

A BALANCING ACT

**GOVERNANCE IN A DECENTRALIZED ORGANIZATION
PARTICIPATING IN STANDARD SETTING ALLIANCES**

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A Balancing Act: Governance in a Decentralized Organization Participating in Standard Setting Alliances

Abstract

Standard setting alliances (SSA) play an important role in the digitalization of our society, yet limited research exists on how individual companies can control their participation in them. Using mediating instruments (Miller & O’Leary, 2007) as a theoretical lens to analyze a decentralized company, this case study sheds light on management control challenges in the context of such alliances. To address appropriation concerns and manage participations more effectively, the case company introduced an internal governance structure that aimed at striking a balance between ‘firmness and flexibility’ (Tatikonda & Rosenthal, 2000; van der Meer-Kooistra & Scapens, 2008). The implemented mediating devices provided three primary effects: *enhancing information flow*, *structuring risk detection*, and *enabling harmonized decision-making*. Answering the calls for more research on the relation between inter- and intraorganizational control, this paper provides evidence of the need for an internal governance system to enable improved control of SSAs in decentralized organizations. Further, the findings underline the importance, but also complexity, of partner selection as a control mechanism related to SSA participation. In doing so, this paper contributes to the literature on interorganizational relations (IOR) by adding additional insights from a specific type of IOR and highlighting the role of a participant’s organizational structure.

Keywords:

Standard setting alliances, mediating instruments, governance, minimal structure, decentralization

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1. Introduction

The rapid technological progress of the past decades not only enabled people to connect across spatial boundaries but has also led to an increased desire for the interconnection of devices in close proximity. One way to keep up with customers' demands for more interoperable products is introducing "a set of specifications to which all elements of products, processes, formats, or procedures under its jurisdiction must conform" (Tassey, 2000, p. 588). In many cases these standards that enable interoperability are developed in standard-setting-alliances (SSAs), which constitute neutral arenas where companies can come together proactively and voluntarily (Blind et al., 2021; Wen et al., 2020). The high willingness of companies to consider participating in SSAs and influence the development of new standards to their advantage can also be explained by the fact that cost and competitive disadvantage resulting from non-compliance with well-established standards can be high (Axelrod et al., 1995; Blind & Mangelsdorf, 2016).

The growing relevance of standards is however not reflected in the existing literature on management control in interorganizational relations (IORs), which tends to focus on other constellations such as joint ventures (JVs) or outsourcing relations. This is problematic since even though SSAs share some characteristics with these IOR settings, for instance the need for cooperation and coordination, there are key characteristics that set them apart. For example, while in JVs or (extended) make-or-buy decisions usually only a limited number of parties are involved, standard setting alliances can consist of several hundred members, making standard development a complex and time-consuming endeavor (Leiponen, 2008; Shin et al., 2015). Further, in cases where the rules on admission of new members are lenient, the scopes of and dynamics within SSAs can fluctuate over time (Wiegmann et al., 2022).

In addition to the need for more research on SSAs, over 30 years after the first calls to consider management control as a bundle (Chenhall, 2003; Malmi & Brown, 2008; Otley, 1980), papers focusing on control in interorganizational settings put little emphasis on the interrelation with intraorganizational control. Only few studies have investigated this topic from a more holistic perspective and included the role of intraorganizational controls in their analysis of interorganizational management control (Dekker, 2016). Of those that have done so, several have found evidence for a bidirectional influence (Carlsson-Wall et al., 2011; Cuganesan & Lee, 2006; Håkansson & Lind, 2004; Thrane & Hald, 2006). The findings of these papers indicate that assessing intra- or interorganizational management control individually is insufficient and additional insights can be retrieved by studying them in combination, hence extending the scope of assessments of management control systems (Chenhall, 2003; Malmi & Brown, 2008).

One particular aspect that requires further investigation is the organizational structure of companies participating in IORs. As shown by van der Meer-Kooistra & Scapens (2008)

balancing the need for structure while leaving enough room for maneuvering is important for lateral relations both in an inter- as well as intraorganizational setting. Hence, in order for decentralized companies to be able to benefit from the participation in standard setting alliances, they need to strike a balance between ‘firmness and flexibility’ (Tatikonda & Rosenthal, 2000, p. 418).

Thus, by answering the research question *‘How are internal management control systems used in a decentralized company to control participation in standard setting alliances?’* this thesis addresses Dekker’s (2016) call for further research on the relation between intra- and interorganizational control with a particular focus on the role of organizational decentralization, by applying van der Meer-Kooistra & Scapens’ (2008) framework on lateral relationships. Doing this is in the context of SSAs that show resemblance with the constellations described by Grafton & Mundy as ‘non-equity-based’ and without ‘a super-ordinate governing authority’ (2017, p. 5), this paper also refers to their call for more research on control in such parity-based constellations.

To do that a qualitative single case study of a large, global manufacturing company (ManuCo) with a decentralized organizational structure is conducted. As the researchers were employed by the case company during the period of the study, in-depth observations of the processes in place were obtained due to extensive access to interview partners and internal documents. Traditionally a manufacturer of various mechanical products, ManuCo is currently undergoing a digital transformation and consistently expanding its product portfolio into the digital space. This transformation has several implications, with an increased focus on standard setting alliances and the required adaption of internal processes being one of them. By analyzing the internal governance implemented to facilitate SSA related decision-making, the purpose of this research is to derive a better understanding of how a decentralized company can reach internal coordination to improve IOR control. In this assessment, the theory of mediating instruments is used as a theoretical lens to shed light on how certain tools, instruments or artefacts mediate between various groups within the company with differing foci areas and objectives.

In summary our analysis has shown the need for a decentralized organization to govern its internal lateral relations to effectively manage its SSA participations. Previously, ManuCo’s lack of internal alignment resulted in overlapping participations, difficulties in influencing the standards they were part of and limited its ability to control group-wide appropriation risks. To address these issues the case company implemented an internal governance structure consisting of three mediating devices. These control systems increased collaboration and coordination between divisions and domains by providing three primary effects: *enhancing information flow, structuring risk detection, and enabling harmonized decision-making*. Finding a better balance between ‘firmness and flexibility’ in its internal governance enabled ManuCo to solidify the partner selection process and make more informed and coordinated decisions on an interorganizational level.

The remainder of the paper is structured as follows: In the following section a literature review of papers focusing on management control in intra- or interorganizational settings and the relationship between them will be conducted. In addition, the chosen method theory, mediating instruments, and the theoretical framework applied in this thesis will be introduced. Section 3 contains a description of the selected research method respectively the data collection and analysis process. Next, an introduction of the case company will be followed by an analysis of the retrieved empirics. In section 5 these empirical findings will be discussed in the light of the literature presented in section 2. Lastly, in the conclusion, findings and contributions of the preceding analysis will be summarized and areas for future research outlined.

2. Literature Review

In this section, relevant previous research within the field of management control in the context of inter- and intraorganizational relationships will be analyzed. In order to construct a robust foundation for addressing the aforementioned research question, the following chapter will concentrate on four principal areas. First, the term 'standard setting alliance' and the key characteristics of such cooperations will be elucidated in greater detail. Second, papers examining different forms of control in interorganizational relations will be discussed. This is followed by an overview of literature on the relation between inter- and intraorganizational control. Fourth, literature on mediating instruments, the chosen method theory to study the case findings, will be introduced, laying the foundation for the theoretical framework developed to analyze the empirical findings.

2.1. Domain Theory

2.1.1. Standard Setting Alliances

Generally, the term 'alliance' has been used in research to describe a medium-to-long-term contractual arrangement where two or more independent entities aim at achieving a result that they would not be able to reach on their own (Gulati, 1998; Mohr & Spekman, 1994; Parkhe, 1993). When referring to standard setting, Farrell & Saloner (1986) highlighted the importance of differentiating between *de jure* and *de facto* standards. While the former are the result of an authoritative power introducing specific standards in the law, *de facto* standard setting alliances are created when a group of heterogeneous, independent firms voluntarily join forces to develop standards (Blind et al., 2021; Leiponen, 2008; Wen et al., 2020).

With alliances developing standards in a broad range of areas and contexts, there is also considerable variation in how they are set up. Wiegmann et al. (2022) mentioned two main characteristics setting them apart: their membership base (e.g., which firms are participating and how are they connected) and rules of governance on topics such as access for new members or intellectual property (IP) regulations (Parmigiani & Rivera-Santos, 2011; Provan et al., 2007). Although the organizational structures of these alliances may vary, their setup exhibits a high degree of similarity, with most of them being constituted of different working groups and a central board (Blind et al., 2021). While both forums consist of representatives from the member companies, the working groups predominantly focus on the technological development of the standards, whereas the boards are engaging with negotiating compromises between the strategic objectives of the companies in the alliance. Due to the fact that in many SSAs firms collaborate with their competitors, suppliers, or other stakeholders, the cooperative nature is frequently

accompanied by competitive dynamics, posing a challenge to the standard development process (Axelrod et al., 1995).

Coming back to the question why firms consider participating in SSAs, there is a growing body of literature on the incentives. Apart from the above-mentioned pressure from the demand side with consumers increasingly interested in interconnected products, there are also supply-side factors enhancing firms' willingness to participate (Narayanan & Chen, 2012). On the one hand, taking an active role in the standard setting process increases the chances of having own technologies implemented as a standard. Being able to do so creates the possibility for a whole network of products being built around one firm's patents and crowding out competitive technologies, constituting a 'winner-takes all situation' (Katz & Shapiro, 1994; Leiponen, 2008; Wiegmann et al., 2022). Even though influencing the standard significantly is often not possible, being an active member in the development process already constitutes a competitive advantage when it comes to the implementation of the standard and the diffusion of products using it later on (Blind & Gauch, 2009; Wakke et al., 2016).

The SSAs that will subsequently be discussed in this thesis are primarily de facto standard setting alliances with a high number of participants and fluctuation in the member base. This results in a tradeoff between access to additional knowledge and larger support for the standard on the one hand and limited influence, a broad range of interests requiring more compromise solutions and relatively high outcome uncertainty on the other hand (Axelrod et al., 1995; Bar & Leiponen, 2014; Iversen et al., 2004; Kale & Singh, 2009; Ranganathan et al., 2018).

2.1.2. Interorganizational Management Control

Despite the ever-growing importance of SSAs (Wen et al., 2020), this is not reflected in the literature on management control. Hence, in the following paragraphs findings on usage of control mechanisms in more researched IOR settings will be presented and the findings subsequently used to analyze SSAs.

A lot of research has been conducted on management control in interorganizational relations since Coase's (1937) work on the potential benefits of extended organizational boundaries from a transactional cost economics perspective. What started as a more or less binominal choice between make or buy has developed into a much more complex decision between various forms of cooperation such as JVs or supply chain webs. As per Ouchi (1979), the mechanisms applied to control these relations can be categorized into two groups. On the one hand outcome (i.e. performance measures to assess the results of operations) and behavioral controls (i.e. controls monitoring or specifying expected behavior) constitute the formal mechanisms. Informal mechanisms, on the other hand, entail social controls that rely on self-regulation and are based on shared norms, values and beliefs. In order to control what has been identified as the biggest challenges when it

comes to interorganizational settings: appropriation (i.e. mitigating opportunistic behavior) and coordination (i.e. avoiding misalignment in collaborative activities) concerns, an appropriate system of different controls needs to be implemented (Dekker, 2004; Dekker, 2008; Ouchi, 1979).

Tomkins (2001) was one of the early scholars to point out that in such relationships, traditional formal controls such as contracting provide value by enhancing mutual planning and joint goal setting rather than acting solely as ex-post control devices. In line with that, Dekker (2004) concluded that the social context in which the alliance is embedded in, such as the existence of trust in a partners' intentions (i.e. goodwill trust) and capabilities (i.e. performance trust), influences the appropriate control structure, however, does not constitute a substitute for formal controls. Later studies by Coletti et al. (2005) or Vélez et al. (2008) built on these findings and found that with increasing complexity of relations, formal management control systems help at increasing collaboration, facilitate the communication of progress and transport information in a more objective way.

