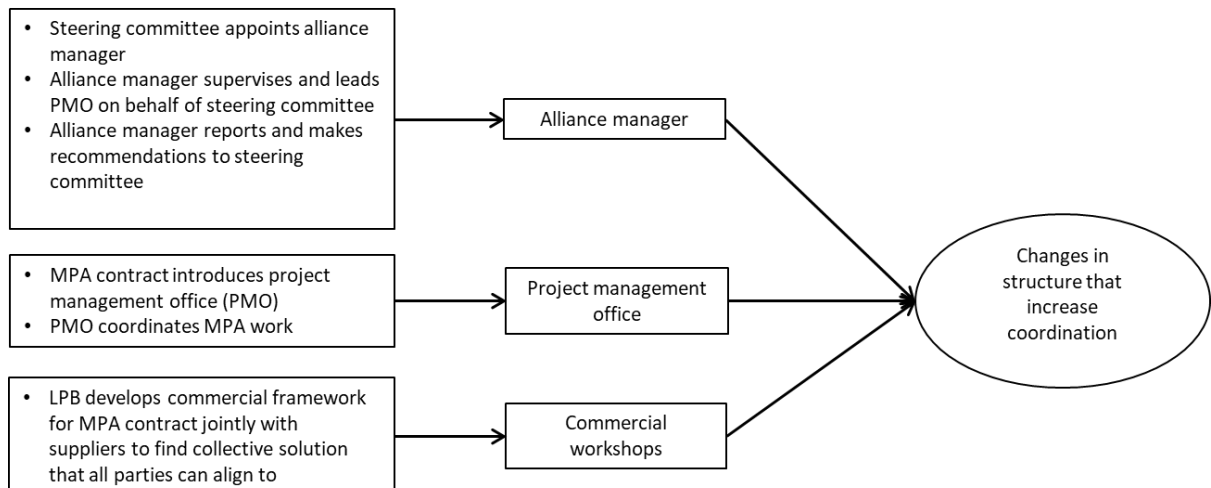
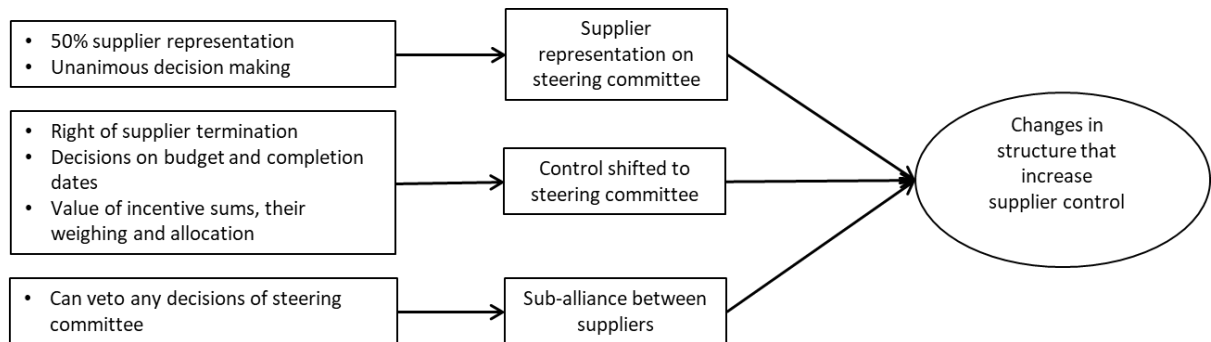
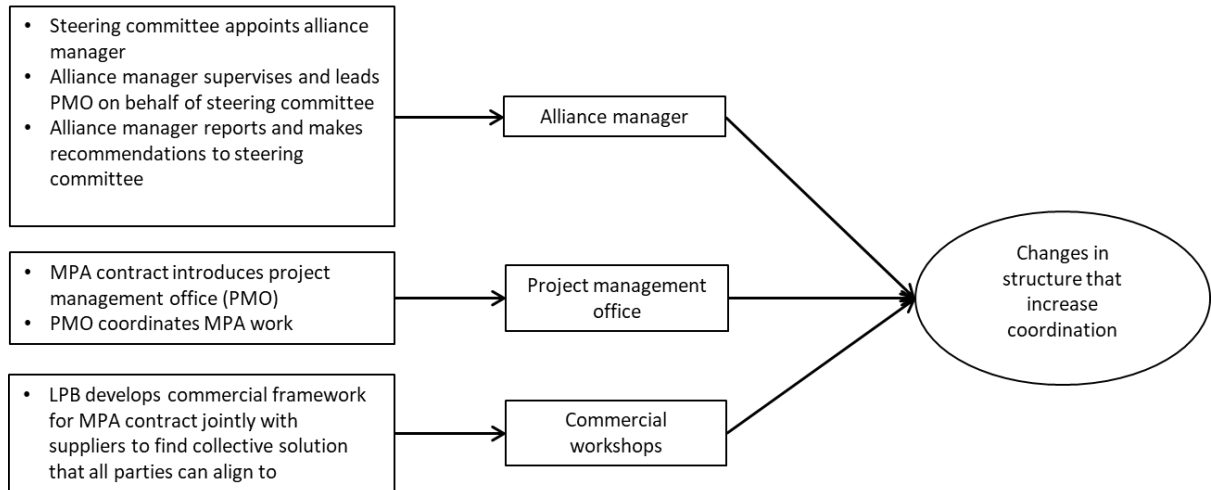
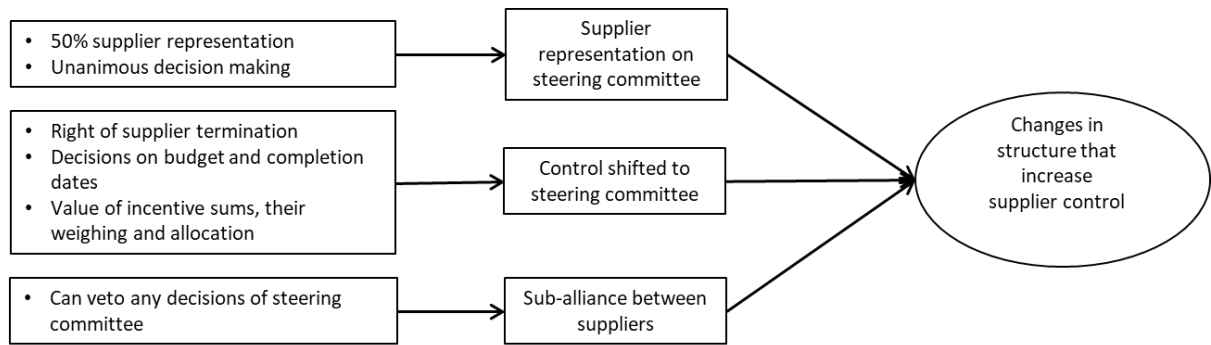
**Table IV** Informal governance mechanisms



