

The role of control mechanisms for governing innovation processes in a collaborative network: Insights from the Swedish Hockey League

Carl Magnus Behm
23130@student.hhs.se

Erik Hedensiö
23140@student.hhs.se

Abstract

This paper examines the role of management control for the governance and coordination of the implementation of an innovation in the Swedish Hockey League – a collaborative network of competing hockey clubs including a permanent governing body. By integrating the concepts of self-regulating and orchestration mechanisms (Mouritsen & Thrane, 2006), we analyze the role of these mechanisms during the implementation process and how they influence each other. In line with previous research, our findings suggest that self-regulating mechanisms automatically manage the financial flows to allow for interaction between firms to occur unobtrusively. Moreover, orchestration mechanisms enable network relationships and facilitate decision making. However, we contribute to the literature on management control and innovation in networks by showing that self-regulating and orchestration mechanisms are interdependent. The self-regulating mechanisms create prerequisites for the permanent governing body to coordinate the network collaboration by using orchestration mechanisms. Furthermore, we make an empirical contribution to the literature on actor-network theory in inter-organizational management accounting by studying the collaboration between the original network and a new actor temporarily included in the network. We claim that the collaboration between the original network and this new actor may be understood as a dyadic relationship, and that control mechanisms in such a relationship may be of little importance if inadequately designed.

Keywords: Management control, innovation, network, self-regulating and orchestration mechanisms

Tutor: Kalle Kraus

Date: 14.05.2018

Acknowledgements

First of all, we would like to express our gratitude towards the case organizations Svenska Hockeyligan AB, the three hockey clubs, Arbetsförmedlingen and the partner firm to one of the hockey clubs. In particular, we are truly grateful for the interviewees' valuable input and time. Secondly, we would like to express our sincere appreciation to our tutor, Professor Kalle Kraus, for your accurate input, encouragement and guidance along this journey.

Stockholm, May 2018

Carl Magnus Behm

Erik Hedensiö

Table of contents

1. Introduction	1
2. Theory	4
2.1 Management control and innovation	4
2.2 Theoretical perspective: Actor-network theory	11
2.3 Theoretical framework	15
3. Methodology	18
3.1 Research design	18
3.2 Selection of case organization	19
3.3 Data collection	20
3.4 Analyzing the data	20
3.5 Research quality	21
4. Case analysis	23
4.1 Background and context	23
4.2 Management control mechanisms	27
4.3 Tensions during the implementation of “ProjectYouth”	30
5. Discussion	36
5.1 The importance and interdependence of control mechanisms in networks	36
5.2 Management controls governing collaborative dyadic relationships	40
6. Conclusion	43
7. Limitations and suggestions for future research	45
7.1 Limitations	45
7.2 Suggestions for future research	45
8. References	47
9. Appendix	53

1. Introduction

“For me, innovation is to do something that has never been done before to make life better for more people. It must not necessarily be something completely new, rather it could be a combination of two existing ideas to create a new idea. Innovation is also about disrupting existing norms. I believe that you have to challenge traditional structures and patterns to create innovation.” – Sustainability Director, Club A

In 2017, Svenska Hockeyligan AB¹ made the decision to test the innovation “ProjectYouth” in the hockey clubs in the Swedish Hockey League². ProjectYouth is a CSR initiative with the objective of decreasing the youth unemployment rate in Sweden. As indicated in the introductory quote by the originator of ProjectYouth, this innovation implies a completely new way of working for the hockey clubs, which created tensions during the implementation process. The focus of this paper is to explore the role of the management control mechanisms established by the network, consisting of the clubs and SHL, in managing these tensions.

The focus of the management control and innovation research has changed incrementally over the years. Initially, the research focused on the relevance of control for innovation and whether control has a constraining or enabling effect on innovativeness (Abernethy & Brownell, 1997; Brown & Eisenhardt, 1997; Håkansson & Lind, 2004; Kamoche & Pina e Cunha, 2001; Rockness & Shields, 1984). In more recent research, focus changed to questions such as why certain controls are designed the way they are, how they can help to address specific issues in the innovation process, and what role they play in that process. One theme within the more recent research that has gained attention from academics is the studies of management control and innovation in a collaborative inter-organizational setting (Carlsson-Wall & Kraus, 2015; Christner & Strömsten, 2015; Miller & O’Leary, 2007; Miller, Moll & O’Leary, 2012; Mouritsen, Hansen & Hansen, 2001; van der Meer-Kooistra & Scapens, 2015; Wouters & Kirchberger, 2015).

However, little attention has been paid to the governance and coordination of innovative activities in a network of competing firms. For instance, Miller et al. (2012) identify inter-organizational coordination mechanisms merely focusing on lateral relationships between the firms in the network. In contrast, van der Meer-Kooistra and Scapens (2015) study the

¹ Svenska Hockeyligan AB is the name of the league organization, hereafter referred to as “SHL”

² The Swedish Hockey League is the name of the top hockey league in Sweden, hereafter referred to as “the Hockey League”

governance of a product development project in a network of competing firms with a temporary governing organization, focusing on both lateral and vertical relationships. All in all, it seems like there are no studies examining the governance and coordination of innovative activities in a network of competing firms with a permanent governing organization within the literature on management control and innovation. Therefore, the aim of the paper is to contribute to this stream of literature by addressing the outlined gap. It might be argued that the focus of the study is very specific and adds little to the discussion. However, it contributes to our knowledge regarding inter-organizational collaboration that in recent years has received more attention as the development of products and services get more complex and requires a wide range of expertise and knowledge (Chesbrough, 2003; Faems, Van Looy & Debackere, 2005; Hagedoorn, 2002; van der Meer-Kooistra & Scapens, 2015). We believe that studying the governance of relationships between parties in this specific context will enable us to better understand the role of management control in other similar contexts as well.

To address the highlighted gap, actor-network theory (ANT) is applied as the theoretical perspective. ANT is selected since it is widely used for analyzing accounting change and it also treats management control as an actor in the network (Modell, Vinnari & Lukka, 2017), which is considered appropriate when analyzing the role of management control in an innovative setting. More specifically, “*self-regulating mechanisms*” and “*orchestration mechanisms*” (Mouritsen & Thrane, 2006) are the theoretical cornerstones of the analysis. Self-regulating mechanisms allow interaction and exchange between partner firms to occur unobtrusively, while orchestration mechanisms involve structuring these interactions. By integrating these theoretical concepts with the outlined gap, a theoretical framework is developed to direct the analysis of the empirics and help to answer the research question:

What is the role of self-regulating and orchestration mechanisms in a network of firms with a permanent governing body in the implementation process of an innovation?

In order to answer the research question, a qualitative, in-depth single case study was conducted due to the high uncertainty and limited knowledge of this type of context in previous management control and innovation literature. Representatives from several stakeholders in ProjectYouth was interviewed to ensure a comprehensive picture. These include representatives

from SHL, three hockey clubs in the Hockey League, Arbetsförmedlingen³ and a partner firm to one of the hockey clubs.

In line with Mouritsen and Thrane (2006), we find that self-regulating mechanisms hold the network in the Hockey League together by automatically handling the financial flows to allow for interaction between firms to occur unobtrusively. Moreover, orchestration mechanisms enable network relationships and facilitate decision making and the development of the network as an entity with a common objective. However, we argue that the two mechanisms are interdependent and that the self-regulating mechanisms create prerequisites for the permanent governing body to coordinate and nurture the network collaboration by using orchestration mechanisms. Therefore, the use of the self-regulating mechanisms during the initiation phase of the implementation process of the innovation is of great importance for the efficiency of orchestration mechanisms during the execution phase. Furthermore, we also find that Mouritsen and Thrane (2006) do not discuss collaboration between the original network and a new actor temporarily included in the network, such as the collaboration between the Hockey League and AF in ProjectYouth. By using the theories of Carlsson-Wall and Kraus (2015), we claim that this collaboration may be understood as a dyadic relationship between the network and the new actor. We further argue that control mechanisms may be of little importance for the collaboration in innovation processes if inadequately designed.

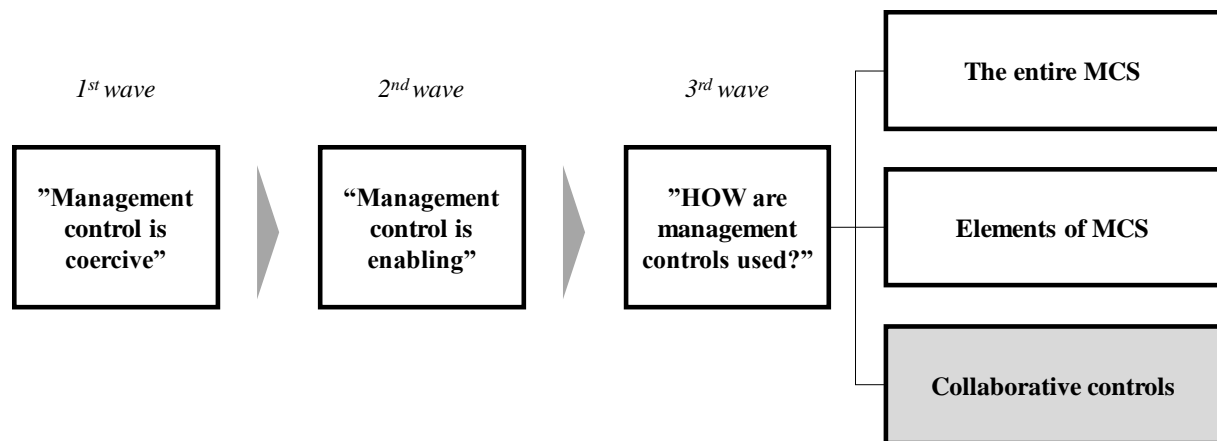
The paper is structured as follows. In the next section, the theoretical background of the study and the theoretical framework used in the analysis are presented. This is followed by a section about the research methodology. In the fourth section, the case analysis introduces the case organizations, the innovation ProjectYouth and the control mechanisms involved in the implementation process of the innovation. The fifth section discusses the case findings and thereafter conclusions are presented together with suggestions for future research.

³ The Swedish Employment Agency, hereafter referred to as “AF”

2. Theory

In the following section, the research question is outlined by a systematical study of the theoretical development within management control and innovation, and an integration with concepts from ANT. To begin with, the existing literature on management control and innovation is reviewed to provide an understanding of the theoretical development (see Figure 1). The focus of this paper is the literature discussing collaborative controls, although the entire theoretical development initially is presented in section 2.1 to fully understand the complexity of the management control and innovation literature. Within the final sub-section 2.1.3, a gap in the literature regarding collaborative controls is identified. In section 2.2, the theoretical perspective, ANT, and the specific theoretical concepts to be applied are introduced. In section 2.3, the gap in the management control and innovation literature and the theoretical concepts from ANT are integrated to build a theoretical framework and present the research question.

Figure 1. The theoretical development of the management control and innovation literature



2.1 Management control and innovation

The first wave of the literature that studies management control and innovation is focused on understanding management control systems' (MCS) role in new product development (NPD) and argues that MCS have a hindering effect on innovation (Abernethy & Brownell, 1997; Rockness & Shields, 1984). However, with a broader definition of MCS, not only including financial measures, the second wave suggests that some formal MCS are enabling creativity and innovation (Brown & Eisenhardt, 1997; Håkansson & Lind, 2004; Kamoche & Pina e Cunha, 2001), and several authors draw upon the minimal structures framework. For instance, Brown and Eisenhardt (1997) apply this framework and show that successful innovative firms use a mixture of formal controls regarding responsibilities and priorities, while allowing

freedom in communication and design to create creativity – a combination that forms a balance between order and chaos.

Primarily, the early research on management control and innovation adopts a functionalist perspective and focuses on the relevance of accounting in the innovative setting. Hence, early studies examine whether control is enabling or coercive as described above. However, they provide limited insight into why certain controls are designed the way they are, how they can help to address specific issues in the innovation process, and what role they play in that process. In fact, limited attention is given to specify the actual use of accounting, and whether the same forms of control are equally effective across different types of innovations. Consequently, an increasing number of studies attempt to address this management control and innovation literature gap. In line with Moll (2015), we divide this third wave of the management control and innovation literature into three different themes: studies that focus on the entire MCS, studies that focus on elements of the MCS, and studies that focus on controls when innovation processes involve collaborations. In the latter theme our gap is outlined.