Focusing on *which* formal controls are appropriate, Stouthuysen et al., (2017) discussed how the most suitable formal form of control (outcome vs. behavior) is determined by the motivation for participation in an IOR. As exploration alliances are characterized by continuous, active involvement by several partners, increased uncertainty and even ambiguous objectives, they require coordination throughout the process (Koza & Lewin, 2000; Stouthuysen et al., 2017). While a pure focus on output measures can lead to confusion or short-term focus, behavioral controls foster conversations and enable the introduction of corrective measures at an early stage (Dekker, 2004). Stouthuysen et al. (2017) also found that this exchange of information is additionally spurred by combining behavioral management control mechanisms with informal controls. Further, behavioral controls also exert a signaling effect. Being physically present when exchanging with alliance partners and actively engaging in coordination activities, allows organizations to signal or reshape organizational priorities (Ahrens & Chapman, 2004; Bisbe & Otley, 2004; Stouthuysen et al., 2017). Focusing on the complexity of the tasks rather than the motivation to engage in an IOR, Anderson et al. (2000) found that with increasing task complexity, the ability of formal controls to provide comprehensive protection is limited.

In their study of a parity-based alliance, Grafton & Mundy (2017) found that relational contracts can act as a substitute for formal contracts, with the former being in fact the preferred method to reduce interorganizational risks. Marques et al. (2011) also included non-hierarchical partnerships in their analysis and found that in cases where companies cannot select their partners but must interact with a given set of partners, inclusion of more social mechanisms is required. Zooming in on the partner selection aspect, Dekker (2004) stated that even though formal controls are important to manage cooperation and coordination concerns, choosing the right partners in the first place reduces the need for expensive formal governance. While Ittner et al. found already in 1999 that companies

using appropriate supplier selection and monitoring practices earn higher returns, Ireland et al. (2002) and Hitt et al. (2000) further underlined the importance of partner selection by stating that it is important for effective and successful alliance management respectively participation. According to Wathne & Heide (2000), this is the case as partner selection has the potential to mitigate the risk of opportunistic behavior. They argued that using this ex-ante control in a suitable way constitutes the most effective way of managing business relations. When investigating the protection of intellectual assets in R&D alliances, Li et al. (2008) found that partner selection and other formal controls such as governance or alliance scopes have a substitutive relationship. Contrary to that, Dekker & van den Abbeele's (2010) findings on interfirm control and organizational learning, showed that the information gathered during the partner selection process enables firms to design more suitable governance structures and contracts which help at mitigating IOR risks and hence indicate a complementary relationship. Relating back to the above-mentioned importance of informal, 'social' controls, Moeller (2010) showed in his study of German business networks, that partner selection can have strong positive effects on the establishment of trust and commitment to the network as well as reducing the risk of opportunism. Also addressing the context dependency of IORs, Neumann (2010) stated that the importance of partner selection increases with growing uncertainty.

Applying another categorization of controls, Dekker et al. (2019) differentiated between interorganizational controls, which are implemented on a firm-level (i.e. joint targets, operational reviews, or joint trainings) and relational controls, operating predominantly on an employee-level, that need to be built up step by step (i.e. trust and relational norms). As stated by Morgan & Hunt (1994), trust and commitment are the cornerstones of well working relational controls, which can be established by providing resources, engaging with partners that share similar values or exchanging information frequently. Boundary spanners are the individuals in charge of establishing these relational controls via repeated face-to-face interactions, personal initiatives, or creation of strong relationships (Zhang et al., 2015). These individuals are crucial for managing interorganizational controls by coordinating, sharing information, building trust, and resolving conflicts between involved parties. In order to successfully do so, they need to utilize a wide range of interpersonal capabilities such as being fair, likeable, funny, proactive, structured and communicative (Lussier et al., 2017; Tangpong et al., 2010; Walter, 1999). In their analysis, Dekker et al. (2019) found that especially in IORs with a rather narrow scope, these boundary spanners constitute an effective and low-cost control mechanism. However, similar to the studies mentioned above, they also highlighted that with increasing complexity of the relationship, boundary spanners need to be supported by more formal control mechanism.

2.1.3. Inter & Intraorganizational Controls

As already indicated above, due to its quickly growing popularity, management control in interorganizational settings has received a lot of attention in the previous decades. However, this stream of research has developed increasingly independent from the studies on intraorganizational management control systems. By highlighting the interrelations between inter- and intrafirm management control practices, Dekker (2016) raised awareness for the growing disparity between research on inter- and intraorganizational management control systems. However, there are a few notable exceptions, where researchers have presented evidence that there is a more general bidirectional influence between inter-organizational management control practices and intra-organizational mechanisms (e.g. Carlsson-Wall et al., 2011; Cuganesan & Lee, 2006; Håkansson & Lind, 2004; Mouritsen et al., 2001; Seal et al., 1999; Thrane & Hald, 2006), but the need for further research remains.

In line with the argumentation by Malmi & Brown (2008) or Otley (1980), Carlsson-Wall et al. (2011) concluded that due to their interdependency inter- and intraorganizational management controls need to be assessed holistically. In addition, they particularly stressed the importance of social and self-controls, such as peer pressure or personal values, which in the context of the study even took precedence over the formal controls. Cuganesan & Lee (2006) addressed the missing link between inter- and intraorganizational research by explicitly aiming to ‘avoid the black boxing of organizations that characterizes previous studies of inter-organizational control’ (p.165). They argued that there is no clear-cut connection between the transactional setting and suitable controls but observed a more dynamic relation between organizational participants and transactional characteristics, hence called for including intraorganizational factors in the analysis. Doing exactly that, Thrane & Hald (2006) provided further evidence why a comprehensive examination of the internal and external effects of management controls is necessary. By examining a manufacturer and its cooperation with suppliers they found that the interorganizational measures introduced by the case company helped at strengthening ties with suppliers but led to the emergence of internal tensions between departments.

In Decentralized Companies

Van der Meer-Kooistra & Scapens (2008) drew attention to the governance of relations of parties that are interdependent but not connected via a clear hierarchical structure both on an intra- and interorganizational level. By analyzing two case companies they identified a need for companies to strike a balance between providing structure to these lateral relations, to avoid confusion and lack of coordination, and leaving enough room for flexibility, to realize the benefits from cooperation.

In order to achieve that, they built on the assumption that a web of management controls is required to find a balance between ‘firmness and flexibility’ in the governance of lateral

relations (Tatikonda & Rosenthal 2000, p.418). To do that they adapted Kamoche & Cunha's (2001) model of minimal structure and created a framework consisting of four dimensions containing different elements that are necessary to create such a minimal structure for the governance of inter- and intraorganizational lateral relations: Economic (specific economic arrangements such as performance/efficiency measures or transaction conditions), Institutional (external legal or internal arrangements), Social (behavioral norms, information sharing and social ties) and Technical (technical interface, know-how or information systems).

Similar to van der Meer-Kooistra & Scapens' (2008) claim that governance should constitute a package of practices, Busco et al. (2008) found that lateral relations require formal management control mechanisms to be complemented by informal systems to enable knowledge sharing and install trust. Corroborating that position, Tsai's (2002) research showed that good lateral relations can positively impact knowledge transfer. Busco et al. (2008) also pointed toward the balance that needs to be struck between decentralization and centralization in a company. They mentioned the work by Helden et al. (2001) where the observed control mechanism was intended to not only improve coordination between the divisions but also between HQ and the divisions. Putting that into the context of alliances means that for companies to speak with one voice in standard setting forums, information needs to flow vertically as well as laterally.

Concludingly, as decentralized companies participating in SSAs need to govern lateral relations on an inter- as well as intraorganizational level and based on the findings that governance on these levels are interrelated (Cuganesan & Lee, 2006; Dekker, 2016; Håkansson & Lind, 2004), one hence needs to assess the implemented control systems from a holistic perspective.

2.2. Method Theory

2.2.1. Mediating Instruments

This paper draws on the notion of mediating instruments to analyze the management controls implemented in the case company. The theory can be traced to science studies in the late 1900s investigating how instruments, such as a machine, can mediate between distinct and sometimes competing views (Wise, 1988). His study indicated how social context, albeit in a mediating form, influences the daily activities of practitioners. Morrison & Morgan further developed the theory of mediation by proposing that models can "function not just as a means of intervention, but also as a means of representation" (1999, p. 12) and similarly are "both a means to and a source of knowledge" (p.35). They have the capacity to serve purely instrumental purposes that facilitate action, yet they can also function as investigative devices that enable a deeper understanding of the subject they represent.

2.2.2. Accounting as Mediating Instruments

The concept of mediating instruments was first introduced in accounting papers by Miller & O’Leary (2007) in their study of the semiconductor industry. Like models and machines, the authors argued that “Moore’s Law” and technology roadmaps were mediating instruments that shaped the development of a common market by guiding capital budgeting decisions within firms and aligning them with investments made by other firms in related industries. By foreseeing future development Moore’s Law was able to link science with economic factors and create a shared understanding. The technology roadmaps were tools to translate these ideas into frameworks for evaluating investment decisions in the industry.

Subsequent research has illustrated how various forms of mediating instruments can bridge diverse domains and shape decision-making processes in other settings. Jeacle & Carter (2012) found that accounting practices such as budgeting and the use of a weekly forecasting tool could mediate between creativity and control in the fashion industry. Christner & Strömsten (2015) demonstrated how accounting calculations could forge linkages between different actors as well as between scientific and economic factors in product development. In their study, accounting was found to play a central role in the development, but primarily through its mediating effect and the connections it made. In similar fashion, and in line with Morrison & Morgan’s (1999) reasoning, Miller & Power stated that “accounting is of such interest because it is both agent and outcome, both idea and practice, in its mediating role, a role in which diverse arenas and levels can be linked (temporarily) together via accounting and mutually expand” (2013, p.582).

In recent years Habran et al. (2021) developed the understanding of mediation by focusing on the interactions between different mediators rather than on mediating instruments in isolation. Contrary to previous studies that have shown how accounting can act as mediating instruments to link domains, they suggest that accounting itself might need to be mediated to address financial and operational concerns. People, spaces, and instruments forms a heterogeneous “web of mediators” that is continuously evolving.

Jordan et al. (2013) built on Miller & O’Leary (2007) by exploring how existing instruments maintain mediation in practice. Studying an interorganizational project the authors found a risk map to be a crucial device for aligning interests between the parties. As a mediating device, the primary purpose was not necessarily to raise awareness for early warning signals. Instead, the map and the activities surrounding it were useful to create a joint identity toward the project, negotiate boundaries, and install confidence so that the project could move forward.

Other papers have argued how control structures in IORs can be seen as dynamic mediating instruments rather than the effect of distant and rational managerial decisions. Zahir-ul-Hassan et al. (2016) applied and modified Roberts’ (2001) consequences of accountability to governance structures and discussed how they can have two different

effects. On the one hand *individualizing* (disciplining) consequences aim at minimizing opportunistic behavior by monitoring respectively rewarding performance via increased visibility of actions. *Socializing* (collaborating) effects on the other hand, center around creating a shared understanding and multidirectional exchanges of information. The representational attributes of KPIs and other control systems are less important when they mediate in creating socialized governance. This is in line with previous research that has concluded that incomplete performance measurement is not necessarily an issue since they can still improve information sharing and foster collaboration (e.g. Jordan & Messner, 2012; Tuomela, 2005). Minnaar et al. (2017) also highlighted the shifting nature of control structures. Contracts and trust are argued to be performative and can thus be seen as actors and mediators that shape and are shaped by the network. In their study an initial contract was designed by top management and neither reflected the views of, nor installed trust between the employees involved in the day-to-day activities. Instead, they had to work on the relationship and eventually rewrite the contract to enable a trusting environment and shared understanding of the required tasks.

2.3. Mediation in Lateral Relations

In the analysis of SSA governance within ManuCo, coordination between largely independent but interrelated equivalent actors plays a central role. Hence, combining the framework by van der Meer-Kooistra & Scapens (2008) on the governance of lateral relations with the notion of mediating instruments constitutes a promising attempt at gaining a better understanding of this subject.

In more detail, the concept of ‘minimal structures’ provides a useful foundation to understand how these lateral relations can be governed in a way that balances ‘firmness and flexibility’. The uncertain and changing environment that characterizes SSAs in combination with the high degree of decentralization in the case company demands a relatively high degree of flexibility in the governance. However, too unrestricted freedom would leave the company exposed to unnecessary risks when it comes to its interorganizational relations. Van der Meer-Kooistra & Scapens (2008) stated that rather than focusing on management control measures to remove potential paradoxes in lateral relations, focus should rather be put on using different elements from the four structures governing them to navigate these contradictions.

As standard setting alliances can simultaneously impact divisions with differing business interests, there is a need in decentralized companies to coordinate between internal stakeholders from different parts of the company. In order to enable this coordination between individuals from various backgrounds, mediation in the form of bilateral exchange and creation of a common perception is necessary. Taking a closer look at how such mediating effects be achieved through internal governance will provide additional

insights into how decentralized organizations can mitigate control challenges emerging from participation in parity-based alliances.

