FORMALIZATION OF MANAGEMENT CONTROL SYSTEM

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ABSTRACT

Management control systems is a traditional research area where the rules and practices of management are examined on how they direct employee behavior. Currently, changes in the market are seen to affect companies' internal needs to modify their management control systems which different consultancy companies have recognized as well. The meaning of the management control system design and coordination should be studied more in organizations.

This study examines the relationship between management control system design and coordination and how they affect management control system functioning in a manufacturing company. The theoretical part adapts Tessier and Otley's (2012) research of the meaning of the design in the employee perception of the management control system. Management control system elements, the use of controls, and the role and objective of management control have been selected as factors affecting management control system design.

The coordination process of management control systems has been studied less and therefore Ghoshal and Nohria's (1989) theory of coordination mechanisms is used in this thesis. The focus is on the formalization of the management control system and its impact on internal transparency, global transparency, flexibility and repair. This study provides insights in the relationship between management control system design and coordination and brings forward success factors and main challenges in the management control systems formalization.

Practical constructivism was selected as an ontological approach to the study and it was conducted as a qualitative single case study. Semi-structured interview was selected as a data generation method. Research data consists of 12 interview for senior managers and other upper white collar employees in the organization. Analysis was conducted through content analysis which was directed by more abstract descriptive analysis strategy.

The most remarkable findings concluded that the MCS elements design, the objective of control and the use of controls are inter-related subjects in the MCS design, and without common coordination different controls do not work together harmoniously as a package and do not support common goal achievement. Several external and internal prohibiting factors of formalization, such as history, uncertainty and the lack of control mechanisms, were identified and development suggestions were given for the case company. The results gave interesting results for the management control system research and further research directions were presented.

TIIVISTELMÄ

Johdon ohjausjärjestelmä on perinteinen tutkimusala, jossa tarkastellaan johdon asettamia sääntöjä ja toimia, joilla johto pyrkii ohjaamaan työntekijöiden toimintaan. Tällä hetkellä markkinoiden muutosten koetaan vaikuttavan yrityksen ohjausjärjestelmän tarpeisiin, ja myös konsulttiyritykset ovat kiinnittäneet tähän ilmiöön huomiota. Johdon ohjausjärjestelmien suunnittelun ja koordinoinnin merkitystä tulisi tutkia tarkemmin yrityksissä.

Tämän tutkimuksen tarkoituksena on tarkastella ohjausjärjestelmän designin ja koordinoinnin välistä yhteyttä sekä niiden yhteisvaikutusta ohjausjärjestelmän toimivuuteen teollisuusyrityksessä. Teoria mukailee Tessierin ja Otleyn (2012) tutkimusta ohjausjärjestelmän designin vaikutuksesta työntekijöiden käsitykseen ohjausjärjestelmästä. Ohjausjärjestelmän suunnitteluun vaikuttaviksi tekijöiksi on valittu ohjausmekanismit, kontrollin käyttö, ohjausjärjestelmän rooli yrityksessä sekä sen ohjauksen tavoite.

Ohjausjärjestelmän koordinointia yritysten sisällä on tutkittu varsin vähän ja siksi Ghoshalin ja Nohrian (1989) koordinointimekanismiteoriaa käytetään tässä tutkielmassa hyväksi. Koordinointimekanismeista keskitytään järjestelmän formalisointiin ja sen vaikutuksiin sisäisen läpinäkyvyyden, globaalin läpinäkyvyyden, joustavuuteen ja järjestelmän parantamiseen. Tutkielma antaa näkökulmia ohjausjärjestelmän suunnittelun ja formalisoinnin välisestä yhteydestä, ja tuo esille formalisointia estäviä ja edistäviä tekijöistä yrityksessä.

Käytännönläheinen konstruktivismi valikoitui ontologiseksi lähtökohdaksi tutkimukselle, ja tutkimus suoritettiin kvalitatiivisena case-tutkimuksena. Puolistrukturoitu haastattelu valittiin aineiston keruumenetelmäksi. Tutkimuksen aineisto käsittää 12 haastattelua case-organisaation ylimmälle johdolle ja toimihenkilöille. Analyysi suoritettiin sisällönanalyysinä, jota ohjasi abstraktimpi kuvaileva analyysistrategia.

Tärkeimmät löydökset painottivat sitä, että erilaiset ohjausmekanismit, ohjausjärjestelmän käyttö, tavoite ja rooli vaikuttavat kaikki ohjausjärjestelmän suunnitteluun ovat toisiinsa vaikuttavia tekijöitä ja ilman koordinointia ohjausjärjestelmä ei toimi kokonaisvaltaisesti eikä tue yrityksen tavoitteiden saavuttamista. Useita formalisointia estäviä ulkoisia tekijöitä, kuten historia ja epävarmuus, ja sisäisiä tekijöitä, kuten ohjausmekanismien puute, tunnistettiin ja jatkokehitysehdotukset annettiin case-organisaatiolle. Tutkimuksen tulokset antoivat mielenkiintoisia näkökulmia ohjausjärjestelmien tutkimukselle ja löydökset antavat aiheita jatkotutkimusta varten.

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1 INTRODUCTION

1.1 Management control systems in current research and practice

Not only employees but also managers have begun to doubt the prevalent idea of performance management elements, including cascading targets, reactive feedback tools, and once-a-year reviews (Buckingham & Goodall, 2015). A Global Human Capital Trends 2014 study by Deloitte (2014) shows that over half of the executives (58%) believe that their current performance measurement approach drives neither employee commitment nor high performance. In the study, 38 percent of organizations surveyed find that they are managing weakly aligning personal goals with corporate purpose. Nowadays employees expect to take responsibility for results, but they also long for high levels of coaching, development and regular feedback. (Deloitte, 2014.)

Changes in employee expectations create pressure for managers to redefine the performance management process in the company, but it cannot be neglected that also the constantly changing environment and changes in technology build challenges for managers. In Accenture's 2014 High Performance Finance Study conducted for several CFOs, complexity was seen as the biggest challenge as 39 percent of respondents say that permanent volatility has a high impact on their finance function, 38 percent address regulation having a high impact on business, and 55 percent of CFOs see complex legacy systems as their biggest challenge. Due to these changes, companies are seen moving towards driving business growth and complexity management while controlling costs. (Accenture, 2014.)

Several factors have highlighted the need for control systems to evolve in recent years. Some of the external trends affecting management control systems are increasing globalization, the development of technology, the need for more open information sharing, increasing transparency and corporate governance, and the emerging knowledge work. New technology, growth and the extension of business into new business areas, customer segments, products and geographies have led to complex organization structures and slow decision-making. The complexity is also increased by the growing dependence on customers. The customer differentiation has become an important source of

differentiation thus requiring frontline employees the right autonomy, motivation and organization support. The emerging knowledge work, the need for more information sharing and the increase in transparency create the need for better corporate governance possession and management control system development. (Lindvall, 2001.) Even though firms have become less bureaucratic, more centralist leadership is exercised as managerial power and the need for control has been increasing. Clear defined processes are needed in several business areas as the ways of doing business have changed. (Nilsson, Olve & Parment, 2011.)

To tackle the change, more attention is channeled towards developing control systems in companies. According to the study of Accenture (2014), 78 percent of the successful companies have started or completed a rationalization of their operating models in the past two years. In the survey of Bain & Company (2014), many of the 109 companies surveyed considered developing control models and operating systems as a top three priority, and only one fifth considered their current model providing a competitive advantage. In many cases, a strategy to performance gap stems from an insufficient resource setting, ill-conceived strategy communication, inadequately defined actions and accountabilities, organizational culture delaying execution, poor performance tracking, uncommitted leadership and inadequate consequences or rewards for failure or success, and thus only 63 percent of companies realize the value of their strategy due to the defects in strategy in planning and execution (Mankins & Steele, 2005). Management control systems have been seen as an important tool for improving the strategic and operational efficiency in a company (Tessier & Otley, 2012) and a yet high number of studies consider management control system design in companies. Bain & Company (2014) studied 109 companies' operating models during five years' period from eight industries and 21 countries. The analysis revealed that companies with clear and robust operating models, with organization structure, accountabilities, governance and employee behaviors, along with the right people, processes and technology which support the strategic priorities, have a higher five-year compound average revenue growth and significantly higher operating margins than the companies with less robust operating model indicators. (Bain & Company, 2014.)

Management control systems consist of two concepts: management control and a system. Management control can be defined as a control that managers exercise over other managers (Fisher, 1998, 47). A system refers to "a prescribed way of carrying out an activity or set of activities" (Anthony, 1965, 7), also referring to several management control practices that are interdependent (Grabner and Moers, 2013). Management control systems are traditionally seen as a balancing system between strategy and operational tasks. From the early studies of Anthony (1965), management

control systems have been seen as information seeking and gathering system serving for common purpose: planning and control. However, changes in organizational life have created a need for the extension of new concepts and theories and many studies mix theories from various fields of research, bringing more socio-cultural aspects to management control systems. Nowadays, management control systems (MCS) represent two supplementary roles: to direct and to empower (Mundy, 2010). MCS are used to control the achievement of organizational goals, but also to allow employees to find new opportunities (Ahrens and Chapman, 2004; Chenhall and Morris, 1995; Mundy, 2010; Simons, 1995; Zimmerman, 2005). Traditional management control can no longer warrant desired results, and the balancing role between flexibility and control is now recognized (Hartmann & Vaassen, 2003; Mundy, 2010; Otley & Soin, 2014). Rather, control should be seen as a process, which leads the organization in uncertainty and assists constant adaptation with the change of goals when original goals become unrealistic (Otley & Soin, 2014).

Management control systems are not easy to design. Optimal balance of management control can be difficult to perceive when facing multiple complex questions (Ahrens & Chapman, 2004; Speklé, 2001). Too often, companies make two mistakes in changing their current management control system. Some fail to evolve an organization quickly enough to match a new strategy, and others come too quickly with new organization design that does not match with how the business creates value (Bain & Company, 2014). Unfortunately, performance gaps are not always visible to top management, causing wasted energy and time in analyzing and making bad calls for whether the gap is caused by either mismatch of strategy or poor execution of it (Mankins & Steele, 2005). Companies are anticipated to maintain cohesion inside the organization, even though individual control components would seem to provide superior environmental fit (Bedford & Malmi, 2015). The piecemeal alterations of an existing operating model may destroy supplementaries between elements (Miller & Mintzberg, 1984) and may "not come at all close to achieving all the benefits that are available through a fully coordinated move, and may even have negative payoffs" (Milgrom and Roberts, 1995, 191).

It can be said that Otley's (1994, 287) statement of management control systems has not lost its meaning in the MCS research: "As companies have developed smaller, less diversified, less hierarchical and have more internal mutual interdependencies, the contemporary organizations no longer conform to traditional management control literature." It is important to study the design of management control systems, since the structure can affect the efficiency of an organization and to the results of actions made in the organization. If a management control system is found to be useful,

MCS tools are likely to be used and the information flow is improving when employees may conduct their tasks with enhanced information. (Chenhall, 2003.) As there are several ways for companies to effectively combine several management control practices (Bedford, Malmi & Sandelin, 2016), management control system design steps into a great role to help to find the best practices, which work inside a company (Chenhall, 2003). However, to effectively reach the goals in conducting efficiency, responsiveness and learning inside an organization, formalization as one of the coordination mechanisms is needed. The formalization refers to a systematized way of utilizing rules and procedures in decision-making (Bartlett & Ghoshal, 2002). As management control is implemented to resolve goal alignment, adaptability, and integration (Otley & Berry, 1980, 232; Bedford, Malmi & Sandelin, 2016, 14), it is important to study, whether and how a management control system design and a formalization process can improve better alignment, adaptability and integration within a MNC. Almost 20 years after the debate of the relevance of MCS, most researchers and practitioners have agreed on the relevance of the research field (Nilsson, Ove & Parment, 2011).

1.2 Purpose of the study and research questions

This thesis concerns management control systems design and formalization in a case organization in a changing environment. The case company is a manufacturing company producing gear units for wind power turbines. The aim was to gather the diverse knowledge of factors affecting the design and formalization of management control systems in theory and in the case company, and deepen the knowledge of the prohibiting factors affecting management control system formalization, and create development suggestions for the case company. The topic of this study is designed in cooperation with a case organization, and the employees and managers were interviewed to receive a better understanding about the perception and a need for a common management system. To achieve this purpose, the following research questions are presented:

1. How the design of a management control system relates to the formalization of the system?
2. What are the prohibiting factors for management control system formalization?
3. What kinds of benefits are related to management control system formalization?

First, it is important to understand the meaning of management control system design. The design comprehends understanding management control systems elements and the use and perception of them. It is necessary to understand how elements in overall MCS work together (Abernethy & Chua,

1996; Otley, 1999; Malmi & Brown, 2008) but both the design and use must be well analyzed to understand, how MCS is influenced by strategic choices (Abernethy & Chua, 1996). Although the individual management control system elements may be well designed, control failures can take place if the design or use of the elements are not linked together (Ferreira, 2002; see Ferreira & Otley, 2009, 275). Also many researchers have studied different control systems in isolation leading to erroneous conclusions and fragmented results (Berry et al., 2009; Chenhall, 2003; Fisher, 1998; Otley & Berry, 1980). Malmi and Brown (2008, 291) use the term 'management control systems as a package' to describe, how different control elements support and strengthen each other: "The term 'package' is employed because in the most contemporary organizations there are a number of MCS. If all those were designed and coordinated intentionally, we might call the whole system a MCS." As there can be many control systems in an organization, it is important to recognize how control system design can support organizational development and effective decision-making (Malmi & Brown, 2008; Simons, 1995). Existing research has explored management control systems design from various aspects, but the research field still knows little about which design elements are the most suitable in different situations (Merchant & Van der Stede, 2003).

Second, the coordination of the management control system is studied. Several practices in an organization require coordination and a coordination mechanism should be decided when a planning management control system. Coordination has become a more and more researched term in MCS studies. As environmental factors push organizations to develop internally more and more often, also formalized practices and internal coordination are needed.

Third, constant change in external and internal environment affects the information needs of management leading to changes in management control system structure. In several MCS research, the uncertainty is recognized only as a contingency factor, but there are few empirical studies on how uncertainty affects the structure, use and performance of management control systems (Ferreira & Otley, 2009; Tessier & Otley, 2012). It is recognized that the rate of change affects both the design elements of MCS and the way management information is used, and therefore research area should be studied more carefully (Ferreira & Otley, 2009). Uncertain is whether MCS can minimize the disturbance caused by strategic change, especially when changes occur several times in a short period of time (Langfield-Smith, 1997). The functionality of MCS under the change is an interesting research subject since management control systems adaptation should be studied more in a volatile environment. As Gerdin (2005, 119) stated, it "may be important not to assume automatically that

there is a one-to-one relationship between context and MCS [as] different control mechanisms available in the control package may well combine in different ways in a particular context".

The topic of the study stems from the actual needs of the case company. Control can create a delusion of control leading to false decisions and internal crisis if a management control system is designed as formal, static and diversifiable in a flexible environment More dynamic perspectives in designing and implementing management control systems in companies require a better analysis of design factors and resource-accumulation processes. (Cosenz & Noto, 2015.) Many MCS research is theoretical with no empirical evidence (Speklé & Kruis, 2014) and it has been seen essential to explore how real control systems operate in practice (Berry et al., 2009). Practical constructivism is selected as an ontological basis for the study as it is in between traditional qualitative case study and constructivist studies, since practical implications are being tried to find by concentrating on facts, logic, values and communication. Different stand points and world views, *topos,* are accepted and analyzed within context. (Nørreklit, 2006.) As the study is qualitative in its nature, it is typical that the research phenomenon is explained comprehensively (Hirsjärvi et al., 2009, 161) but it is also natural that the research object is clearly defined and solutions are practically relevant. (Bryman & Bell, 2011, 62). As Nilsson et al. (2011, 199) conclude: "In practice, the usefulness of MCS depends on whether managers with sufficient experience of their organization and industry are given time to model the interdependencies between organizational processes, strategic priorities, and financial outcomes."

1.3 Research process and structure of the study

The research process started with familiarization to the case company. Before the more intense study period in the spring of 2015, collecting profound understanding started by participating in in the daily operations of the company in operations, finance and human resources department. Understanding was gained by controlling activities in finance, operations and sales, building a process of the key performance indicators and by tracking the development of key projects and success factors of the company. The process in the case company has given a great motivation to study deeper the function of management control systems in a company and the process served to understand the diversity of the management control system. A case study research offers a multilevel approach to study this complex phenomenon deeply and in its practical context (Yin, 2009).

After familiarization with the case company, a recognition of the research need was made in case organization. The topic of the study came as a need from the management team of the company, and after discussion, issues related to the topic of the study were identified. At the same time, the long exploration of the literature and earlier studies of management control systems started. Yin (2009) has described a research process as moving between theory, research questions, and empiricism, which has happened constantly in this thesis and this review has helped in defining research questions and positioning for the study which fit the needs of the case company. Simultaneously, theoretical field and research strategy were formed and research questions got refocused to fit for interviews. After data collection and triangulation, the research questions were inspected and the analysis of the data was done driving for conclusions.

The study consists of five main chapters. In the introduction, the background and the purpose are reviewed constituting relevance for the study. Researchers have an important part in developing management control models but as the research can sometimes be one step behind when putting theories in practice, the management consultancies' studies are brought on stage in introduction to bring the view of the need in the market (Nilsson et al., 2011, 27).

In the second chapter, the first theoretical part addresses the research theory of management control system design. The chapter concludes different management control system research aspects and theories, deriving from Tessier and Otley's (2012) view on the management control system design and perception. In the second theoretical part, more emphasis is put on the management control system coordination process in a multinational company. The focus is set on management control system formalization. In the end, these two research fields are joined together in the synthesis of a theoretical framework.

The third chapter represents a research paradigm and the ontological, epistemological and methodological choices. Practical constructivism is presented as an ontological choice, and the research strategy is presented. The fourth chapter leads to the empirical part of the study. First, the case study organization and its current management control system is introduced. Afterwards, current MCS design is analyzed through interviews and the deep analysis of current practices in the case company, the meaning and development of management control systems is reviewed with the help of interviews. Conclusions include the effect on management control system design and formalization. The promoting and prohibiting factors of management control system formalization is analyzed, and the summary concludes the findings for the research questions. Results of the personnel

survey are analyzed to understand the perception of current management control systems and similarities between the interviews and the personnel survey are analyzed. Theory and empirical part are applied and suggestions for management control systems model development and formalization are given.

The fifth chapter concludes the theoretical findings and the accuracy and benefits of recommended solutions bring forward the contribution of the study and managerial implications, evaluates the execution of the study, and brings forward further research directions.

2 MANAGEMENT CONTROL SYSTEMS DESIGN

2.1 Management control system design

2.1.1 Definition and rationale of management control systems

Management control systems represent an organizational system or process to guarantee the achievement of organizational goals. In the definitions of management control systems, the terms *planning* and *control* are central in almost all definitions from Anthony's first studies in 1965 until today. Since then, management control systems have been studied from various aspects including the both narrow and broad scope of definitions, research areas, variables and contingency factors.

Many of the definitions are based on the assumption that someone (managers or a management team) is trying to control the behavior of others (employees) (e.g. Abenethy & Chua, 1996; Anthony, 1965; Merchant & Van der Stede, 2003). The earliest studies of MCS by Anthony (1965, 5) consider management control function to consists of as passive management control tools providing information from strategy function to task function and defines the management control as follows: *"Management control is the process by which managers influence other members of the organization to implement the organization's strategies."* The definition has been stated as narrow in the nature, as strategy and operational control are separated from each other and the management control consists of financial controls, standard setting, short-term plans, resource management, and the measurement of goal achievement. Narrow terms were common in the studies in the 1960 – 1970s.