2.1.1 The entire MCS

A few studies focusing on the entire MCS discuss the appropriateness of different modes of control for the firm's innovativeness and performance depending on whether the innovation project is exploratory or exploitative (Bedford, 2015; Davila, Foster & Oyon, 2009; Ylinen & Gullkvist, 2014). By extending the work of Bisbe and Otley (2004), Ylinen and Gullkvist (2014) examine the indirect effects of mechanistic and organic controls on project performance in exploratory and exploitative innovation projects. Mechanistic controls include formal rules and standardized routines, while organic controls are flexible and responsive and involves fewer rules. Their results suggest that the interaction of mechanistic and organic controls enhances performance in both exploratory and exploitative innovation projects, suggesting a complementary effect. In contrast, Bedford (2015) concludes that control levers in firms that specialize in either exploratory or exploitative innovation *"have supplementary rather than complementary effects on performance"* (p. 26). The use of interactive controls is associated with enhanced performance for firms engaged in exploratory innovation, while exploitative innovation firms tend to benefit from using diagnostic and boundary control systems. However, in firms that jointly pursue exploitation and exploration, it is the balanced use of diagnostic and interactive controls that matter for enhanced performance. Davila et al. (2009) seem to agree with Bedford (2015) that the control levers have supplementary rather than complementary effects on performance. Davila et al. (2009) conclude that *"innovation is not a monolithic*

phenomenon but various processes that coexist in parallel, each one requiring different types of control systems” (p. 284).

Another stream of the literature on the entire MCS focuses on how the need for employee creativity is reflected in the choices of formal controls (Adler & Chen, 2011; Grabner & Speckbacher, 2016). Furthermore, Ditillo (2012) claims that certain forms of control trigger relations between individuals that can foster knowledge transfer, and that accounting facilitates knowledge transfer since it provides a common understanding of the classification of activities. Additionally, several studies have focused on the role of accounting practices in certain product development projects (Jørgensen & Messner, 2009, 2010; Nixon, 1998).

2.1.2 Elements of MCS

Parallel to the focus of investigating the holistic MCS in innovative settings, scholars have studied parts or elements of MCS (Carlsson-Wall, Kraus & Lind, 2009; Gopalakrishnan, Libby, Samuels & Swenson, 2015; Henri, 2006; Mouritsen, Hansen & Hansen, 2009; Revellino & Mouritsen, 2009, 2015; Shields & Young, 1994). In NPD, costs may steer the direction of the process. Therefore, it has been natural to study the cost consciousness of employees (Shields & Young, 1994) or the role of target costing in NPD (Carlsson-Wall et al., 2009; Gopalakrishnan et al., 2015). For instance, Carlsson-Wall et al. (2009) find that target costing influences decision processes in NPD and supports the process since it rejects technically well-functioning solutions that become too expensive. Furthermore, target costing guides the innovative process as a tool that can identify possible solutions that have an impact on interaction and improvisation in the development process.

By taking a broader view of accounting calculations, Mouritsen et al.’s (2009) findings point to the fact that accounting calculations do not in detail describe or represent any of the innovation activities conducted by a firm. However, they add to the perspective of the innovation and relate the innovation to the firm, which makes accounting calculations part of the relationship between the economy, the innovation and the environment. To extend this research, Revellino and Mouritsen (2015) investigate how calculative practices not only describe the world, but also help changing it. They find that accounting acts as an “engine” in innovation processes as the calculative accounting practices produce inspiration for actors to ask new questions and aim for new opportunities. Furthermore, an innovation process is not linear as the accounting practices are guided by the development of the innovation, and at the same time the new calculations bring up new questions that steer the innovation. This reasoning explains the findings of

Revellino and Mouritsen (2009), who claim that as the innovation develops it must pass several trials that are all controlled by different technologies. The findings shed light on why the management control and innovation literature has become so dispersed – the innovation process is a non-linear fuzzy activity where, depending on its location in time and space, different logics are suitable and can be applied to steer the innovation.

2.1.3 Collaborative controls

In the following section, the existing literature on management control and innovation in collaborative settings is examined. This theme in the literature can be divided in two parts; the first part is focused on dyadic relationships, while the second part is focused on relationships in a network of competing firms. In the final paragraph, the identified gap in the literature focusing on network relationships is presented, and we elaborate on why it is relevant to study this gap.

Dyadic relationships

A dyadic relationship is a one-dimensional relationship between two parties. In studies of dyadic relationships in collaborative innovation processes, the primary focus is lateral relationships (Carlsson-Wall & Kraus, 2015; Mouritsen et al., 2001; Wouters & Kirchberger, 2015). Mouritsen et al. (2001) show how collaboration was started through the use of accounting instruments, e.g. functional analysis and open book accounting, by the firm and the supplier. Furthermore, their research indicates that the MCS that mediate the inter-organizational relationship also had an intra-organizational effect, since they translated the firms' strategies, competencies, technologies and products. As a complement to the findings made by Mouritsen et al. (2001), Carlsson-Wall and Kraus (2015) show how non-financial practices mediate between the R&D department and internal and external actors. They study the fuzzy front-end of product innovation and the role of management accounting (MA) in a high uncertainty context. It became evident that the complexity in the organizations' collaborations gave rise to the need for mediating both inter- and intra-organizational relationships. Therefore, a technology maturity staircase guided and encouraged the technology innovation as a "*mediating instrument*", i.e. an instrument connecting two domains. Hence, Carlsson-Wall and Kraus (2015) show how a firm, using non-financial MCS, can construct coherent chains of trustworthy arguments necessary for a R&D department to motivate support and resources from internal and external actors. Furthermore, Wouters and Kirchberger (2015) show how a customer value proposition was used as a mediating instrument in the dyadic relationship between firm and customer. The collaboration between the firm and its customers

guides the firm in the innovation process since the mediating instrument closes the knowledge gap that existed in terms of what the customer values.

The three papers presented so far within this theme in the literature all discuss a lateral relationship. However, Christner and Strömsten (2015) show that MCS can also have an important role in NPD to act as a mediating instrument in a vertical relationship between firm and owner. Their study investigates the mediating instruments used in NPD depending on the scientific (product innovation) and economic (shareholder value) ideas of three different owners of the case company. The empirics show that, depending on the scientific and economic ideas of the owner, different mediating instruments are used.

Network relationships

So far, the literature on collaborative controls and innovation reviewed has been limited to dyadic inter-organizational relationships with suppliers, customers, authorities and owners (Mouritsen et al., 2001; Wouters & Kirchberger, 2015; Carlsson-Wall & Kraus, 2015; Christner & Strömsten, 2015). However, this stream of literature also includes more complex relationships in networks of competing firms (Miller & O’Leary, 2007; Miller et al., 2012; van der Meer-Kooistra & Scapens, 2015). Miller and O’Leary (2007) examine how mediating instruments link science and the economy, thus influencing capital budgeting decisions in the semi-conductor industry. “Moore’s Law” and an industry wide “technology roadmap” are considered as mediating instruments that frame the capital spending decisions made by independent firms, and help to align the decisions and investments made by other firms in the same or related industries. Moore’s Law, defined by Gordon Moore in 1965, is a set of predictions about the future development of the semi-conductor industry. Furthermore, they examine how the mediating instruments envision a future, and how they link several actors and domains so that the development of a common market for semi-conductors is shaped.

The focus of Miller and O’Leary’s (2007) study is limited to the mediating instruments that link the actors and domains in the network, rather than the actors that make up the network. Nevertheless, in a follow up study of the semi-conductor industry, Miller et al. (2012) adjust the course of the study to instead focus on the capital budgeting aspects of inter-organizational coordination mechanisms. The objective is to understand the information sharing practices that enable individual firms to align their investments in R&D with the targets at an industry or network level. In other words, they seek to understand the conditions and processes necessary to develop the industry wide technology roadmap. They identified three processes that were

essential for understanding and managing capital investment programs in a network of competing firms: the organizing of appropriate forums for information exchanges between firms; the modelling of joint financial and technological trajectories; and the mechanisms for intervening to align the investments required. These processes are argued to be crucial to avoid capital misallocation and instead achieve coherent and efficient outcomes for all firms in the network.

Miller et al. (2012) contribute to the literature on management control and innovation by identifying important inter-organizational coordination mechanisms for product development in a network of competing firms. However, the analysis of the coordination still only discusses lateral relationships between firms. In a later study, van der Meer-Kooistra and Scapens (2015) address this gap by studying the governance of a product development project in a network of competing firms with a temporary governing organization, focusing on both lateral and vertical relationships. Temporary organizations are defined as *“limited in duration and membership, in which people come together, interact, create something and then disband”* (Morley and Silver, 1977: p. 59). In van der Meer-Kooistra and Scapens (2015) case study, they observe employees from several organizations working in a temporary organization with the purpose of together developing and commercializing a new product. To understand how such a project can be governed, they use a minimal structures framework – consisting of economic, institutional, social and technical structures – and analyze how these structures provide the firmness and flexibility needed to stimulate creativity and innovation, while coordinating the actions of the firms at the same time. Drawing on the concepts of temporal embeddedness and a-temporality, they find that social and technical structures governed the everyday activities of the project team, i.e. the temporary governing organization. These structures ensured the participating organizations that project employees did not prioritize the project objectives above those of their own organization, and coordinated knowledge sharing with other employees in their respective organization. In addition, they find that economic and institutional structures provided the context for the project and governed the relationships between the organizations. Moreover, they conclude that accounting information was important in defining the boundaries of the project.

In this paper, we further elaborate on the coordination and governance of innovative activities in a network of competing firms in line with van der Meer-Kooistra and Scapens (2015), although we focus on network relationships including a permanent governing organization, rather than temporary. Evidently, the literature reviewed within management control and

innovation research does not include any studies of a network including a permanent governing organization. Therefore, we aim to contribute to this stream of research by addressing the highlighted gap in the literature. By doing this, it might be argued that the focus of the study is very specific. However, in recent years there has been an increasing inter-organizational collaboration in innovation processes (van der Meer-Kooistra & Scapens, 2015), where a wide range of expertise and different forms of knowledge are required, for example in the electronics, biotechnology and even pharmaceutical industries (Chesbrough, 2003; Faems et al., 2005; Hagedoorn, 2002). Nevertheless, the research within management control and innovation in collaborative settings, more specifically in a network of competing firms, has been limited. Thus, we believe that it is important to study the governance of the relationship between the parties in any kind of network since this may enable us to better understand the role of management control in other similar inter-organizational settings as well. The understanding of the role of management control is facilitated if management control is regarded as a factor influencing the environment, rather than the opposite.

2.1.4 Concluding remarks on the management control and innovation literature

To sum up, early research on management control and innovation adopts a functionalist perspective and focuses on the relevance of control for innovation. The first wave of the literature argues that MCS are counterproductive to innovation because they have a constraining effect on creativity and innovativeness. However, with a broader definition of control systems, not only including financial measures, the second wave introduces a contrasting view suggesting that MCS are enabling creativity. The third wave develops the management control and innovation literature by changing perspective from the question of what the effects of management controls are to the question of how management controls affect innovation processes. Furthermore, later studies also aim to understand whether the same forms of control are equally effective across different types of innovations. These studies cover a wide range of topics, and although they add to the management control and innovation discussion, they fail to address how they build on prior work and therefore only little progress has been made in cumulative theory building. Therefore, we divide the recent literature on management control and innovation into three different themes and put extra emphasis on the studies that focus on controls when innovation processes involve inter-organizational collaborations. One stream of the studies within this theme of the literature focuses on governance and coordination of innovative activities in a network of competing firms, but none examine these issues in a network with a permanent governing organization. In the next sections, we therefore discuss

the underpinnings of the theories of Mouritsen and Thrane (2006) and how their theoretical concepts can help address this literature gap.

2.2 Theoretical perspective: Actor-network theory

Evidently, the emphasis on the role of governance and coordination for innovation in a network of firms has been limited in previous accounting research. We attempt to improve the understanding of these issues through the lens of ANT. ANT is different from many alternative theoretical perspectives since the control system is given a central and influential role rather than being a result of other factors. Several of the studies of innovation in networks mentioned above have implicitly applied the perspective of ANT, and more specifically the concept of mediating instruments (Mouritsen, Mahama & Chua, 2010). We further elaborate on the concept of management control as an actor that mediates inter-organizational relationships in a network by using the concepts of self-regulating and orchestration mechanisms as introduced by Mouritsen and Thrane (2006). In this section, the ANT in general as well as its applications in inter-organizational MA research are introduced before a profound presentation of the theoretical concepts used by Mouritsen and Thrane (2006).