Adding the theory of mediating instruments to the framework of ‘minimal structures’ hence enables a deeper understanding of the intricacies of particularly the social structure, as well as how elements from the four structures are interrelated. The researchers thus argue that synthesizing these concepts can provide additional insights into the strive for balance between ‘firmness and flexibility’ in the governance of lateral relations.

3. Methodology

After having presented the theoretical framework that will be used to analyze the empirical findings, the following chapter outlines the methodology employed throughout this thesis. It describes the primary considerations related to the selected research design and discusses the research method as well as the aspects of the research's quality.

3.1. Research Design

This paper aims at further exploring the relation between inter- and intraorganizational control. To achieve this and be able to engage with the subject matter from several points of view and obtain a deeper perspective, a qualitative single case study was deemed appropriate to answer the research question. Even though generalizability may be limited by studying only a single subject rather than comparing several, the benefits of focusing on one case and hence obtaining a deeper and more holistic understanding were considered as crucial for this analysis (Yin, 2018). As the environment in which the observed phenomena are set plays an important role in this paper, a single-case study provides additional insights by including the context in which individuals act (Bryman & Bell, 2011). According to the epistemological view in qualitative research, to comprehend how individuals ascribe meaning to phenomena, it is most effective to study social reality in its immediate context (Djamba & Neuman, 2002). In line with this an interpretive research approach was selected.

The case company was chosen based on its decentralized business model and the digital transformation journey it is going through. Furthermore, the company itself inquired research to gain theoretically grounded practical knowledge that could support the transformation, a fact that facilitated access to empirical data. The researchers were employed by the company during the research period and were given their own workstations at one of the company's offices. Being physically present on the majority of workdays throughout the whole research process allowed the researchers to exchange with employees from different divisions and areas of expertise to get a holistic understanding of the case company. This ensured close engagement with the field, an important aspect of doing qualitative research (Ahrens & Chapman, 2006).

The research process has been iterative and abductive, continuously going back and forth between empirics and literature, which provides the benefit of capturing aspects from both the empirical world and theoretical models (Conaty, 2021; Dubois & Gadde, 2002). By using the findings derived from the (pre-)interviews to analyze theory and using insights from theory when assessing the empirics, focus was put on the refinement of the theoretical framework, as stated by Dubois & Gadde: "the original framework is successively modified, partly as a result of unanticipated empirical findings, but also of theoretical insights gained during the process" (2002, p. 559)

In the early stages of the process, pre-interviews with employees in different roles and departments, were held to gain an overview of the case company, the role of IP and explore prospective research perspectives. During these discussions the tensions related to managing standard setting alliances in a decentralized organization emerged as a promising field to explore further. To better understand standard setting alliances, additional pre-interviews were conducted with internal and external experts in the field. In connection with this an extensive literature analysis was carried out. The insights from the pre-interviews together with the literature review were used to narrow down the scope and define the research question, as well as develop the interview guide.

The notion of mediating instruments was selected as the theoretical lens after it became apparent that the high degree of decentralization constituted a key challenge in the management of standard setting alliances. While traditionally the separation of the different business units worked satisfactorily in the case company, participation in SSAs required it to behave as one group. Hence, mediation was considered promising to understand how a minimal structure could enable a more effective control of IORs in a decentralized organization by creating bilateral exchange and creation of a common perception.

3.2. Data Collection

The empirical data was collected primarily through interviews and supported by document analysis. The interviews can be categorized in two phases: pre-interviews, conducted between January and February, and main interviews, conducted between March and April. The pre-interviews, 14 in total, started with a brief description of research ideas, followed by an open and unstructured discussion around these topics. These sessions were not recorded, instead the researchers took notes and cross-checked them afterwards. The main interviews, 22 in total, were held in a semi-structured format to allow for flexibility and in-depth insights, (Bryman & Bell, 2011; Kvale & Brinkmann, 2014). In general, the interview guide constituted an integral part of the interviewing process, however the researchers always remained open for questions by the respondents and stayed alert to ask follow-up questions in case answers were not understood fully. The interviews were recorded with the consent of the interviewees and transcribed for detailed analysis later in the process.

The interviewees were selected through a mix of purposive and snowball sampling. A few key employees were identified early on and were then asked to recommend other potential candidates who could possess relevant expertise and experience in the domain. As the (internal) governance of standard setting alliances spans across multiple business units and affects employees at different organizational levels, interviews were held with individuals at various levels in the organization representing different divisions, including group functions. In addition, external consultants, working long-term with the company on IP and alliance related projects, were interviewed. This approach enabled the capture

of diverse perspectives within the organization and facilitated a comprehensive understanding of the operational environments in which they were situated. Appendix A provides an overview of the interviewees, while Appendix B showcases exemplary questions asked.

Before the main interviews the participants received the interview guide and a brief description of the research area. All interviews were conducted face-to-face, one in-person at the office and the rest via video conference software due to geographical limitations. Each participant was interviewed individually in order to make sure that their responses were not influenced or drowned by the presence of other people. In order to avoid bias, both interviewers were present in each interview (Bryman & Bell, 2011). In line with Dubois & Gadde (2002), as the researchers obtained a continuously improved understanding of the subject matter throughout the research process, the interview guide was slightly adapted over time. In addition, as the pool of interviewees covered a wide range of areas and backgrounds, focus was put on different sections of the interview guide to make sure that respondents and researchers ‘spoke the same language’ and reduce the risk of misunderstandings.

Each interview started with a personal introduction and by confirming anonymity in the report. A few introductory questions were asked to make the interviewees loosen up before moving on to more detailed questions related to the research question (Qu & Dumay, 2011). Follow-up questions were posed to gain deeper insights into key points made by the respondents. To conclude the interviews, each participant got the opportunity to reflect on the topic and provide comments to fill potential gaps.

Apart from the interviews, participating in several weekly meetings with employees directly concerned with the research topic helped immensely in obtaining a more granular understanding of the subject matter. In addition, engaging in weekly company-wide informal gatherings as well as being present during daily lunch or coffee breaks deepened the understanding of the case company and allowed for participation in informal subject related discussions. These enabled the researchers to retrieve valuable background knowledge and insights on how the benefits and problems associated with the studied subject were perceived throughout the company. Talking with employees from various departments during cross-divisional events it became clear how deep-rooted decentralization was in the organizational culture. One example illustrating this is the fact that even though several divisions were present in the same office building, access to the different floors was restricted to employees from the respective divisions.

The interviews were augmented by internal and external documents provided to the researchers. The documents included in the analysis consisted of both internal documentation, such as presentations, reports, organizational charts, intranet webpages, as well as external documentation, such as the company website and annual reports. The internal documents provided by the employees engaged with this topic mainly centered around describing how the firm currently manages participation in standard setting

alliances respectively outlined ambitions for the future. In order to avoid a selection bias, the researchers were granted access to the company's intranet and retrieved information from there independently. Combined, these documents were utilized to understand the formal objectives of the organization and to triangulate the findings from the interviews (Bowen, 2009). Access to internal documents was facilitated by the execution of a non-disclosure agreement (NDA) signed by the researchers. As stipulated by the NDA, internal data and presentations will be discussed but not shared explicitly.

3.3. Data Analysis

After the interviews the researchers had short conversations about the discussions and summarized key findings. In addition, transcription and coding was done shortly after the interviews were held, to prevent the loss of information and ensure its inclusion in the abductive research process. In line with the approach outline by Dubois & Gadde (2002), the coding was conducted by grouping quotes into different topics which were iteratively contrasted with insights from theory to abductively refine the theoretical framework. In addition, statements by interviewees that did not fit into one of these categories were separately analyzed and subsequently grouped in newly added categories. This process provided the researcher with an overview of the collected material as well as helped in understanding where additional insights were required.

After conducting this process, the empirical findings were again holistically analyzed. When analyzing the interorganizational control challenges ManuCo faced it became apparent that intraorganizational aspects, particularly the decentralized business model, played a central role. During the assessment of the mediating effects of the recently implemented governance structure three main themes emerged: (1) information flow, (2) risk detection and (3) decision-making. By providing these functions, the governance structure established a minimal structure that aimed at balancing the need for improved coordination of SSA work without intervening (too much) in the division's autonomy. Each of these functions, how they mediate and how they deal with the interorganizational control challenges, will be elaborated on further in the empirical analysis.

3.4. Data Quality

As mentioned by Bell et al. (2019), trustworthiness has emerged as a main criterion for assessing the quality of qualitative research. This term covers four primary aspects that need to be accounted for in qualitative research: confirmability, credibility, dependability and transferability. Brief elaborations on how the two former criteria were considered throughout this study, underline the quality of this analysis and hence the usability of its findings:

Credibility

Credibility applies to qualitative research in the form of how believable the findings are (Bell et al., 2019). In order to ensure that the findings accurately represent the realities portrayed by interviewees, the authors approached the topic holistically and captured a wide range of viewpoints. The pool of interviewees consisted of individuals from different divisions and levels in the organization as well as nationalities located in more than five countries. In addition, two external consultants were also interviewed in order to obtain an ‘outside-in’ perspective and further enhance the credibility of the findings.

As mentioned above, several respondents were interviewed twice, via a pre- and main interview. This not only helped in obtaining deeper insights into their perspective but also ensured that misunderstandings were avoided. At several points throughout the process, preliminary insights were shared with employees of the case company to retrieve additional validation of the empirical findings and strengthen credibility (Bell et al., 2019).

Confirmability

The concept of confirmability pertains to the objectivity of a study, including the reproducibility of findings (Bell et al., 2019). To build a solid foundation for the interview, the objectives of the research were mapped out to respondents beforehand. In addition, the interviewees were given ample time to process the questions and reflect on their answers. To further strengthen the confirmability of results, the researchers predominantly posed open-ended questions to avoid a bias from the interviewers’ presumptions (Arsel et al., 2017).

4. Empirical Analysis

The following section summarizes the findings derived from the qualitative single case study of a global manufacturing company, ManuCo. First, a short introduction of the case company, including its organizational structure is provided. The subsequent section offers an overview of the dynamics involved in participating in standard setting alliances and the governance structure employed by ManuCo to manage them historically. This is followed by an examination of the changes implemented by ManuCo to enhance the effectiveness of alliance governance. In doing that, particular emphasis is put on how the introduced internal control system provided mediation to address control challenges arising from participation in parity-based alliances.

4.1. The Case Company: ManuCo

ManuCo is a large global manufacturing company with over 60,000 employees and operations in more than 70 countries. The company has experienced significant growth in the past decades and extended its product portfolio significantly during that time. It is further characterized by a highly decentralized organizational structure with 7 different divisions, hereafter also referred to as business units, which constitute the highest operating units.

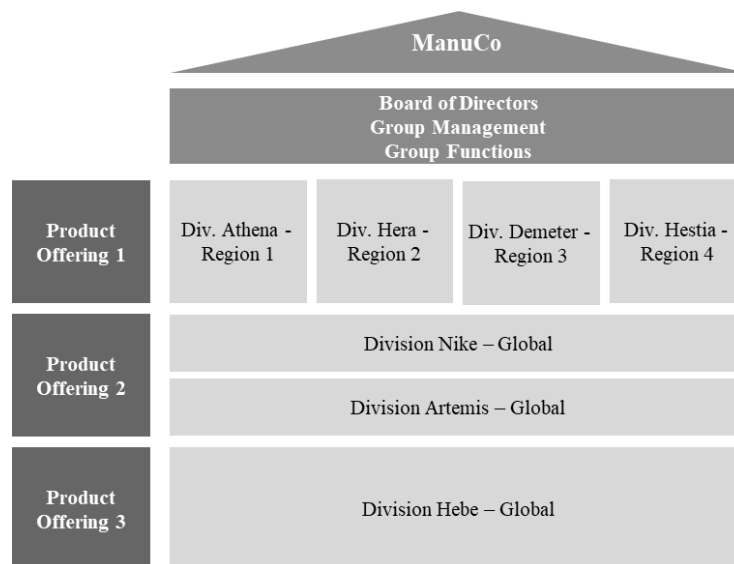


Figure 1: Schematic depiction of ManuCo's organizational structure.