In later phases, management control systems have adopted more behavioristic and contingency-based perspectives and more design factors affecting MCS functionality have been recognized. The boundaries between strategy, management control, and operative control have been broken, and a strategy has been considered as an integral part of MCS design (Langfield-Smith, 2005; Merchant & Otley, 2007; Mintzberg, 1979; Otley, 1999). Flamholtz (1983) and Abernethy and Chua (1996) take into account the target for goal congruence and behavioral aspect of MCS stating that organizations and individuals share only partly homogeneous objectives why it is necessary to direct individual energy toward a specific set of organizational goals. Since employees' goals may not be consistent with an organization's goals, Merchant and Van der Stede (2003) argue that many management

controls do not concentrate only on performance measurement but instead they focus on enabling or, sometimes, coercing employees to act in the company's interests. The meaning of management control systems meaning and elements has changed drastically, which Merchant and Otley's (2007, 785) statement describes well: "Almost everything in the organization is included in the overall control system."

One of the management control systems' function is to provide accurate information for decision-making. As Otley (1999, 364) describes, "management control systems provide information that is intended to be useful to managers in performing their jobs and to assist organizations in developing and maintaining visible patterns of behavior". In traditional studies management control systems are seen as stable, but as the management complexity and environmental uncertainty increases, so does the information need of the management. Change has been identified as an element affecting MCS, and as Merchant and Otley (2007, 785) describe: "In broad terms, a management control system is designed to help an organization adapt to the environment in which it is set and deliver the key results desired by stakeholder groups, most frequently concentrating upon shareholders in commercial enterprises. Management implement controls, or sets of controls to help attain these results and to protect against the threats to the achievement of good performance."

One of the difficulties in the discussion of MCS is the ambiguity and contradiction of definitions (Fisher, 1998). Some of the definitions overlap while others differ from each other (Abernethy and Chua, 1996; Alvesson and Karreman, 2004; Anthony, 1965; Chenhall, 2003; Fisher, 1998; Flamholtz et al., 1985; Langfield-Smith, 1997; Merchant and Van der Stede, 2003; Otley and Berry, 1980; Ouchi, 1979; Simons, 1995). Concepts with the same terms vary often among different researchers leading to mixed empirical results (Bisbe et al., 2007; Malmi & Brown, 2008; Van der Stede, 2001). Many researchers have brought interesting aspects into MCS research, thus leaving the research field fragmented, disorganized and incoherent in itself, as many researchers have studied different aspects of control design and use from different theoretical perspectives (Berry et al., 2009; Chenhall, 2003; Ferreira & Otley, 2009; Merchant & Otley, 2007; Otley & Berry, 1980; Sandelin, 2008.) The MCS literature recognized the need for research to be based on solid theoretical findings (Chenhall, 2003), and a more systematic development of knowledge (Chapman, 1997). Although MCS research has a long history, many previous models are outdated since they do not display flexibility, and continuous learning, which contemporary organizations' display (Otley et al., 1995). One of the ways to compete in global markets is to develop the internal efficiency and functions of the global organization to

respond to constant changes in the market. Due to incoherence in the studies of MCS, different studies are often difficult to compare (Malmi & Brown, 2008).

2.1.2 Management control systems as a package

Malmi and Brown's (2008) typology of management control systems as a package is formed on the separation between decision-making and control which managers use to direct employee behavior. In the model in Figure 1, MCS is structured in five groups: planning, cybernetic, reward and compensation, administrative and cultural controls. Cultural controls are on the top of the model providing a framework for other controls. Planning, cybernetic and reward and compensation are usually tightly bundled control elements in many organizations and are presented from left to right in temporal order. Administrative controls form a framework where planning, cybernetic and reward and compensation controls are practiced.

Cultural controls						
Clans			Values		Symbols	
Planning		**Cybernetic controls**				
Long range planning	Short range planning	Budgets	Financial measurement systems	Non-financial measurement systems	Hybrid measurement systems	**Rewards and compensation**
Administrative controls						
Governance structure		Organization structure		Policies and procedures		

Figure 1. Management control system as a package by Malmi & Brown (2008)

Planning controls

Malmi and Brown (2008) divide planning control in long and short range planning. Short range action planning, is more tactical with a duration less than one year while long range planning is considered with a duration of more than a year. Planning sets out the targets for a company and directs the course and behavior, provides standards and clarifies the expected effort from the organization members. Planning can enhance cooperation among members of the organization and it can have a major role

in directing employee behavior. Planning can be both financial and non-financial, and it is separated as a separate system in Malmi and Brown's (2008) typology, since it has a major role in directing employee behavior. Planning is usually seen as a tool deciding on future activities but it should also be seen as a process to involve employees to commit to organization's plans.

Cybernetic controls

Cybernetic controls have a long association for management control and they are seen as a core of the control systems (Anthony, 1965; Flamholtz, 1983). Malmi and Brown (2008) include budgets, financial measurement systems, non-financial measurement systems and hybrid measurement systems to cybernetic controls. Cybernetic controls can be seen either as an information system or control systems depending on the contingency. Green and Welsh (1988, 289) emphasized a feedback loop in the process where variances about current actions are compared with the standards of performance. Cybernetic controls are related to standards of performance and measuring system performance.

A budget is a central foundation of MCS and can often be included in the planning function of management. A budget combines performance planning and to ex post evaluation creating a comprehensive plan of an organization (Hansen et al., 2003). A budget is used to coordinate and control the departments and subunits of an organization and it has several uses including an integration of processes and the allocation of resources for decision-making and measuring the performance (Malmi & Brown, 2008). A number of different forms of budgeting are presented, such as participative budgeting (Milani, 1975, Brownwell & McInnes, 1986), beyond budgeting (Hope & Fraser, 2003), and organizations without budget (Østergren & Stensaker, 2011), which are seen also as hybrid measurement systems. Despite the criticism, budgeting still is an important element in today's business (Ekholm & Wallin, 2001).

Financial measurement systems may be related to budgets, but provide specific financial measures to hold employees responsible for specified targets. Examples of central performance measures are Return On Capital Employed (ROCE) or Cash Conversion Cycle. Also non-financial measures are becoming more and more important in temporary organizations since they overcome limitations that are perceived in financial measures. Ittner and Larcker (2003, 88) have highlighted the importance of non-financial measures identification and use, and state that the most companies have not recognized the meaning of non-financial performance in their chosen strategy. Hybrid measurement systems

contain both financial and non-financial measures to measure performance. Balanced Scorecard (Kaplan & Norton, 1992) has been identified as one of the most recognized hybrid measurement systems.

Reward and compensation controls

Reward and compensation relate to the motivation and performance of employees achieving congruence between individual and organizational goals and activities (Bonner & Sprinkle, 2002). Bonner and Sprinkle (2002) argue that compensations lead to increased task-management compared with an absence of them. Reward system range from intrinsic to extrinsic rewards (Flamholtz et al., 1985), and effort can impact on performance in three ways: the effort direction, the effort duration, and the effort intensity (Bonner & Sprinkle, 2002).

Administrative controls

Administrative control systems control employee behavior through the disposition of individuals and groups, the monitoring of behavior, and the process of clarifying how tasks or behaviors are to be performed or not performed. Malmi & Brown (2008) specify three groups of administrative controls: organization design and structure, governance structure, and the procedures and policies.

Organizational design is seen as an important control system since it encourages certain behavior and relationships (Abernethy & Chua, 1996; Alvesson & Karreman, 2004). Organization structure works as a control form through functional specialization (Flamholtz, 1983), and can be counted as a control form since managers can change it (Malmi & Brown, 2008). Governance structure consists of a company's board structure, management structure and project teams, and describes formal lines of authority which ensure that representatives from various organizational functions and units are integrated and coordinated. Policies and procedures include a standardization of practices, rules and policies. Policies and procedure are used to control behavior for organization's best interests. (Malmi & Brown, 2008.)

Cultural controls

Malmi and Brown (2008) divide cultural controls to clan control, values and symbols. Although many researchers argue that culture cannot be controlled (Clegg et al., 2005), a control system is used to regulate employee behavior (Malmi & Brown, 2008).

Flamholtz et al. (1985) see organizational culture as a combination of values, beliefs and social norms. Culture can serve as a facilitating control, as a knowledge transformation tool, monitoring the environment and individual perceptions (Birnberg & Snodgrass, 1988.) Clan controls are the most effective in organizations where outputs are hard to measure and behavior controls cannot be used because the process is unknown (Ouchi, 1979). Many organizations rely on clan control, which are characterized by a high level of commitment among employees, the careful employment of individuals, and the stability of employment (Langfield-Smith, 1995). Values, mission and vision mirror the direction managers want subordinates to adopt (Simons, 1995). The meaning of values as a control system is described in three ways. First, an organization hires persons whose values match with organization's values, secondly, individuals' values change through the socialization process, and third, when values are defined, employees follow them increasing goal congruence. (Malmi & Brown, 2008.) Symbols are visible elements such as workspace design or dress codes, which are used to increase the culture of collaboration or the professionalism in attempt to control behavior. (Malmi & Brown, 2008.)

Malmi and Brown's (2008) has been seen an effective way of operationalizing management control systems structure. Although the typology has been criticized over being a purely descriptive model without suggesting practical measures for management's use (King & Clarkson, 2015), it has been useful in many management control systems empirical studies.

Management Control System as a package

Although companies may have several different controls to align individual's activities to organizational goals, the management control must be a systematized way or a process of conducting control (Abernethy & Chua 1996; Alvesson & Karreman, 2004; Flamholtz et al., 1985; Otley & Berry, 1980; Simons, 1995). Control systems, which should be viewed together as a package and not separately (Malmi & Brown, 2008) and every part of the organization must be coordinated together so that the various parts are in balance (Anthony, 1965) According to Malmi and Brown (2008),

management control system is formed when these controls form a complete system, not just a simple rule. Malmi & Brown (2008, 209) define MCS as follows:

"As a general conception, a management control systems (MCS) package is a collection or set of controls and control systems. --. Organizations may have numerous controls present, and they all may be used to some extent to align individual's activities with organizational goals."

The idea of management control systems as a package has been valid since Otley's (1980) studies but there has been little theory or practical research on the phenomena, as the tendency has been to focus only on selected and separate factors of control systems (Abernethy & Chua 1996; Alvesson & Karreman, 2004; Chenhall, 2003; Simons, 1995). The challenge is to study MCS as a package since they are often a very large and complex systems (Malmi & Brown, 2008, 288). Difficulties in studying MCS package relate to an unclear definition of MCS as a package; what is included, how systems are inter-related and how MCS package operates as a whole? Researchers argue that the understanding about MCS to remain incoherent and disconnected as long as the MCS research continues to ignore the interdependency between different control elements (Abernethy & Brownell, 1999).

2.1.3 Types of control

Controls can be classified in many ways. Controls can be categorized by the control function as management control and task control, or by the meaning of controls as financial, operational and organizational controls (Anthony, 1965). Controls can also be divided into positive and negative (Simons, 1995), good and bad (Tessier & Otley, 2012), social and technical (Tessier & Otley, 2012), proactive and reactive (Flamholtz et a., 1985), feedback and feedforward (Otley et al., 1995) and performance and compliance controls (Merchant & Van der Stede, 2003; Tessier & Otley, 2012). Variation in the type of controls complicates to develop coherent knowledge (Langfield-Smith, 1997). Despite Simons' (1995) positive and negative controls, the duality of controls has remained unexplored (Tessier & Otley, 2012). The dual role of controls has been stated as competing creating positive tension in an organization (Mundy, 2010).

In this thesis, controls are divided as coercive and enabling controls in Table 1. Mechanistic, technical, bureaucratic and controlling controls are combined as coercive controls and organic, social, less bureaucratic and enabling controls are linked as enabling controls (Burns & Stalker, 1961; Chenhall, 2003; Tessier & Otley, 2012; Vosselman, 2002, Auzair & Landfield-Smith, 2005; Adler &

Borys, 1996; Ahrens & Chapman, 2004; Mundy, 2010). These taxonomies link controls together and give an understanding of organization's control culture (Bedford & Malmi, 2015).

Table 1. Classification of dual types of control

	Burns & Stalker, 1961; Chenhall, 2003	Tessier & Otley, 2012	Vosselman, 2002; Auzair & Langfield-Smith, 2005	Adler & Borys, 1996; Ahrens & Chapman, 2004; Mundy, 2010
Coercive controls	Mechanistic	Technical	More bureaucratic	Controlling
	Formal rules, standardized procedures and routines, traditional budget control, diagnostic controls,	Formal rules, standards, procedures, segregation of duties	Action controls, formal controls: rules policies, procedures, tight controls: defined targets, restricted controls: decision-limitation, impersonal controls: formal	Centralization, preplanning, traditional cybernetic controls, bureaucracy, top-down control
Enabling controls	Organic	Social	Less bureaucratic	Enabling
	Flexible, responsive, low levels of rules and standardized procedures, social controls, clan controls, personnel controls, flexible and participative budgets, competitor focused data, interactive	Emotional, non-rational, values, beliefs, symbols	Results controls, informal controls: procedure and targets communicated informally, loose controls: actions and target monitoring infrequent, flexible controls: allow managers to respod to new opportunities, interpersonal controls: controls applied taking into consideration individual	Codification of best practices, spontaneity, transparency, fast adaptation, high information sharing, employees allowed to respond to new opportunities

Coercive controls are considered as formal rules, standardized procedures, routines and traditional cybernetics control. Superiors monitor staff actions, targets are precisely and frequently monitored, and written rules and targets are formally communicated to employees. (Burns & Stalker, 1961; Chenhall, 2003; Tessier & Otley, 2012; Vosselman, 2002, Auzair & Landfield-Smith, 2005; Adler & Borys, 1996; Ahrens & Chapman, 2004.) Coercive controls are associated with predictability, efficiency, formality, and a meeting short-term targets. The aim is to mitigate uncertainty in operations and improve decision-making. (Mundy, 2010.) *Enabling* controls are richer in data, flexible, involve fewer rules and are more informal. Enabling controls are applied when employees are wished to deal directly with challenges in their work independently. Enabling controls are associated with spontaneity, the transparency of operations, fast adaptation, information sharing and adaptability. The aim is to decrease uncertainty and improve decision-making. (Mundy, 2010.)

Brown and Eisenhardt (1997) have found that both dual control elements are needed for organizations to be successful. In innovative organizations coercive controls are used to bring focus to processes. As Simons (1995) states, some controls increase creativity and others build boundaries, but neither

control's role is bad. The same control elements, such as cybernetics control, preaction reviews and hierarchical control (Ahrens &Chapman, 2004; Auzair & Langfied-Smit, 2005; Chenhall, 2003; Tessier & Otley, 2012) can be used in two ways, to monitor behavior and enable employees to perform better. Enabling and coercive controls do not exist purely in an organization, and management control practices can combine both elements to use the benefits of both types of control (Brown & Eisenhardt, 1997; Chapman, 1998; Dent, 1987; Simons, 1990; Sjöblom, 2003). Different control elements' role and use can be different depending on the objectives of control.

2.1.4 Objectives of control

The types of control and objectives of control are defined by managerial intentions. Many researchers have divided many control system models into two categories: performance and compliance controls (e.g. Tessier & Otley, 2012). Performance controls have been related to strategy and results control whereas compliance controls are associated with action control and boundary setting. The classification of performance and compliance controls is not clear, which controls are included and excluded in these categories. However, many interpretations have been made based on Simons (1995) and Merchant and Van der Stede's (2003) frameworks (e.g. Hartmann & Vaassen, 2003; Tessier & Otley, 2012). The reason for using these frameworks is that they mostly referto the way in which management control system is *used* (Hartmann & Vaassen, 2003; King & Clarkson, 2015) and define the primary objective of control (Tessier & Otley, 2012).

Simons' framework consists of four control elements: beliefs, boundary, diagnostic, interactive systems. Diagnostic and interactive systems have been related to performance management, and boundary and belief systems are more related to opportunity seeking and boundary setting. (Simons, 1995.) Simons levers of control framework is modelled in Figure 2.
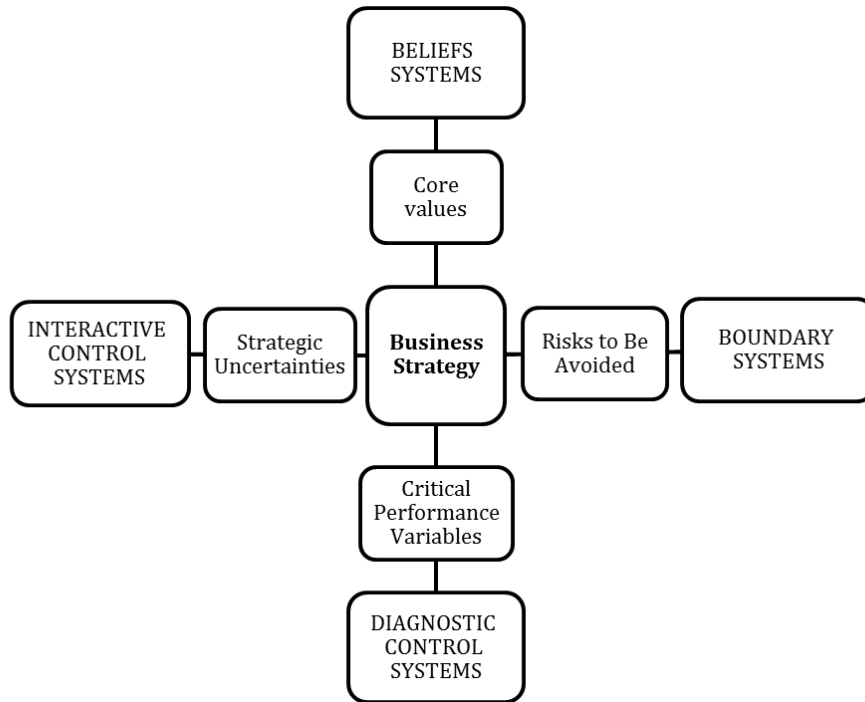
Figure 2. Levers of Control framework (Simons, 1995)

Beliefs systems are "the explicit set of organizational definitions that senior managers communicate formally and reinforce systematically to provide basic values, purpose, and direction for the organization" (Simons, 1995, 34). Communicating beliefs is considered as a control, when the communication is formal or used by managers to maintain or question organizational habits. *Boundary system* "delineates the acceptable domain of strategic activity for organizational participants" (Simons, 1995, 39). Simons (1995) divides boundary systems to business conduct boundaries and strategic boundaries. The boundary systems align strategically undesirable actions and risks, and are often communicated through codes of conduct and rules. (Simons, 1995.) Beliefs and boundary systems have both intentions to motivate and guide employees to innovative opportunity seeking and compliance, but beliefs system is seen as a more positive way of encouragement than boundary systems (Simons, 1995; Tessier & Otley, 2012).

Interactive control systems include active dialogue and arguing on strategic directions and uncertainties. Interactive control systems are assumed to foster organizational learning and innovativeness in organization. (Simons, 1995.) Interactive control systems are acknowledged as one of the most relevant forms of control in uncertain environment (Ferreira & Otley, 2009). *Diagnostic systems* are designed for organizational goal achievement, while allowing managers to monitor and reward achievements. Diagnostic systems communicate the critical performance variables, and

include measurement and tracking performance to targeted level. Although both diagnostic and interactive control systems are aligned with feedback systems and results control, the difference lies in how the two control systems are used. (Simons, 1995.) Interactive and diagnostic controls are related to focus attention in performance measurement systems (Marginson, 2002; Tessier & Otley, 2002) and the way strategic performance controls are used (Tuomela, 2005).