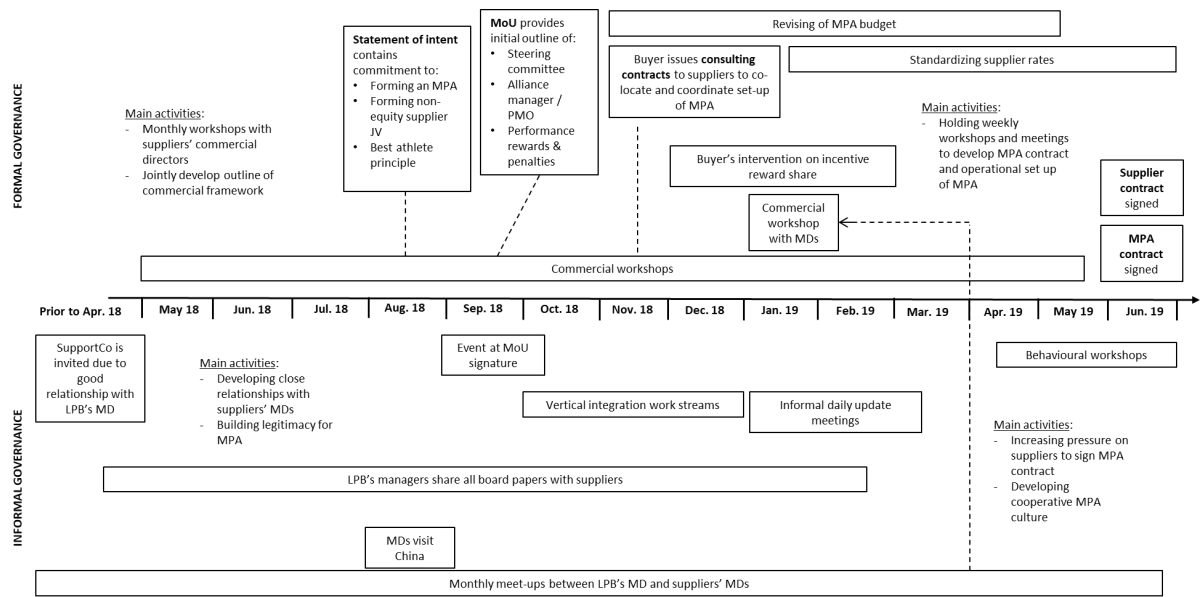


**Figure 1** Timeline of contractual history





**Figure 2** Coding structure



**Figure 3** Timeline of formal and informal governance mechanisms