The top management team, consisting of the group's chief officers and division heads, is at the top of the organizational hierarchy. Its aim is to ensure alignment at the highest

level. However, the divisions have significant operational freedom, with each having the flexibility to develop and implement individual strategies. The divisions, hereafter referred to as Athena, Hera, Demeter, Hestia, Nike, Artemis and Hebe, are defined by either geographical focus or product offering with each one producing its own P&L. As all division are assessed based on their individual P&L, focus is predominantly on improving the results of respective business units:

“Division perspective is always to grow business, if we look at the P&L. I mean they are whipped on a daily basis if they do not achieve their goals. So, they will, of course look at risks, but only, and that is my highly personal view, from a very restricted view if this is good for us [as a group] as well.”- Interviewee #10

As highlighted throughout the interviews, this decentralized organizational structure constitutes an important factor in ManuCo’s success as it enables the company to make decisions close to the market, keeping the firm agile and allowing it to incorporate newly acquired businesses into the group quickly.

Within the divisions centralization is limited as well, with each business unit consisting of different segments and subgroups. As one interviewee stated *“[W]hile on paper we look like a large multibillion dollar organization the reality of it is we are a federation of many, many small operating groups and subgroups that are focused on areas of specialty”* (Interviewee #9). These subunits are also assessed on their individual P&L, centering attention of the subgroup’s management on improving their own results: *“And even within the divisions, it could be like that [they consider the overall division’s interests only to a limited extent]. And then [they] will go for it. And if it’s a problem for somebody else down the line, ‘I don’t care’. That is sort of for somebody else to take care of”* (Interviewee #10).

Further, as the divisions’ boundaries are not solely based on geographic focus or product categories, there are certain markets in which the business units compete directly with each other. While this internal competition enhances the divisions’ competitiveness, it also reduces the incentive for knowledge sharing and internal cooperation.

Facilitating and fostering this internal knowledge sharing is among the objectives of the teams operating across divisions. These ‘group functions’ are subordinated to the overarching group management team and constitute around 5% of the overall workforce. Their main aim is to support the divisions and, as they do not have direct P&L responsibilities, incorporate a more long-term thinking beyond quarterly reports. However, as they do not generate revenue, they are fully funded by the divisions and need to predominantly focus on the entire group’s, rather than specific division’s interests:

“[We are] basically a cost center. We do not have this monthly or quarterly whipping and can actually look beyond that; we can look strategically at what is important to stay competitive in five years. But we need money and that comes from the divisions.” - Interviewee #17

4.2. Undergoing Digital Transformation

Being a traditional manufacturer initially, ManuCo has started to undergo a digital transformation which is driven by the identified growth opportunities in this area. This development poses several challenges to the company with one of them being a blurring of the divisions' boundaries. As stated by Interviewee #10, while the predominantly mechanical products that were being sold in the past decades could be grouped into clearly defined product categories rather easily, the overlap between different digital products, sharing the same software or hardware parts, is much larger.

4.2.1. Standard Setting Alliances

Furthermore, the intensified focus on digital products has resulted in the necessity to adhere to connectivity standards. While being a member in the alliances developing them can create immense value for ManuCo, failing to govern its participation poses several threats to the firm.

Throughout the interview process, potential commoditization of products emerged as the main risk perceived by the employees. If a company decides to adhere to a standard but is not able to deliver products and services that provide value-add on top of what has been standardized, the firm's profitability will be driven down significantly. At the same time, as mentioned by Interviewee #22, even though ManuCo can still choose to drive its own proprietary solutions independent from standards, customers tend to prefer products with the 'quality stamp' from SSAs. In other cases, insufficient standard compatibility could require the company to license-in technologies from the owners of standard compatible patents, and thus become indebted to and dependent on other market players (Internal Document). Another IP-related risk is that in most alliances, ManuCo is required to offer other participating companies access to all the group's patents reading on the standard under predetermined, low-cost licensing terms. This also applies even if only a single subunit would join an SSA. Hence, as underlined particularly by the IP managers, unrestrained alliance membership also poses a significant threat to the value of ManuCo's IP portfolio.

An additional challenge stemming from participation in SSAs developing digital standards is that the companies ManuCo needs to interact with are often different from their usual partners and competitors. While historically ManuCo's main competitors were other manufacturing companies offering mechanical products, by entering into SSAs, the company had to interact with leading technology conglomerates that often dominate these alliances. Despite each member of the alliance board having equal voting rights, there is a strong political dimension to the decision-making process, as these dominating players can often leverage their market power and nudge their suppliers to vote in their favor:

“[A] lot of the companies that would be like minded to us in the industry are partnering with [a leading technology company] on other business projects and are quite frankly just afraid to tell [them] ‘No’. They will side with [the leading technology company] thinking that this is going to help them have a relationship with [the company].” – Interviewee #20

In addition, since the conglomerates, internally often referred to as ‘tech giants’, have vast experience and dedicate a lot of resources to shaping various standards, many interviewees mentioned the difficulties of effectively dealing with them. While in ManuCo, SSA-related work is typically conducted alongside regular tasks, leading technological companies often allocate multiple dedicated and well-coordinated teams exclusively to SSA-related activities.

4.3. Standard Setting Alliance Governance

Managing the above-mentioned risks posed a challenge to ManuCo as the company had only limited opportunities to use formal controls. Even though there are contracts stipulating IP policies and voting rights within the alliance, they regulate the scope of the standards, and the risk stemming from it, only to a limited extent. As mentioned by Interviewee #22, standards typically develop organically, take a long time to finalize and potentially change direction significantly during advancement. Particularly the high number of participants per SSA obscures the establishment of controls:” *How do you control? You can’t really control what it [the development] is. Because in a standard typically the answers come from a consensus*” (Interviewee #5). Further complicating the matter, even if ManuCo elects not to participate in an SSA, it may nevertheless be affected by the triggered commoditization, should the alliance receive sufficient backing and technological expertise from other companies to implement a new industry-wide standard. In lack of other formal controls, several interviewees stressed the importance of partner selection as an interorganizational control mechanism. One dimension of this constitutes deciding which SSAs to participate in and which to avoid, as well as which areas of the standards are most crucial to protect or influence, from now on referred to as deciding *where to play*.

“[I]f that initiative gets some momentum behind it and becomes real, if it applies in your business space, you’re going to have to deal with it eventually, right? You’re not going to have a choice, and so the decision really needs to be: Does this initiative look like it has legs? Like is it going to potentially get off the ground? If it does, do we want to participate? At what level?” – Interviewee #21

Further, in cases where the decision to join a standard has been made, identifying *what role to take* when part of an alliance constitutes another dimension of the partner selection process at ManuCo. If a standard developed by an SSA directly affects one of the firm’s main current or potential future markets and the company has a strong market position, it can take a leading role in the alliance and try to shape the standard to its requirements.

Pursuing such a strategy requires the company to share large amounts of information with other members but opens the opportunity to create ecosystems around its products. In other cases, where the standard only tangentially affects ManuCo's business or where the company is not in a position to contribute meaningfully, a more passive observer role may be more resource efficient and beneficial. As an observer ManuCo can still gain early access to specs, stay informed on the development of the standard and develop products supporting it. At the same time appropriation concerns from SSA participation, such as the risk of leaking information or oversharing IP are less severe when following such a strategy (Internal Document).

In order to use this interorganizational control mechanism and ensure that decisions are made in the interest of the company as a whole, internal alignment is required on several levels. Particularly for a decentralized company it is important that representatives sent out from different divisions speak with one voice and steer the standard development in a common direction if a driving role is to be assumed. However, coordination is also required on a higher level. While some divisions potentially benefit from the standardization of certain technologies, it can have adverse effects on others. Even though some of these conflicts of interest cannot be resolved entirely, finding a common ground between the positions is necessary to make decisions on alliances. Thus, ManuCo needs to manage the conflict between the pressure for enhanced internal coordination and the division's drive for autonomy to find alignment on whether the company should participate and if yes, aim to lead or simply observe the development of a standard.

By applying the theoretical model described in section 2.3., the governance of SSA participation will be assessed in the following paragraphs. The paper will examine how mediating effects exerted by different forms of internal governance can balance 'firmness and flexibility' within a decentralized company to address the identified key questions 1) *where to play* & 2) *what role to take*.

4.3.1. Initial Situation

"Quite frankly, I sometimes think that being part of ManuCo is really just there is a central investor almost, owning shares and the rest of the company is just small companies, in many ways behaving according to their own needs, immediate needs. Their metrics basically are: Bring in enough money by the end of the year and how you achieve that is a little bit up to you almost." - Interviewee #22

The high degree of decentralization within ManuCo was a common theme in almost every interview and posed a significant challenge to internal coordination in the context of standard setting alliances. Until a few years ago, the decision to join an alliance had been driven by an individual division, subunit or even brand that had identified an opportunity to develop its business by joining the alliance. In most cases there was only limited awareness for the group-wide impact of the repercussion of these decisions, such as the obligation to contribute ManuCo's complete patent portfolio. As one employee put it:

“[O]ne division would rush headlong into a standard and make all sorts of decisions that implicated intellectual property and never considered the impact on other divisions” - (Interviewee #12).

Discussions on SSA participations were supposed to be held in a broad technology forum, however as responsibilities in this area were not clearly defined, and the forum covered a wide range of topics, SSAs received only limited attention. Emblematic for the decentralized handling and the lack of governance structures was the fact that there was limited knowledge about basic information such as the total number of alliances ManuCo actually was part of, with the process of gathering that information within the company still ongoing: *“[When one employee started counting alliance memberships] a year ago I heard it was 40 plus. Now it’s 70 plus ... Maybe we are at 80 plus at the end of the year – who knows”* (Interviewee #2). In some instances, this meant that the firm was represented in multiple alliances with overlapping scope. However, as different parts of the organization joined these, there were instances where ManuCo drove different agendas in alliances focusing on similar technology. In other cases, ManuCo was unknowingly member in one alliance via several different subunit or brands. This not only meant that the company had to pay membership fees multiple times, the lack of internal coordination also meant that in some cases ManuCo would represent opposing opinions in one alliance. Furthermore, participating as a smaller legal entity rather than as a unified group with the group name and brand also meant that its negotiation position to influence other members in the board of the alliance was weaker.

These contradictive memberships were symbolic for the lack of group-wide controls and the unrestricted leeway divisions or subunits had in managing their SSAs participation. There was only limited cross-divisional coordination and, if any, it took place in an unstructured, ad hoc way and relied heavily on the efforts of individuals. The external pressure to coordinate internally to ensure effective alliance participation was overridden by the divisions’ need for autonomy, further reinforced by performance measurement favoring divisional performance. Using van der Meer-Kooistra & Scapens’ (2008) terminology, the institutional and economic structure in the governance of the lateral relations was thus tilted towards flexibility. Further, there were no information systems or other elements of the technical structure in place nor a social structure with enough firmness to control these lateral relations. Hence, there was not even a minimal structure governing respectively restricting the divisions’ space for maneuvering SSA participation. However, as the risks related to this became more apparent over time, group management aimed at introducing governance structures to better deal with the tension between coordination and autonomy.

4.3.2. Changes Made

As stated by van der Meer-Kooistra & Scapens (2008), a lack of a clear hierarchy between (largely) independent players complicates the usage of traditional control systems. In the

case of ManuCo's participation in SSA, lateral relations were present on an inter- as well as intraorganizational level. Instead of using hierarchical or coercive mechanisms, focus was put on introducing a control system that was predominantly focused on strengthening relationships and enhancing coordination between divisions to tackle interorganizational challenges more effectively.

In order to achieve that and shift more attention to the topic, the position of a Central Alliance Coordinator (CAC), overseeing the overall management of standard setting alliances, was created in the group function team. Adhering to the principle of decentralization, the intention behind this role was to support divisions with their participation and coordinating between them. In addition, representing ManuCo on the boards of selected key SSAs constituted another area of responsibility. Hence, similar to the boundary spanners described by Dekker et al. (2019), this role required a person with strong relation capabilities, a proactive, likeable and compassionate character to solve conflicts and share knowledge on an interorganizational, but also intraorganizational level.

Another change was the establishment of an Alliance Governance Forum (AGF), a dedicated space to address SSA-related issues. This forum came together on a monthly basis and was composed of one stakeholder from each division with a holistic overview of their division's strategic and operational activities and the mandate to make decisions on behalf of the business unit. The AGF can be conceptualized as an integrative liaison device (Abernethy & Lillis, 1995), that allowed internal stakeholders from different divisions to engage in a regular and personal exchange to facilitate coordination and collaboration. The main goals of this specific forum were to decide on main strategic questions, prioritize critical alliances and provide strategic guidance to alliance representatives.