2.2.1 Introduction to actor-network theory

ANT is a theoretical and methodological approach to social theory with its origins in science and technology studies. Primarily, it was developed by Bruno Latour, Michael Callon and John Law in the early 1980s. ANT is not easy to define in just one sentence, but with inspiration from Modell et al. (2017) the definition can be elaborated with reference to four key concepts: actors, networks, translation and realism. To begin with, Latour (2005) defines an actor as *“any thing that does modify a state of affairs by making a difference”* (p. 71). This implies that all entities are actors, including non-human entities, as long as they make a difference in the surrounding world. The second key concept, the actor-network, is defined by Callon (1987) as *“simultaneously an actor whose activity is networking heterogeneous elements and a network that is able to redefine and transform what it is made of”* (p. 93). Put differently, an actor emerges from its interactions with other actors in the network, and its characteristics are redefined each time it is involved in the dynamics of a network. Furthermore, Modell et al. (2017) defines the third key concept, translation, as *“the process of associations through which an entity emerges and acquires its characteristics”* (p. 66). The concept of translation is closely linked to the actor-network and implies that the development process is not linear as the entity (a fact, innovation or other entity), as well as the properties of the actors connected to it, are

transformed and modified during the process. The fourth key concept of ANT is realism, which stands in opposition to generalizability. ANT is a highly empirical approach where the aim is not to find general propositions, but rather to find “*one single explanation to a singular unique case; and then we throw it away*” (p. 131) as illustrated by Latour (1996). Since the constellations and properties of actors are assumed to change constantly, no assumptions can be made ex-ante about who the relevant actors are, what connects them and what the translation process will be like (Modell et al., 2017).

Primarily, ANT studies focus on the dynamics of change, since traditional theories may be inadequate in situations where boundaries between entities are blurred and the entity construction processes are unclear. Stability is seen as a rare, temporary and fragile state that requires constant maintenance to persist (Modell et al., 2017). Moreover, ANT was introduced in MA research already in the late 1980s. This early adoption is possibly explained by ANT’s view of management control as a non-human actor that is central to explaining activities, rather than as contextual and environmental effects (Justesen & Mouritsen, 2011). The first applications of ANT within MA research include the exploratory works of Miller (1991), Robson (1992), Preston, Cooper and Coombs (1992) and Chua (1995). This research stream examines how abstract ideas or systems are transformed and diversified when they meet practice, and the unexpected results that follow (Justesen & Mouritsen, 2011). In subsequent MA research, the usage of ANT as a theoretical approach has primarily been based on the writings of Latour (Lukka & Vinnari, 2017).

Why is ANT applicable when studying the role of MCS in the coordination of innovative activities? Several reasons are mentioned in the presentation of the characteristics of ANT above. To begin with, MCS are considered to be non-human actors that are central in the construction of organizational activities, compared to other theories where they are seen as an effect of the context. In addition, the concept of translation is useful for analyzing accounting change as MCS do not have inherent properties, but rather adapts their properties to the constellation of actors they engage with. Accounting change and instability are natural elements in innovative activities.

2.2.2 Actor-network theory in inter-organizational management accounting research

In the subsequent ANT-based MA research, a certain stream focuses on the interactive role of accounting systems as interdependent actors in inter-organizational networks. According to Mouritsen et al. (2010), the conceptualization of the accounting system as an interdependent

actor has two implications. First, accounting calculations are effects generated by the network through the interaction of the elements that form the network. Second, accounting calculations also produce effects in the network as they are engaged as mediators in various forms of interactions. An example is the effect on organizational boundaries. As ANT-inspired research concludes that the definition of an organizational boundary is the result of the interacting actors, organizational boundaries are seen to be mediated and partly constructed by accounting calculations (Justesen & Mouritsen, 2011).

The role of accounting systems in the formation of organizational boundaries have been discussed by several scholars (Chua & Mahama, 2007; Mouritsen, 1999; Mouritsen & Thrane, 2006), often in terms of mediating instruments as introduced in section 2.1.3 (Miller & O’Leary, 2007). The concept of mediating instruments to describe non-human actors mediating inter-organizational relations in networks can be further elaborated on by separating it into self-regulating and orchestration mechanisms, in line with the findings of Mouritsen and Thrane (2006).

2.2.3 Self-regulating and orchestration mechanisms in a network of firms

Using ANT, Mouritsen and Thrane (2006) study three horizontal networks that each constitute a “*network enterprise*”. The network enterprise is a decision-making unit that is larger than the firms included and manages conflict between goals and aspirations of the individual firm and the network, respectively. Management technologies are claimed to help establish the network as a network enterprise by developing and exploiting complementarities in the diverse network competencies and resources. These management technologies are conceptualized as actors that mediate, shape and construct inter-organizational relations through self-regulating and orchestration mechanisms. Self-regulating mechanisms allow interaction and exchange between partner firms to occur unobtrusively, while orchestration mechanisms involve structuring these interactions.

Self-regulating mechanisms “*allow the financial and distributional effects of network relations to flow automatically without intervention from a center*” (Mouritsen and Thrane, 2006: p. 267), allowing the partner firms to concentrate on the day-to-day activities. These mechanisms are oriented towards the exploitation of existing complementary relations. Through pre-set transfer prices and fees, the discussion of financial interdependencies can be avoided, and attention can be allocated to the competencies needed to serve a client. This is of great importance since much of the ideology of network participation is based on sharing and equality, which makes

problematization of financial and competitive relations undesirable as they are seen as evidence of the brutality of the market. Mouritsen and Thrane (2006) claim that there are typically three different types of fees; a fee to cover for overhead expenses at the network center such as brand name, a fee when a partner firm uses another partner firm's intellectual property, and a recurring participation fee to finance and sustain the network center. In general, discussions and debates of fees and transfer prices policies are deferred to the annual general meeting or board meetings. By managing the ongoing distribution of money in predictable ways, self-regulating mechanisms allow the interactions between partners to be focused on the offer to external customers and how to produce income streams.

Orchestration mechanisms are obtrusive. By facilitating the structuring of network relations, they are involved in the development of the network as an entity with a common objective. These mechanisms are oriented towards developing new complementarity relations by distributing competencies across the network. Orchestration mechanisms focus on decision-making for the network entity and typically require a decision at board meetings. Partner firms may not benefit equally from the decisions made, and the orchestration mechanisms make it visible that an individual partner firm is somewhat subordinated the network. This may create conflict and in extreme situations make partner firms leave the network. Mouritsen and Thrane (2006) find three different types of orchestration mechanisms in their study. First, the aim of the orchestration activity may be to equip the network enterprise with a common strategy. This includes a segmentation of firms in terms of skills to counteract internal competition, a map of competencies to create an overview of resources available, and intellectual capital statements to survey what activities need to be performed to develop the competency base of the network. Second, orchestration mechanisms may also be designed to make partners visible to one another and create relations in the network. Examples include fairs, meeting, happenings and events. Third, the process of setting up the self-regulating mechanisms is an orchestration mechanism as well.

Mouritsen and Thrane (2006) claim that the network enterprise is to a large extent the management control mechanisms described above. The management controls produce durability in network relationships by adopting a "third party" position in the inter-organizational relationships, thus developing the boundaries of the network by showing how partner firms are related and problematize how they should be related. Moreover, it is argued that a network enterprise is fragile since the ideology of trusting is a problematizing device, rather than an actual practice, in place when the partner firms' actions conflict the ideology of

the network. The relationship between partner firms would hardly flow without the management controls that help manage uncertainty about the level of motivation of others, for example the predictability in the financial flows provided by the self-regulating mechanisms.

2.3 Theoretical framework

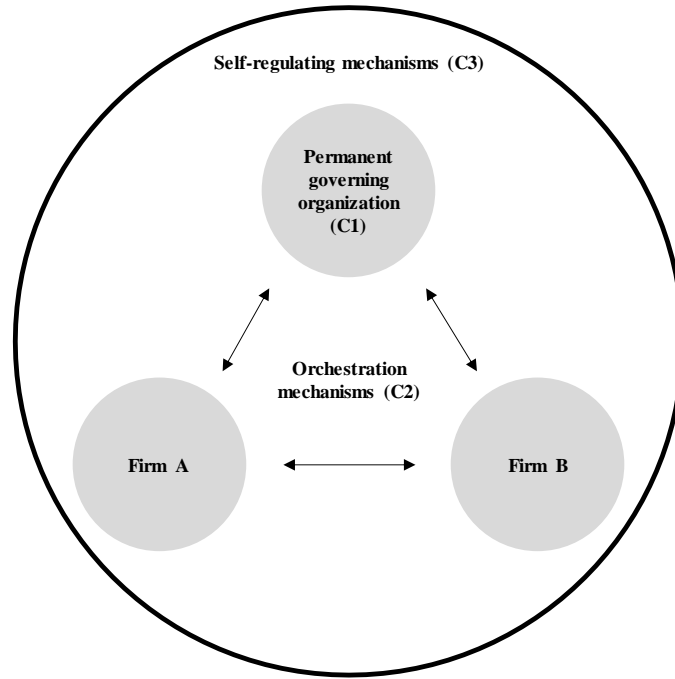
2.3.1 Integrating self-regulating and orchestration mechanisms in the implementation process of a network innovation

The purpose of this study is to further explore the role of management control for the governance and coordination of innovative activities in a network of competing firms. In brief, previous literature on collaborative controls of innovation processes in networks discusses the mechanisms that link actors and domains (Miller & O'Leary, 2007), mechanisms that link actors (Miller et al., 2012) or mechanisms used when there is a temporary governing organization (van der Meer-Kooistra & Scapens, 2015). However, none has studied the control mechanisms in a network of competing firms with a permanent governing organization, and this study aims to address this gap.

Primarily, in previous studies on collaborative controls in inter-organizational innovation processes, ANT has implicitly been applied through the concept of mediating instruments (Mouritsen et al., 2010). Since ANT treats management control as a non-human actor central to the formation of an innovation, and the theory is widely used for analyzing accounting change, this study builds on the same theoretical principle. More specifically, self-regulating and orchestration mechanisms (Mouritsen & Thrane, 2006) are the theoretical cornerstones of the analysis. In this section, we aim to develop a theoretical framework by integrating these theoretical concepts with the outlined gap in the management control and innovation literature. Figure 2 presents the proposed framework. This framework will direct the analysis of the empirics and help us answer the research question:

What is the role of self-regulating and orchestration mechanisms in a network of firms with a permanent governing body in the implementation process of an innovation?

Figure 2. Theoretical framework (explained in section 2.3.2)



2.3.2 An integrated framework for coordination of innovation processes in networks

Miller et al. (2012) focus on the capital budgeting aspects of inter-organizational coordination mechanisms. The objective is to understand the information sharing practices that enable individual firms to align their investments in R&D with the targets at the network level. Furthermore, van der Meer-Kooistra and Scapens (2015) focus on the governance of a product development project in a network of competing firms with a temporary governing organization. The combined focus of their studies sets the foundation for the theoretical framework with a horizontal network of firms A, B, etc. and a governing organization with vertical relationships to the firms in the network. Moreover, there are inter-organizational coordination mechanisms between the governing body and each firm in the network, but also between the individual firms within the network.

To describe the basis of ANT, Callon (1998) states that “*we need simply to add a third party, C, and adopt its point of view for the relationship between A and B to become analyzable and then comprehensible*” (p. 9). This is the theoretical principle that underpins the theoretical framework used in the subsequent analysis, similar to the study by Mouritsen and Thrane (2006). Management control is considered an actor in the network, just like the firms A, B, etc. Management control is divided into two different governing and coordination mechanisms – self-regulating and orchestration mechanisms (C3 and C2). The role of self-regulating

mechanisms is to hold the network together by automatically handling the financial flows to allow interaction and exchange between network firms to occur unobtrusively. In contrast, the role of orchestration mechanisms is to enable network relations and facilitate decision making and the development of the network as an entity with a common objective. This includes both vertical and lateral relationships in the network. The vertical relationships concern the relationships between the firms in the network and the permanent governing organization (C1), a different type of “third party” actor in the model. All actors influence each other and are defined by the interactions with the other actors in the network.

According to Mouritsen and Thrane (2006), self-regulating and orchestration mechanisms are essential in creating a network enterprise since they facilitate interaction within the network and develop and exploit complementarities in the diverse network competencies and resources. However, the function or role of self-regulating and orchestration mechanisms may differ depending on the specific network conditions, for example in an innovation context characterized by uncertainty and creativity. Moreover, the insight into the internal relation between the two mechanisms and how they influence each other is limited. Additionally, the function or role of self-regulating and orchestration mechanisms for interaction and coordination of activities together with parties outside the network is unknown. These are examples of issues that should be further examined, and that are addressed in this paper.

3. Methodology

In this section, the methodology applied in the study is presented. First, the research design and the theories used to form the study are discussed. Second, the selection of case organizations is discussed followed by a presentation of the data collection and the data analysis. Lastly, a discussion regarding the quality of the research methodology is presented. Throughout this methodology section, the ambition is to present the underlying logics of the methodology and how they are linked to the overall objective of the study.