In a similar way, Merchant and Van der Stede (2003) have divided control practices in four different groups focusing on results, actions control, personnel control, and values and shared norms. Merchant and Van der Stede (2003) offer more practical implications for management control system framework (Sjöblom, 2003) but the framework is more compliance oriented. According to Merchant and Van der Stede (2003), the need for management control exists due to three main reasons: lack of direction, motivational problems, and personal limitations. Most likely the lack of direction exists if the goals for an organization are not set and communicated clearly to employees. Motivational problems may cause employees to start acting against an organization's objectives. Personal limitations are due to lack of knowledge and resources, and decrease the likelihood for employees to make right decisions.

Management control systems and corporate governance have many similarities. The role of balancing between compliance and results control is recognized also in corporate governance studies. The definition of internal control by Committee of Sponsoring Organizations of the Treadway Commission (2013, 1) suggests internal control as: "a process, effected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories: effectiveness and efficiency of operations, reliability of financial reporting, and compliance with applicable laws and regulations." The first objective of internal control is related to performance and the other two to compliance. Although one control form can be more dominant than another, the definition calls for balance between the use of performance and compliance related controls.

2.1.5 Use, role and perception of controls

Controls can be positive and negative but the dual role of controls and the quality of controls can be easily mixed in literature, and erroneously, the dual roles are often described as good or bad (Adler & Borys, 1996). While the duality of control is a design attribute of a management control system and can be referred to as coercive and enabling types of control, a quality of control is more a

perception of a control. Types and objectives of control are related to managerial intentions of how to achieve goal congruence in an organization but employee perception of control may not always reflect to intentions of a control. (Tessier & Otley, 2012.)

Although control may be positive or negative in its nature, the presentation and the use of controls will define whether controls are perceived as either positive or negative. According to Adler and Borys (1996), classification of positive and negative controls depends on the attitudes within an organization and controls can be interpreted differently depending on employees (Scott, 2001; Tessier & Otley, 2012). People in an organization tend to present clearly what they consider as "bad" while "good" rules are often rarely noticed or taken for granted (Perrow, 1972; Adler & Borys, 1996). As Tessier and Otley (2012, 183) state: "Presentation acts as a bridge between managerial intentions and employee perceptions and can influence how controls are perceived."

Balancing use of control mechanisms

Management accounting is stated to move towards global homogenization of practices due to standardized accounting practices in multinational firms' subunits (Granlund & Lukka, 1998). However, management control system will always adapt to local environment, and therefore the local units will enact management control system produced in company headquarters (Cruz et al., 2011; Lawrence & Lorsch, 1967). Localization of global management control system may not always undermine the common core of the system but instead heterogeneous practices can facilitate the control process by complementing the global system with local results (Robertson, 1995; see Cruz et al., 2011).

It is questioned whether organizations can find an optimal balance in management control use and how can they recognize and maintain it (Mundy, 2010). Mundy (2010) has recognized following control elements that impact on an organization's capability to balance between controlling and enabling use of management control system: internal consistency, logical progression, historical tendency, dominance, and suppression. *Internal consistency* of management control system should ensure that employees get clear and consistent messages, and *logical progression* describes the order in which different control mechanisms are used, which can affect control perception. *Historical tendency* to use certain control instruments may facilitate or slow managers' efforts to balance control but has an impact on how managers use controls and how employees perceive controls. *Dominance* to use one or more control instruments regardless of environmental circumstances or active in use,

suppression, of certain control instruments affects to balancing way of using control. (Mundy, 2010.) The functioning of a control system is seen to depend on internal consistency in the firm, especially on the linkages in design and use between primary control mode and other control elements (Sandelin, 2008).

As management control system literature has focused mostly on external forces to disrupt management control system functioning, Almqvist and Skoog (2006) argue that most often, internal forces and changes inside the organization, such as in organization structure or resource availability, play more crucial role in MCS change and adaptation. Management control system is an ongoing process in organization and can be continuously transformed within an organization purposefully and unwillingly. (Almqvist & Skoog, 2006.) As MCS research has studied several control elements in isolation from time to time, a perception that companies should manage one control element at a time is misleading. The choice of management control system depends on company environment and companies use multiple control elements at a time (Bedford et al., 2016; Sandelin, 2008) but also the use of different control elements can lead to similarly good results resulting to equifinality (Nohria & Ghoshal, 1994; Sandelin, 2008. The most important is the decision of primary management control tool and the design of other control elements should be designed to fit with primary control element (Sandelin, 2008). Bedford, Malmi and Sandelin (2016) argue that the adjustments to other controls in MCS is necessary to keep management control systems effective. Balanced way of using management control system is studied to reach even more attention than before in the research as new need for business management has risen and it is important to manage risks in more volatile and unpredictable environment (Lukka & Granlund, 2003; Sjöblom, 2003).

2.1.6 Implementation of management control system

Tessier and Otley (2012) argue that as both managerial intents and employee perceptions of controls vary, and the perception of controls may heavily depend on presentation of controls. Employees have emotional responses to controls, and attitudes towards the control system can be positive, negative or neutral. As Adler and Borys (1996) indicate, in formalization process employees' perceptions are more positive when formalization enables employees to better conduct their tasks and attitudes vary to negative, when controls are perceived as managers are attempting to force employees. Ahrens & Chapman (2004) studied the management control in restaurant chain and the relationship between headquarters and restaurant managers was characterized by mistrust while the head office was more compliance oriented and managers more performance driven.

2.2 Formalization process of management control system

2.2.1 Controlling management control system in multinational companies

Multinational companies face three types of strategic challenges in highly dynamic market environment: global efficiency, local responsiveness and global learning (Bartlett & Ghoshall, 2002). It is questioned if the reporting systems and management controls that are used in the head office can be used to effectively in subsidiaries. Busco, Giovannoni and Scapens (2008, 104) define integration as "the effective collaboration, among diverse organizational entities, which is necessary to achieve a global unity of effort, while at the same time leaving space for local adaptation, differentiation and flexibility".

In order to cope with disorder and global challenges, Ghoshal and Nohria (1989) have developed three coordination mechanisms to address the issue. A set of coordination mechanisms for multinational firms (MNC) is widely used in international business studies consists of three dimensions: *centralization, formalization* and *socialization.* Centralization refers to a lack of subsidiary independence in decision-making, formalization is used to systematize rules in decision-making, and socialization brings normative integration, consensus and shared values as a basis for decision-making. Each multinational subsidiary may have different roles and resources in an organization depending on size and strategic function. Therefore, coordination mechanisms have to be used to fit best in each case. (Ghoshal & Nohria, 1989.)

The coordination mechanisms by Ghoshal and Nohria (1989) have received largest attention in the international business research, but the model has also been under criticism. *Formalization* is seen as the lowest cost solution of the three mechanisms also enabling efficiency by creating formal policies, systems and standards for operational business management. However, formalization is seen to reduce creativeness and adaptation to changing environment. Benefits of *centralization* include fast implementation by creating a central unit for decision-making and direction of other units. Although the mechanism is easy to implement, the solution is more expensive than its counterpart and may lead to information overload in central unit slowing decision-making capability. The third mechanism, *socialization* solves the problem of information overload and the decision-making is based on shared objectives. Socialization is the most expensive and slow method as it takes lots of time and resources for alignment of objectives. For these reasons for multination headquarters, the combination of

formalization and socialization mechanisms are recommended since it allows more autonomous and creative decision-making. For a subunit whose role is to implement company strategy, the formalization method is recommended to save costs.

The use of three coordination mechanisms depends on local resources and environmental complexity of a firm. Studies by Ghoshal and Nohria (1989) and Nohria and Ghoshal, (1994) present a framework (modelled in figure 3) where the combinations of coordinating mechanisms are adjusted with the amount of local resources and environmental complexity. The choice of coordination mechanism will also depend on the relation between subsidiary and headquarters and the need for dependency. When local resources are low, the higher the level of interdependency. As environmental complexity grows, a subsidiary is more dependent on the support of a headquarters. As local unit has more autonomy and resources, headquarters is more dependent on the information that subsidiary provides.

	low	high
high	Interdependency: High & Subsidiary Dependent	Interdependency: High & Headquarters Dependent
low	Interdependency: Low & Subsidiary Dependent	Interdependency: Low & Headquarters Dependent

Environmental complexity (y-axis), *Local resources* (x-axis)

Figure 3. Classification of relation between subsidiary and headquarters' dependency relating to context and need of interdependency (Ghoshal & Nohria, 1989)

The dependency affects also to three coordination mechanisms used: formalization, centralization and socialization. Based on empirical findings, Ghoshal and Nohria (1989) have suggested the combination of coordination mechanisms to be linked with environmental complexity and amount of resources in the subsidiary. When the environmental complexity is high but resources are low, more clan based controls are recommended to be used. Socialization will be high letting group to find best fitting solutions to adapt quickly to changing environment. As environmental complexity and resources are locally low, centralization brings cost effectiveness to whole organization. As firms grow, more formalization and coordination is needed to ensure correct information for decision-

making. When the environmental complexity is low, formalization can be used to manage effectively the business with low costs. Use of coordination mechanisms is modelled in figure 4 where alphabetic code C refers to centralization, F to formalization and S to socialization.

Figure 4. Classification of coordination mechanisms depending on the environmental complexity and local resources (Ghoshal & Nohria, 1989).

Headquarters plays an important role in designing control structures in a multinational company and coordinating them to subsidiaries (Cruz, et al., 2011). Alfodi et al. (2012, 278) have suggested ten different functions for multinational company headquarters which align with the purposes of management control system design: "strategic leadership, planning and direction; resource development, acquisition and deployment; seeking and exploiting new opportunities; driving organizational adaptation; attention and signaling; monitoring, control and governance; resource and knowledge management; representation and mediation; coordination and harmonization; and integration and facilitation of inter-unit linkages". Headquarters has to understand context-structure relationship between headquarters and subsidiary and how different elements of the structure are linked to subsidiary context. For example, if differentiation in subsidiary is necessary for organizational effectiveness, headquarters should initiate more integrative processes (Lawrence & Lorsch, 1967.) Management control systems are studied to homogenize in global companies, but local managers can also reshape global systems to achieve local and corporate objectives (Cruz et al., 2011; Lawrence & Lorsch, 1967). As Giddens (1990, 175) conclude, globalization is an interactive process requiring lots of communication, and can lead to "uneven development that fragments as it coordinates" if not managed properly taking global and local requirements into consideration. As Robertson (1992) state, local context should be seen as part of the global context and therefore systems should not be totally divided.

2.2.2 Benefits of formalization

Formalization refers to the systematized way of utilizing rules and procedures in decision-making (Bartlett & Ghoshal, 2002) but can also be correlated to standardization (Bedford & Malmi, 2015) and the process of enforcing and codifying inputs, outputs and behavior (Ouchi, 1979). As integration in a multinational company is often expensive due to use of internal and external resources and competences, the optimal coordination mechanism has to be found to achieve organizational integration. Formalization is the most cost effective administrative mechanism and governs with well-developed rules and systems. Formalization needs less administrative resources and after stabilized it needs the least resources and energy to maintain. Formalization provides a coherent context for information sharing but may sometimes be stiff for rapid organizational changes. Although centralization is in the implementation phase the least expensive coordination mechanism, it requires big efforts and resources from the headquarters decreasing local units' active participation and decision-making. (Ghoshal & Nohria, 1989.) The level of autonomy is often related to the history as in older subsidiaries, resource concentration has accumulated over time (Ghoshal & Nohria, 1989). Subsidiaries present "a pool of sticky resources on whose performance the MNC is often dependent" (Ghoshal & Nohria, 1989, 328). Formalization is seen as effective control mode due to the conflict-prone situation, and formalization may help the actions of the company more predictable over time due to the well-defined routines and rules.

Formalization benefits have been collected to Table 2. Formalization can bring benefits to an organization through improved efficiency and common sense making and focused attention to create information integrity, improvement of communication and avoidance of biases and wrong information for decision-making. On an individual level, formalization may increase efficiency and task performance as well as work pride and commitment though improved goal communication and better work procedures.

Table 2. Benefits of management control system formalization

Dimension	Benefit	Researcher(s)
Organization	Cost efficiency, information integrity in decision-making	Ghoshal & Nohria, 1989
	Common sensemaking through focused attention, improvement of communication, interaction and reducing of biases, judgement error and inconsistency	Vlaar et al., 2006
Individual	Increasing work pride, commitment, work satisfaction, empowerment	Deming, 1986; Michels et al., 1988
	Improving efficiency and task management performance	Deming, 1986; Adler & Borys, 1996

Formalization enables and coerces engagement in common sense-making through focusing attention, improving communication, maintaining interaction and reducing biases, judgement errors and inconsistency, which all create mutual understanding in an organization (Vlaar, Van den Bosch, & Volberda, 2006). Formalization of controls can bring benefits and disadvantages into an organization depending on how the formalization of controls is conducted and perceived. Adler and Borys (1996) bring forward that in the earlier studies, control and formalization such as written rules and procedures guiding employee behavior were associated with absences, physical and psychological stress, lack of innovation and job satisfaction (Rousseau, 1978) feelings of powerlessness and self-estrangement (Kakabadse, 1986; Bonjean & Grimes, 1970). However, later the more bureaucratic control was seen as powering if employees see that their own and the organization's goals are overlapping, the contribution of formalization such as formal work procedures and design are wished to improve efficiency and to increase the pride of the work (Deming, 1986). Formalization of work activities are positively linked with commitment of sales people despite other thoughts (Michels et al., 1988). There are studies of formalization affecting positively or negatively to work satisfaction. If formalization is tight too much to daily work, it is often recognized negatively, but also lack of autonomy and control creates feelings of lack of motivation and dissatisfaction. (Adler & Borys, 1996.)

Employees may have emotional responses on how they consider in advance or perceive controls after implementation in an organization. Controls, such as pre-action reviews, may produce negative

attitudes (Merchant, 1985) already in advance before they are implemented. Also employee attitudes may be positive when formalization enables employees to perform their tasks better and negative when management attempts to coerce employees' actions (Adler & Borys, 1996).

2.2.3 Enabling formalization of management control system

Adler and Borys (1996) distinguish three dimensions in control system formalization: 1) characteristics of a system, 2) the process of designing a system, and 3) implementation of a system. Compliance of rules and control can either be accomplished by forcing employees to mandate the rules, as to say using coercive formalization, or facilitate and motivate employees to follow the rules and system in place by using enabling formalization (Ahrens & Chapman, 2004). Enabling control is studied to lead to higher motivation, performance and sense of well-being and ability (Adler & Borys, 1996).

Formalization process is tightly linked with designing a construct for management control systems. Formalization has strong conceptual ties to management control system constructs, for example to boundary and beliefs systems. Although formalization may be recognized as overlapping with management control system theories (Bedford & Malmi, 2015), in this thesis formalization is interpreted such that formalization is not only related to one control but to all control mechanisms, perception of controls and management control system functioning as a package. It is a process of designing and implementing a management control system, and can be used in more coercive and enabling way.

To make control practices work in global corporations, internal transparency and global transparency is required. Also proactive and reactive actions are needed, in other words flexibility and repair. *Internal transparency* refers to understanding the local working processes and providing information regarding management control systems' internal functioning. Internal transparency supports visibility of internal processes to employees in the organization. Key resources and best practices are developed, and layered access of information is given to avoid information overload with targeted reporting and communication. (Ahrens & Chapman, 2004.) Enabling formalization expects employees to respond creatively and autonomously to new challenges. Therefore, users need more understanding and information of the whole system's functioning. (Adler & Borys, 1996.) *Global transparency* refers to understanding all actions and processes in whole company. In global transparency, systems are built to provide wide range of information globally. The enabling view on

global transparency relates to employees' understandings of the broader system within they are working (Adler & Borys, 1996; Ahrens & Chapman, 2004), it requires knowledge on how processes are aligned within an organization (Adler & Borys, 2004) and helps employees to understand company's strategy (Kaplan & Norton, 1996; Simons, 1995). Ahrens and Chapman (2004) suggest that knowledge of performance related factors should not be provided only on what is needed to know, but knowledge should also be divided more widely between departments by using lateral coordination. Through global transparency, not only the understanding of company's actions increase among employees, but also the responsibility regarding the resource use and the detecting of local and global improvements and opportunities (Adler & Borys, 1996).

Flexibility is a built in feature in a system, where systems are programmed to provide advice and make suggestions. Ahrens and Chapman (2004) characterize the flexibility as the degree of flexibility and autonomy users have in the use of a system. Flexibility permits employees to build different kind of scenarios and model management control system in different situation, which supports fast organizing in changes. Also systems are programmed to give advice and make suggestions for users (Adler & Borys, 1996). *Repair* refers to detecting responses to problems in a system leading to continuous improvement. Repair is a two-way dialogue, where workers and system designers communicate and find common understanding on how to improve the system in a system. (Adler & Borys, 1996.) Employees should be encouraged to discuss about practical problems regarding to rules and standards (Ahrens & Chapman, 2004). Formal and informal incentives encourage employees to provide feedback of the system's functioning (Adler & Borys, 1996). Ahrens and Chapman (2004) propose that users of the system should be provided with capabilities and resources to fix problems. Although formalization is seen as a cost effective way of coordinating actions in a global company, formalization does not mean of the use of coercive controls. Recognizing characteristics of a company, resources and control environment helps management to weight what type of control needs to be used, coercive or enabling (Adler & Borys, 1996). When combining different types of controls with formalization style, the design of management control system may result differently (Bedford & Malmi, 2015). This is visualized in Adler and Borys' (1996) typology of organizations in Figure 5.
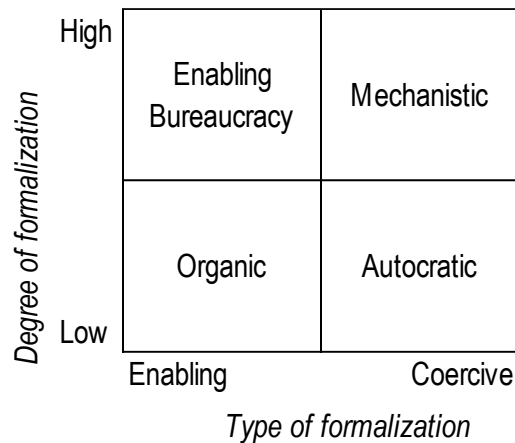
Figure 5. A typology of organization depending on the type and degree of formalization (Adler & Borys, 1996)

Ahrens and Chapman (2004, 280) introduce several suggestions for improving internal and global transparency within organization. Internal transparency requires improvements in giving layered access to information in management control system process without giving information overload. One way is to highlight key components of processes and codify best practices. Management control system can be accessed by organizational members, by linking budgeting processes with operational planning, and detecting and clarifying variances. Global transparency refers to visibility of overall operational context where employees perform their duties. One example for enhancing visibility and lateral coordination and communication is to communicate the key targets of certain organizational units with organizational relevance thus improving lateral coordination across departments. (Ahrens & Chapman, 2004.)