Another change aiming at enhancing internal coordination was the implementation of two templates to standardize the visualization of information in the AGF. Similar to the risk maps described by Jordan et al. (2013) these templates aimed at aligning stakeholders and providing more structure to discussions that were previously perceived as unproductive. The first slide set, also referred to as the 'Alliance Overview map', depicted the distribution of different SSAs over the various technological domains ManuCo's products fall under. The second set, the 'Alliance Evaluation Framework', hereafter 'the Framework', presented information on a selected alliance's scope, other participating members or main risks stemming from participation to give the reader an overview of an alliance's key characteristics (Internal Document).

Therefore, the implemented changes constituted of appointing a Central Alliance Coordinator, establishing a dedicated forum for standard setting alliances, and introducing standardized methods for presenting and assessing information in this arena. In doing so the company aimed at managing the tension between coordination and

autonomy by providing a minimal structure to allow for a more efficient handling of the interorganizational control challenges. The following sections explore in more detail how these changes have affected the handling of standard setting alliances by providing mediation via three different functions: enhancing information flow, structuring risk detection and enabling harmonized decision-making.

4.4. Mediating Functions

4.4.1. Enhancing Information Flow

One crucial factor in effectively addressing the interorganizational control challenges, was ensuring an adequate flow of information. Together and in various ways the three mediating instruments helped improving lateral coordination both at the top level as well as vertically between higher management and the SSA representatives by creating an informal reporting structure.

Top-Level Information Flow

Being steered by the templates and the boundary spanner, the discussions in the AGF encompassed a broad range of topics, including the decision to join or leave alliances, new developments in SSAs and potential responses by ManuCo. As an integrative liaison device, the AGF facilitated the convergence of diverse parties with the objective of identifying common ground between their positions. One of its primary mediating effects was providing AGF members with an opportunity to gain a deeper understanding of the internal operations by sharing information and knowledge with employees from other divisions. This understanding was used to strengthen relations, but also to identify areas where they can learn from each other, such as proof of concepts, to gain more from the standard. Having discussions on SSAs at a strategic level and reaching a better understanding of other divisions' point of view facilitated coordination and hence constituted important factors for addressing questions related to both *where to play* and *what role to take*.

Further, this exchange of information also acted as safeguards against myopic tendencies. Receiving information and feedback from stakeholders with different points of view allowed for a more holistic and comprehensive analysis of SSA participation and a more critical assessment of the *role taken* in the alliances when parameters change. Comparing cases that had been up for discussion in the AGF with situations that had been handled solely by one division, one employee reflected:

(Referring to the lack of a reassessment of the participation if parameters change) "Usually I don't see that in cross-divisional discussions. I see that in single-division discussions: They've made a decision. They're driving forward. You have blinders on, and you're just gonna get to the end of the road. But you're not paying attention that things have changed and you're actually a little bit off course or you need to redirect based on what's changed." – Interviewee #8

The boundary spanner played a central role in this process as well. Apart from chairing the AGF meetings, being in continuous interaction with almost every employee involved with SSAs and redistributing the collected information established the CAC as the central node in the SSA-related information flow. By building bridges and fostering relationships with and between stakeholders, she fostered the creation of confidence in each other's intentions, i.e. goodwill trust, within the company. Similar to Das & Teng (2001) and Vosselman & Meer-Kooistra (2009) this trust based on positive expectations about each other thus constituted a consequence of the governance structure. Apart from that, one AGF member further pointed out that the fact that the meetings were led by the CAC, who reports to the Group CTO, had a certain 'pull effect' to centralize the information.

Moreover, the responsibility for populating slide decks for AGF presentations solidified the CAC's role as a central connector and required her to act as a gatekeeper for incoming information. As mentioned above, the Alliance Overview map plotted participation across the main technology domains ManuCo focused on. The process of creating the map was beneficial in itself, as it required stakeholders to think about which and how many SSAs their division was participating in. More importantly the tool clearly visualized areas where ManuCo was part of overlapping or competing SSAs. Having that information depicted in a clear and neutral way made it easier for the CAC to convince others that more attention needed to be put on the question *where to play*. While questioning the participation in certain SSAs would have potentially been considered as an intervention in the divisions' businesses, this became less controversial by providing an objective structure to focus attention on such issues.

"So, one thing where the CAC has done a very good job is back in the days ManuCo had a tendency to go and participate in every standards alliance that was there. (...) And then the CAC started looking: 'My goodness, we are in about 50 different standards alliances. What is it that we really want to do? Is it our job to be just at a standards alliance or is our job to be at a standards alliance that is impactful?' And that's when she built a framework, which allows a very good visual representation (...) So the outcome of all of the work that the CAC has done has been that we have chosen not to participate in certain standards." – Interviewee #5

Further, having a more structured discussion on *where to play* also had beneficial impacts on *what role to take* in other alliances. As resources dedicated to the topic of SSAs were limited across ManuCo, leaving certain standards or reducing membership level in others meant that time and attention could be shifted to participate more actively in others that were more important for ManuCo as a group.

The pivotal role of the boundary spanner in the implementation and promotion of this tool is further evidenced by the fact that, prior to the introduction of the CAC, there had been attempts to introduce other internal control tools, which, however, were never widely implemented. One employee had tried to create a better overview by storing information

on membership fees of different alliances in a central spreadsheet. Even though information was collected over several months and various interviewees mentioned the existence of such a file, it never got traction as a control tool. Contrary to that, using visualizations and being promoted by the boundary spanner who exchanged frequently with a large number of people enabled the establishment of the slide templates as control tools.

As a second visualization template, the Alliance Evaluation Framework exerted control by centering attention and discussions on specific areas of alliances that require immediate attention and hence allowed for a more informed assessment. The Framework enabled the CAC to share information on the viability of technologies developed in a standard, its strategic relevance for ManuCo, who the other members were and what their intentions could be, in a concise and standardized way. In doing so, it provided crucial input for AGF discussions on *where to play* and *what role to take*. Confirming this notion, all AGF members agreed that both templates had the right level of detail for the discussions needed in that forum. However, highlighting the lack of granularity, the conveyed information was described to be useful for deciding “what direction to steer the standard, but at a 100,000-foot level” (Interviewee #8).

The CAC further indicated that the Framework was practical to keep top management informed about alliance related activities, but there was no structure or standardized process in place to distribute the information down and further out in the organization. Since it was the alliance representatives further down in the organization who were actively participating in the working groups of the standards, well working vertical information flows were crucial for the control of SSAs:

“I think the issue is not at the very top area, how we govern and all that sort of stuff. I think the area of improvement if you're looking at structure would be, you know, having coordinated (employees in the) working groups. Because working groups are the ones who will help define the standard.” – Interviewee #13

Vertical Information Flow

While the idea was that the CAC would update and coordinate between the members in the AGF and the members afterwards disseminate this information to their divisions, most respondents highlighted an unstructured information flow outside the AGF. What and who to report back to was highly dependent on the topic at hand and if the person responsible for sharing the information knew the relevant people. As several employees indicated, due to this high context dependency, forwarding information was hence often done in informal and ad hoc calls or meetings by the AGF members. The lack of a clear process however also meant that there was a risk that decisions and information that had been coordinated at the top did not percolate to the alliance representatives in the SSA working groups. Similarly, also the information flow from alliance representatives to AGF members equally showed signs of deficiencies. Due to the complex and

decentralized structure within the divisions some of the representatives noted that they did not have a channel to make their business area's voice heard in the AGF.

“I do not see him (the AGF member from my division) at all. Nada. So, if he thinks that he's representing (my business area) in any way, he absolutely needs to reach out and say hello. But it's a great example of how we're absolutely broken down.” – Interviewee #22

In lack of a structured process to share information and despite not having authority over the business units, the CAC had to support the flow of information to and from the AGF. This entailed both collecting information from the alliance representatives to inform divisional upper management about the activities within their business units as well as making sure that the representatives were up to date on decisions taken in the AGF and aligned across divisions.

Coordination of Alliance Representatives

Particularly when ManuCo had specific preferences regarding where it wanted a standard to go, ensuring that the alliance representatives in different working groups within one SSA were well coordinated constituted an important factor in controlling participation. Even though most of the representatives in the alliances stated that they tried to include the interests of the whole organization when making decisions in the working groups, their operative reality was in one division and a certain bias towards their own business unit's requirements was noticeable.

Further, having a (minimal) structure governing the information flow was also relevant when it came to the questions how much and what kind of information the representatives should share on an interorganizational level. “*So, they have to think about, ‘OK, when I go into these discussions, what do I contribute? Is that aligned with my generation plan? Is that aligned with my commercial interests? Is it OK with the other divisions?’*” (Interviewee #4). Although the working groups in the standards were primarily concerned with technical details, there was a risk that the representatives explicitly overshaded information or implicitly signaled in which direction the firm wanted to proceed, adding additional complexity to the control challenge:

“You get a very, very clear picture of the road maps of all the companies because you see in which working groups they're participating, what they are pushing for...” – Interviewee #19

To address this challenge and minimize information leakage on an interorganizational level, internal calls were held prior to each SSA meeting. The objective was to align on an agenda, discuss what information can be shared with other members of the alliance and establish 'red lines', i.e. key areas of the standard that ManuCo needed to protect or influence. If the standard only affected one division this was handled completely within that division, with the CAC receiving updates when needed to stay informed in case there were significant developments in the working groups. One technical representative

underlined this dual reporting when describing how he would act if something would trigger him to reevaluate the decision to participate in a standard:

“(...) I would actually go through (my boss) who's our representative on the board on (this standard). So, he's my direct boss. He's the CTO of (Nike), but also involve (the CAC) in it, right? If you go by email, it would be to (my boss) and cc (the CAC).” – Interviewee #19

In situations where multiple business units were involved, it was predominantly up to the CAC to arrange cross-divisional calls between alliance representatives and other stakeholders involved and create a shared understanding of what was best for the group. However, due to the large number of alliances ManuCo was participating in, the boundary spanner could support the information flow on this level only to a limited degree. In order to add more structure, several representatives expressed the need for more formal information sharing instruments. Some of them mentioned a newsletter to receive regular updates about developments in other standards that could be relevant to them or a ‘Technology Fair’, to get to know the people involved in other standards and exchange with them. As stated by several employees in and outside the AGF, more cross-divisional interactions also on lower levels would allow the representatives to align their strategies to reduce the risk of information leakage and share best practices in similar fashion as witnessed in the AGF. Some attempts to create a tool to store and share knowledge were observed on a divisional level, but nothing similar on a group level. Yet, also within the divisions, employees saw the need for a more structured approach in this regard. They saw a need to reduce the high dependency of the information flow on the CAC and facilitate the onboarding process for employees new to SSAs and thus obtain better control over how the company would drive standards:

“I'm trying to think about also the new guy, that attends the standard for the first time (...) to get at least some form of guidelines on what you should not say, what to pay attention to and maybe at least to get the name of someone that he can call. Because his boss might not be familiar on how it works, so he needs to look for other people from [ManuCo] and ask them how it works. So, we must make sure that whoever is ever attending a standard, reads that first.” – Interviewee #18

Summarizing, the socializing effects of the governance structure spurred cross-divisional discussions and hence helped in establishing trust. Especially the boundary spanner strove for and managed to connect different stakeholders to foster the development of goodwill trust. In parallel, the CAC established several informal reporting channels to group. At the top level the integrative liaison device, in which the slide templates were discussed, in combination with her work as a boundary spanner were the key instruments to foster a flow of information and mediate between the divisions. The cross-divisional discussions that took place in the AGF gave the members a more holistic view, reducing myopic behavior and enabled more informed assessments, particularly on *where to play*. However, ensuring that alliance representatives knew how to participate when the company strove for a leading role constituted another aspect of the interorganizational

control challenge. Due to the decentralized organizational structure and the high context dependency of the information, large parts of the information flow remained ad hoc and informal, both between representatives in different alliances as well as between AGF members and alliance representatives. Trying to support this information flow the CAC acted as a central node by collecting and forwarding information, to ensure alignment between various stakeholders.

4.4.2. Structuring Risk Detection

Risk detection constituted another critical point in addressing the key questions *where to play* and *what role to take*. As pointed out by several interviewees, risk management related to SSAs is a highly complex topic, not only because there is a wide variety of risks involved, but also due to the difficulties of monitoring them.