3.1 Research design

There have been several studies focusing on MCS in an innovative setting, and a certain stream of the later research focus on the collaboration between several actors in a network. However, there is no focus on MCS in collaborative innovation processes where the firms in the network together establish a permanent governing body. Hence, the intention is to understand and illustrate this rather novel phenomenon – the permanent governing body. Edmondson and McManus (2007) suggest that management research falls into three types of general designs – mature, intermediate and nascent theory. Given the novice nature of the research question, a nascent research is considered most appropriate. Dyer and Wilkins (1991) recommend that a qualitative, in-depth study of a single case is preferable to get as close as possible to the phenomenon of the permanent governing body. Furthermore, Halinen and Törnroos (2005) argue for a single in-depth case study to investigate a context, especially when the researcher seeks to understand business networks.

3.1.1 Abductive approach

Due to the investigation of a novel phenomenon in this study, the research was continuously modified as data was gathered. This kind of research approach is identified as “systematic combining” (Dubois & Gadde, 2002). The systematic combining approach can be divided into two processes – matching theory and reality, and direction and redirection – and stems from the “abductive logic” which means that the research process is of an intertwined nature. The abductive approach is positioned in relation to an inductive and deductive approach. The inductive approach gradually and systematically develops theories from generated data, while the deductive approach develops propositions from the existing research and test them in the real world. The abductive approach leverages the two concepts and is an appropriate method if the researcher’s objective is to investigate a new phenomenon and have plausible arguments (Dubois & Gadde, 2002; Lukka, 2014).

The abductive approach has been helpful for our research as it has guided the process, starting off by getting familiar with the empirical setting and simultaneously study the existing literature within management control and innovation to steer our focus. As the empirics were gathered, the data was continuously analyzed in order to revise and update the theoretical framework. Hence, the process is iterative which is in line with the abductive approach and it was proven as a fruitful method as it allowed for the literature and focus of the data gathering to shape each other during the process.

3.2 Selection of case organization

Initially, we had the idea of studying management control and innovation within sports organizations. At an early stage, the Hockey League became the focus of our attention mainly due to higher rate of commercialization in the league compared to other sports leagues in Sweden. Furthermore, a favorable access to SHL was secured as one of the authors of this paper had an office at this organization during the research period. Following the abductive approach (Dubois & Gadde, 2002) with a combined empirical and theoretical perspective in mind, we started our research with SHL in focus. The empirical setting of the organization was found interesting since it is the central organization, created and owned by the 14 clubs in the league, that govern and nurture the commercial collaboration between hockey clubs that are competitors sportswise.

Since the objective of this study is to contribute to the management control and innovation literature, the first interviews were focused on understanding how the actors in the Hockey League define and work with innovation. Early on, the interesting innovation ProjectYouth was identified and became the focus of the study. This innovation is a CSR initiative with the objective of decreasing the youth unemployment rate, focusing on youths that are the furthest away from employment, e.g. young immigrants and youths with disabilities. A secondary objective is to attract new and larger sponsorship deals to the Hockey League, by breaking traditional norms in hockey that historically is dominated by a macho culture. Particularly, ProjectYouth is interesting as it was created in one of the clubs and later selected by SHL as an innovation to pilot test in the other clubs in the league. Hence, it was natural for us to include this club (which will be referred to as Club A) in our study since they created the innovation and their perspective of the implementation process is deemed invaluable.

To further strengthen the analysis, we decided to include two additional clubs in the Hockey League, Club B and Club C. These two clubs were chosen as we could ensure access to key

individuals, but also due to their geographical location. Since the clubs were located relatively close by, most of the interviews could be face-to-face ensuring a possibility to build a stronger relationship to the interviewees and a relaxed conversation. Moreover, the geographical location of the clubs was an important determinant in selecting these clubs as it plays a crucial role for our analysis. The local pre-conditions of the clubs included in the study differ, including the size of the city, the local youth unemployment rate and the size of the local business environment and its characteristics. Even though the clubs have differing local pre-conditions all three clubs are essentially similar, being well-known hockey clubs with an organization that spans several different departments, ranging from the men's team, the women's team and youth organizations to supportive functions such as sales and marketing.

3.3 Data collection

Primarily, the empirical data was gathered through in-depth interviews. In total, 15 interviews were conducted with 14 interviewees. The in-depth interviews were designed as semi-structured so that the focus of the interviews was adjusted depending on the answers given to be flexible and open-minded in the search for interesting findings. In addition, internal and external documents have been used as a complement to the interviews in the analysis to ensure a deeper understanding (Maxwell, 2012). The interviews were conducted and documents were collected between January and May 2018. The duration of the interviews was between 25 and 100 minutes, with a majority being face-to-face interviews except a few phone interviews due to the geographical distance. The choice of interviewees was strategic. As we wanted to gain as deep knowledge as possible regarding the creation and implementation of ProjectYouth as well as the role of SHL in the network, we focused on key individuals in the organizations. Furthermore, ProjectYouth includes external actors. For instance, AF and some of Club A's partner firms have been involved in the development and execution of ProjectYouth. Therefore, representatives from AF and one of the partner firms have been interviewed to ensure a nuanced image. For a detailed list of the interviewees, see appendix.

3.4 Analyzing the data

In line with the abductive approach, the empirical findings were continuously analyzed. To execute on this approach in the best possible manner, all interviews were recorded and immediately transcribed so that both authors could reflect on and critically analyze the new findings and draw parallels to the theoretical findings. To further strengthen the empirical analysis, the interviewees behavior during the interviews was carefully studied – for example

the tone in the voice and the choice of expressions and words. The behavior was documented through notes during the interviews and combined with the transcripts to ensure that both authors kept these in mind when analyzing the data. This methodology is deemed to be of great importance since the study concerns the interviewees' personal ideas and reflections.

As the data was gathered, it was categorized into theoretical topics to facilitate the development of the interview process together with the development of the theoretical framework. Hence, the initial interviews were focused on management control and innovation, and the data collected were structured into these categories. In the second phase, the network collaboration perspective was added, guided by both theory and empirics. By introducing the concept of self-regulating and orchestration mechanisms (Mouritsen & Thrane, 2006) in the theoretical framework, the empirics were also structured using these two mechanisms. Hence, the research was constantly focused on the broader concepts of management control and innovation in collaborative networks, but later through the lens of self-regulating and orchestration mechanisms.

3.5 Research quality

In broad terms, qualitative studies within management accounting research can take the perspective of either functionalistic or interpretive research. The functionalist bases its research in theory to come up with a general finding stretching across borders and settings, while the interpretive researcher bases its studies in the empirics and try to come up with a specific finding for an individual setting not applicable in other settings (Lukka & Modell, 2010). Hence, the functionalist is objective, and the interpretive researcher is subjective. This study is of the interpretive nature, and Lukka (2014) describes interpretive research as characterized by having the aim of understanding a unique phenomenon and an examination of how the researched subject develops meanings, rather than general ones. Thus, there is a strong reliability in the researcher's interpretation and theorization of the studied phenomenon. Therefore, the validity of interpretive research has been the subject of wide debates in recent years (Lukka & Modell, 2010). The main argument in the discussion is that the empirical findings in interpretive research have difficulties in establishing the link between cause and effect due to its subjective nature.

The main action taken in our research design to improve credibility is, as suggested by Lukka (2014), to use the abductive approach. By having an abductive design, the risk of the empirics being too decoupled from theories is mitigated. Instead, the iterative process in the research

ensures that the empirics are well grounded in theory. All interview questions have been designed with the theory in mind, and correspondingly, the theory have been studied with the empirics in mind. However, we have allowed for the scope of the data gathering to change when new empirical or theoretical findings have been identified, in line with the abductive approach.

Furthermore, the risk of getting biased data when conducting qualitative case studies is high. When an interviewee looks at a past process, it is easy to see it as a linear process excluding the other possible outcomes (Hoholm & Araujo, 2011). Hence, it was of great importance for the quality of the study to gather information from several people in different positions and in different organizations. Individuals from six different organizations, potentially with different perspectives, were interviewed and asked similar questions. By cross checking the collected data, the risk of analyzing biased data was mitigated to the largest extent possible. In addition, the different perspectives ensure a more nuanced image of the implementation process of ProjectYouth.

4. Case analysis

4.1 Background and context

4.1.1 Introduction to SHL – the governing body overseeing a network of hockey clubs

SHL is the league organization governing the common interests of the 14 hockey clubs in the top hockey league in Sweden. SHL has negotiated with the Swedish Ice Hockey Association (SIF) to get the legal and commercial rights to operate the Hockey League. The purpose of the organization is to manage the clubs' financial interests in areas where the clubs may benefit by giving SHL the overarching responsibility. Hence, SHL is responsible for the broadcasting rights and the national sponsorship deals. SHL's objective is to improve the level of the league, both sportswise and commercially, and to ensure that SHL as a brand is as strong as possible.

SHL is a Swedish limited company owned by the 14 clubs, each club owning 1/14. SHL is governed by a board of directors that consists of seven members – four club representatives and three external representatives. However, all clubs in the league have the possibility to make their voices heard at least two times per annum at the Owners' Forum (OF) when all chairmen and CEOs meet. At the OF, the participants discuss the focus areas for SHL and determine the strategic plan for the coming 18 months. However, the OF has no possibility to make decisions as it is the board that has the ultimate decision power. Typically, the recommendations get definite at a board meeting the following day.

4.1.2 The commercial transformation trend in the Hockey League

The Swedish elite hockey has a history of being conservative and traditional. Historically, the clubs' resources have been allocated to maximize the hockey players' salaries to ensure success for the sports organization, implying reduced resources available for the commercial organization. Consequently, there is a tradition of recruiting retired hockey players rather than external candidates that may be more qualified. However, as SHL was restructured in 2013, the commercial logic gained importance.

“The organizations are becoming more commercially professional, both SHL and the clubs. The largest change is that we now are more business oriented, hiring from other sectors to strengthen the organizations. We have realized that we must allocate more money and resources outside of the ice.” – CEO, SHL

This has resulted in the creation of the modern sport office – being more business oriented and taking a larger responsibility in the society to reshape the image of the sport. The major driver in this transformation is the renewed recruitment process with an increasing focus on

competence. This structural change has enabled the organizations to become more innovative and redesign old and outdated models. This has been the catalyst for the creation of “SustDept”, a business area in Club A, and ProjectYouth, the initiative from Club A that were identified and adopted by SHL. These are further discussed in the following two sections.

4.1.3 Introduction to the innovative business area “SustDept”

“Companies are unwilling to pay for exposure on the jerseys. For each new logo, the value of the existing logos is reduced. In the end, you get to a point where you cannot attract new or larger sponsorship deals.” – Sustainability Director, Club A

SustDept is Club A’s new sustainability business area in which they cooperate with United Nations Children’s Fund (UNICEF), corporate partners and other organizations and associations. The ambition is to be a social benefactor for children and youths in the society. The business area was initiated by the Sustainability Director in Club A in 2013, and became part of the core business to ensure that the sustainability initiative did not end up merely as an activity or project. This implied a new way of thinking and working that was innovative in Swedish hockey.

The first step in the innovation process was to analyze the mega trends in the society, and three major trends were identified; digitalization, urbanization and sustainability. Most importantly, the Sustainability Director believed that Club A had to deliver on the latter since companies today want to be associated with basic values such as equality, diversity and social sustainability. Hence, Club A decided that the club should become a force in the society by using its brand, players and other employees together with their corporate partners.

Club A’s partners were given the right to an association with the brand and SustDept instead of the previous sponsorship tradition of exposure on the jerseys. In addition, partners were strategically involved in the new business area with the authority to participate in decision making regarding SustDept. A steering group was formed consisting of representatives from executive management teams in the largest partner firms. The purpose of forming this steering group was to gather competence from the partner firms to make business plans, communication plans, market research and strategic decisions. This new way of collaborating with partners implied that Club A could sign new sponsorship deals at a higher revenue level.

Together with the steering group, Club A decided that the focus area to deliver on the sustainability challenges should be “children and youths”. Given the strengths of the club and

its network of partner firms, this was considered the area within social sustainability the club had the greatest potential to influence. Furthermore, Club A established a long-term partnership with UNICEF as the first hockey club in the world. The purpose was to get credibility, gain more specialized competences within the chosen focus area, and to increase the value of the sponsorship deals.