2.3 Synthesis of theoretical framework

In this study, theoretical framework consists of two research fields, management control system studies concentrating on management control system design, and coordination research focusing on formalization. As the synthesis of theoretical framework, the management control system design and the management control system formalization have been studied separately, or formalization has been considered as overlapping or thought to belong automatically to the MCS design. The MCS design and formalization have several similarities in processes and the processes could be streamlined to decrease overlapping phases. In both, the recognition of company's external and internal environment is important, but in MCS design. In the management control system planning phase, the characteristics of the environment as well as control needs should be defined considering the object of control, the role of control, the control elements and the use of control. The coordination process

binds separate elements as functioning system. The implementation of MCS can happen when the MCS design and the coordination process are planned, and the success of whole process defines the perception of control. This integrated framework used in this thesis is modelled in Figure 6.
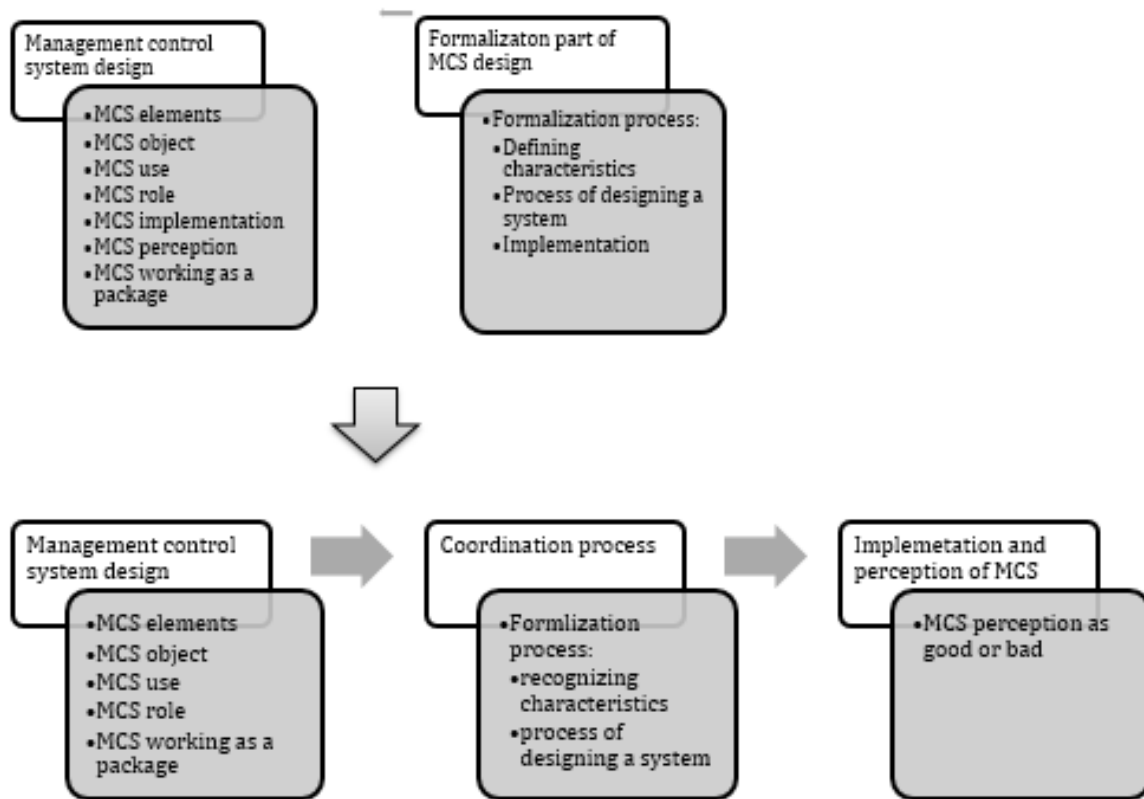
Figure 6. Integrated framework for management control system design and coordination process

Common goal achievement and the operation of controls cannot be taken as self-evident. In several MCS research, control failures have been caused either by the control design or control coordination. In the control design, Ferreira (2002; see Ferreira & Otley, 2009, 27) examined that the lack of coherence and integration between control can lead to control failure. In the studies of new economy firms' by Lukka and Granlund (2003), the reason for limited of success of a new economy company after growth period has been the lack of coordination mechanism and balanced management control. In several companies, developed coordination mechanisms lacked in order to be successful and imbalanced use of only belief and interactive control systems as a control tool lead to the lack in monitoring. (Lukka Granlund, 2003.) Also certain types of control use have been suggested to be implemented in different situations. For example, Simons (1995) has suggested that the diagnostic use of controls and interactive use of controls is recommendable in uncertain environment. The management control system has also been affected by different objectives of control and strategic choices (Abernethy & Chua, 1996).

Also the coordination of control systems is needed. Ahrens & Chapman (2004) studied the meaning of management control system, and coordination in a restaurant chain increased cooperations, efficiency, and harmonized procedures in headquarters and subsidiaries and increased corporate managers' and restaurant managers' common understanding of prevalent situation and control needs. Additionally, formalization increased trust between two parties. Formalization can be considered as overlapping with management control system theories (Bedford & Malmi, 2015) but in this thesis formalization is interpreted to affect management control system functioning. Thus formalization does not remove the meaning of management control elements design but acts as a process of implementing a management control system and coordinating the management process in a multinational firm. Without coordination mechanism, several systems or separate management control system instruments could exist without clear common coordination on group level.

The management control system's research area is vast, but this study's purpose is to gather main elements from the research field and combine them as a set of factors which affect management control system design. Coherent view on MCS design is adapted from Tessier and Otley's (2012) theoretical framework of the management control system design elements and their influence on the management control system perception. In this thesis, more combined view on the management control systems studies is tried to achieve, and the framework of MCS design is seen to consists of management control system elements, the object of control, the use of control, the role of control, and the management control system as a package. By describing only the elements of control, the actions and the objective of control may not come through. However, Tessier and Otley (2012) stated that controls as themselves are good or bad but the employee perception is dependent on implementation of controls which is part of formulating employees' view of controls either as positive or negative. Therefore, formalization is studied as a coordination mechanism of management control system along with its design. Current hypothesis and framework of management control system design, coordination and implementation process is examined in this studies through empirical research.

3 CONDUCTING THE RESEARCH

3.1 Research philosophy

According to the increasing number of management control system researchers, the research should develop relevant theory that can be applied also in the practice (Berry et al., 2009; Chenhall, 2003; Hopwood, 2007; Ittner & Larcker, 2003). Paradigm can be defined as "a world view or a belief system that guides a researcher in their work". Sometimes a paradigm may be a constitution of internally related ontological, epistemological and methodological choices. (Guba & Lincoln, 1994; see Eriksson & Kovalainen, 2008.) C*onstructivist pragmatics* (Nørreklit et al., 2006) was guiding the research work as it takes into account also the social and communicative side which lacks from the mainstream paradigm. Ontology provides assumptions about psychical and social reality as epistemology and methodology concern the nature of knowledge (Van der Meer-Koistra & Vosselman, 2012) and practical constructivist ontology has raised attention in scientific world since Nørreklit's et al. (2006) study, and in 2016 Qualitative Research in Accounting and Management Journal published a special issue based on actor-reality construction and one issue was dedicated for practical constructivist ontology.

Practical constructivist ontology (PC) constructs the reality through integrating logic, facts, values and communication (Seal, 2012). Facts should exist independently without human verification. Logic acts as a reasoning behind of alternative practices and likelihoods. Values act as a motivating force and a long term reason, and communication is important for integration of other dimension, for creating objectivization of values, and meaning in organization. All the dimensions support the understanding of others, and PC method can help to understand the challenging questions in research. Nørreklit et al. (2006, 48) uses a term *topoi* to describe "the concepts and arguments used in certain social setting". They are communicative tools which help to construct the world and facilitate dialogues and communication between people who share same vision of the reality. In an organization, there might be one or more *topos,* different worldviews, and therefore theories and conceptual frameworks are needed in an organization to understand the reality. PC tries to avoid knowledge-doing gap since the theory and practice must work together in reality. (Nørreklit et al., 2006.) PC helps to understand organizational and managerial reality, and research design is

constructed to bring sufficiently general and abstract frameworks that can be applied for several organizations (Seal, 2012).

3.2 Research strategy

3.2.1 Qualitative research in MCS studies and a single-case study as a research method

MCS research is mostly qualitative research. The premise of a qualitative research is a deep understanding about daily cultural activities of a company, management or market, and it separates single cases and classifies them through participants' meanings and viewpoints (Koskinen et al., 2005). In management control systems' theory, case studies have improved to be a promising method of inquiry since it makes possible an inclusive approach to the controls in use (Otley & Berry, 1995; Berry et al., 2009). Case studies explain real life events in their own context which is too complicated to be explained by a survey (Yin, 2009). A case can be one company or parts of the company (Koskinen et al., 2005), but in this study the researched company is classified as a case. Bedford, Malmi and Sandelin (2016, 14–15) use survey data to study management control combinations, and the selected companies presented independent for profit organizations with a minimum of 100 employees and revenues over 20 million Australian dollars, and the respondents were selected from top management. The same criteria are applied in this study but also the white collar employees' opinions are taken into account.

Case study may include characteristics of ethnographic survey, evaluation survey, action research and memoir survey (Syrjälä & Numminen, 1988, see Saarela-Kinnunen & Eskola, 2010, 194). In case studies, both qualitative and quantitative data gathering methods can be used and the data may contain documentation, archival records, interviews, direct observation, participant-observation, and physical artifacts. (Yin, 2009). Strong theory part, active participation of researcher, multiple methods technique and environmental variables are prevalent in a case study (Stoecker, 1991, 108–109, see Saarela-Kinnunen & Eskola, 2010, 194). In this study, both interviews, documentation and quantitative personnel survey results are used.

The case study, as other research methods, does contain strengths and weaknesses. The case study's strength is its capability to combine different evidences and surpass the weakness of other research methods in explaining "how" and "why" related questions inside research object. A case study also has its limitations as the process has been criticized of the lack of rigor and long duration. Secondly,

case studies have been stated to provide little basis for scientific generalization. However, limitations can be overcome with a systematic research process, research design and appropriate analyzing to create analytic generalizations. (Yin, 2009, 14 – 17.) Another research method, action research, was considered as other appropriate method as the researcher participated actively on the MCS development process inside the company and the aim was to gain instant benefit in practice (Heikkinen, 2010, 214). However, as the research paradigm concerns constructivist pragmatism and research ontology and epistemology's objective is to reduce knowledge-doing gaps in factors affecting management control systems design, formalization and functionality, case study research is an applicable method for understanding differences in people's thinking and action and reflect the actions to the theory, and theory to action. The case study approach enables to give a thick description of the research object and thus gives a holistic view of the current situation in the organization, thus development actions can be further developed in the future.

3.2.2 Triangulation

In practical constructivist ontology, proposed methodology includes combining all facts, logic, values and communication. Especially multiple sources methods are suggested for the development of interpretative methodology and the methodology concerned with communication is suggested due to the access to sensing facts, the reflections of logic and possibilities, values through interviews, and documents and relevant contracts to support communicatively fetched information. (Nørreklit et al., 2006.) Therefore, multiple data sources are used in this thesis and the triangulation of data enables to evaluate the information from various aspects.

Triangulation is *a rationale for using multiple sources of evidence* (Yin, 2009, 114) and enables the validity of the research while the data is interpreted from various aspects of the management control systems theory. Platton (2002, see Yin, 2009) presents four types of triangulations in doing evaluations: data triangulation, investigator triangulation, theory triangulation and methodological triangulation. In this study, two of the triangulation types are used: data and theory triangulation. A variety of sources of evidence including semi-structured interviews, surveys, documentations and observations are used to guarantee an extensive understanding of the current situation in the case company. The data is analyzed around different MCS theories to make a contribution for both MCS studying field and the case company. To some extent, also investigator triangulation may have been used as the researcher has been privileged to have mentoring guidance from the case company's personnel, from the instructor and fellow participants of the master's thesis seminar group. The case

company's personnel has given a fully picture of company's history, processes, situation and culture. In triangulated data, the events or facts in the case study have been supported by more than a single source of evidence, and each source of evidence is being studied in conjunction with other rather than separately (Yin, 2009, 116).

3.2.3 Interviews as a primary data generation method

Interviews were used as primary data generation method for this thesis. The nature of the study was reflecting that the answers for research problem were multidimensional and subjective, and the goal was to combine results within a larger context. Interviews help to answer these types of questions (Hirsjärvi et al., 2009, 205). In this thesis, finding facts, logic, but also individual values and communication regarding current management control system is essential. According to Arbnor and Bjerke (2009), social dialects are constituted first of the subjective opinions, and through communication the opinions are announced in public. After common acceptance, objectification harmonizes the viewpoint and which may follow internalization of information to common practices. Interviews help to build common dialect and conversation to externalize data. In this thesis, the externalization of the data is important to find subjective opinions and new development areas to the current management control system.

Semi-structured interviews are used in this thesis due to the will to find out opinions and feelings about the management control system. Semi-structured interviews are partly shaped by pre-existing knowledge of the topic and partly by concerns that are emerging through the interview (Bloor & Wood, 2006, 104). As in a semi-structured interview, themes have been defined beforehand by selecting the prevalent themes based on current MCS research but the order of the questions as well as the exact use of words has differed between interviews (Eriksson & Kovalainen, 2008, 82). Themes are not directly related to management control system formalization because in the beginning of the study, different coordination mechanisms were open and through the interview, the state of current MCS elements and the process have been wanted to clarify. Themes include Current Management Control System, MCS change, MCS implementation and Uncertainty Effecting Management Control System. Subquestions are the meaning of MCS in the company, MCS elements through Malmi and Brown's (2008) MCS as a package framework, the relation between MCS elements, the types of control and the objectives of control, and the needs for formalization. Malmi and Brown's (2008) model was visualized in interviews through a picture of the model, but this visualization was made only after the first question which related their view on what management control system constitutes

to find out whether practical thoughts and empirical model are perceived in the same way. The MCS Change questioned past, present and future state of MCS as guided by Nørreklit et al. (2006) and how the change has affected to the MCS elements and the use of them. The success and problems of the implementation were discussed as well as the effect of uncertainty to MCS. The English interview guide is attached to Appendix 1 and the same in Finnish in Appendix 2.

Interviews took practice in spring 2015. Altogether 12 interviews were conducted of which two via online meeting and others as live meetings. Respondents of the study are listed in Table 3. Interviews were decided to conduct as single interviews to give privacy to express opinions. The duration of interviews was between 35 minutes to 67 minutes and the average interview time was 55 minutes. The same outline was used in all cases and all the questions were discussed in the same order with all interviewees. Interviewees were chosen based on their different roles in company giving multiple viewpoints from different functional areas. Both top management and white collar employees were interviewed. Interviews were not conducted to only to top management since to try to narrow knowledge-doing gap, several individual values and opinions need to be taken into account to guarantee practical success of management control (Nørreklit et al., 2006).

Table 3. Respondents of the study

Interviewed	Lenght of interview	Date
CEO	56min	8.6.2015
SVP, Business Management and Product Development	55min	2.6.2015
SVP, Chief Operations Officer	66min	12.6.2016
SVP, Sales	53min	15.6.2015
Factory Manager	56min	15.5.2015
Communications and Marketing Manager	51min	19.5.2015
Quality Manager	67min	21.5.2015
HR Manager	64min	25.5.2015
Project Manager	56min	12.6.2015
HR Manager (former)	67min	14.6.2015
Business Controller	37min	16.6.2015
Product Development Manager	35min	23.6.2015

Interviews succeeded according to expectations and altogether 132 A4 pages of densely written thick description were analyzed. Interviews were conducted based on both positivist view where the facts of MCS functionality was research as well as emotionalist view where also participants' experiences were shared (Silverman, 2001, 120-128).

3.2.4 Personnel survey and documents as a secondary data generation method

Personnel survey

The personnel survey results conducted inside the case company are used as a secondary data besides other documentation. Secondary data is empirical data that is already existing (Eriksson & Kovalainen, 2008, 77). A global personnel survey was conducted at the case company in the early 2015. The questions were categorized in the questionnaire regarding employer image, customers, ways of doing things, top management, work climate and team spirit, workplace communication, supervision, duties and coping at work, and self-evaluation. Additionally, open-ended questions were placed upon working climate, satisfaction towards the company, recommendation of workplace, and feedback. Personnel survey can be found in Appendix 3.

The questionnaire represents 85 percent of all case company's active employees and the number of attendees was 369. Some of the questions are classified newly to better describe the focus areas and most applicable questions were selected for four categories. To examine the need for management control system formalization, the four dimensions, flexibility, repair, internal transparency and global transparency are viewed based on survey results. The scale of agreement with the statement was between one to seven, seven as the highest evaluation of success. Answers for open-ended questions are used to deepen the quantitative results of global personnel survey.

Documents

In qualitative research, documents are often used as a secondary data when observational and oral data are used as primary. However, Atkinson and Coffey (2004) argue the documentary data having a significant position describing well the reality. Documentations themselves do not incorporate all information, additional information comes also from the acknowledgement of how documents are produced, read, stored and used and by whom. Documents should always be examined in organizational settings. (Atkinson and Coffey, 2004.) In this study the importance of documentations is acknowledged and documentations are used to describe the organization structure, the value chain of the operations and the current management control system of the case company. Documentations have been collected during one year but the selection of the documents described in this thesis was conducted in spring 2015. Documents are used only as secondary data as more descriptive information is sought from interviews.

3.2.5 Data analysis

Qualitative research is often divided into three categories: induction, deduction and abduction as reasoning methods. Inductive reasoning seals observed cases to more general models or statements. In deductive reasoning, hypothesis and theories are formulated which help to explain the researched phenomenon later. As induction and deduction seldom exist as clear, many researchers use both or abductive logic in the study. Abduction is the process where everyday descriptions and meaning of people are transformed to categories or concepts which create basis for understanding. Abduction can be stated as the logic of exploratory data analysis. In general, no single model is used as the different forms of reasoning are commonly used. (Eriksson & Kovalainen, 2008, 21-23.)

The information in this thesis was constructed iteratively moving from induction to deduction in different parts of the study. This may also be referred as hermeneutic circle (Eriksson & Kovalainen, 2008, 23). Theoretical preunderstanding of the subject guided the research design as well as empiricism. After interviews, the theory was newly structured to ensure that the theory and the empirical parts are solid. This was all part of analyzing process, and moving between the theoretical abstract level and the practical subjective level, hermeneutic circle helped to confirm study results and deeper understanding was received. Gummesson (2005, 315) uses also a term hermeneutic helix to describe how researcher moves from first-hand understanding to deeper levels of understanding through iteration.

Typical research analysis approach in consulting is pragmatic in its nature where following conceptualizations may occur. *Conceptual analysis*, concerning the clarification of concepts and their relations. In *actions oriented approach* data is analyzed through the case study based evidence, and in *constructive development* problems are detected from the practice and solutions are created to solve the problem. *Decision-modelling* can include a design structure of improved accounting system design, or as in thesis, management control system design. (Lukka & Granlund, 2002, 172). Decision-modelling was selected as analysis method since management control system design does not solve any precise problem automatically but can suggest one model for decision-making. Decision-oriented approach tries to help management in practice, although the approach heritages from nomothetical approach where explanatory modelling is causal and findings are stated as general laws. Theoretical analysis is central in creation of new information, and usually deduction or abduction is used as reasoning logic. (Kasanen et al., 1991, 255.) Nørreklit et al., (2006, 52) propose that the procedure to

create integration between theory and practice would involve combining of institutional facts through a decision-making procedure, where decision-modelling as research analysis approach also fits.