Symptomatic for that, employees working with R&D or customer facing departments often emphasized the positive aspects of SSAs, as they benefited from the exchange with engineers from other companies or the standard compatibility to market the products. Contrary to that, interviewees with an IP background often expressed their concerns about joining alliances, as it entailed contributing all patents relating to the standard and hence give away the protection derived from it. While most interviewees showed some awareness for risks outside their immediate area of responsibility, there were instances where this was only partially the case:

"And losing IP? Yeah. But I mean those patents that we have it's not really any valuable protection anyway. So, giving them up under [fair, reasonable and non-discriminatory] conditions, I don't see that as a problem either." – Interviewee #15

As outlined above, by introducing the Alliance Overview Map, the CAC was able to transport information on ManuCo's overlapping memberships in concise way and draw attention to the risks related to that. With the Alliance Evaluation Framework, the CAC aimed at increasing awareness for risks outside the stakeholder's immediate area of responsibility. By outlining the risk stemming from technical developments, changes in the scope of the alliances, other member's intentions or ManuCo's relative IP position, the template signaled which risks required consideration. Similar to '[only] what gets measured, get managed', risk areas that were included in the risk overview received increased attention in the AGF, causing discussions on what should be mentioned on the slides. As stated by an IP-professional within ManuCo who had tried to introduce a one-page overview of the risks and opportunities with SSAs before the introduction of the CAC:

(Referring to a colleague) "He loved the one pager and said: 'Yeah, but I need some more space, so let's take IP out.'

[I said]: No, this is my one pager, and he replied: 'No, no, we can put IP on the second page.'

Then it's not [a one pager]." – Interviewee #10

However, the usage of the templates did not only prove helpful when it came to putting attention to certain risks, but was also effective to deepen discussions about them in the AGF and foster exchange between stakeholders:

“So before when I was asking people why we were part of it, as I was just trying to get my arms wrapped around the memberships, I would get a very high-level answer of ‘Oh, this work looked interesting.’ It was a very superficial response that the topic covered in the [SSA] related to our business. Now we are able to get down to the next level, which is: ‘OK, it’s an interesting topic. But is this a risk versus an opportunity? So that we can decide how to manage.’” – Interviewee #8

Hence, similar to the risk maps described by Jordan et al. (2013), the tools were used to create alignment directly and indirectly. On the one hand they highlighted certain risks that potentially would have not been taken into account otherwise. On the other hand, they spurred discussions and in doing so helped to establish a ‘shared credible and possibly alternative understandings of organizational reality’, characteristic for socializing governance (Zahir-ul-Hassan et al., 2016). Visualizing the key risks from a group perspective, thus helped at enhancing a more unified perception of them across divisions. In addition, the combination of both templates highlighted the risks that came with certain memberships and hence laid the foundation for the decision on *where to play* and *what role to take*.

Further, similar to the observations by Jordan et al. (2013), the templates in combination with the boundary spanner also created reassurance among AGF participants that different SSA related risks were being monitoring and dealt with. Trust between the boundary spanner and other stakeholders played an important role in this risk monitoring process. Establishing relations with all relevant stakeholders solidified the CAC’s standing as the central node in all SSA related matters and allowed her to assess risks from different perspectives. The trust other employees put in the CAC’s ability to conduct such a holistic assessment and not miss out on standard releases that could impact ManuCo became apparent in several interviews:

“I think [the CAC and her direct report] have been key and thinking a little bit more holistically. When a new specification is released by a standard, they will involve the implicated businesses usually to at least take a look, understand what’s being proposed and gather feedback on that. So, I think that’s very helpful.” – Interviewee #12

At the same time, various challenges remained in the risk detection process. One example illustrating this was the handling of IP in the context of SSAs. As mentioned earlier, a key criterion for joining alliances is providing patents to other members under predetermined terms. Yet, by filing a declaration to withhold certain patents from the inclusion in the standards, firms have the possibility to exclude some of their most valuable assets from that obligation. To determine which patents should be withheld, a group-wide assessment of the available IP would be necessary. While some divisions had

a standardized process to conduct such an evaluation on a divisional level less attention was put on this by others.

As there was no infrastructure in place to conduct a group-wide IP assessment beforehand, the process to withhold patents was portrayed as ‘ad hoc and imperfect’ by several employees and participation in alliances hence continued to pose a significant threat to the group’s patent portfolio. Interviewee #4 highlighted that one option to add more structure to the risk detection process would be to use cross-divisional integrative liaison devices such as the AGF to jointly define milestones and events in the development of standards that trigger a group-wide IP assessment. Having such a process in place would minimize the risk of unintentionally sharing other division’s critical IP with competitors and could thus provide the business units with more freedom on *what role to take* and how to execute a driving role without negatively affecting other business units or group interests.

In addition, when it came to the question of how to deal with the risk of commoditization dispute on the questions of *where to play*, and if a member, *what role to take*, remained. In general, the commoditization of core business areas and the resulting pressure on profit margins was perceived as the most significant risk posed by SSAs. However, opinions on how to deal with this threat differed between interviewees. One group argued that the best way to monitor and manage this risk was being part of the SSA in question. They reasoned that even though SSAs were usually dominated by leading technology companies, by acting strategically and picking its battles wisely, ManuCo had the possibility to influence the most crucial parts of the standards. And even if there was only limited opportunity for the firm to actively impact the advancements in SSAs, taking an observing position and receiving timely and precise information about current developments by listening in to meetings already allowed the company to adapt products and hence reduce risk:

“[M]y opinion is that we are not in a position to really, to prevent these big guys [refers to leading technology companies]. (...) This is more for us to observe, to follow and then develop products which are supporting the standards. Of course, we are part of the standardization committees, can influence it but I think we are there not in the key player role. But we can use this information and not only can, we need to, we must use this information and develop products.” – Interviewee #11

Others however argued that simply by joining alliances and contributing ManuCo’s brand and patent portfolio, the SSAs would gain additional momentum and traction. Hence in order to minimize the risk of supporting a standard that would potentially commoditize parts of its own business, the company should not be associated with it:

(Refers to joining an alliance) “And when you do that, then suddenly you are putting [ManuCo’s] name on the standard and that has a lot of weight. Now if you remove ManuCo from the [refers to a specific SSA], I’m not sure [it] would still be a standard.” – Interviewee #18

These disputes further underline the topicality of the above-mentioned aspects *where to play* and *what role to take*. Irrespective of the fact that there were arguments for both perspectives, the decision to join or stay away from an alliance could potentially have detrimental implications for another division or the entire group. By introducing a new governance structure, the firm aimed at mediating between different perspectives to achieve a more unified approach to the decision. The idea was that the division who identified a standard that could generate new business opportunities or be disruptive for existing products would use the Framework to assess the viability of the standard and the relevance for ManuCo. If deemed necessary to act upon this assessment, the SSA would then be pitched in the AGF where the other members could evaluate and reach an agreement on how to proceed.

Summarizing, previously, risk detection related to SSAs was conducted by divisions individually and with differing levels of sophistication. The three instruments introduced took key roles in raising a more unified awareness for these risks and mediated between different divisions and domains. Outlining main characteristics such as other companies in the alliance and the maturity of the technology to be standardized, the Framework allowed the AGF to analyze and discuss the likelihood of a standard being adopted. Further, by giving an overview of what is in and out of the scope of different SSAs and comparing it to where ManuCo provides value-add to its customers, the template gave AGF members the opportunity to assess if, where and how SSAs posed risks to ManuCo in order to allocate resources accordingly. This process was supported by the boundary spanner who aimed at fostering a holistic assessment of risks and acted as central node in the risk detection process. Enabling this exchange between the different stakeholders allowed ManuCo to take first steps towards creating a common understanding of relevant risks and how to best deal with them, with minimal interference in the divisions' authority. Although several challenges remained, the minimal structure thus laid the foundation for more coordination in the questions of *where to play* and *what role to take*.

4.4.3. Enabling Harmonized Decision-Making

With the introduction of a socializing governance, a more holistic assessment of risks and opportunities was enabled by including more stakeholders in the discussion. However, as representatives in the alliances often needed to make decisions quickly, the process of including stakeholders from all divisions or going via the AGF was often considered as sound, but too slow and cumbersome, as stated by one alliance representative:

(Referring to a more centralized flow of information and decision-making) "I think it would be nice, but it's quite difficult because you have to react quite fast and flexible. So, you need some space for movement, but you have to be also aware about the big picture. Because in standardization you sometimes have to think about the next step already ahead and this is quite difficult sometimes." – Interviewee #7

Hence, in order to give the divisions, respectively the representatives in the alliances, enough room to maneuver and remain agile while also adding structure to the decision-making process and protect key group interest, some interviewees argued for introducing clear guidelines on which decisions can be taken on individually and when information needs to flow through cross-divisional forums such as the AGF. However, the lack of hierarchical structures posed a significant challenge to implement a more centralized decision-making process:

“[I]f [the CAC] were to say it's in ManuCo's best interest to go left and for me, that would be devastating, and I need to turn right here because that will bring P&L opportunities, I honestly think we would go right because that's what I need to do. Not what ManuCo needs to do. (...) I would say very few people in Group have the authority and the mandate to tell any legal entity in the organization elsewhere what to do, because at the end of the day they are measured on how much profit and loss they bring in, not if they adhered to or whatever.” – Interviewee #22

As underlined by statements like this, due to the high degree of decentralization in the case company, group functions had no decision-making power over the different divisions. Hence, the CAC had no mandate to give instructions neither to the members of the AGF nor to the employees representing ManuCo in the standard setting alliances themselves. Nevertheless, despite lacking formal decision-making authority, the CAC enhanced internal coordination in the decision-making process in various ways. Being in continuous interaction with different people involved, the CAC mediated by building bridges between stakeholders and creating goodwill trust to foster more coordinated decision-making. In addition, having gathered a lot of knowledge and experience in this field, she also advised decision-makers when it came to decisions that had a group-wide impact. Particularly the fact that she had the backing of ManuCo's top management, which was committed to fostering internal coordination in the field of standard setting alliances, added significant authority to her opinion. Further, being also in charge of setting the agenda for the AGF meetings, the CAC could indirectly influence the decision-making process by focusing attention on the most pressing topics on an interorganizational level:

“So, I mean lately [the CAC] makes sure that if there is something that we take a decision on whether to be there or not and if and what our strategic position should be.” – Interviewee #15

The AGF on the other hand, as a formal control organ, was introduced to be the main decision-making body for SSA related questions, a fact that was clearly stated in its internal description (Internal Document). However, its ability to take such decision and its effectiveness in general, was highly contingent upon the individuals representing the various divisions within the forum. Being selected by the respective division heads, they needed to be able to understand their division's business well enough to estimate the impact of specific standards on their division's business to meaningfully contribute to *where* and *in what role* ManuCo should participate in SSAs.

In addition, their ability to connect with other AGF members impacted the success of the forum immensely. Similar to what one of ManuCo's representatives in an SSA mentioned about cooperation on interorganizational level in the alliances themselves,

"You have to talk to other people and sometimes it's quite difficult to make a connection to a company which you just don't like on a personal level. (...) I see this as a risk that if you don't like a person, it can happen that you don't like the idea what he's presenting. (...) [T]herefore it's quite important that you start to do quite a lot of networking to talk to them and to convince them and all this stuff." – Interviewee #7

also applied on an intraorganizational level, with a lot boiling down to relations and personal opinions based on previous experiences:

"I don't think that a conflict like that is resolved, it just exist. [T]he rest of us we see [refers to a specific SSA] as something good. And we, we don't really care at all about whether it is good for [another division] or not to be honest." – Interviewee 15

Hence, in order to make decisions on *where to play* and *what role to take*, employees from different divisions needed the space to build up, strengthen or repair relations. As pointed out by Zahir-ul-Hassan et al. (2016) one effect of socializing governance, such as the one implemented by ManuCo, was the creation of positive expectation of future capabilities, in the literature referred to as competence trust (Das & Teng, 2001). In addition, it also strengthened the above-mentioned goodwill trust, which constituted important cornerstones in ensuring a functioning decision-making process in the absence of hierarchies.