SustDept includes four initiatives identified through a thorough analysis and several interviews with the social service, the Swedish Migration Agency, AF, the municipality, and other organizations. The four initiatives are; Leadership Academy, Play and Activity, School Collaboration and ProjectYouth. Club A has five employees, excluding the Sustainability Director, working full-time with SustDept. One of those are solely working with ProjectYouth. From now on, ProjectYouth is the main empirical focus of this paper and is discussed in detail in the following section. The reason is that ProjectYouth is the network innovation that SHL decided to implement in the other clubs in the league.

When the steering group conducted the analysis of potential initiatives for Club A to engage in, they found that the unemployment rate among youths in the region was the highest in Sweden. Together with AF, the club created a strategy on how to reduce the unemployment rate among youths. The youths targeted are between 18 and 26 years old and are the ones furthest away from employment. Hence, these are individuals who have never had an employment before and risk becoming outcasts in society – a group primarily consisting of immigrants and individuals with disabilities or special needs. These unemployed youths imply a great cost for the society and Club A, with more than 500 partner firms in their network, believe that they can help reduce the unemployment rate. The core idea of the project is to create internships for the youths at one of the partner firms through speed dates with the corporate partners. Hence, this enables the youths to get an introductory line on their CV, which may motivate them to go back to studies or get a full-time employment.

4.1.4 The network innovation "ProjectYouth"

"A brand is everything, 360 degrees. How do we behave? How do we look? How do we meet people? How do we communicate? How do we make our money? What are our morals and ethics?" – Communication Manager, SHL

These were the questions that the management of SHL asked themselves in 2013 when they restructured the elite hockey league in Sweden. Similar to Club A, SHL concluded that the

clubs' possibility to attract and increase local sponsorship deals had stagnated. Hence, they had to improve the SHL brand to attract national partners. However, the organization realized that it was not enough to deliver hockey entertainment and inspiration for young hockey players – they had to take a larger responsibility in society. The organization had elaborated on the idea and tested a few activities such as participation in the Movember initiative⁴. These initiatives were doing good, but merely activities and very difficult for SHL to evaluate and sustain. Hence, the organization analyzed other options closer to their core business for establishing a CSR strategy.

“It would be good enough if we can be a force in getting children and youths in movement. We started to elaborate on how to solve this societal problem by means that are close to our core business. It was logical to look at the initiatives created by Club A.” – Communication Manager, SHL

The outcome of the analysis was that children and youths were less engaged in sports activities, and therefore SHL looked at Club A's new business area since they already had a functioning model with the same objective. However, adopting SustDept was too extensive for SHL. Instead, the management of SHL found ProjectYouth appropriate since it requires minimum effort from the clubs as they already have a large network of partner firms. Furthermore, SHL considered it possible to prove the socio-economical cause-effect relationship between the clubs' activities and the societal economic gain.

Club A and its partners had invested a lot of time and money into ProjectYouth. However, they did not expect any reimbursement from SHL for being fully transparent and sharing their work. This is to a large extent due to the overall logic in the Hockey League – the clubs are rivals on the ice but cooperates commercially since they are stronger together. The Sustainability Director of Club A claims that ProjectYouth will be more valuable and a stronger force in society if implemented by SHL rather than only in their own region.

As a first step in the implementation process of ProjectYouth, it was decided that SHL should organize a pilot test including six clubs together with Club A during week 4 in 2018. They were picked primarily based on their own engagement, but also due to their geographical location.

⁴ An annual campaign in November to raise awareness of men's health issues run by the Movember Foundation

The project is designed as speed dates where unemployed youths meet the clubs' corporate partners with the ambition that the youths should get an internship leading to full-time employment or enrollment in higher education. The responsibilities of AF and the clubs in connection to the speed dates are presented in Figure 3.

Figure 3. The responsibilities of AF and the club in connection to the speed dates

Action	Invite parties	Information sharing	The speed date	Evaluation	Follow up
Responsibility AF	Invite unemployed youths	Inform the youths about the companies that they will meet and what is expected of them	Joint responsibility to decide on when and where the speed date should take place	Evaluate the speed date together with the club	Follow up how many youths and firms that participated and how many youths that got hired
Responsibility Club	Invite corporate partners	Inform the partners what is expected of them	Joint responsibility to decide on when and where the speed date should take place	Evaluate the speed date together with AF	No responsibility

4.2 Management control mechanisms

4.2.1 Self-regulating mechanisms

As previously explained, self-regulating mechanisms automate the financial and distributional effects in a network of firms, allowing partner firms to focus on day-to-day activities. In the Hockey League, the clubs have relinquished the responsibility for broadcasting rights and national partnerships to SHL. The league organization negotiates the terms of contract and receives the contractual payments. Common costs are deducted from the revenues and the remaining income is paid to the clubs five times per season at predetermined dates, and possibly at an additional occasion if needed. This implies that all 14 clubs get an equally large share of the income at the same time, about every other month. Common costs include for example salaries to employees in the league office and to referees. However, costs that are club specific, or that are varying between clubs, are invoiced to the club and not included in the common costs. The automatization of financial flows, both revenues and costs, is a self-regulating mechanism that enables the club executives to focus on their daily work. If SHL delivers what they have promised beforehand, there is no discussion of the financial flows.

“They get angry if we promise them 25 million, and then in January communicate that they will only receive 23 million. However, if they know they will get 25 and get 25 it is all good. No one will ask for 26, but what is important is that we deliver as promised since they anticipate this payment in their budgets and it is a rather large share of their total revenues.” - CFO, SHL

Regarding the costs of ProjectYouth, SHL and Club A have come to an agreement stipulating the division of responsibilities. Initially, SHL did not pay Club A or their partners for the model they had developed, but SHL is responsible for further development costs that benefit all clubs. This implies that Club A is still responsible for costs related to the model in their region, but not on a national level. In addition, SHL compensates Club A’s representatives for the time they spend on developing the model on a national level or to help other clubs in the league. Furthermore, the other clubs have no significant costs related to the speed dates, only insignificant costs of coffee and the working hours of the club representative that they do not get any compensation for. Since the allocation of responsibilities were agreed before the project was tested in other clubs, the distribution of costs in ProjectYouth seems to be another self-regulating mechanism that allow project participants to focus on the model and its activities, and not on financial matters.

4.2.2 Orchestration mechanisms

Mouritsen and Thrane (2006) find three types of orchestration mechanisms with different objectives in their study; (i) equip the network with a common strategy, (ii) make partners visible to one another and create relations in the network, and (iii) set up self-regulating mechanisms.

Equip the network with a common strategy

The overall strategy for SHL is discussed and determined during the OF, even though the decisions become formalized at a subsequent board meeting. During 2017, the clubs agreed upon a new vision and a new strategy with certain strategical focus areas for SHL, in which the CSR strategy is included. The decision at the OF (confirmed by the board) implied that the strategy would derive from Club A’s SustDept, with ProjectYouth as a first step.

There is no specific strategic plan for the implementation of ProjectYouth in the league since the clubs at this point only have agreed on a pilot test during 2018. However, Club A has made business plans and other strategic and operational material guiding the operations in their region. Certain parts of this material have been adopted by the league organization, rebranded

from Club A to SHL, and thereafter distributed to the clubs participating in the pilot project. This includes company invitation proposals and proposed frameworks for how to arrange a speed date. Furthermore, the representatives from Club A state that they are fully transparent and that all their competence and experience are available for the other clubs.

Make partners visible to each other and create relations in the network

Club representatives meet each other, quite naturally, in informal settings in connection with the games at several occasions during the hockey season. However, there are also formal meetings and forums where for example the CEOs and Commercial Managers in all clubs meet one to four times per year. The main purpose is to get the opportunity to meet in person and learn from each other by exchanging knowledge and experiences. At the CEO meetings there is also room for making decisions about the clubs' common interests.

At one of these formal meetings with the CEOs from all clubs in the league in the early fall of 2017, the decision was taken to pilot test ProjectYouth during 2018. Later during that fall, the representatives appointed by each club in the pilot project met at a one-day information session at Arlanda outside Stockholm. In this meeting participated AF's Business Sector Specialists from the regions in question, as well as representatives from the local AF offices. The meeting was arranged by the Communication Manager at SHL together with the Sustainability Director at Club A. The information session started with three presentations by the organizers and the Business Sector Specialist responsible for coordinating AF's national operations within ProjectYouth. After the presentations, workshops were arranged with representatives from the club and the local AF to agree on the details for the first speed date.

After the first speed date, the Communication Manager at SHL and the Business Sector Specialist coordinating ProjectYouth at AF arranged a follow-up meeting over the phone. The participants were the representatives from each club and the corresponding local AF office. The representatives from each speed date got the opportunity to speak about their positive and negative experiences and what they want to change until next time. The Communication Manager at SHL is responsible for reporting a summary of the evaluation to the CEOs so that they can decide on the way forward at the next OF. In total, she perceived the response from the representatives as positive.

However, the initial decision to pilot test ProjectYouth during 2018 seems to have been poorly established in the clubs. The Deputy CEO in Club B claims that the decision was taken without

really discussing it, and according to the CEO in Club B this decisional ambiguity is a general problem in the CEO meetings.

“At times we have different views regarding whether the decision has been made. Either we do not agree that we have made a decision, or that we have not made a decision. The key to success in this type of organization is the structure of the decision process and how explicit the decisions are.” – CEO, Club B

Potential reasons for the decisional ambiguity mentioned include deficient communication in the meetings or deficient coordination within the respective organization. The CEO in Club B points to the importance of informing your own organization about the decisions made in the meetings. At times – she explains – there have been contradicting dialogues at CEO meetings and Commercial Manager meetings leading to confusion and misunderstandings.

Set up self-regulating mechanisms

The setup of self-regulating mechanisms as an orchestration activity is less common in the Hockey League compared to the previous two. However, it is an important function as it enables a possibility for the clubs to participate in the underlying agenda setting of the collaborative network. The adjustment of self-regulating mechanisms usually requires a general meeting or board decision. An example is the soon-to-be implemented incentive model, in which ProjectYouth may be included to incentivize the clubs to fully engage in SHL’s CSR initiative. During the process of setting up the incentive model, representatives from SHL have arranged workshops with the clubs to collect ideas and thoughts. Based on the outcome of these workshops, SHL’s management team has formulated an incentive model that have later been accepted at the OF and a subsequent board meeting.

“The clubs feel that they have been included in the decision process for the first time, and not that we have taken a unilateral decision. Everybody feels included and as co-designers of the incentive model.” – CFO, SHL

4.3 Tensions during the implementation of “ProjectYouth”

The attitude towards ProjectYouth varies among the clubs in the hockey league, and some have changed their view after the first speed date. After interviews with representatives from two clubs (Club B and Club C) participating in the pilot project, Club A, SHL and AF a few issues have emerged. These issues are considered to stem from an insufficient analysis from SHL and include a collision between different perspectives on sustainability and diverging local pre-

conditions. Moreover, a flawed collaboration between the hockey clubs and AF has been identified. In this section, these issues are further described.

4.3.1 Insufficient analysis from SHL

As previously discussed, the use of the self-regulating mechanisms establishes the financial flows in the network and determines the financial resources available for SHL to allocate to different operations or projects. Currently, the amount of resources available for the CSR operations is low. Therefore, the organization has no project group managing ProjectYouth on a league level. Currently, the Communication Manager at SHL is responsible for the pilot project during 2018. Her role is to ensure that every club participating in the pilot project designates a club representative, to distribute materials and to be available as a support to club representatives.

The current use of self-regulating mechanisms is considered to constrain SHL's ability to adequately perform an initial analysis of the CSR strategy and the optimal design of it. The lack of analysis by SHL is mentioned by several interviewees.

“I believe that Club A's Sustainability Director has promoted this project as a really good thing, and then SHL has not reflected on what they have embarked on” – Deputy CEO, Club B

For instance, the Deputy CEO in Club B believes that the research process has been flawed and too quick. He argues that SHL should have done a more thorough analysis of how to work with CSR in a way that is feasible for all clubs, instead of just embracing the top-of-mind model. The representatives interviewed from Club A and AF claim that the Communication Manager does not have the time and resources required to continuously work with sustainability. Therefore, they argue that SHL must invest to establish an administrative sustainability organization that could develop a common sustainability strategy and govern activities such as ProjectYouth. This organization should aim to inspire the clubs to establish their own administrative sustainability organizations, and work closely with local representatives by using orchestration mechanisms to learn about local challenges and how the clubs and SHL can contribute in solving these challenges. If SHL does not invest in the resources required, the Project Leader of ProjectYouth in Club A is concerned that the club representatives will lose motivation, which would be devastating for the national implementation of ProjectYouth.

4.3.2 Collision between different perspectives on sustainability

Club B launched a new model for their sustainability operations during 2017, and has a small administrative organization consisting of two employees working with sustainability. Several employees in important positions within Club B consider their perspective on sustainability substantially different from the perspective of Club A.