The analysis of the data consists of two different kind of approaches: either the data can be reviewed from one certain theoretical point of view when only the most appropriate knowledge is acknowledged, or findings can be combined with common characteristics (Alasuutari, 2011). The data analysis began with coding the transcribed interviews. Results were categorized by the themes of the interview structure and questions. Themes were classified with the meanings of management control system, the elements and their functionality, the use and the role of controls, and the effect of uncertainty to management control system's functioning. Also the management control system change was analyzed logically through presence, history, and future to find logical explanations for *topoi* (Nørreklit et al., 2006). Individual *topos* were presented especially when discussing about implementation, perception and needs for formalization of management control systems, as interviewees presented own opinions regarding MCS functioning. Thematizing is a way of analyzing data by finding characteristics that are common or general for several interviewees (Hirsjärvi & Hurme, 2000, 173). In interviews, same themes surged from all interviewee candidates but also other themes emerged which supported research questions (Hirsjärvi & Hurme, 2000, 173). After thematizing the data, themes were newly structured in logical order to fit with theory and research questions. Data analysis process is modelled in Figure 7.

Theory: Management Control System Design / Formalization				
Data gathering	*Documents*	*Interviews*	*Personnel survey*	**Results**
Analysis		*Classification*		*Comparison of theory and data*
Main category	Current Management Control System	Management Control System Design	Formalization and Prohibiting Factors	Relationship between design and formalization, prohibiting factors of formalization, benefits of formalization, promoting suggestions for management control system formalization
Subcategories	Presenting Case company, current MCS, Evaluating dependency and Interdependency	Meaning, Current MCS Elements, Use of Controls, Perception of Controls	Prohibiting factors for internal transparency, global transparency, flexibility and repair	Finding supportive elements for hypothesis

Figure 7. Data analysis process

After classification and thematizing of the data, the selected citations were translated into English to support the findings covered from the data. 11 interviews were conducted in Finnish and only one in English. With translation, the real meanings of the citations have been tried to translate although waterproof interpretations cannot be drawn from quotation due to linguistic challenges. All the citations have been marked with M as manager and E as white collar employee and descending number. Before the interviews, several requests were presented to keep the information anonymous and therefore only classification of a manager and an employee is used. The descending number does not reflect the order of conducting the interview.

4 THE MEANING OF THE DESIGN OF MANAGEMENT CONTROL SYSTEMS

4.1 Analyzing current management control system of the case company

4.1.1 Presenting the case company

The study is a single-case study, and it is conducted in a Finnish industrial gearbox manufacturing company. The case company is a Finnish-based supplier of gearbox technology and services, known as one of the leading companies supplying gear units for major wind turbine manufacturers globally. Company runs engineering, sales, procurement, production, services business and other operations in eight countries around the globe with production facilities in five countries and employs close to 500 employees globally. Case company's operational company structure is visible in Figure 7.

The case company started serving gears for wind power transmission in 1980s and started with service business in 1990s. The company has been separated from other Finnish technology supplier, based in 1887 and producing gear units for industrial power transmission and drive systems operating in fiber, paper and tissue, mining and minerals, and marine industry. The common history is diverse while gear units have been provided under several brand names, the ownership of the company has changed many times, and the two divisions of different product lines, industrial gears and wind turbine gears, have been separated and merged several times. During financial crisis company filed for bankruptcy due to several changes in the market. However, year 2013 global investment engineering group acquired the case company and improved market situation allowed company to continue business but several reorganizing had to be done. The bankruptcy caused internal disorganization and new arrangements internally. In the beginning of 2015 the case company was separated as a legal entity from other technology supplier and the company went through big organizational changes.

Head quarters, FIN

Production unit, FIN 2 factories

Production unit, FIN Housing

Working office, FIN

Working office, FIN

Production uniit, GER

Production unit, UK

Production unit USA

Production unit, CAN

Service unit, Australia

Service unit, Spain

Service unit, Italy

Strategic partnership, Brazil

Production unit

Sales office

Production unit 1

Production unit 2

Production unit 3

Sales & Service unit

Figure 8. The case company's company structure

Several factors have affected to the need for a study of the management control system in the company. The first is related to volatile market, the second to company history, and the third to internal changes. First, the market in the wind business is volatile. Government policies affect highly on the regulation of the market affecting straightforwardly to the operating environment of the power industry. [1] The market is consolidating as big end customers and customers are closing mergers or stepping out of the business. The wind power manufacturers are now focusing more on the service business and will grow the service market share in the future. The business focus changes fast along the new strategic decisions wind power solution providers. Wind power market is experiencing overcapacity at the moment, and thus business has to be adjusted constantly to the market needs faster than competitors. Therefore, business management has to be agile for changes.

Second, the case company has gone through big changes in the past, which have affected the need for the study. One is related to the fast and uncontrolled global business expansion in the past, the other

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[1] Example of MCS and change in operating environment due to Australian Federal Government's Clean Energy Act 2011, see Evans & Tucker, 2015

is related to the new management control system creation after the bankruptcy and company demerger. The first reason is heavily related to the history of the company. In the beginning of millennium era, the company was expanding fast along the business, and high expectations were built upon the business growth. Company extended fast its operations and opened new service centers globally and started to build new operations capacity quickly in several countries. In 2008 financial crisis hit the markets and the company after which sales dropped drastically and business expansions were discontinued. Also the best practices and operational policies were withered.

Third, in 2015 company went through a big organizational change dividing its business in two separate legal entities. The so called demerger process affected the ways of doing business, as the division allowed both separate companies to concentrate only on one single business lines. The operational processes were divided already before the division, but Finance, Human Resources, IT, R&D processes were equally shared till the demerger. The demerger does have its effects on the organizational level of the company, but since people have been working on separate business lines already before the demerger, the biggest effects will be seen in the future as two companies start to manage the business more separately. To ensure a smooth transition after a company divorce, as demerger process has been described in the literature, and to fulfill the strategic objectives after the demerger, company's management team experienced the need for a thorough study of management control systems in the company.

The process for the MCS renewal started in 2012, but due to its dynamic nature, the management control system of the company has evolved as business needs have changed. The process has included determining strategic programs from business rearrangements to profitable growth. The senior management structure has been newly designed and common values have been shared to warrant common understanding and goal congruence. Long term business plan has been outlined, organization structures changed and organizational mentality has been formed more to team-based view. Management team and current business lines are modelled in Figure 8.
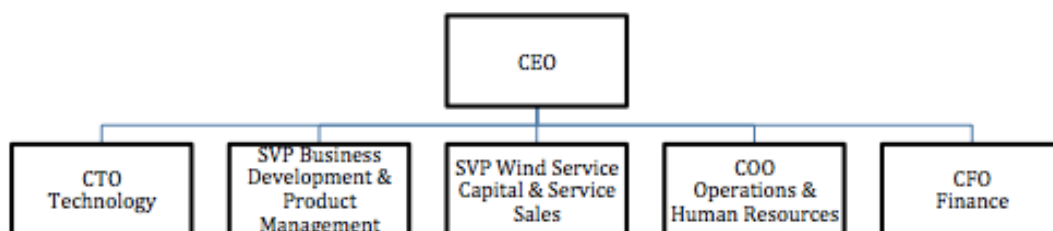
Figure 9. Management Team and current business lines

The new situation inside and outside of the company has created a rationale to study management control systems in a company in a package of multiple control instruments and develop the system to match with current business needs. As earlier in the history, the case company's subsidiaries were given a full autonomy leading to dispersed management control practices, differences in accounting IT systems and accounting metrics, and dispersed decision-making forums. As the business has started to develop positively on the global market, the company has experienced a need for best practices sharing and management control system formalization globally in all case company units to increase cooperation and effective operations. As in the headquarters the operations are the most complicated and common coordination and information sharing is even more important than previously, interdependencies and formalization need to be looked for carefully to find an optimal balance for management control system.

4.1.2 Current management control systems model of the case company

The case company's current management control system was built before company bankruptcy and MCS instruments have been modified one at a time when in need. Case company's management control system is based on 1) *Quality, Environment, Health and Safety (QEHS) Management, Standards and List of laws*, 2) *Process descriptions*, and 3) *Service Business Management* specification*s*.

QEHS Management consists of management manuals, policies, objects and meters, year clock, and list of laws. Management manuals include quality manual, environmental management manual, and health and safety manual. The manuals contain definitions of meanings, responsibilities, goals, resource management, and regulatory responsibilities. Additionally, the manuals contain instructions for evaluation and development of quality, directions for corrective actions, and plans for documentation and communications. The QEHS Management is directed with the help of corporate policies, including inter alia anti-bribery and corruption policies, standards, including ISO standards, and annual year clock.

Main processes descriptions set the principles for *business management*, *capital and service business management* and *support function*, including finance, IT, human resources, QEHS and supply chain and product life cycle management. Because the main focus in this thesis is related to general business management, the principles for business management are described more carefully.

The case company' mission is to provide innovative drive train solutions to improve wind power competitiveness. The company vision is to be recognized by partners to and employees as the leading provider of drive train technology and services in wind industry. To achieve the goal of being one of the leading companies in the wind gear industries, strong focus is set on maintaining strong customer orientation and commitment to continuous improvement. Company values are set to form stable element for leadership as business changes according to customer and market needs. Vision and mission, strategic goals, strategy implementation and feedback set the strategy process of the company. The performance is measured by using recognized key performance indicators, and management results are evaluated from three perspectives: 1) *customer results*, including loyalty, satisfaction, reclamations), 2) *key performance results*, including competitive advantage, financial results, and 3) *personnel results*, including personnel motivation, satisfaction and development. Business performance is regularly evaluated in operative management meetings and management reviews.

The case company strives to main a culture that invites employee participation and engagement, and encourages employees to bring ideas and constructive feedback. Employees should understand how their achievements contribute to company's strategic objectives, which requires the knowledge of management's expectations and objectives. The most important management procedures to provide managerial information are *planning and implementation of strategy, operative management and development,* and *communication and information*. Figure 9 shows how the main processes are related to business process level. Case company' operational business management in capital and service business consists of three main processes:

1. Customer management
2. Technology Management
3. Order-to-delivery
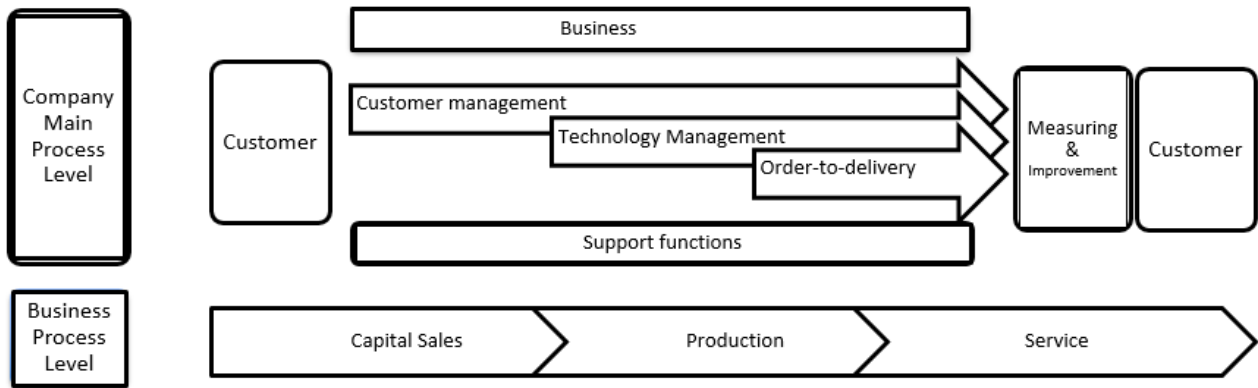
Figure 10. Case company's main processes

The current management control system is focused on non-financial aspects and business processes. Achievements are compared towards standards and the object of control is compliance oriented. Standards bring guidance and requirements for operational framework, and support processes are designed to give support for core processes. For every process, there are sub-processes defined with following definitions: description and meaning of process, owner of the process, salient stakeholder groups, customer requirements and needs, process input and output results, process resources, main performance indicators, and control and development procedures. Standards do not tell how things are managed in organization but give direction of how standards have to be regarded. Implementation of standards happens through frequent evaluation of current management control system. Implementation plan is guided from managers to process owners.

4.1.3 Evaluating the need for dependency and interdependency

Ghoshal and Nohria (1989) have suggested the combination of coordination mechanisms to depend both on resources submitted to the units and the level of complexity in the environment. The case company's control structure consists of two different dimensions which affect management control system design: the level of autonomy and business type. First, the case company is geographically dispersed into production in four countries and sales in three additional countries. In the history, the case company practiced multinational internationalization strategy by building strong local presence to guarantee responsiveness to the market (Bartlett & Ghoshal, 2002). Case company's units were far autonomous in the past and every unit had the right to control their own actions. The disparity is shown also in the different accounting IT systems and meeting routines which slows the efficient consolidation. The business type is affecting the level of uncertainty in business. The forecasting of sales in more difficult in service than in new gear unit business. New gear unit business relies more

on long term contracts as in the service business there is visibility for three months ahead which affects to the reliable forecast creation. The more difficult the market is to forecast, the more uncertainty lies in the business.

Value chain in Figure 10 is supposed to describe the connections of the value system elements between country units. Finland and its production play major part in the company. The new gear unit production is centered only in Finland, and other units work on the service business or sales. Main central functions in Finland include Finance, ICT, Legal Services, Human Resources, Procurement, Product Management, Research and Development, and Marketing, and constant cooperation between departments and units are needed. Some service design engineering, product management and smaller size procurement is centered in United States and other production units. The core function of the service units is to work among sales, service repair and field service. The core function of sales units are sales and field service.
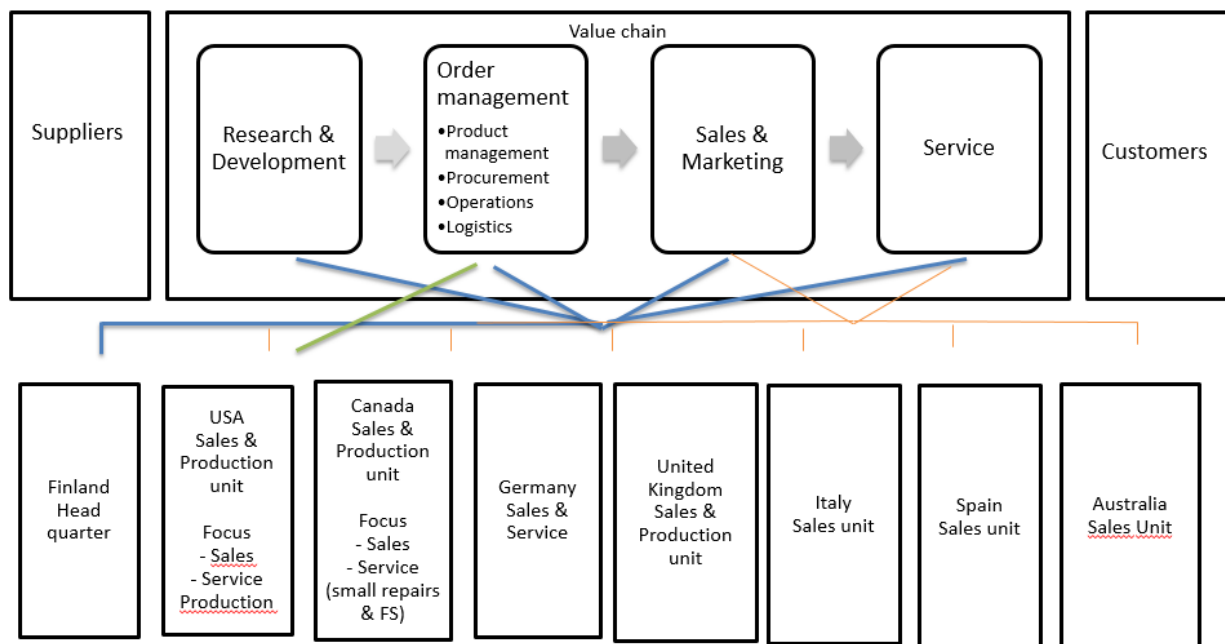
Figure 11. Value chain of current operations

Management control system requirements vary in different units depending on the size and function of a unit. In Finland, the management control system is heavier due to central part of the production and wider information needs of current operational capability. Three years ago the case company changed the multinational strategy and management style to more formalized management style. New key performance indicators sales were identified and analysis of consolidated information became

central. With the increase of KPI based transparent management, also the level of global tasks has increased and more direction and support from headquarters is needed. Global teams were created to increase information flow, communication and guidance. The core is to increase efficiency with light team based centralization without increasing the tasks and amount of personnel in headquarters too much. The case company's aim is to exploit parent company's knowledge, capabilities and formalized rules, which are transferred to overseas unit.

Interdependency between companies is high in the case organization. The case company's subunits practice internal trade with the headquarters and between other subunits. The biggest production unit is Finland which provides also the most of the internal components to other units and provides workshop services for repairs. The headquarters is dependent on the subunits level of sales due to intercorporate sales' impact for factory load and productivity and subunits need on time delivery and communication from production. Communication is important since both parties are dependent on the other one's performance. Management control system in the case company requires formalization due to the corporate level information need for the basis of decision-making and performance improvement.

4.2 Analyzing management control system design and need for formalization

4.2.1 Meaning of management control system

The current management control system is seen to be quality systems oriented and the development of strategic management control systems has been neglected due to the bankruptcy and the company history. Interviews indicated the current MCS framework to be detached from every-day management as the daily management has required more results-oriented leadership. The quality system of the company has remained well-working despite the changes and has helped to stabilize the management control use as operations have continued but the strategic and financial management control system has not evolved as fast as the business has developed. In the interviews, the existence of two management control systems was common: a quality-oriented management system and a strategy-oriented management system. Interviewees did not see that the current quality oriented management control system can secure long range target setting and flexibility also on managerial and financial level. A quality-oriented management control system can work on factory level but strategic management needs more results-oriented and flexible control system. Hence more comprehensive

management control system is needed. All the interviewees agreed that current control system covers main control elements but they are not well organized.

"How I see it we have two systems in place. One is the quality documentation, management system, which however does not represent real life especially if we think of management's control system. I'd see that it might work on a factory level, but not much on the strategy side. The other [non-quality related] management system has been very vivid due to colorful company phases during the years, and even in 2011 we still had a very specific year clock and strategic planning which were scheduled and the periodic planning was working very well until the bankruptcy. After that they [strategic planning elements] have been put aside and we have gone through quite some upheavals, and they have been eliminated quite much, but now we have started to build them again." (M1)

"If you ask about the quality side, our organization has a control system which works well and covers the main control elements. It is widely enough set, even it may lack some structural elements. The challenge is, what is company's target in the business and as a company, do we have a management control system that supports that goal. That is the core question." (M2)

Interviewees opinions about the meaning of the formalized management control system are well aligned with the current MCS research presented in the chapter 2.2.2. The goal for management control system is to harmonize the control system in the company: to unify practices and allow goal setting and accomplishment. Interviewees stated harmonized management control system to bring efficiency and improve work performance increasing commitment on employee level. Additionally, on company level, MCS is seen to bring cost efficiency and goal achievement into the company.

"Personally I feel that the management control system, if working well, should unify working practices between factories and departments to let employees to concentrate on own work knowing what to do. On consolidated level, management control system will lead the actions forward." (M4)

Management control system is seen to help to see the big picture of the company management and help to avoid subptimization. As the company has experienced turbulence in its operations, the interviewees raised the control systems' important role as bringing stability and continuity into the organization. Stabilized management control system can also build trust in the company.

"Uncertainty affects to how one can see the cause and effect relationships for the actions in terms of uncertainty. To where one action leads. It requires capability to see the big picture for not to partly optimize something that will cause problems in longer term. Also the management control system should make the agility and reaction pace faster." (E2)

"Management control system gives a framework according which to act. It gives personnel certainty that we do have a working model which aims somewhere and with which targets can be achieved. I have noticed that even in hard times, core processes last. This is something personnel can rely on." (E5)

"Management control system needs to collect the information and with that information people can analyze the situation. But the management control system pipeline where employees operate cannot be too coercive and tight." (M2)

Interview results indicated the importance of the MCS in reducing biases in the organization and collecting correct information from external and internal environment. Interviews indicate the meaning for formalization to conduct tasks efficiently but enabling to work independently.