As elaborated on previously, the Framework created a shared understanding between stakeholders and centered attention on pressing topics and thus facilitated decision-making on *where to play* and *what role to take*:

"So, we look at a bunch of items which drives the discussion towards a certain objective or towards a certain decision. So, the CAC does a good job with this because she's she has put a structure which allows everybody to think in one specific direction because standards discussion can go here and there, everywhere. I could argue that before the CAC put this structure together, that's what was missing. (...) This is another tool, that allows us to determine the feasibility of participating in an alliance. How does it align with the ManuCo global objectives or the ManuCo strategy? What is our IP position? Keeps you fairly laser focused on what you need to achieve." – Interviewee #5

Apart from adding further structure to the governance process, similar to the risk maps described by Jordan et al. (2013), the templates also proved useful in boundary management. As the discussions in the AGF centered around the topics presented on the slides, these created a common understanding of which topics were (not) in the realm of the forum. Further, the boundary spanner also mentioned that the templates facilitated decision-making as they created a sense of accountability by memorializing decisions made in the AGF. Although still based on discussion and interaction, the introduction of

some degree of accountability served to delimit the maneuvering space of divisions to some extent. As there had been instances where agreements were made in the AGF, but divisions did not act upon those afterwards, or stakeholders repeatedly demanded to reconsider decisions, one interviewee highlighted the ability of the templates to introduce accountability to the process:

“So, one of the things that I find within ManuCo, especially once you have more than one division that's involved in a conversation, you need to memorialize the conversation. People have selectively short memories on some of these topics, so seeing it with a clear structure of ‘Here's what we discussed, here was the risk, here was the opportunity, we decided not to move forward.’” – Interviewee #8

Even though the introduced instruments demonstrated their capacity to enable more harmonized decision-making within ManuCo, it was evident that several challenges remained. First, the fact that the importance of SSAs varied between divisions, as some of them focused more and others less on digital products. Consequently, the level of awareness and the perceived importance of this topic also varied considerably. In general, the time available to engage with SSA related topics was frequently identified as a major challenge, with almost all employees conducting this work on top of their ‘regular’ activities. This also applied to AGF members, with one employee stating that apart from participating in the meetings once a month, he did not spend time on the topic. Consequently, valuable meeting time was spent on reiterating previous discussions, which significantly reduced productivity and decision-making capacity. As stated by several employees, a more strategic management of standard setting alliances will not be possible until there are more roles purely dedicated to it.

Related to this, even though ManuCo’s management team had signaled the need for coordination in relation to SSAs, divisions were reluctant to transfer extensive decision-making power. Thus, employees without such a decision-making mandate were delegated to the AGF. Therefore, while as described above originally designed as a discretionary panel, and internally portrayed as such, most of its members referred to the AGF as a discussion forum:

“But I am not in the position to make any decisions really. So, if a decision, the formal decision is needed, I need to make sure that the CTO of [my division] takes that decision. And I think that that’s the same probably from at least most of the other participants that they are in. (...) If a formal decision is necessary, we would probably just have the CTOs in the call.” – Interviewee #15

As underlined by this statement, members of the AGF repeatedly referred to the divisions’ CTOs to make strategic decisions related to alliances, whereas they saw themselves in more of an operative role. Hence, although the integrative liaison device offered the opportunity to establish personal relations and goodwill trust, which facilitated cooperation and coordination, it mainly focused on more short-term decisions and

operated only to a limited extent as the strategic decision-making body it was intended to be.

Partially triggered by this lack of decision-making authority, several interviewees voiced their concerns that alliance management was done reactively rather than proactively. The AGF in combination with the boundary spanning activities of the CAC provided mediation related to challenges or opportunities that have emerged from developments in the SSAs, i.e. *where to play* and *what role to take* in the short term. However, mediation was much more difficult regarding more long-term decisions, where disagreement continued to exist on how ManuCo wanted certain standards to progress and what role it should play in the mid to long-term future:

“‘We would like this to go that direction in the standards’ all that kind of short-term things (...). But the long-term strategy ‘OK, this is over the next three years. Our main goal in [mentions specific SSA] would be to get the market to perceive us as a technical leader.’ This was never defined. This was never set out. (...) The overarching goal was never really spelled out anywhere. And this is also not measured as such. And then it becomes very difficult to decide.” - Interviewee #19

This need for an overarching strategy triggered additional challenges on several levels. Such a reactive behavior often required ManuCo to take a passive role in alliances and avert initiatives brought up by other companies. As highlighted by one interviewee, this behavior risked harming the firms’ reputation in the alliances:

“If we were able to at the beginning of this say ‘Hey, if we could agree on these four elements (...)’ We could couch that in all positive directions, right? Get people on the same page we are. Here, we are excited about collaborating. We are excited about driving interoperability. But then once we shift the other way, when we take the back seat, we are now needing to say ‘No, don’t do that!’, which makes us look like we don’t want to collaborate.” – Interviewee #8

In addition, this passive role also constituted a challenge for introducing more comprehensive formal assessments, such as performance measures, to guide the decision-making. As pointed out by several employees, introducing long-term output measures was difficult in general due to the dynamic nature of SSAs. This was further complicated without any long-term targets set by higher management. In fact, the majority of the alliance representatives stated that success of their participation in SSAs was never systematically assessed by their supervisors. Concrete goals, such as enforcing a specific decision in a vote in the SSA were used only in rare occasions. For basic measures, such as the time spent on alliance related work or the contributions made to standards, data was collected by some individuals. However, even though traditional formal controls, such as KPIs, do not necessarily need to be the ‘objective truth’ and complete, but are already valuable by providing an input for discussion (Zahir-ul-Hassan et al., 2016), the members of the AGF could not agree on a specific set of metrics to monitor alliance participation. Hence, due to the divisions’ strong drive for autonomy and the lack of

agreement on metrics to measure performance, focus was solely on qualitative aspects and creating governance with socializing effects.

Summarizing, by introducing three mediating instruments ManuCo established a minimal structure that enabled a more harmonized decision-making process. As an integrative liaison device, the AGF provided an arena to conduct holistic assessments before decisions were taken. By setting the agenda in the meetings and creating trust among decision-makers the boundary spanner provided additional mediation in this process. Further, in addition to highlighting the need to make decisions on *where to participate* and providing input on ManuCo's relative market and IP position to make decisions on *what role to take*, the presentation templates also added some accountability to the process by memorializing decisions taken in the past.

At the same time, more effective decision-making and utilizing the full potential of the mediating instruments was hindered by several interrelated challenges. First, a lack of awareness for standard setting alliances in some parts of the organization resulted in them dedicating only limited time and resources to this topic. Further, even though the different business units acknowledged the need for cooperation in this area, and most employees showed willingness to cooperate cross-divisionally, the divisions' strong drive for autonomy remained and only limited decision-making capacity was transferred to the AGF. Lastly, difficulties in agreeing on metrics and accurately measuring outputs from SSAs meant that the AGF had to rely solely on qualitative and mostly short-term assessments in the decision-making process.

5. Discussion

In summary, the findings of the empirical analysis indicated that prior to the appointment of the CAC and the implementation of the AGF, there was a notable absence of internal coordination with regard to participation in SSAs. Divisions joined standards individually, without consulting with other business units, resulting in simultaneous memberships in overlapping or even the same alliance. This not only led to the company incurring high membership fees but also increased interorganizational risks such as information leakage or IP oversharing. Further, the combination of a decentralized organizational structure and a lack of internal controls, reduced ManuCo's ability to utilize its whole market power and speak with one voice in the SSAs. Consequently, the lack of internal coordination in the case company led to an increase in risk and negatively impacted the benefits derived from participation in inter-organizational relations from a group perspective.

In order to address this issue, the company implemented an internal governance structure with the objective of fostering internal coordination regarding SSAs. The company installed a CAC, who acted as the central node in SSA related work and built relationships with and between different stakeholders. Further, by giving SSA related topics a dedicated forum, the exchange of information and experiences between upper-level managers was facilitated. Within this forum, standardized templates were used to create a shared perception of risks and opportunities and centered attention and discussions on the most pressing topics, so that decisions could be taken accordingly. Hence, by providing mediation related to information flow, risk detection and decision-making, the mediating instruments helped establish a minimal structure to balance the need for improved coordination related to SSA work and the divisions' drive for autonomy.

5.1. Partner Selection in SSAs

One of the primary objectives of the change in the governance structure was to achieve more coordination in the question of *where to play*. By enhancing coordination related to in which instances to join, stay or leave SSAs, the company aimed at mitigating interorganizational risks and direct resources to standards which mattered the most. Using partner selection as a control mechanism is in line with the results of Ireland et al. (2002) and Hitt et al. (2000), which showed that finding the right partners constitutes an important factor for the success and effectiveness of IORs. However, compared to the literature on partner selection in more traditional IOR settings, in the context of standard setting alliances this constitutes a more complex matter, with several additional aspects that need to be included. While similar to partner selection in the settings analyzed by Dekker (2004), Moeller (2010), Morgan & Hunt (1994) or Mouritsen & Thrane (2006), finding trustworthy partners is also of importance in the setting of SSAs, yet the number

of contributors is usually much higher in this specific IOR constellation. Consequently, a comprehensive assessment of all potential partners is much more complex and resource intensive compared to supplier networks or Joint Ventures and can thus be conducted to the same extent only under great strain.

In addition, the risk of commoditization, triggered by the industry-wide implementation of a standard, further differentiates partner selection as a control mechanism in SSAs from other IOR settings. For the latter, the existence of other like-minded companies, which are committed to working towards a common goal together, constitutes an essential prerequisite (Ireland et al., 2002). These findings on partner selection apply only partially to participation in standard setting alliances, where a more nuanced perspective is required. Although the case company assessed whether other companies with congruent ambitions were part of SSAs, participation in alliances with members that pursued objectives not in line with the company's interests were also considered. The rationale behind such a participation was that if a standard had technological viability and the backing of other influential companies, ManuCo could be negatively affected by the commoditization triggered by it, even if not part of the collaboration itself. Consequently, in order to have the option of monitoring developments or, in some cases, also actively impeding and slowing them down, companies sometimes participate in SSAs even if there are no shared or even contradictory objectives with other alliance members.

Additionally, while Wathne & Heide (2000) described ex-ante partner selection as the most effective way of managing opportunism in successful business networks, in the case of SSAs this constituted a continuous effort for the case company. One reason for this is that in many cases new companies join and existing members leave standards on an ongoing basis. Hence, this fluctuation impacts partner selection as an ex-ante control mechanism. Further, broadly speaking, standard setting alliances are characterized by a high degree of outcome uncertainty, with the scope potentially changing significantly over time. Consequently, it is necessary to monitor the intentions of other members, if and how they want to develop a standard further, continuously.

As underlined by the empirical observations, the mediating instruments played a crucial role in enabling ManuCo to deal with the increased complexity of partner selection as a control mechanism. By providing support related to risk detection, information flow and decision-making, they facilitated a more coordinated approach to addressing the questions of *where to play* and *what role to take*. Particularly the usage of assessment templates to give AGF members a comprehensive overview on an SSA's scope and the assumed intentions of the most important companies present, proved useful in utilizing this interorganizational control mechanism. In addition, participating in alliance meetings on interorganizational level and being the central node within the company, the CAC acted as a boundary spanner on both levels. By collecting information on an inter- and intraorganizational level and disseminating it across ManuCo, she made sure that a more

holistic view was taken when reevaluating existing memberships or considering joining additional SSAs.

5.2. Other Formal Controls

Apart from partner selection, this case study has highlighted the difficulties of relying on other formal control mechanisms when it comes to standard setting alliances with a large number of members. Contrary to the findings of Li et al. (2008), in the case of SSAs, partner selection as a social control was not in a substitutive relationship with more formal controls such as contracts. As mentioned in the empirics, contracts governing SSA participation only stipulated foundational aspects, such as voting mechanisms in the alliance, IP sharing policies and other legal considerations. Although the contract may have outlined the initial scope of the standard, this was only on a high level and interviewees mentioned several cases where it changed significantly during development. In line with the findings of Anderson et al. (2000), the high task uncertainty meant that contracts could provide only limited protection against risks stemming from SSA participation.

Similar to what Stouthuysen et al. (2017) and Koza & Lewin (2000) found in exploration alliances, the number of companies participating in and the high outcome uncertainty of standards also complicate implementation of traditional outcome controls. While output controls could facilitate the risk-benefit analysis needed for the decision on *where to play* and *what role to take*, the dynamic nature, i.e. knowing in which direction the standard will evolve over time, and the unpredictability of impacts, i.e. how widely it will be accepted and implemented by other producers, meant that it was difficult to track success in a standardized and quantifiable way. In the case company, introducing output controls to determine the value of participating in a standard was further complicated by the decentralized business model and the vastly different impact certain standards had on the divisions. Instead, similar to the findings of Marques et al. (2011), ManuCo had to rely predominantly on the boundary spanner's and the technical representatives' ability to implement social controls by creating relationships and networking with other alliance members.