“We have tried to have a much more strategical approach where we have started by looking at ourselves. Looking for what we need to succeed in the long run. Afterwards, we see how our need is linked to what the society needs, what our sponsors need, and what our supporters need. In the inflection point of our internal needs for being successful long-term and the societal needs, we find our sustainability operations” – Project Leader of Club B’s sustainability operations

Instead of a normative approach to sustainability where you start by looking at the needs in the society, Club B has chosen a strategical approach and started by exploring their own needs. Since sports is their core business and area of expertise, it is the starting point of the club’s sustainability work. They believe that they can use their strengths to address and solve many of the societal needs, while at the same time strengthening their own club. Club B has chosen to focus specifically on the health of youths, and therefore works to activate local youths regardless of whether they are already part of a team within the association or not. It is of great importance that everyone in the organization understands the necessity of these activities for their own success. As the Commercial Manager, for example, understands how activating youths helps him to attract sponsors, the model ensures that the operations become sustainable and not a one-time project. Club B is fully devoted to this model and experiences an increased interest from partners to sponsor the club.

As there is a fundamental difference in the view of how to work with sustainability between Club A and Club B, Club B representatives are critical to the implementation of Project Youth. They consider the potential risks to outweigh the opportunities.

“You have to define the difference between what we can contribute with and what we can take responsibility for. It is important to notice that we can definitely not take responsibility for the youth unemployment. I mean, Arbetsförmedlingen gets SEK 80 billion per year, which is approximately SEK 17,000 per month per unemployed, and they cannot manage to solve the problem. Then we would be stupid if we said that we will take responsibility for Swedish

unemployment. We can only get punished. Instead we should ask ourselves, what can we contribute with?” – Deputy CEO, Club B

To begin with, they claim that the knowledge required does not exist within the organization, and therefore they cannot take responsibility for solving youth unemployment. Instead, they should focus on what they can contribute with to avoid an unnecessary reputational risk and bad publicity. Secondly, several employees claim that the relationships with partners and sponsors may be threatened by ProjectYouth. As the club cannot control who will meet the important corporate partners, the partners’ perception of, and relationship with, the club may be harmed. Additionally, club representatives do not want to demand too much time from the partners that risk affecting their time available for other partner activities.

As a consequence of the fundamental difference in the view of sustainability, Club B has decided to work with ProjectYouth as a separate activity. The two employees responsible for the sustainability model have made it clear that they are critical to initiatives from SHL within this area. Instead, the Event Manager is responsible for the speed dates during the pilot project. Remarkably, during interviews with representatives from SHL, it appeared that they are unaware of Club B’s discontent with the implementation of ProjectYouth.

Again, this conflict primarily seems to stem from the poorly used self-regulating mechanisms and the resulting deficiency in the use of the orchestration mechanisms. The insufficient analysis affected SHL’s development of a CSR strategy and they listened to the party that most effectively used the orchestration mechanisms, i.e. the Sustainability Director in Club A who successfully promoted their CSR activities. Meanwhile, representatives from Club B failed to use the orchestration mechanisms to highlight how they work with CSR and how their operations would be affected by the implementation of ProjectYouth.

4.3.3 Diverging local pre-conditions

Due to the inadequate allocation of resources to SHL through the use of self-regulating mechanisms, local pre-conditions were not taken into consideration when deciding on what CSR strategy to implement. Local pre-conditions are mentioned as important determinants for the success of ProjectYouth by representatives from the three clubs, SHL and AF. The clubs are geographically dispersed, which implies that the observed local pre-conditions differ considerably. Hence, this is another source of conflict.

First, Club B representatives point to the importance of the size of the city or town and its implications for the relationship with the local business sector and the municipality. For example, the Deputy CEO argues that it is easier to establish a tight relationship with companies in a small city or town. Potential reasons include fewer sports clubs to choose from when companies look for partners, and that there is less competition for company representatives' time. Second, Club C operates in a region that attracts companies, rather than the opposite as in the region where Club A operates.

“There are many major logistics firms coming here since this is a logistics hub. Right now, there is a lack of labor here and therefore it is not surprising that it [the characteristics of the unemployed] differs. Here you find the people that are constantly rejected. There are two categories here: the youths that choose not to work, since it is not cool enough to work in a warehouse, but will make it anyway; and the youths that always get rejected or that do not even try to find a job.” – Commercial Manager, Club C

According to the Commercial Manager, the shortage of labor in the region has resulted in the lowest youth unemployment rate in Sweden. This is a crucial difference in pre-conditions compared to the region where Club A operates that substantially affects the characteristics of the unemployed youths involved in the project. Third, several actors denote the engagement of the club and local AF representatives to be a key pre-condition for the success of the project. For instance, the Project Leader of ProjectYouth in Club A states that the personality and passion for solving unemployment is more important than the role in the organization. She claims that there are a few examples from the pilot project where representatives have seemed to be uninterested and detached resulting in a bad outcome of the speed date.

Representatives from Club B and Club C seem to agree that the model will not necessarily be successful in their setting just because the outcome has been positive for Club A. However, a little surprisingly, the Sustainability Director in Club A, the founder of ProjectYouth, has the same view. He believes that all clubs should pass through the same process of exploring the societal challenges in their region as Club A did before launching SustDept, since the geographical pre-conditions are so dispersed. He argues that this should be part of the analysis by SHL before deciding upon the final model.

4.3.4 Flawed collaboration between hockey clubs and Arbetsförmedlingen

AF has established approximately 60 national and regional partnerships with large corporations and organizations in Sweden to reduce the unemployment rate. One of the national partnerships is the collaboration with SHL governed by the Business Sector Specialist coordinating ProjectYouth at AF. He is responsible for setting up a national system for reporting the progress of the project. However, the follow up has been one of the major issues during the initial phase of the project. Follow up is crucial for the evaluation and assessment of the project, but AF has struggled to communicate the results from the speed dates. The Sustainability Director in Club A notes that this project is a real challenge for AF since their reporting system is out-of-date. The Business Sector Specialist admits that they have struggled to find an appropriate structure for reporting the long-term progress of each candidate, but states that they are looking at what kind of national system they have the resources to build and maintain. However, he points out that it will not be easy.

During the pilot project, club representatives from Club B and Club C have experienced that the representatives from the local AF office were not as prepared as they had hoped for. The Commercial Manager in Club C believes that this is a general problem at AF – the decision makers are not sure how to create engagement internally and work with the project yet. This view is supported by the Communication Manager at SHL.

Furthermore, the only control mechanisms that guide the collaboration between SHL and AF are the initial letter of intent that is signed by the two parties together with the internal documents regarding the design of the speed dates. The letter of intent is a formal document that merely states that the two parties intend to collaborate in ProjectYouth long-term. The internal documents are guidelines on how the speed dates could be executed and a suggestion of how responsibilities could be allocated between the parties. Besides the letter of intent and the internal documents, SHL and AF have no procedures or processes that control the effectiveness of the collaboration and that each party performs what they have promised.

5. Discussion

5.1 The importance and interdependence of control mechanisms in networks

In section 2.3, the theoretical framework for the analysis of the empirics is presented. By applying the concepts of self-regulating and orchestration mechanisms (Mouritsen & Thrane, 2006) as theoretical cornerstones, we seek to study the control mechanisms involved in the governance and coordination of innovative activities in a network of competing firms with a permanent governing organization. The analysis is intended to answer the following research question:

What is the role of self-regulating and orchestration mechanisms in a network of firms with a permanent governing body in the implementation process of an innovation?

The roles of self-regulating and orchestration mechanisms involved in the implementation of ProjectYouth in the Hockey League are summarized in Figure 4, and are further elaborated on in section 5.1.1 and 5.1.2 respectively. Evidently, self-regulating and orchestration mechanisms are essential for the coordination and implementation of the network innovation ProjectYouth to govern and streamline day-to-day project activities. As concluded by Mouritsen and Thrane (2006), “*the relation between partner firms could hardly flow without the help of certain management technologies that (imperfectly) execute the relations between partners*” (p. 273).

Unsurprisingly, similar conclusions are drawn within the management control and innovation literature on network collaborations. First, Miller et al. (2012) identify mechanisms that align the investments required as well as mechanisms such as appropriate forums for information exchanges between firms. These mechanisms enable individual firms to align their investments in R&D with the targets of the network. Second, van der Meer-Kooistra and Scapens (2015) find that economic and social structures have different roles in governing a product development project within a network of competing firms. Economic structures provide the context for the project and govern the relationship between organizations. Social structures govern the everyday activities of the project team and coordinate knowledge sharing with employees in other firms in the network. Hence, Miller et al. (2012) and van der Meer-Kooistra and Scapens (2015) find mechanisms similar to, although not exactly the same as, self-regulating and orchestration mechanisms for governance and coordination of innovative activities. However, our analysis of the implementation of ProjectYouth in the Hockey League suggests that there is an interdependence between these mechanisms when there is a permanent

governing organization. Moreover, we argue that the self-regulating mechanisms create prerequisites for the permanent governing body to efficiently use orchestration mechanisms to coordinate and govern the innovative activities. This is further discussed in section 5.1.3.

Figure 4. Self-regulating and orchestration mechanisms (Mouritsen & Thrane, 2006) involved in the implementation of ProjectYouth in the Hockey League

	Self-regulating mechanisms	Orchestration mechanisms
Setup phase	Initiation phase	Execution phase
Purpose	Allow project participants to focus on daily project activities, and not on financial matters	Coordinate the project by enabling information flows, decision-making, evaluation and the exchange of knowledge and experiences
Examples	<ul style="list-style-type: none"> ▪ SHL's prearranged responsibility for broadcasting rights, national partnerships and common costs ▪ Prearranged distribution of costs in ProjectYouth 	<ul style="list-style-type: none"> ▪ Decisional (OF, board, CEO), informational and evaluation meetings ▪ Rebranded strategic and operational materials developed by Club A
Outcomes	<ul style="list-style-type: none"> ▪ No negotiations of financial matters during the project ▪ Resources provided for the league organization SHL 	<ul style="list-style-type: none"> ▪ Pilot test of ProjectYouth as a potential common CSR strategy
Dilemmas	<ul style="list-style-type: none"> ▪ Shortage of resources allocated to ProjectYouth ▪ Lack of initial analysis by SHL 	<ul style="list-style-type: none"> ▪ Knowledge gaps between Club A and other actors in the network ▪ Poorly established decisions regarding ProjectYouth and CSR

5.1.1 The role of self-regulating mechanisms in the network

In short, Mouritsen and Thrane (2006) define self-regulating mechanisms as mechanisms that “allow interaction and exchange to occur unobtrusively” (p. 241). In the Hockey League, these self-regulating mechanisms have resulted in the clubs' common interests to improve the league. These common interests originate from the need of enhancing the value of the SHL brand to maximize revenues from broadcasting and national partnerships. This is an essential pre-condition for competing clubs to care to share innovations with each other, which Club A decided to do with ProjectYouth. Club A is transparent and shares all their material with the other clubs without any request for financial compensation. Moreover, during the pilot project

there have been no negotiations of how to share the upcoming costs as this was stipulated beforehand. Consequently, project participants may solely focus on daily project activities, and not on financial matters.

In the study of the governance of product development in a network of firms, van der Meer-Kooistra and Scapens (2015) note that the economic structures were put in place during the initiation phase, similar to the self-regulating mechanisms established in the Hockey League that have an impact in the initiation phase of the innovation process. The self-regulating mechanisms enable the existence of the permanent governing organization, SHL. The clubs, which also are the owners of SHL, provide the resources for this organization to work with the clubs' common interests. More specifically, through the board they determined the resources available to SHL to design and implement a common CSR strategy. Thus, using these resources the Communication Manager at SHL was given the responsibility for ProjectYouth, as one of many tasks included in her role. Given the limited resources at hand, she decided to adopt a complete model developed by Club A to efficiently use the resources in terms of both time and capital.

A great amount of resources was required when Club A developed a CSR strategy based on an extensive analysis of the mega trends and the sustainability challenges in the region. Club A had support in terms of both competence and financing to develop the CSR strategy and establish the business area SustDept. Therefore, representatives from both Club A and AF argue that SHL has not allocated enough resources in terms of time and capital for working with sustainability. This shortage of resources is claimed to have resulted in the insufficient initial analysis by SHL, which is mentioned as the main reason for the tensions originated – the collision between different perspectives on sustainability and the ignored divergence in local pre-conditions. In the end, this shortage of resources due to the use of self-regulating mechanisms is the responsibility of the board and ultimately the owners – the clubs.