4.2.2 Management control system elements

The current management control system framework in the case company is a mixture of old processes with new control elements. Current control elements have been described by taken advantage of the framework by Malmi and Brown (2008) in Table 4. The framework gives a holistic view of the control systems of the company taken several viewpoints into consideration.

Table 4. Case company's management control system elements by Malmi & Brown (2008)

Cultural controls						
Clans		**Values**			**Symbols**	
• Organization culture, much inheritance from the history • Several national cultures inside the company		• Values bringing basis for decision-making • Mission & vision on the basis for long-term planning instead of strategy • Weak strategy communication			• Innovative branding • No factory level symbolic control	
Planning		**Cybernetic controls**				**Reward and compensation**
Long range planning	Short range planning	Short term performance follow-up	Financial measurement systems	Non-financial measurement systems	Hybrid measurement systems	
• Strategy process • Strategic projects • Committee function • Management team function • Budget planning • R&D	• Strategic projects • Business plan • Budget planning • Forecasting • Sales and Operations planning • Operative planning • Other meeting and schedules	• Rolling budgeting and forecasting • Budget control	• Sales, Operation, Finance, R&D, Product Management KPIs	• Strategy follow-up • Weekly calls • Personnel and customer surveys	• Balanced Scorecard • Current Management System Reviews and Standard fulfillment	• Rewards system concentrated mostly only on management and sales
Administrative controls						
Governance structure		Organization structure			Policies and procedures	
• Committee / Board of directors Management team Unit Management Shop stewards and accredited parties Teams • Corporate governance policies		• Matrix structure • Team-based organization structure but also legal unit based organization structure is in use			• Working policies • Trainings • Job descriptions	

All management control system instruments are analyzed more closely in following chapters and tables summarize control elements in the case company. The information for control instruments is gathered using empirical field research. The analysis of the functionality of the instruments is gathered from the in-depth interviews collected from the management team and white collar workers.

Administrative controls

Administrative control systems direct employee behavior through governance system, organization structure, and policies and procedures. The case company' administrative control structure is listed in Table 5.

Table 5. Administrative control instruments in case company

Administrative control structure	Control instruments
Governance system:	Owners, board of directors, management team, unit management, shop stewards, teams Corporate governance policies for decision-making, permission levels, governance and operative policies
Organization structure:	Matrix organization; global teams, functional teams inside one legal unit, and legal unit structure
Policies and procedures:	Corporate governance policies Established and outdated policies Unit-special policies and ways of working Trainings (no formalized training programs)

The case company's governance structure can be divided into decision-making, supervisory, and operative monitoring function which is modelled in Figure 11.
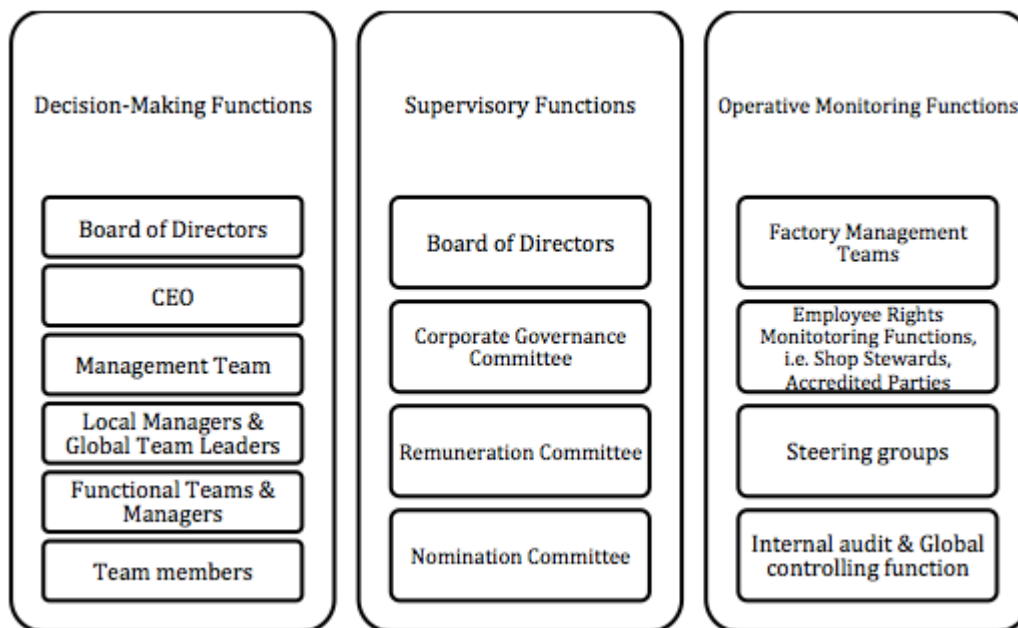
Figure 12. The case company's governance structure

Decision-making is centralized to the management team and owners, where actions are delegated to global and functional teams. Supervisory function has been set up for ensuring good practices fulfillment and developing governance in the company. Operating monitoring functions conduct operative actions and factories' own management teams are responsible for own area results and the rights of the employees are guarded by shop stewards of social parties. The organization is a matrix organization where global teams report for global team managers and legal units are structured

functionally. Global teams have been set to increase synergies in the company, bring responsibility to lower stages of the company, develop business processes, and increase governance. According to interviews, participation in the development of a company can also increase employees' motivation. Interviewees highlighted the need for strong administrative structure and decision-making limits because the known organization structure and the ways of working can increase participation and employees' motivation despite creating boundaries. However, management control system was seen to work as its best when the system is flexible and allows employees to influence on work.

"I am a friend of administrative structure. --. The worst is if we do not participate employees to improve their own working area. --. Additionally, you will increase employees' motivation when they are listened to." (E7)

"Management control systems needs responsibility in decision making process as part of the system, because even though you had a working management control system in place, if decision-making forums do not exist, the system does not lead towards the goals. --. A little bit of mechanistic structure is needed. People always think that coercive means stiff and non-customer oriented organization. It shouldn't be like that." (M4)

Following practices and policies are set to control employee behavior and to guide employer's practices: anti-bribery and anti-corruption policy, competition compliance, equality plan, foreign assignment policy, and corporate governance and decision making rights policy. Corporate responsibility is recognized in the code of conduct, HR policy and equality policy as well as in environmental policy, which are implemented in daily activities, values, and rules. According to interviews, processes are seen as one of the most important aspect in management control of the company. Good process definitions help employees to focus on defined tasks better and limit the actions of unwanted behavior, help employees to understand different functions in organization and bring balance between personal life and work. In interviews, policies and procedures are seen to bring a framework for management control system. Surprisingly, policies and procedures have lasted well despite changes, and give continuity despite other changes in organization.

"Manufacturing company operates in its best when there is an operative framework process created. --. Process pipe is a very describing term. When people work in that 'pipe', the limits are more clearly set. I would describe it as the main element in daily work." (M2)

"Policies and procedures bring a framework for a system.--. Within employees, they are planned to combine and balance work and personal life and not to look only at company's interest. Nowadays many things are considered what is the best for an employee since no one motivates with using coercive control but one should plan a system which takes into account employee's personal life and situation, which helps to do the work when needed. Policies and procedures hold the system together to help in controlling the environment and regulate costs." (E2)

Planning

The case company operates mostly with short range planning due to the market changes in the market which complicates long range planning. Uncertainty and history affect to communication, implementation and formulation of planning, and in current situation more flexible planning tools are needed for the future. Case company's planning elements are listed in Table 6.

Table 6. Planning elements in case company

Planning control structure	Control instruments
Long range planning:	Vision, Mission Committee & Management Team fuction Strategy Budget Planning Performance appraisal
Short range planning:	Strategic projects Business plan Budget

Long range planning is conducted at senior management level concerning the direction from the owners. Management team formulates the strategy and targets, and is in charge of daily operations and decision-making. Management team's presence is visible in daily management, and everyone has an own control area. According to current management control system, long range strategic planning is conducted for every three to four years considering the market changes and investor relations but due to market situation and changes in customers' strategies, strategy process is more continuous rather than permanent stage. Constant changes have left little time for proper strategy work, decreased other organization's participation in strategy formulation and have affected negatively on strategy communication. In interviews, long range planning is important and helps to align goals towards same direction. Despite the strategies have varied and strategic periods have been short, the mission and vision have replaced the meaning of strategy in creating guidance for operations.

"Personally I see the long range planning important. Although it is important to be reactive and change the direction whenever needed, our employees do not know how to work together without knowing common goals." (E1)

"The vision of where we are going, the clarification and communication, is a clear shortage. The business idea of the company is quite clear, gear manufacturing, and we would need two or more customers for capital gears, and it is kind of a vision where the company is going towards to be bigger and more profitable. And of course the mission is that company has to grow and it has to become profitable, which sounds like a cliché but when considering the background of the company, the mission is quite suitable. When starting to think about that and what to do next, the concrete strategic frame is still missing. The company lives the moment very often and makes even difficult operative things and uses lots of efforts in it, which causes that there is little time and focus on creating a strategy.--.The strategy is best formulated via communication and organization owns the best knowledge for the base of the strategy than any other source. The best strategy is created when the largest amount of employees is participated. And when employees are participated, the need for strategy communication decreases." (M2)

Short range planning consists of strategic projects that are implemented to whole organization. Business plan is made yearly with financial analysis, and targets are set through yearly budgeting. Budget operates as both planning and cybernetic control instrument since budget is used as a target setting tool for upcoming year as well as a monitoring tool when measuring performance. Action planning happens mostly in a 12-monts period on unit manager and departmental level in which financial and operational targets and projects are undertaken. During the definition of strategic projects key success factors are defined. The meaning of key success factors is seen as important to bring vision and mission more vivid and help to measure the development and build capabilities.

"Central key success factors are two folded. One capability based. We have to have capability to succeed in the business. Other is process based. Our core processes should work well to be able to reach the goals. The additionally, the capability to reach growth from the market is essential. With the definition of key success factors, the vision and mission get a more concrete form. When the key success factors are working well, goal setting, and follow-up to reach the goals is easier to do." (M2)
"We have had deviations after the changes, that teams do not know their targets or own organization. Those are some kind of weaknesses that we have had in our control system." (E5)

Cybernetics control

Financial measurement systems are targeted for constant performance measurement along the organization. Several project to the unification of measurement systems have been started to create common data which can unify performance evaluation and clarify decision-making. Financial measurement is performed in various levels of the organization from sales to production, and common KPIs are followed throughout the organization which are reviewed in global weekly or monthly meetings. Cybernetic controls are modelled in Table 7.

Table 7. Cybernetic control instruments in case company

Cybernetic control structure	Control instruments
Short term performance follow-up:	Budget 12-month rolling forecast Full year rolling finance forecast
Financial measurement system:	Monthly reporting; revising of Finance, Sales, Operations, R&D and Product Development Performance and core KPIs Weekly reporting; revising and controlling weekly performance, tasks and operational changes Ad hoc controlling and analysis
Non-financial measurement system:	QEHS Meetings Strategy Follow-up Strategic Projects Follow-up Weekly Reporting, Status update and Management Meeting Personnel and Customer surveys
Hybrid measurement system:	Balanced Scorecard Current Management System Reviews and Standard Fulfillment Update

Budget is used for planning and performance benchmarking purposes. Budget is defined yearly for every unit with participative budgeting method, and it is an important tool in target and cost follow-up. Once a month, global finance actuals and forecast reviews take place. Weekly meetings include regional sales meetings, local operations meetings and senior management weekly meetings and non-financial measurement system which includes Quality, Environment, Health and Safety Meetings, which are core of the current management control system of a company. Meetings work as a place where to share knowledge of current situation as well as target setting channel. Numerical metrics circulate in weekly phase to produce knowledge for wider group of people in the organization. Core KPIs include customer delivery accuracy, throughput time, resource usage, order intake, net sales

level, product group profitability and torque density. Once a year, non-financial surveys such as customer or personnel survey are conducted. Balanced Scorecard is in operational use serving mostly factory management. Non-financial measurement systems usage in production, quality and sales are recognized as good although link between financial and non-financial figures is not straight. Cybernetics control system have helped organization to continue operations fast despite bankruptcy. Active follow up in financial metrics is important for analyzing company's performance. In performance follow-up, proper analysis of the current financial and operational figures is important for everyone to share the same view on the situation.

"Information is available and results and numerical targets are gone through, such as targets for customer delivery accuracy and cost level. We have targets for this year, clear numerical targets and saving targets, which are implemented on supervisor level to daily management in teams. When teams give information back on the needs or plans, and the management team controls whether plans and action needs correlate with overall business plan. If not, other ways to meet the targets are presented. in the company, there is a strong communication connection with the management and employees and numerical targets are acknowledged and known, and the management is done via numerical measurements and interactive conversations. It is daily management." (E5)

"We have quite a big fixed cost budget and therefore we have a monthly follow-up where controller explains whether we are going above or under the budget." (E2)

Rewards and Compensation

In the case company, incentive system is related to salary-based incentives and non-money related incentives such as career development and continuous development in workplace. The history has affected to capability to implement the whole organization wide incentive system, but also other non-monetary results are indicated as important and are seen to increase commitment. The lack of monetary reward system has not been considered problematic but with planned incentive system more commitment and motivation could be created. Especially important reward system is seen in managing personnel risk

"Incentives do not only consist of money but it also consists of the results oriented organization which knows what is targeted. At the moment it is implemented through target and development discussions but in our organization this tool is not used in fully." (M2)

"Reward system is functioning since the only motivator is not only money but also responsibilities. Reward system is not only monetary which is a better way to commit employees. With money as a reward system, you will get only three months of satisfaction and then the reward is forgotten." (E8)

Cultural controls

Table 8. Cultural control instruments in case company

Cultural control structure	Control instruments
Clan control:	Old, history driven organization culture
	Strong national culture and national organization culture
Symbols:	Innovative marketing and communications strategy to differentiate company from competitors
	Low symbolic control
Values:	Vision: Recognized by our partners and people as the leading provider of drive train technology and services in the wind industry.
	Mission: Provide innovative drive train solutions to improve wind power competitiveness.
	Values: customer orientation, agility, quality commitment, pioneering and innovation, safety attitude, and respect for people

The case company's core values are customer orientation, agility, quality commitment, pioneering and innovation, safety attitude, and respect for people. Values are built to honor core actions in the company and to be based on decision-making. Common values and mindset secures information integrity in communication and speaks with company's values. Mission and vision work as an important factor. The case company's mission is to "Provide innovative drive train solutions to improve wind power competitiveness". Vision includes to be "Recognized by our partners and people as the leading provider of drive train technology and services in the wind industry".

"The management control system should represent the values, to which actions are based, where we are ready to bend and where not." (M4)

"The core values should not change. If the values change, the interesting question is where the company action is based on? Of course values develop during the time but I think values are the corner stone of the business.--. The management of a company is a campaign. The message you want to bring forward must be communicated forward to employees in different ways for them to digest the vision and purpose. Before a company can campaign the strategy and vision, it has to have a

common value base as a company to answer in all situations similarly to employees' challenging questions. When the management team's values are common and mission is clear, the way to reach the results happens more automatically." (M2)

The case company possesses organization culture habiting already from the times of the industrial gear manufacturing. The organization has experienced different management styles in the history, and every management team has brought own view to the leading of the company. Culture is slow to change and therefore lots of management work is required to bring new atmosphere to the organization. Current culture has been tried to renew with new processes, teams and ways of working.

"Change needs also cultural change since the company history is very autocratic in manufacturing company and the culture follows and stays inside the walls. Culture will change if people change or time is taken to get to used to other kind of culture. In cultural change a lot of effort has to be put on how to do things in new way." (M2)

"I see the management control system as a package, I do not think that the MCS consists only of reporting. I see that management control system consists of processes where all the business functions have been considered and all elements have been modeled so that employees can also understand them." (E7)

4.2.3 Use of controls

The case company is highly results-oriented company. Growth and profitability have been key driving forces in the business and compliance has been minor concern. The way the case company is conducting results control has been close monitoring in management and supervisor level, active use of interactive controls, direct target setting on personal level, and high level of freedom to conduct tasks. Common target setting and common monitoring has been minor and effort has been put on short-term improvements in all levels. This has brought overall process improvements and short-term achievements. However, on the negative side, this has brought lack of coordination causing much overlapping work and waste of resources.

"Control in our company is much likely goal setting. There are results targets for many employees which are followed on supervisor level. With supervisor, development needs are communicated to reach the goals. Sometimes results control is used to commit employees for reaching goals. Lots of

freedom is given to employees to conduct the business as they see it best. One thing missing is the lack of preconditions. We are consuming lots of time in doing several things and wasting resource due to the lack of focus and coordination, but this is now under the scope." (E8)

The use of personal and interactive controls has been common mainly due to historical autonomy level, size and management style. The small size of the company has facilitated the use of interactive controls. As units have been highly autonomy and with small size, management style has become interactive management control oriented. Management communication has been essential in organizational development, and has created a sense of strong but flexible coordination. Although the use of interactive controls can be classified as enabling use of controls, control targets come through to employees.

"Managing is quite much now in personal level than in organization's management level due to small size of the company.--. – And also because units are very much local centric." (M2)

"I can sense interactive control strong in the organization but there is always some control behind." (E4)

"Management communication is the key. Many management-related field is psychological and is not grounded on how the system is built. --. The images of the direction guide people's energy levels, action, and motivation. --. The trust on the company surveillance is the central psychological element." (M2)

The interactive and personal use of controls can create lack of common organization wide control as the strategy and projects are not implemented commonly for all organization, as communication is conducted interactively face to face. Interactive control use may not work if the communication is not planned commonly through corporate communication or if organization structure and training does not support communication process. Based on the interview, communication should be designed to management control system as an evident part. Although management communication is widely used in organization, it is not seen a best way of communicating events and changes in an organization. Communication must be planned and implemented into a system or otherwise information does not come through systematically into whole organization. Communication should be designed based on the content and receiver to reach desired effects in organization.

"Management control system should support communication and act as a mediator of a message since in every department the message has to be a little different. Although the content is the same it has to be modified to fit the department to have a meaning. If you tell the information in the same way to all employees, departments and organizations, the message may become meaningless." (M2)

"Our corporate communication works well but the message that goes naturally to employees through organization structure, that kind of communication does not work in our organization. --. When talking about communication, I would divide it to strategy communication and management communication. They should be part of running the business. Mostly we talk about strategy communication, but which one should it be – strategy communication or management communication? In strategy communication we talk about the changing agenda of the management and in management communication about what happens currently in the business and where we are going at this stage. --. At this moment the management communication is uncontrolled and comes from the short need and there is not enough time planned to do it. It should be systematic and be supported to the organization and team structure so that the communication would be daily." (M2)

"If there were strong control processes, they would be guided through communication. --. When strategy and goals are not in the knowledge of all employees, you cannot control them when they are not implemented." (E1)

If the interactive use of control is used in organization, employees should be given support and guidance in communication to guarantee that the message will be coherently communicated in all organization. One way of improving coherent communication is the development of meeting practices.