Given the limited protection from contracts and the difficulties in implementing output controls, addressing appropriation concerns, i.e. reduce the risk of information leakage and oversharing of IP, constitutes a challenge in SSAs. Hence, in the case company focus was put on partner selection, supported by an internal governance structure aiming for alignment on what (not) to share, which required mediation between different parts of the business. This was due to the fact that knowledge about IP that was crucial for other divisions, and hence should not be shared on an interorganizational level, was often limited. By raising awareness for this topic and building relations across divisions and domains, such as connecting employees working with IP with engineers participating in the alliances, the boundary spanner introduced informal

controls to mitigate risks. Confirming the findings of the early stages of van der Meer-Kooistra & Scapens (2008) study, in lateral relations where the nature of work is dynamic and difficult to standardize, regular meetings played a pivotal role in ManuCo's internal governance by creating knowledge and sharing information between stakeholders.

5.3. Internal Governance

Referring back to Dekker's (2016) call for more insights on the interrelation between inter- and intraorganizational control systems, participation in SSAs and the lack of controls present on that level required the case company to adapt its internal governance structure. Contrary to the findings by Thrane & Hald (2006), an increased focus on interorganizational control spurred internal coordination and collaboration. Even though ManuCo aimed at adding firmness to its SSA participation, to avoid confusion and contradictory actions by different divisions, the traditionally high degree of autonomy of the divisions in combination with the need of the alliance representatives to be able to react to changes in the SSA quickly, required ManuCo to ensure flexibility. Similar to Cuganesan & Lee (2006), by 'opening up' a company participating in SSAs, additional insights into how intraorganizational factors, such as the organizational structure, influence interorganizational control, were gained. The observations further confirm Zahir-ul-Hassan et al.'s view that "governance and control are generated in and constitutive of the relationship surrounding them" (2016, p. 386).

In the context of SSAs, the use of mediating instruments can significantly contribute to the governance of internal lateral relations. Using the framework outlined by van der Meer-Kooistra & Scapens (2008), these mediating devices can reinforce specific structures or build bridges between elements from different structures. Exchanging with relevant stakeholders across divisions established the CAC as the central node in the social structure of the lateral relationship. In doing so, she managed to build up strong relations with and between people across the company. Extending the findings by Tsai (2002), these strong relations improved knowledge sharing not only on a lateral but also vertical level in the case company. Relating to the work done by Helden et al. (2001), the enhanced communication on both a horizontal as well as vertical level constituted a key point in being able to speak with one voice in the alliance meetings. As additional mediating instruments, the AGF and the slide templates connected elements from different structures. The AGF mitigated the siloing effects of the decentralized organizational structure by enabling employees to exchange information and experiences across divisions, thus bridging the institutional and the social structure. Similarly, by facilitating the exchange of technical knowledge on the impact of certain standards on ManuCo's products and creating a shared awareness for the risks and opportunities arising from the participation in SSAs, the slide templates built a bridge between the technical and the social structure of the governance system.

However, the high focus on informal and social controls within ManuCo also came with certain challenges. In line with the observations by Zhang et al. (2015), the CAC implemented relational controls on an inter- and intraorganizational level but the lack of other formal mechanisms supporting her work resulted in a high person dependency. This posed a significant risk to the company as losing her as the connecting node would severely impede ManuCo's participation in SSAs. Further, corroborating the findings by Dekker et al. (2019), with increasing complexity and number of participations, the risk of exceeding her capacity to keep an overview and coordinate all of ManuCo's participations rose.

The empirical findings showed that the introduced governance structure helped in strengthening relations and creating a trusting atmosphere between divisions, hence confirming Zahir-Ul-Hassan et al.'s (2016) findings on the socializing effects of governance. At the same time, there was only little governance with individualizing effects, such as comprehensive performance monitoring, supporting the AGF in its decision-making. Similar to Zahir-ul-Hassan et al. (2016), the CAC stated that the divisions were rather reluctant when it came to the introduction of such controls, as it would have led to an increase in visibility and hence their accountability. Furthermore, even though the slides were employed by her to memorialize decisions taken in the AGF, thereby serving to remind the divisions of the commitments they have made in this forum, there were no disciplining effects associated with this form of governance.

It can be argued that the aforementioned factors, in conjunction with the company's deeply ingrained decentralized company culture, contributed to the divisions' limited commitment to the AGF. In the light of Morgan & Hunt's (1994) findings that appropriate commitment constitutes a cornerstone of effective relational control, this thus impeded the harmonized decision-making it sought to achieve. On the one hand, this was visible in the limited time some AGF members allocated to SSAs outside of the meetings. On the other hand, it was also reflected in the divisions' lack of willingness to transfer significant decision-making capabilities to the AGF. The inability to agree on a long-term strategic plan for certain SSAs, compelled the company to respond to developments in the alliances only in a reactive manner. Such behavior damaged the company's reputation on an interorganizational level, as it frequently required the firm to slow down initiatives rather than actively driving them forward. Consequently, when designing governance systems for the control of lateral relations, decentralized firms need to consider the balancing act between socializing and individualizing forms. Put differently, a duality of governance, as mentioned by Zahir-ul-Hassan et al. (2016), whereby individualized governance is implemented in the background and socialized governance is in place in the foreground, may enhance co-operative behavior, while also safeguarding against self-centered opportunistic behavior. Thus, finding a suitable combination of socializing and individualizing internal governance potentially constitutes an important part of creating a

more optimal balance between ‘firmness and flexibility’ to effectively control participation in SSAs.

6. Conclusion

With standardized technologies being an invisible, yet integral part of everyday life, this paper set out to analyze how an organization consisting of interrelated but largely independent divisions can control its participation in standard setting alliances. Drawing on the notion of mediating instruments facilitated an understanding of how various forms of internal governance can help decentralized firms strike a balance between ‘firmness and flexibility’ to tackle interorganizational control challenges. Based on a qualitative study of a global manufacturing company going through the early stages of a digital transformation, this thesis has attempted to answer the research question:

How are internal management control systems used in a decentralized company to control participation in standard setting alliances?

By answering the research question, this thesis provided additional insights into the relation between management control on inter- and intraorganizational level, and hence responded to the research gap highlighted by Dekker (2016). In order to do that in the context of SSAs, a better understanding of the particular control challenges present in this setting was required first. As the existing literature on management control in IORs has hitherto predominantly focused on settings with one dominant firm, such as buyer-supplier relationships, this thesis thus also addressed the calls for further research on parity-based alliances, as mentioned by Grafton & Mundy (2017).

The empirical findings confirmed that partner selection is an important factor for successful management of interorganizational relations (Hitt et al., 2000; Ireland et al., 2002). In the context of SSAs, this social control mechanism is however more complex. This is predominantly due to the risk of commoditization, as standards can have a negative impact also on companies that do not participate in the specific alliances developing them. Consequently, in contrast to previous studies on partner selection in IORs (Ireland et al., 2002; Moeller, 2010; Morgan & Hunt, 1994), companies also consider joining alliances that are not constituted of like-minded companies, or that pursue objectives conflicting with the company’s interests, to monitor or slow down certain initiatives. Moreover, the usability of other formal control mechanisms, such as output controls, to mitigate appropriation concerns is constrained due to the large number of members and the dynamic nature of SSAs (Koza & Lewin, 2000; Stouthuysen et al., 2017). Further, certain appropriation concerns that arise from participation in SSAs affect not only the participating entity, but the entire group to which it belongs. Hence, particularly for decentralized companies, an internal governance structure is necessary to complement the partner selection and mitigate risks such as information leakage or IP oversharing.

However, due to the divisions’ high degree of autonomy in ManuCo, a centralized governance structure for SSAs was not feasible. Instead, by introducing different mediating devices such as a boundary spanner, an integrative liaison device and

presentation templates to standardize the assessment of alliances, the company aimed at fostering collaboration and coordination between divisions and domains. These devices provided three main functions: *enhancing information flow*, *structuring risk detection*, and *enabling harmonized decision-making*. Improved risk detection & information flow enabled more informed assessments on *where to play* and *what role to take*, and by impacting the decision-making, the control system made sure that decisions could be taken accordingly and in a coordinated way. Referring to the framework laid out by van der Meer-Kooistra & Scapens (2008) the mediating instruments reinforced specific structures of the governance of lateral relations, as well as built bridges between elements from different structures. However, the findings also underlined the challenges emerging from solely relying on socializing governance to strike a balance between ‘firmness and flexibility’. Even though the introduced governance spurred cross-divisional coordination, the lack of commitment and awareness by certain divisions meant that challenges in the governance of lateral relations remained.

In light of these findings, contributions were made to the IOR literature in two respects. First, by focusing on a specific type of parity-based alliance, that has hitherto received only limited attention, this thesis offers new insights by emphasizing both the importance and the complexity of partner selection as a control mechanism in SSAs. Second, by highlighting the significance of an internal governance structure for the participation of decentralized companies in SSAs, the paper provides a deeper understanding of what has been coined by Dekker as the ‘interrelations between intrafirm and interfirm management accounting’ (2016, p. 92). In addition, by analyzing van der Meer-Kooistra & Scapens’ (2008) framework on the governance of lateral relationships through the lens of mediating instruments, this paper contributes to the existing literature by offering a new perspective on how companies can achieve a balance between ‘firmness and flexibility’ in their internal governance structure.

However, this paper only throws a few pebbles into what is perceived as a rather wide research gap by the authors, and that offers several avenues for further research. First, the crucial role of standard setting alliances in our society stands in stark contrast to the limited management control research that has been done in this field. Consequently, literature predominantly on other forms of IORs had to be employed throughout the abductive research process, potentially influencing the attitudes and perspectives of the researchers. Hence, the need for additional insights into how individual companies can control participation in SSAs remains. Second, as the analyzed case company is still in the early stages of its digital transformation, enhanced understanding of how other decentralized but more experienced companies control their SSA participation constitutes another important area for future research. Further, due to time and resource constraints, a fully homologous focus on the inter- and intraorganizational implications of the established governance structure was not possible and constitutes another limitation of this paper. More comprehensive research gathering supplementary insights into the

interorganizational implications of internal governance hence constitutes another promising area for further research.

7. References

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8. Appendix

Appendix A: List of conducted main interviews

Interview	Role	Division	Date	Form	Duration (in min)
#1	Consultant *	External	18.03.2024	Online	61
#2	IP Manager *	Artemis	18.03.2024	Online	56
#3	Product Compliance *	Group	19.03.2024	Online	55
#4	Consultant *	External	22.03.2024	Online	56
#5	AGF Member	Nike	22.03.2024	Online	60
#6	Alliance Representative	Athena	25.03.2024	Online	40
#7	Alliance Representative	Nike	26.03.2024	Online	71
#8	Central Alliance Coordinator *	Group	26.03.2024	Online	62
#9	AGF Member	Hera	26.03.2024	Online	65
#10	Global IP Manager *	Group	27.03.2024	In person	65
#11	AGF Member	Athena	27.03.2024	Online	41
#12	IP & Litigation	Nike	27.03.2024	Online	44
#13	AGF Member	Demeter	27.03.2024	Online	58
#14	Alliance Representative	Nike	27.03.2024	Online	50
#15	AGF Member	Artemis	28.03.2024	Online	75
#16	Product Security	Artemis	02.04.2024	Online	69
#17	Emerging Technologies	Group	02.04.2024	Online	66
#18	Alliance Representative	Nike	02.04.2024	Online	66
#19	Alliance Representative	Nike	04.04.2024	Online	61
#20	Business Development	Nike	04.04.2024	Online	63
#21	Alliance Representative	Group	05.04.2024	Online	76
#22	Alliance Representative	Athena	08.04.2024	Online	62

In total 22 interviews were conducted with an average duration of 60 minutes

*Indicates interviewees who also participated in pre-interview sessions prior to the main interview

Appendix B: Interview Guide

Theme	Exemplary Questions	Interest
Role & Responsibilities	- Please tell us about your current role and background in the company.	Get an understanding of the background of the interviewees.
Introduction to SSAs	- What are in your opinion the biggest risks related to SSAs? - What are in your opinion the biggest opportunities related to SSAs?	Gain insights into how interviewees perceive SSAs.
Interorganizational control	- How do you decide if you should join/stay/leave an SSA and what are the determinants of that decision? - How is the participation in SSAs monitored respectively controlled?	Get an understanding of the current governance structure to control IOR participation.
Intraorganizational coordination	- Do you coordinate with other employees outside of your team in your SSA related work? - How do you perceive the tools used in the coordination process? - How do you handle internal conflicts of interests in the SSA context?	Examine the internal coordination and the perception of the mediating instruments.
Ending	- Is there anything we have missed, or you would like to add? - Are there any further questions from your side?	Give the interviewees room to add or clarify statements.