5.1.2 The role of orchestration mechanisms in the network

Similar to the social structures described by van der Meer-Kooistra and Scapens (2015), orchestration mechanisms are built during the execution phase of the innovation process. As the organization governing the implementation process of ProjectYouth, SHL together with the clubs that own the organization have developed and now apply orchestration mechanisms to coordinate and steer the project given the resources at hand. The purpose of these mechanisms is to inform project participants, make decisions on how to move forward, and evaluate the

progress of the project. Moreover, they are designed for club representatives to exchange knowledge and experience across organizational boundaries. According to Mouritsen and Thrane (2006), orchestration mechanisms “*help develop the network as an entity with a common objective*” (p. 268). This logic also applies to the orchestration mechanisms used in the Hockey League, in which they have enabled a first step in creating a common CSR strategy with the pilot test of ProjectYouth. This pilot test serves as a basis for the board, and ultimately the clubs, to decide on in which direction they want to further develop the CSR strategy.

During the process of developing a common CSR strategy, Club A has undoubtedly played a major role. Firstly, an important reason for the decision to adopt ProjectYouth in the Hockey League seems to be the promotion from the Sustainability Director in Club A. Secondly, during the pilot test, Club A has been vital by introducing the project during informational meetings and sharing all their project materials. Club A’s important role in the project has been useful for some clubs during the pilot test. However, it has also created resistance. Some club representatives have understood the decision to adopt ProjectYouth as poorly established. We argue that the nature of the innovation as such has created a knowledge gap between Club A and the other parties in the network resulting in this view. As innovation implies a new way of thinking and a disruption of existing norms, it is not surprising that decision makers, unfamiliar with the innovation, find it hard to make decisions about it. Furthermore, as the innovation is for a good cause such as reducing youth unemployment, it becomes problematic for other clubs to advocate a contradicting view even though the club believe it would not benefit from the implementation of the innovation.

5.1.3 Self-regulating mechanisms role in creating prerequisites for the governing body to coordinate the network using orchestration mechanisms

In section 2.3, where the theoretical framework is presented, we conclude that the functions or roles of self-regulating and orchestration mechanisms may differ depending on the specific network conditions. ANT offers a simple explanation why – all actors, including management controls, influence each other and are defined by the interactions with other actors in the network. In short, the theoretical principle implies that the management controls may problematize the relationship between the partner firms by taking a third-party position (Mouritsen & Thrane, 2006). Using the same logic, the network of firms and the permanent governing body may as well take a third-party position to problematize the relationship between self-regulating and orchestration mechanisms. By using this logic to analyze the empirical

findings in this study, we find an interdependence between self-regulating and orchestration mechanisms that is amplified in the innovative setting.

At first, self-regulating mechanisms are put in place to handle the allocation of resources to SHL, which create boundaries for the development and use of the orchestration mechanisms. As the amount of resources in terms of financing and competence allocated to the league organization is too limited, SHL becomes a weak counterpart in the relation with Club A. Club A is allowed to play a major role in both the decision to adopt ProjectYouth and during the pilot test as SHL lacks competence within CSR, and financial resources to build knowledge within this area. The knowledge gap is wide since ProjectYouth is an innovation, implying a new way of thinking and working. Hence, there is an interdependence between the two mechanisms. van der Meer-Kooistra and Scapens (2015) also find interconnections between various structures in their minimal structures framework, and that these interconnections change over time. However, we argue that the self-regulating mechanisms create prerequisites for the permanent governing body to coordinate and nurture the collaboration in the network by using orchestration mechanisms. Therefore, the use of the self-regulating mechanisms during the initiation phase of the implementation process of the innovation is of great importance for the efficiency of orchestration mechanisms during the execution phase. If used inadequately, tensions such as the collision between different perspectives on sustainability and the ignored divergence in local pre-conditions may occur.

5.2 Management controls governing collaborative dyadic relationships

Self-regulating and orchestration mechanisms (Mouritsen & Thrane, 2006) are essential for SHL and the network of clubs to govern and coordinate the implementation of the innovation ProjectYouth. Even though the mechanisms are not perfectly designed and used, they align the actors' interests and nurture the collaborative innovativeness in the network. However, the success of the innovation ProjectYouth is not only dependent on SHL and the clubs, but also on AF. AF takes on an important role in ProjectYouth as they are responsible for bringing unemployed youths to the speed dates and follow up the results after the speed dates. From a network perspective, AF is a new and temporary actor that to a large extent are excluded from the mechanisms connecting the actors in the network. AF is not involved in the self-regulating mechanisms in the Hockey League. However, to some extent AF is included in the orchestration mechanisms since they participate in the information and evaluation meetings regarding ProjectYouth. In line with the reasoning by Mouritsen and Thrane (2006), the partial exclusion

from involvement in the control mechanisms is problematic since these mechanisms are necessary to facilitate the collaboration between partners.

The lack of involvement in the network, and more specifically in the self-regulating mechanisms, has generated implications. AF does not have the same financial interests in the success of ProjectYouth as the clubs in the network have. The potential financial benefits for the clubs are evident. For instance, Club A has already proven that there is a potential financial gain from working with sustainability, as they have substantially increased the revenue from sponsorships after initiating SustDept. The common financial interest in the success of ProjectYouth is a result of the establishment of self-regulating mechanisms, as mentioned in 5.1.1. Self-regulating mechanisms create conditions that facilitate cooperation, since the discussion of financial interdependencies may be avoided (Mouritsen & Thrane, 2006). However, the potential financial benefits for AF are less evident. ProjectYouth is only one out of 60 similar nation-wide initiatives that AF is engaged in. Hence, by not being included in the network and therefore excluded from the self-regulating mechanisms, the financial gains for AF become less visible. Therefore, the project may seem less important to an employee at AF than to an employee in the clubs. Furthermore, the exclusion implies that it is difficult for AF to see the financial gain from making large investments in reporting systems – which is considered a key to success for ProjectYouth by SHL and the clubs.

Mouritsen and Thrane (2006) claim that management technologies help to establish the network as a network enterprise, i.e. the organizations involved together with the self-regulating and orchestration mechanisms create one single actor – a network enterprise. In our empirical case, we identify one original network enterprise, consisting of SHL together with the network of clubs, and one new actor, AF. Hence, two actors collaborate in ProjectYouth, the original network enterprise and AF. Their relationship may be considered as dyadic. Some dyadic relationships previously studied in the management control and innovation literature have certain mediating instruments that enable the collaborative innovation process (Carlsson-Wall & Kraus, 2015; Wouters & Kirchberger, 2015). The mediating instruments play a crucial role in these collaborative settings as they enable trust between the actors by creating guidance and structure.

However, Carlsson-Wall and Kraus (2015) show that some mediating instruments do not have an enabling impact when they are designed poorly. Our empirical case shows that there are mediating instruments in place with the aim of providing guidance and structure for the actors

in ProjectYouth – the letter of intent that has been signed by SHL and AF, and the internal documents with information and proposals on how to conduct the speed dates. We argue that these mediating instruments are insufficiently designed to fully enable the collaboration between the two actors. This view is based on the deficiencies mentioned by club representatives regarding the lack of follow up and lack of preparation from local AF employees. By doing so, we confirm the findings of Carlsson-Wall and Kraus (2015) that mediating instruments may be of little importance for the collaboration in innovative processes if inadequately designed.

To conclude, Mouritsen and Thrane's (2006) findings regarding management technologies in a network do not include a discussion of collaboration between the original network enterprise and a new actor temporarily included in the network. By using the theories of Carlsson-Wall and Kraus (2015), we claim that the original network enterprise consisting of a network of firms, the permanent governing body and the control mechanisms may engage as a single actor in a dyadic relationship with a new actor. This is an empirical extension to the findings of Mouritsen and Thrane (2006). However, we further argue that poorly designed mediating instruments connecting the two actors may be of little importance for collaboration.

6. Conclusion

The aim of this case study is to fill the outlined gap within the management control and innovation literature – identified as the role of management controls to govern and coordinate innovative activities in a network of competing firms with a permanent governing body. Previous literature on collaborative controls in networks discusses mechanisms that govern and coordinate lateral relationships in the network (Miller et al., 2012) or mechanisms that govern and coordinate vertical and lateral relationships in the network when there is a temporary governing organization (van der Meer-Kooistra & Scapens, 2015). However, none has studied the role of control mechanisms in a network of competing firms including a permanent governing organization in the implementation process of a network innovation. By integrating ANT, and more specifically the concept of self-regulating and orchestration mechanisms, to address this gap, we contribute to previous literature on management control and innovation in collaborative settings. The combined framework enables an understanding of the role of self-regulating and orchestration mechanisms and how they influence each other.

Two contributions to the existing literature are identified by analyzing the empirics using the combined framework. First, we contribute to the management control and innovation literature on collaborative controls in networks (e.g. Miller & O’Leary, 2007; Miller et al., 2012; van der Meer-Kooistra & Scapens, 2015). Drawing upon the findings of Mouritsen and Thrane (2006), who conclude that self-regulating and orchestration mechanisms help to engage network participants in collaboration, we find that there is an interdependence between the two mechanisms. More specifically, we claim that the self-regulating mechanisms create prerequisites for the permanent governing body to coordinate and nurture collaboration for innovation in the network by using orchestration mechanisms. The dependency of orchestration mechanisms on how the self-regulating mechanisms are used seems to be stronger in innovative contexts as they are characterized by knowledge gaps that emerge when some parties know more than others due to the novelty of the innovation. Consequently, the use of the self-regulating mechanisms during the initiation phase of the innovation implementation process is of great importance for the governing body to efficiently use the orchestration mechanisms and manage tensions during the execution phase. As such, this contribution adds to our knowledge within the management control and innovation literature by showing how the function of the permanent governing body is linked to the interdependent roles of self-regulating and orchestration mechanisms in collaboration for innovation.

The second contribution is of empirical nature and related to the research on ANT in inter-organizational MA, and more specifically the findings of Mouritsen and Thrane (2006). In line with Mouritsen and Thrane (2006), we find that self-regulating and orchestration mechanisms are essential for the network of firms together with the permanent governing body to coordinate the implementation process of an innovation. However, Mouritsen and Thrane's (2006) perspective is limited to the original network enterprise, i.e. how the management control mechanisms help to establish the original network as a network enterprise, and do not discuss the effects of temporarily including a new actor in the network. We extend the theories of Mouritsen and Thrane (2006) by studying an empirical case where a new actor, which is not included in the self-regulating mechanisms and only partly in orchestration mechanisms, is participating in the implementation process of the innovation. We conclude that the lack of involvement in self-regulating mechanisms may lead to a lack of commitment and engagement from the new actor, which may result in tensions between the network enterprise and the new actor. Moreover, by including the theories of Carlsson-Wall and Kraus (2015), we claim that the original network enterprise may engage as a single actor in a dyadic relationship with the new actor. We further argue that inadequately designed control mechanisms, such as mediating instruments as discussed by Carlsson-Wall and Kraus (2015), may be of little importance for a successful coordination of this dyadic relationship.

The research within management control and innovation in collaborative settings, more specifically in a network of competing firms, has been limited. Thus, we believe that these contributions may enable us to better understand the role of management control in innovative processes in other similar and complex inter-organizational settings as well. Furthermore, the second empirical contribution and new perspective on how to look at collaborations in a complex network may be a starting point for further research on the control mechanisms governing and coordinating the relationship between the original network enterprise and a new actor.

7. Limitations and suggestions for future research

7.1 Limitations

The primary limitation of this paper is associated with the research methodology adopted. As discussed in the methodology section, our study is of a subjective nature. The empirical findings emerge in a very specific context that is difficult to mimic or identify elsewhere. Therefore, our findings should not be assumed to hold in all contexts, rather they add to the understanding of innovation collaborations in a network of competing firms and bring new perspectives to the discussion.

A second methodological limitation is the limited period of time for data collection. As the implementation process of ProjectYouth extends over several years, a longitudinal case study would have been preferable. However, this was not possible given the time constraint of the master thesis. This implies that the data gathered from interviewees may be biased as they recall their view and observations of the historical events in retrospective. The interviewees may discuss the implementation process as a linear process, excluding alternative outcomes discussed along the way. To address this limitation, we validated claims made by the interviewees by asking similar questions to several interviewees and continuously triangulated the answers to come up with a comprehensive assessment of the chronological order of the historical events.

A third limitation concerns whether the interviewees have been honest in their representation and view of ProjectYouth. There is a risk that interviewees may hold back because of a fear of conflicts with other actors in the network. To mitigate such risk, it was communicated to all interviewees before the interview that we do not represent any club or organization in the network, and that their answers would be anonymized in the final paper.