"If foremen are not guided and supported in communication and they are not provided with the good tools to do that, the communication lies only on foremen responsibility depending on what they will communicate to employees." (E1)

"Communication is the most important thing, to get the message forward from the top to the bottom and from the bottom to the top. There the meeting practices are essential. At the moment the message does not come automatically but the information has to be fetched from friends and coworkers or ask someone to produce or collect the information." (E8)

4.2.4 Perception of control

The management control system has been visible in the case companies neither as visually nor practically. Current management control system is largely quality oriented, but has not managed to clarify the picture of management's long range plan and short range target setting for employees. Some of the employees were not at all familiar with the case company's control system due to the lack of clearly visualized and communicated management control system. All interviewees however were able to list management control systems and instruments, and evaluate the performance of them. Most unclear subjects consider long-range planning, strategy communication, clarification of processes and procedures, and clarifying diagnostic measurement system. Core KPIs were identified but the concentration and the use of the KPIs were in some cases unclear and questioned. Although clear management control system was not clearly perceived in the case company, the meaning of MCS was seen as an important tool to harmonize control practices, visualize goals and provide tools for achieve them.

"Actually I do not know whether we have a clear management control system. We have interactive controls with employees and supervisors but I do not see the system. I am not seeking any multiple page strategy but the direction of where the company is going and what we are targetting.--.I know my own responsibilities but the fact where the company is going strategically should be implemented better than now." (E6)

In the organization, several management control can exist separately and some of them are systematized as a functioning system. The idea of management control system of a package derives from the concept that different control systems are related with each other. However, as the organization consists of several departments, units and functions where different control systems are not unified, management control system can be perceived as weak or non-existing. If the organization structure, responsibilities, processes and targets do not support cooperation in multinational company, communication can work as a substitute. However, the lack of named responsibilities may destroy goal achievement in a company.

"I would like to highlight the meaning of communication. We have several good things existing in the MCS package, as sole systems or instruments. But how well they are working? How well they are in control? The package misses named responsibilities. To know the instruments and responsible person or a group who communicates the message being either foreman or HR department. Everyone should

know their role and their responsibility in that position, which prevents partly that people will not ignore them continuously." (E7)

One reason for unclear perception of MCS in the case organization is related on the changes in the company. Several changes in the organization have affected to unclear perception of management control system and changes in management and supervisors have caused discontinuity in organization. When pace of change is tight, change pace can harm the organization when tasks cannot be accomplished as ready before next change. Also uncertainty has narrowed the way of how management control system elements have been used and which elements have been in use. Although basic management control system elements have been similar for long time, the surrounding idea of MCS has changed as well as linkages between control system.

"When talking about how the management directs with which tools, it consists almost all areas within organization. Most commonly the management control system starts with the actions of the management and how the management is organized. Usually management is organized through management teams and management teams have their own agenda. Management leads via management's teamwork." (M2)

"I have seen the management control system perception in general challenging during my whole working history, maybe due to multiple changes inside the management and owners.--. The speed with mergers and demergers has not given the possibility to develop management control system. There has been no time or resources. When a new change comes, it has created a new whole into a system.--. During my working history I have had 13 supervisors and new owners and managers always bring their own ways and models. In our department, the basic tools have stayed but the whole management control system as a package and the systematic in it has been invisible." (E7)

4.3 Analyzing current prohibiting factors of management control system formalization

4.3.1 Internal transparency

4.3.1.1 History affecting internal transparency

Before the bankruptcy, the case company had a highly standardized management control system. Strategy was communicated verbally and symbolically for all employees. Management control system was stiff and governance oriented, and did reflect internal operations but the changes in market and customers were not taken into account and transparency to employees regarding the market and financial development was low. Additionally, the strategy formulation was a major effort and stiff process. Interviews showed that as the planned strategy did not succeed as aimed, it paralyzed the whole organization and created distrust between employees and management as well as on strategy. This has left a stigma in the current organization culture and control use. The current strategy is communicated on tactical level and big strategy release has been avoided. According to interviews, this has decreased employees' visibility over long term and decreased common clan control for common goal achievement. Within bankruptcy, also good MCS practices were eroded as employees did not have motivation to develop them and strategy did not direct to common goal achievement.

"Earlier when the previous strategy was made, lots of effort was put on strategy communication globally with materials which were delivered and communicated locally to all sites. When the strategy failed, it created a big repercussion. Therefore, in current organization strategy was not taken with the same format forward for employees not them to feel that strategy is made on top and leads to failure. But it is clear, it has to be made better." (M1)

"Within bankruptcy and uncertainty, good practices were eroded. There was no resources and the remaining resources did not have motivation to use them and guide the actions in systematized way." (E2)

4.3.1.2 Confusion of organizing in the fast recovering processes

According to interviews, logical progression of management control system has created confusion in the organization after bankruptcy. Operative actions and several short-term strategies were implemented to manage the company from the crisis, and the vision and mission definition was left to wait until the operative situation was stabilized. As operative situation and processes started to work fluently, people in the organization felt the lack of direction without clear communication of the vision, mission or strategy causing confusion in organization.

"One reason for organization's confusion can be that management control system started to recover faster than the management was capable to define vision, mission and strategy which is based on vision and mission. Management control system has not been capable to be built to excellent level in the right order." (M2)

4.3.1.3 Uncertainty complicating focus setting on long-range planning and comprehensive use of MCS

Uncertainty and historical events have created an effect that management control system has been used narrowly. Planning has been shortsighted and development of management control system has been minimal. During uncertain times, limited resources and limited attention has minimized the control usage to concern only the most important aspects of control based on ongoing strategy. Additionally, the changes in managers and employees have affected what control elements have been highlighted. Therefore, some control elements have dominated in the organization while the meaning of others has been suppressed, but it has decreased organization's internal visibility. All interviewees agreed that management control system has not been used in balanced way due to the fast pace of changes and constantly changing needs, but the goal is to harmonize and formalize management control system use to serve better for management's and employees' needs.

"The uncertainty has had an effect that management control system has been used in a very narrow way. --. Only the mandatory tasks with the required amount of people have been realized based on the accounting responsibility. Planning has been very shortsighted, and longer term action and shaping of management control system has not been under focus when there has been no need nor faith to fix it." (M2)

"In my opinion the MCS is still a little unclear due to the changes in the last years. The last biggest impact was the company demerger in 2015. There has been a lot of personnel changes and of course new persons bring their own flavor to the management of the business. There are controls in place in many function, but some areas are far weaker than others. Lots of good things have been done during the years, and I think all the MCS elements are in place. To start leading this requires a model where we define the right actions which are implemented to the ones who are responsible and who start realizing the tasks.--. All the elements exist but they are not organized. We have all the control elements in place but we do a lot of overlapping work. Clarity for action is missing." (E6)

Based on the interviewees, due to inability to put in place a long term strategy for several years, the vision and mission have been taking the role of leading the company direction. The interviewees considered that vision directs long term strategy which seen as a constantly changing object in the case organization. In the case company, the organization must be flexible and agile and therefore also the strategy work must be constant and the strategy must be changed when the market and the customer situation changes and traditional view on the strategy of a long term plan does not hold. This also means that the management control system needs to be flexible to respond to changes because the management control system should reflect the company's strategy and goals.

"Based on our history, we should not hold into a strategy which does not bring results. Strategy work needs to be constant, and in current market situation and environment one cannot do a strategy, which does not change in the defined period of time. Instead, the considerations of whether a vision of how to reach goals is vital, need to be done more often. You can also name it as the continuity of strategy work. Now we have not had enough energy for strategy work but it is a central element to change. When market changes and the strategic vision changes, so have to change management control system. Also management control system needs to change regarding employees' needs in the work so that personnel can have a stable operating environment and keep themselves motivated to bring actions forward." (M2)

"Management control system must be able to take the company to the direction of the mission. The key question is what are the functions we need to put more emphasis to build he agility.--. You cannot put emphasis to everything but all functions have to be working moderately but in different strategic situations it is important to define what are the basic elements in the management control system and where we need to focus on to get to the results." (M2)

"Management control system is a framework but there is left room for flexibility in both positive and negative sense. The strategy can be framed, but the strategy can be updated. The management control system follows the strategy and goal setting for that special period." (M4)

Interviews indicate the meaning of the design of the management control system elements and other design factors. All controls need to be working moderately but more emphasis should be put on primary control elements during volatile times.

4.3.1.4 Information overflow and data inaccuracy distracts decision-making

Based on the interviews, the information overflow and several metrics have disrupted efficient decision-making and internal transparency. In the company several financial and operational measurements exist due to disorganized MCS and overlapping functions. This has caused data inaccuracy in the case organization. Several metrics are spread to wide amount of employees in the organization but information interpretation is vivid. The streamlining of current metrics would be important for decreasing information overflow, clarifying key metrics and increasing meetings where to analyze the information. Decision-making requires metrics that are widely in use and interpretation is homogeneous.

"Of course we have to have hard operative measurements which we follow. But we already have very much of them. If talking about manufacturing process, there are always three themes, quality, time and costs which to follow always. We have enough of these metrics, but then the question is how the functions follow the metrics and do corrective actions. How I see it, we have too many metrics and too little input in interpreting them and making corrective actions. --. The management control system could be improved by clarifying the essential metrics that each function possesses and start requesting frequent follow up. If deviations exist, corrective actions are obliged. We have a lot of financial metrics. We could have more core metrics, reporting metrics and development metrics, and we should use them more in operations development." (E3)

Data accuracy has been the biggest problem in the case company. Data has been used by several persons and the requirements for data have varied. Due to lack of the formalization, also the amount of metrics has increased decreased accuracy of data. In the case organization, data inaccuracy has caused inefficiencies in decision-making and taken time from strategic management.

"Data accuracy is a big challenge here in our organization which has to be solved to not to take time from strategic management. --. Data accuracy and the validity of the data hamper the decision-making and change. When you cannot fully trust to the information or the information does not get created fast enough, management cannot do fast and agile decisions in different situations." (M2)

"We should have policies, procedures and ways of working documented in one place and brought more visible. We have too many operating models built by different people, and processes are not in a good shape if there are 2-3 different ways of conducting the task, make reports and so on. This leads to result, when management needs one report, the information is collected from different systems and different formats, as there should be only one agreed way to produce the needed information." (E8)

4.3.1.5 Unclear processes and responsibilities

Unclear processes have caused confusion in organization and a lack of internal transparency. If processes are not well defined, lots of effort have to be placed to control different work stages from all parts of the organization causing inefficiencies from many parts of the organization. In the case organization unclear processes and responsibilities have also forced the management team to focus energy on the process development which has taken time from the strategic management.

"Processes are team oriented. In decreasing amount, we have to intervene [in processes], but of course it happens sometimes. It has improved a lot, let's say within one year, and in decreasing amount the management team has to intervene on operative problems which has left time for longer term planning and process development." (M2)

The need for formalization can be interpreted from the case company's employees' needs for common coordination and increasing cooperation between different departments. To enable constant improvement in the organization, responsibilities should be communicated and working methods clarified, participation in most important processes highlighted, and cooperation tightened. Current working methods cause inefficiencies and the lack of commitment in the organization.

"Maybe all the interfaces and contacts do not meet in daily life. Simply, right people are not in the right place and wrong people are asked incorrect questions. For example, budgeting process is implemented but all supervisors are not part of the process. Sometimes I have to push myself into the

projects.--. In our organization, all the information and places where information should be and to whom people should be in contact are not acknowledged." (E5)

"Meeting structures are a little unclear at the moment. In the company, clear meeting structures are visible only in the management team and some other departments' weekly meetings. However, certain linkages are missing at the moment. We would need some linkage from the top management to the operative management, and this could be partly done with clarifying meeting structures for information to go from the top to the bottom and from the bottom to the top. Messages do not go between departments at the moment. Especially problematic has been demand and capacity planning, where the Sales does an estimate of future sales to the Production, but the production or capacity related problems and decisions do not always reach the sales again. In this sense the management control system is still limping." (E8)

4.3.2 Global transparency

4.3.2.1 Local policies and procedures

Processes have been very much local which has decreased global transparency and repair. Although several processes in the case organization have been created to be implemented also in other units, the common coordination of formalizing control structure and creating global policies has been missing. To increase transparency and efficiency, the core processes have to be standardized in all companies and simultaneously control practices have to be unified. Standardization of the core processes can bring efficiencies in company. The interviews stressed the importance of coordination and implementation of global processes. Coordination should be part of management control system, and implementation should happen along with coordination. Currently global level of processes has been dependent on global teams' ability to harmonize practices.

"Global efficiency can be increased when the actions that are wanted to bring global, are defined clearly, global tools exist and they are wanted to implement more transparently globally. At the moment, processes and tools exist already.--.All the politics, at least QEHS politics are global, but management team's organizations level of global action varies. Some are global, some manage global processes and some are very local. How well processes are communicated, implemented and managed globally vary greatly. All the politics are made globally so the processes can be copied to other countries.--. The efficiency of the management control system varies globally." (E5)

4.3.2.2 Dispersed cybernetic IT system

The case company' history has affected to the management control system building and perception. In the past the case company consisted of autonomy companies which had own control systems. Subsidiaries were satellite companies and much responsibility was given to subsidiaries directly. Currently the company is managed towards commonly formalized management control system with a KPI based management where standardized metrics have been implemented to the whole organization. This has created more internal transparency, global visibility and flexibility creating synergies in processes and in cooperation and it has also decreased the inaccuracy of information. Dispersed IT systems have affected to the global data integration and data validation decreasing global transparency. With standardized information collection templates, the data has been consolidated together to give more information of the performance of the units.

"More than 10 years ago our company was a coalition of autonomous companies. Every company has own sovereignty to administrative the business in the best way wanted. There was an active development direction that there was no visibility to subsidiaries' activities. There was no consolidated reporting except all the relevant financial figures were inputted to our consolidation system. --. The current organization model, which is still quite fresh, is a fixed format analytical model for information collection based on which analysis can be made. Closely related is the active visiting in Service Centers and discussions of KPI pack information. In many areas the development has gone towards more global and fixed reporting since it provides synergies in information and procedural sense." (E4)

4.3.2.3 Fading responsibility-taking in global KPI system

Interviews indicated also negative consequences that more transparent KPI management has brought due to the unclear organization structure and divide of responsibilities. In the past, companies were lead independently, but within global KPI management, results responsibility has disappeared from units as every function takes responsibility only from own area and reports to functional team manager. Also entrepreneurship has disappeared along as common responsibility is not carried. Too much of the responsibility of the whole legal unit is poured onto the management team's responsibility as in local units, entrepreneurship and capability to affect solely to unit's operations has decreased due to global synergies seeking on the corporate level. At the corporate level, the case

company has not yet succeeded in bringing formalized management control practices to subsidiaries which can decrease subunits' workload. As centralization is not wanted to be decreased in headquarters, more formalization is needed to coordinate global actions.

"We have a fundamental issue how we lead the company. In the history we have approach the sales in traditional way, with satellite companies, which are lead with result oriented way. Every location has its own unit manager who is the administrative person. That person is responsible from company results and other administrative and legal issues. In the budgeting and other issues, the unit manager has the freedom with administrative issues, guided by governance. Little centralized energy from the headquarters is used to control the unit. This is the way how we have historically managed the business. Now we are in transition phase where we want to implement a more transparent KPI control system. We have global sales, and unit managers are in output responsibility to operations manager. In this way, two things will disappear. One is profit responsibility; who is in charge of the unit profit unequivocally? The other thing that disappears is the entrepreneurship. Sales team is responsible only for sales and closing the deals, and people in factory are responsible for on-time delivery. But who is responsible for the profit? The profit responsibility falls to the management team level." (M4)

"If the service units make loss, there is no one taking responsibility for that except the management team. And that is a problem. If we add more KPI lead transparent reporting, it will increase the work in headquarters, which leads to more bureaucratic and heavy structure. Still you need the same administrative actions in the units. In some way, we are increasing the work in the headquarters but we have to know how all the information is taken advantage of. " (M4)

The transparent KPI management can specify function based targets into commonly measurable metrics but several department-based KPIs can also create an understanding of dispersed control. Especially with the lack of communication in vision, mission and strategy, the control of the company is strongly related to diagnostic and interactive control use to guarantee results. Interactive control has substituted other ways of developing management control system and supportive elements of management control system have not received much attention. All interviewees were longing for systematic management and longer term goal communication despite all teams and individuals knew their own goals.

"If any kind of new system would be developed and taken more strongly into use, I would see communication in the main function of it for employees to know how they are controlled and to which

direction. In our company at the moment, control is stronger than guidance. --. I see that the whole organization is not guided or controlled commonly in any way. If there were strong control processes and targets in everyone's knowledge, they would also be communicated. Targets and controls do not involve all employees in the organization, and everyone has their own KPIs with which teams, production or sales is controlled. But it is more like follow-up than guidance.--. Our strategy is not in every employee's knowledge and therefore one cannot control towards goals as they are not implemented." (E1)

4.3.2.4 Congruence of financial and non-financial data

Unrelatedness of financial and non-financial data has directed the company towards two separate systems. As organizational processes and metrics have not been coordinated commonly, financial and non-financial reporting has become separated leading to information inaccuracy and overlapping reporting. This has caused inefficiencies, waste of resources and decreased coherent decision-making ability. Synergies between financial and non-financial systems should be found and they should be coordinated together to bring coherency into the company. Combining financial and non-financial data can bring also development suggestions to the organization.

"Alignment with financial figures must be solid because neither financial or non-financial system cannot question the results of another but they should support each other.--. Otherwise, one of the systems is unreliable and it takes too much time to find explanations for variations of the results. Decision-making should be focused on the decision-making and not to validation of the data." (M2)

"We have certain KPI metrics but no development metrics. Metrics should change when needed. When strategy is formulated, performance analysis is made and for every project metrics are built.--. When processes are implemented and responsibilities named, everyone defines the actions and development metrics, and they will follow up the development. And everything doesn't have to be informed to the top, small things are solved within function." (E3)

"In good management control system one should have three assignments. First is the result, one should have a result responsibility. Second is the development responsibility. Third is the growth responsibility. Then the company develops. If one's main responsibility is the result responsibility, may it be invoicing or other, then core KPIs should be implemented. Everyone has a development responsibility with specified development task with a certain value, which are measured qualitatively.

And everyone bears a growth responsibility, which is soft and difficult to measure. But everyone should have an idea of how they are part of the company's big picture and how one can improve things tomorrow. When all the three aspects are fulfilled, then the employee yields 100 percent to the company. And then the management team has the forth responsibility: everyone bears the market responsibility." (M4)

The case organization's non-financial measurement system is traditional in many manufacturing companies. More information could be used e.g. in marketing through amounts of click, page views in news letters, LinkedIn and other social media to increase the knowledge of market demands. However, in flexible environment new elements for management control system design should be considered.

"All the signals and actions in the market do not come to knowledge of owners or top management. There I would see lots of challenges." (E8)

"We have not built a management control system that would stand out from traditional manufacturing company's MCS which takes into account current trends such as networking, social media, and business and communication cycle change. We have not thought about that." (M2)

4.3.3 Flexibility

4.3.3.1 Ownership affecting management control and control type

The ownership structure is playing an essential part of the development of the case company' management control system. The owner control is strong and the target setting is tight, which is visible also in the daily operations especially in financial matters. The ownership structure pushes the dominance of the strategic and financial management control system development in the company. Tight ownership structure affects strongly to control style, strategy setting and strategy cycles. The control style is very results oriented, and weekly or monthly calls related to financial and operational performance cause sometimes fast changes in strategy and therefore also strategy cycles are exceptionally short. Development and agility of the company are exceptionally important, and decision-making and implementation fast.