7.2 Suggestions for future research

In this paper, we contribute to previous literature on management control and innovation in a collaborative setting. Due to the nascent character of this research stream, there is room for more academic research of it. As the role of a permanent governing body established by a network of competing firms has been given limited attention within this stream of research, we suggest scholars to further examine similar empirical settings to contrast or extend the findings in this study. In other industries or networks, management controls may have a different role

than what we have observed in the Hockey League, and more specifically in the implementation of ProjectYouth.

Furthermore, future studies could also seek to overcome the methodological limitations presented above. In particular, a longitudinal case study is suggested to investigate the implementation process of an innovation over a longer period. Scholars would then be able to study the outcome of the implementation of the innovation.

Lastly, existing literature within the domain of management control and innovation primarily focuses on the role of mediating instruments in new *product* development (e.g. Carlsson-Wall & Kraus, 2015; Christner & Strömsten, 2015; Mouritsen et al., 2001; van der Meer-Kooistra & Scapens, 2015; Wouters & Kirchberg, 2015). In contrast, ProjectYouth is a *service* innovation. Therefore, a suggestion for future research is to study service innovation further and contrast the role of mediating instruments or other management controls between service and product innovation processes in collaborative settings.

8. References

- Abernethy, M.A. & Brownell, P. 1997, "Management control systems in research and development organizations: The role of accounting, behavior and personnel controls", *Accounting, Organizations and Society*, vol. 22, pp. 233-248.
- Adler, P.S. & Chen, C.X. 2011, "Combining creativity and control: Understanding individual motivation in large-scale collaborative creativity", *Accounting, Organizations and Society*, vol. 36, pp. 63-85.
- Bedford, D.S. 2015, "Management control systems across different modes of innovation: Implications for firm performance", *Management Accounting Research*, vol. 28, pp. 12-30.
- Bisbe, J. & Otley, D. 2004, "The effects of the interactive use of management control systems on product innovation", *Accounting, Organizations and Society*, vol. 29, pp. 709-737.
- Brown, S.L. & Eisenhardt, K.M. 1997, "The art of continuous change: Linking complexity theory and time-paced evolution in relentlessly shifting organizations", *Administrative Science Quarterly*, vol. 42, pp. 1-34.
- Callon, M. 1998, *The laws of the markets*, Blackwell Publishers, Oxford.
- Callon, M. 1987, "Society in the making: The study of technology as a tool for sociological analysis" in *The social construction of technological systems: New directions in the sociology and history of technology*, eds. W.E. Bijker, T.P. Hughes & T.J. Pinch, MIT Press, Cambridge, Massachusetts, & London, England, pp. 83-103.
- Carlsson-Wall, M. & Kraus, K. 2015, "Opening the black box of the role of accounting practices in the fuzzy front-end of product innovation", *Industrial Marketing Management*, vol. 45, pp. 184-194.
- Carlsson-Wall, M., Kraus, K. & Lind, J. 2009, "Accounting and distributed product development", *The IMP Journal*, vol. 3, pp. 2-27.
- Chesbrough, H. 2003, *Open Innovation*, Harvard University Press, Cambridge.

- Christner, C.H. & Strömsten, T. 2015, "Scientists, venture capitalists and the stock exchange: The mediating role of accounting in product innovation", *Management Accounting Research*, vol. 28, pp. 50-67.
- Chua, W.F. 1995, "Experts, networks and inscriptions in the fabrication of accounting images: A story of the representation of three public hospitals", *Accounting, Organizations and Society*, vol. 20, pp. 111-145.
- Chua, W.F. & Mahama, H. 2007, "The effect of network ties on accounting controls in a supply alliance: Field study evidence", *Contemporary Accounting Research*, vol. 24, pp. 47-86.
- Davila, A., Foster, G. & Oyon, D. 2009, "Accounting and control, entrepreneurship and innovation: Venturing into new research opportunities", *European Accounting Review*, vol. 18, pp. 281-311.
- Ditillo, A. 2012, "Designing management control systems to foster knowledge transfer in knowledge-intensive firms: A network-based approach", *European Accounting Review*, vol. 21, pp. 425-450.
- Dubois, A. & Gadde, L. 2002, "Systematic combining: an abductive approach to case research", *Journal of Business Research*, vol. 55, pp. 553-560.
- Dyer, W.G. & Wilkins, A.L. 1991, "Better stories, not better constructs, to generate better theory: a rejoinder to Eisenhardt", *Academy of Management Review*, vol. 16, pp. 613-619.
- Edmondson, A.C. & McManus, S.E. 2007, "Methodological fit in management field research", *Academy of Management Review*, vol. 32, pp. 1155-1179.
- Faems, D., Van Looy, B. & Debackere, K. 2005, "Interorganizational collaboration and innovation: toward a portfolio approach", *Journal of Product Innovation Management*, vol. 22, pp. 238-250.
- Gopalakrishnan, M., Libby, T., Samuels, J.A. & Swenson, D. 2015, "The effect of cost goal specificity and new product development process on cost reduction performance", *Accounting, Organizations and Society*, vol. 42, pp. 1-11.

- Grabner, I. & Speckbacher, G. 2016, "The cost of creativity: A control perspective", *Accounting, Organizations and Society*, vol. 48, pp. 31-42.
- Hagedoorn, J. 2002, "Inter-firm R&D partnerships: an overview of major trends and patterns since 1960", *Research Policy*, vol. 31, pp. 477-492.
- Håkansson, H. & Lind, J. 2004, "Accounting and network coordination", *Accounting, Organizations and Society*, vol. 29, pp. 51-72.
- Halinen, A. & Törnroos, J. 2005, "Using case methods in the study of contemporary business networks", *Journal of Business Research*, vol. 58, pp. 1285-1297.
- Henri, J. 2006, "Management control systems and strategy: A resource-based perspective", *Accounting, Organizations and Society*, vol. 31, pp. 529-558.
- Hoholm, T. & Araujo, L. 2011, "Studying innovation processes in real-time: The promises and challenges of ethnography", *Industrial Marketing Management*, vol. 40, pp. 933-939.
- Justesen, L. & Mouritsen, J. 2011, "Effects of actor-network theory in accounting research", *Accounting, Auditing & Accountability Journal*, vol. 24, pp. 161-193.
- Jørgensen, B. & Messner, M. 2010, "Accounting and strategising: A case study from new product development", *Accounting, Organizations and Society*, vol. 35, pp. 184-204.
- Jørgensen, B. & Messner, M. 2009, "Management control in new product development: The dynamics of managing flexibility and efficiency", *Journal of Management Accounting Research*, vol. 22, pp. 99-124.
- Kamoche, K. & Cunha, M. 2001, "Minimal structures: From jazz improvisation to product innovation", *Organization Studies*, vol. 22, pp. 733-764.
- Latour, B. 2005, *Reassembling the social: An introduction to actor-network theory*, Oxford University Press, Oxford.
- Latour, B. 1996, *Aramis or the love of technology*, Harvard University Press, Cambridge, Massachusetts, & London, England.

- Lukka, K. 2014, "Exploring the possibilities for causal explanation in interpretive research", *Accounting, Organizations and Society*, vol. 39, pp. 559-566.
- Lukka, K. & Modell, S. 2010, "Validation in interpretive management accounting research", *Accounting, Organizations and Society*, vol. 35, pp. 462-477.
- Lukka, K. & Vinnari, E. 2017, "Combining actor-network theory with interventionist research: present state and future potential", *Accounting, Auditing & Accountability Journal*, vol. 30, pp. 720-753.
- Maxwell, J.A. 2012, *Qualitative research design: An interactive approach*, 3rd edn, SAGE, London.
- Miller, P. 1991, "Accounting innovation beyond the enterprise: Problematizing investment decisions and programming economic growth in the UK in the 1960s", *Accounting, Organizations and Society*, vol. 16, pp. 733-762.
- Miller, P., Moll, J. & O'Leary, T. 2012, "Managing inter-firm interdependencies in R&D investment: Insights from the semiconductor industry", *CIMA*, vol. 8, no. 3, pp. 1-12.
- Miller, P. & O'Leary, T. 2007, "Mediating instruments and making markets: Capital budgeting, science and the economy", *Accounting, Organizations and Society*, vol. 32, pp. 701-734.
- Modell, S., Vinnari, E. & Lukka, K. 2017, "On the virtues and vices of combining theories: The case of institutional and actor-network theories in accounting research", *Accounting, Organizations and Society*, vol. 60, pp. 62-78.
- Moll, J. 2015, "Editorial: Special issue on innovation and product development", *Management Accounting Research*, vol. 28, pp. 2-11.
- Morley, E. & Silver, A. 1977, "A film director's approach to managing creativity", *Harvard Business Review*, vol. 55, pp. 59-70.
- Mouritsen, J. 1999, "The flexible firm: Strategies for a subcontractor's management control", *Accounting, Organizations and Society*, vol. 24, pp. 31-35.

- Mouritsen, J., Hansen, A. & Hansen, C.O. 2009, "Short and long translations: Management accounting calculations and innovation management", *Accounting, Organizations and Society*, vol. 34, pp. 738-754.
- Mouritsen, J., Hansen, A. & Hansen, C.O. 2001, "Inter-organizational controls and organizational competencies: Episodes around target cost management/functional analysis and open book accounting", *Management Accounting Research*, vol. 12, pp. 221-244.
- Mouritsen, J., Mahama, H. & Chua, W.F. 2010, "Actor-network theory and the study of interorganisational network-relations" in *Accounting in Networks*, eds. H. Håkansson, K. Kraus & J. Lind, Taylor & Francis, London, UK, pp. 550-591.
- Mouritsen, J. & Thrane, S. 2006, "Accounting, network complementarities and the development of inter-organisational relations", *Accounting, Organizations and Society*, vol. 31, pp. 241-275.
- Nixon, B. 1998, "Research and development performance measurement: A case study", *Management Accounting Research*, vol. 9, pp. 329-355.
- Preston, A., Cooper, D.J. & Coombs, R.W. 1992, "Fabricating budgets: A study of the production of management budgeting in the National Health Service", *Accounting, Organizations and Society*, vol. 17, pp. 561-593.
- Revellino, S. & Mouritsen, J. 2015, "Accounting as an engine: The performativity of calculative practices and the dynamics of innovation", *Management Accounting Research*, vol. 28, pp. 31-49.
- Revellino, S. & Mouritsen, J. 2009, "The multiplicity of controls and the making of innovation", *European Accounting Review*, vol. 18, pp. 341-369.
- Robson, K. 1992, "Accounting numbers as 'inscription': Action at a distance and the development of accounting", *Accounting, Organizations and Society*, vol. 17, pp. 685-708.
- Rockness, H.O. & Shields, M.D. 1984, "Organizational control systems in research and development", *Accounting, Organizations and Society*, vol. 9, pp. 165-177.

- Shields, M.D. & Young, S.M. 1994, "Managing innovation costs: A study of cost conscious behavior by R&D professionals", *Journal of Management Accounting Research*, vol. 6, pp. 175-196.
- van der Meer-Kooistra, J. & Scapens, R.W. 2015, "Governing product co-development projects: The role of minimal structures", *Management Accounting Research*, vol. 28, pp. 68-91.
- Wouters, M. & Kirchberger, M.A. 2015, "Customer value propositions as interorganizational management accounting to support customer collaboration", *Industrial Marketing Management*, vol. 46, pp. 54-67.
- Ylinen, M. & Gullkvist, B. 2014, "The effects of organic and mechanistic control in exploratory and exploitative innovations", *Management Accounting Research*, vol. 25, pp. 93-112.

9. Appendix

Figure 5. A presentation of the interviewees including their function, their organization, the date and the duration of the interview

#	Function	Organization	Date	Duration
1	CEO	SHL	2018-02-08	91 min
2	CEO	Club B	2018-02-14	80 min
3	Sustainability Director	Club A	2018-03-02	74 min
4	Deputy CEO	Club B	2018-03-02	50 min
5	Commercial Manager	Club B	2018-03-07	55 min
6	Sustainability Manager 1	Club B	2018-03-12	67 min
6	Sustainability Manager 2	Club B	2018-03-12	67 min
7	Commercial Manager	Club C	2018-03-15	55 min
8	CFO	SHL	2018-03-19	59 min
9	Communication Manager	SHL	2018-03-23	94 min
10	Project Leader "Project Youth"	Club A	2018-03-26	88 min
11	Sustainability Director	Club A	2018-03-26	87 min
12	Event Manager	Club B	2018-04-04	52 min
13	Business Sector Specialist	Arbetsförmedlingen	2018-04-05	59 min
14	CEO	Partner firm to Club A	2018-04-24	47 min
15	CEO	SHL	2018-05-03	27 min