"Owner control is quite tight in a venture capital owned company. The head owner is hands-on the mud, as to say, very close. We have weekly, and especially monthly reporting. But on a weekly level, it is evaluated, where we are going. Not only the actual activity but also on the long-term activity, the future. Only yesterday we had a long conversation about our quartile capability, as to say, the control is very tight. And the goal-setting is very clear, it comes through budget." (M1)

4.3.3.2 Short operating periods

In the case organization, the need for flexibility is important and therefore also the operating cycles are preferred to be kept as short to be able to adapt to changes. Short operating periods bring flexibility to the system and help to provide capabilities to react in the future. Interviewees emphasized the meaning of frequent target reviews and goal setting in short planning cycles. Management control system should be planned to support both short term target setting and capability building.

"Operating periods must be short and goals need to be reviewed often enough, and with the help of the management control system the direction can be focused or changed often enough." (M2)

"With pedant planning, the communication will come automatically from goals through the management control system and you will have very concrete plans. If you could lighten the system a little and increase flexibility and rethink the planning cycle and measurement, the system would be more optimal." (M1)

In the case organization, the business planning for the upcoming year is done mostly in half a year basis consisting of analyzing the upcoming year in financial and business related matters. Shortage of longer term planning can lead to the lack of capability building for a long term. However, short visibility needs strong forecasting capability aside because risk management is central when conducting long term forecasting plan which can reserve high amount of company's net working capital.

"To keep the business going, you have to have beforehand planned and built capabilities. Reactive action is not working but the customer demand must be seen long enough to which capabilities are built." (E3)

"Agility culminates to the capability to deliver. On material side, when taking net working capital into account one can have a reasonable amount of components, semi-finished components in consignment stock or material is at supplier's stock. With employees, bank credit contracts can help to balance agility." (E2)

4.3.3.3 Flexible cybernetic control systems

Traditional once a year budget is seen as incompatible to respond changing business needs due to the fast changes and low visibility of the business. Budget is much referred at owner level in the case company's business and works as a benchmark of success. As budget is a one-year goal setting with current best vision of the future, in changing environment rolling budget could work better as a benchmark of the current business. Budgeting period of one year seems too fixed for one year due to many changes which can destroy the basis of the budget. In the case organization's volatile environment, budgeting should be implemented to strategy process and forecasting and budget target should be modified if the budget assumptions no longer are valid. As cybernetic controls should be more flexible, constant analysis and controlling is needed to give signals about changes and development.

"Budget is sort of old-fashion control mode. As the strategy should be continuous, so should be the budget. You shouldn't start always from beginning as one period is ended when planning the budget. Flexible working requires also other procedure, rolling budgeting or continuous financial guidance." (M2)

Forecasts have a high meaning in running operations in the case company. However, forecasting accuracy has been difficult to low due to the challenges in business and insufficient data accuracy. As short range planning has dominated the planning, less effort has been used to develop long term planning and its measurement. To evaluate development of strategic targets, proper proactive and reactive measurements should be placed.

"Planning is highly budget oriented. We look at the business based on sales forecast and budget planning. Strategy work consists of forecasting one year forward. Second and third year are always less visible especially within operative teams." (E2)

"We have no strategic KPIs except profit and loss statement, which is also a very operative KPI. We have no other method to measure improvement of strategic capability, they are missing." (M4)

The case company has adapted to changing and uncertain environment and has become more and more flexible with fast decisions and strategic changes. However, management control system has not been changed with the same pace and management control system has been left as stiff and regulative with limited touch with current business situation creating confusion on employee side. According to the interviews, management control system should reflect external and internal changes. The meaning of flexibility of management control system is important but at the same time all the control elements need to exist to build a strong framework for changing situations.

"This kind of company with this kind of ownership and market situation with high market volatility, firms probably develop automatically as flexible." (E4)

"If management control system is too tight, it will destroy the capability to be flexible and change direction. Flexibility and agility is central in small company when building a management control system. A company must look big although it is small to be capable to operate in the environment where the company is operating." (M2)

"Market situation, ongoing strategic projects and footprint may change if market or strategy is changed. We have to change if the market changes. Management control system change should come from the customers, not only from inside the firm. If market changes, then also management team work must change. Reward structure changes when MCS changes because it follows the market, as it most often is market-based system. But I don't see that the work of board of directors needs to change." (M4)

4.3.3.4 Inherited clan culture

The case company's clan culture is much inherited from the history. Previous owners, organization culture as well as autonomic company culture have affected to the common ways of working. The lack of common communication has affected strong goal commitment in clans negatively.

"We have elements for clan control but they are not working in practice. There is no strong clan control for targeting into the set goals, in different functions there is no disappointment although the

actions succeeded below expectations. In strong clan controlled organization this would not happen. Clan control is a good and powerful control way if kept on a healthy basis." (E2)

To improve the cultural controls, the supervisor trainings are essential in the case company. Supervisors can enhance goal commitment, guide in tasks, streamline processes, and support employees. The current organization relies much on the supervisor's ability to lead. The lack of self-coordination may depend on the clear processes and instructions. Also self-coordination could be increased to provide flexibility in the organization. Employees have freedom to make decision and react, but everyone must understand the mission and company goals to provide goal congruence in organization. According to the interviews, to increase clan control, support and responsibilities should be given to supervisors and employees but at the same time, the management control system should provide a framework in which to act giving motivation but also boundaries to employees' actions.

"Clear assignment policy and sales policies should be implemented. Of course the policies cannot be too tight but certain rules should be implemented for example to the product group based sales. Product groups have targets of sales and margins and whether sales go below the target setting, acceptance should always be asked from regional sales manager. More clan control should be implemented in that sense while giving limits but not controlling too much." (E8)

"Supervisors need the support, education, updates, information and supervisor training. Old habits transfer fast, and some habits still are ongoing. It is important that one could tell and update the information of what is the company's' ways of working.--. Clan control is related very likely to supervisor's capability and there we have quite a big variation. Therefore, the supervisor training is essential." (E7)

"The company must be flexible to take over the possibilities, and to be flexible, employees must have certain freedom to make decisions and react, and go towards the common goal. Thus essential is to understand the basic idea of the management in the same way." (M2)

4.3.4 Repair

4.3.4.1 Uncertainty and culture affecting decision-making and formalization

The centralization of decision-making can be derived from the case organization's history of bankruptcy and the company culture. In the history, the decision-making has been centralized but the history of the bankruptcy has left the fear of failure which is also reflected to the decision-making and the company culture. Also the need for tight cash management and control has affected the centralization of decision-making. On the company level, centralized decision-making can destroy the management team's time which could be used for strategic development and development in operational functions causing slow decision-making and decrease in efficiency. The centralization of the decision-making and the fear of failure has also caused unwillingness to formalize the management control system.

"There has been a 'corner room attitude' in our company during the short period of time I've been in the organization. Everything had to be ask from the corner rooms: "can we do this, can we not do that". The decision-making was stiff and people did not want to make decisions in their own territory, the decision had to be asked from the top." (M1)

"Also the difficult financial situation affects. When money is tight, people consider that employees at the lower levels of the organization do not have a proper visibility to all the aspects needed in the decision-making." (M4)

"We have a poor decision-making culture in our organization, only 2-3 persons are willing to make decisions due to the history derived from times when the company was owned by another big manufacturing company. We are afraid of making decisions since we are afraid it to lead to punishment whether the decision is wrong. Therefore, it is a very cultural aspect." (M4)

"We are weak at making decisions. And therefore, the formalization of management control system is difficult." (M4)

On the employee level, the centralized decision-making can make employees may feel mistrust and decrease motivation if the decision-making is not allowed and it can also slow-down the pace if the decision-making time is too long. Centralized decision-making can prevent employee development

in the organization, decrease motivation and commitment to the organization. Decision-making should be integral part of team actions, and therefore also roles and responsibilities of the teams should be defined.

"In the crisis situations, the decision-making will get centralized. --. In the end, it is a question of trust as well. But centralizing is one way to structure the world when the decision-making activity is concentrated on a small group. It is a clear control. But will it lead to best result? Is it efficient enough? The decision-making time gets longer but it prevents optimization." (E4)

"Without decision-making forums, the management control system stays unused. People are committed to a system which facilitates the work. Without decision-making forums, the system does not facilitate their job." (M4)

"Decisions happen at the top management level, unfortunately too little things. It is one of our weaknesses. One may consider it to be more regularized way of keeping control when times are difficult financially. But however it does not alleviate the recovery after the crisis. And it does not commit personnel in the same way and you never get all the potential from employees. Usually employees perform better the more responsibility is given. And part of the decision-making is the failure, and it has to be accepted. Also there can be a thinking that people in the lower level are not capable to evaluate many things proper enough.--. Some can understand it as a mistrust." (M4)

4.3.4.2 Matrix structure complicating management control performance

Matrix structure has its benefits. Legal units own responsibility in developing the market area and monitoring the processes and operations, and the global teams bring synergies and knowledge to the whole company. However, the organization structure can be interpreted as unclear and reporting responsibilities may get lost as well as the result responsibility. Although more synergies have been created between new gear business and service business, old organizations are difficult to replace.

"Organization structure is a bit unclear. In the sales, the structure has been tried to clarify with responsibilities. In new gear unit business the key account managers are clear in comparison to service, but now more unified sales is being built. --. Then we have two product managements, service and capital product management. Simplifying product management is essential. In technology side,

engineering and technology is mixed. We should have a technology team and engineering producing pictures and documentation, and it should be global since its now only Finland service centric." (M4)

Decision-making has been tried to implement lower in the organization, but the matrix organization structure may create problems in decision-making. As the case company's both global teams and local units' decision-making capabilities are strong, decision-making levels need to be clear. To help the management control system formalization, the role of governance needs to be understood and clarified in the company, and decision-making rights regarding organization structure and employees' roles need to be clarified. Additionally, the supervisory functions need to be strengthened and functions clarified. The operative monitoring function role needs more development and discussion on company level. However, the role of governance is remarked on the group level.

"In governance, we have quite a light structure and implementation. It could be stronger, especially when we have so many units and location, certain basic rules should be tighter. We have a tighter control in money spend and acceptance, but in general it could be tighter." (M4)

4.3.4.3 Risk management improvements

The level of risk management is recognized as minimal in the current management control system. The current system is mostly covering operative risks regarding much safety in the factory. However, other risks such as financial risk, customer related risks and human resource related risks need also to be taken into account and integrated into plans. In interviews, the following risks were identified: business related risk, financial risk, customer risk, operative risks, and personnel risk.

"Risk management is under very little attention in our management control system. But in the actions and decisions that have been done the risk management has been visible. Risk management tasks definition and decisions have not been modeled into management control system, such as project or customer delivery based risk plans. Risk management should be part of the strategic and operative planning." (M2)

Business risk is partly managed by contracts with customers and suppliers, and by governance and decision-making limits. However, dependency on certain customers and high volumes bring financial related risk that is reflected to cash and inventory management. As the need for material reservation is high due to the high material percentage, risk is tied highly into the assets. The changing operating

environment requires more comprehensive control systems for risk management, such as market, product or people risk management inside the company.

"Customer information, market information, and sales and operational planning consolidation are weak links which cause risk. If you reserve materials for a deal which may not realize, it will cause a big financial risk for the company." (M1)

"We cannot make changes to plans one a year concerning what kind of capability we are aiming. This should be combined with period planning: strategy for three years, budget for one year and the applicable period plan for six months. Building the capabilities could be grouped into six months' periods, and it is one risk and investment decision. Building capabilities is costly and how well it fits into customer needs, that is the point of discussion. There we have lots to improve." (E3)

The integration with customer is important since lots of risk is carried with the manufacturing decisions. The integration and high cooperation with the customer increases forecasting capability and enables planning for the future. The integration of financial and non-financial information to the management control system helps with forecasting and gives thus flexibility.

"It is possible that the deal will come with 77 percent possibility and it requires investment of million euros to the factories. It has to be understood by everyone commonly, in sales people often forget to measure the level of capital expenditure and define what the factory needs to invest. On the company level, the decision is made and lived within that decision. Seems like sometimes we live in different understandings, decisions cannot be made once a day, we have to build some sort of capability and then the period planning is a good time scale to build it. It [Increasing flexibility] consists of knowing what the customer wants and we have to try to define the scope of customer need in the best possible way and build the capability for that." (E3)

Due to the small size of the companies, several employees conduct highly specified tasks without a clear team or a person who could replace the other. Many employees manage high level of information and specialization, which has not been documented or transferred. Therefore, the role of human resource development becomes relevant in the company. The risk of disappearance of knowledge is big without an active human resource management and development.

"There are lots of positions where one person who has a lot of knowledge is in control of one entity. If that person left the company, there would be a big risk to lose that knowledge. And replacing one person is always difficult." (E6)

4.3.4.4 Limited reward system

Current reward system has been limited to some parts of the organization. This can possible lead to the lack of motivation and limited willingness to present development suggestions. Rewards do not necessary have to be monetary but also non-monetary incentives, such as better working environment, can increase willingness for repair inside organization.

"Rewards and compensation structure in the company is very sales oriented, and I am not even sure why. Why do not we have a reward system for operations? What would block that? I think nothing else but history." (M4)

"Company is in its beginning with reward and compensation system. Incentives should be set based on strategy and end up on person level. We have had the idea to drive sales with the help of rewards and compensation but all other functions have remained." (M2)

4.3.4.5 Use of interactive controls

Although diagnostic and interactive use of controls are analyzed to be used in the results-oriented control, negative sides of the interactive use of controls are that the control style is time consuming and may thus lead to less results. The use of interactive controls can lead to inefficiencies in an organization. As different managers use different communication style, it may hamper formalization in an organization as clear company objectives do not come out clear.

"[With the use of interactive and personal controls] there lies a challenge that it is time consuming, and it may not advance results orientation. The company's mission may not come forth. Positive is the personal remark which boost motivation in cases where one can participate actively in the central tasks of the management." (M2)

Unsystematic use of interactive control system may create uncertainty in organization and targets may not go through to daily activities. Communication of targets and plans is important to create

commitment and common goal orientation to the organization. Communication creates direction to employees and therefore communication should be supported by management control system.

"All employees have not had clear view on where the company is going, what its function is, and what the strategy is – basically, what the basis for the company is. They say we are here only for work and this message is very concerning. It tells that when we are doing changes, our organization does not keep up with the changes and we cannot communicate them.--. People need the direction and leadership." (E7)

"I cannot see any reason why our 400 employees cannot be informed from the same things. It causes more trouble if you have to think which you can and cannot communicate. Communication should be coeval and equal, and this is what communication is not without proper management support and communication, since the message should be briefed properly." (E1)

4.4 Formalization needs evaluation through personnel survey

As interviews were made for limited amount of employees consisting only of the management team members and white collar workers, personnel survey results are used as secondary data source to reflect the importance and the perception of current management control system in the whole organization. Personnel survey questions have been newly categorized within the theory context of this study. Answers are categorized with HQ referring to headquarters, SUB to subsidiary, M to manager and E to employee. The answers of personnel survey can be seen in below tables.

In personnel survey results, internal transparency is seen as the most important factor in the company. Personnel survey results indicate aligning of the results with interviewee data, as the understanding of objectives are important for employees. Own work related factors were considered more important as cooperation and communication between units, which can be also due to low levels of coordination and big picture sharing in organization. The ways of how employees can perform their tasks better and the understanding of processes are important for employee work satisfaction and goal achievement in a multinational company.

"Flexible atmosphere and environment, employees are involved in, good working team. On the downside unclear and un-open information flow, unclear working practices in transitions, unclear responsibilities, and contradictions of common direction." (HQ, E, 1)

Table 9. Personnel survey results by the level of importance, category internal transparency

Factors of operation	Whole company mean (n=369)
I am clear about my objectives	6,4
I understand how my work contributes to how smoothly the different processes run	6,3
Co-operation between different departments works well	6,0
People in my work community work well together	6,6
I am adequately informed about matters affecting my day-to-day work	6,3
Communication is adequate between different departments	6,0
average	6,3

scale 1-7 (max)

A structured and organized way of operating across the company is seen as important in the case organization highlighting the importance of global coordination and transparency. The results also highlighted the meaning of common communication in goal setting. Especially as the operations are interdependent, common processes and the sharing of the best practices is important for productivity improvement. Usually subsidiaries' teams are smaller and multitasking is required since many employees are conducting several position. Employees were keen on participating in company development, but in opposite to current generalization of enabling and coercive controls in theory, the use of coercive controls is seen to increase work motivation. Interfaces between various functions should be cleared and synergies with the different functions should be improved.

"The thread is not clear. The strategy hasn't been deployed yet and clear guidelines for the various functions and responsibilities are not sufficiently well-defined. Interfaces between various functions are too grey. For some reason in Capital and Service there is seen some unfortunate confrontation, that you should get rid of." (SUB, M, 2)

Table 10. Personnel survey results by the level of importance, global transparency

Factors of operation	Whole company mean (n=369)
I am familiar with our objectives	5,7
I am committed to our objectives	6,1
The way we operate across the company is organised and structured	6,1
There is adequate communication about changes	6,1
Co-operation between different units works well	5,7
Co-operation between management and employees works well	6,1
Communication is adequate in our company	6,2
Communication is adequate between different units	5,8
average	6,0

scale 1-7 (max)

Flexibility was considered as very important in the case organization especially among the management. On the whole company level, the meaning of supervisors' trust on employees' capabilities is important. The importance can be high because of close relationships between supervisors and employees, the low level of hierarchy and supervisor communication that has been used commonly in the case organization. Also the meaning of roles and instructions is not neglected in answers. Pride towards personal work could be improved by the formalization of management control system which can be detected from the personnel survey's open-ended question results. Personal commitment to work can be improved by sharing the knowledge of other development projects inside the company, which may increase willingness and capability for own work task improvement. By sharing information of the development actions, respect is also shared to employees.

"Positive is the flexibility provided by work time scheme. As a remain from the past, certain type of pessimism and lack of professional pride have remained in employees' actions. Everything in own work tasks is not done the way required when focusing only on own territory; also improvement possibilities in other areas should be communicated. Maybe the lack of development comes from the thinking, that this kind of development is irrelevant." (HQ, E, 3)

Table 11. Personnel survey results by the level of importance, category flexibility

Factors of operation	Whole company mean (n=369)
Our company has well-defined roles and responsibilities	5,9
Employees are given clear instructions and guidelines for doing their assigned tasks	6,0
Employees undergo a thorough orientation process	6,1
My supervisor takes enough time to listen to staff	6,2
My supervisor trusts in my ability to work independently	6,5
average	6,1

scale 1-7 (max)

Importance of having the capability to impact on personal work and the development of the company was considered as important. For employees, the ability to influence on matters related straight to employee itself or the work did not come through straight forwardly from interviews, but the trust and respect for work came indirectly through. In the personnel survey, employees appreciated the ability to influence their work.

 "Good and bad times have united with coworkers. Responsibility and challenges are possible to receive in own work and the work stays interesting." (HQ, E, 4)

Table 12. Personnel survey results by the level of importance, category repair

Factors of operation	Whole company mean (n=369)
Employees are given enough opportunities to participate in training or other activities to develop themselves professionally	6,1
Employees are given enough opportunities to participate in the development of the company	6,0
I can have a say in matters related to me and my work	6,3
average	6,1

scale 1-7 (max)

Internal transparency was the most important factor in the whole company for good cooperation and the execution of tasks, relating to the wish for more visibility and transparency. The personnel survey conducted for all the case organization's employees reflected the same notions of management control system functionality as the interview results and reflected the opinions of a wider interest group.

4.5 Summary of the findings of MCS design and formalization in the case company

4.5.1 Benefits of the management control system formalization

In the literature, formalization is seen to bring benefits for an organization and its's employees. For the company, the formalization is seen to bring cost efficiency and information integrity for decision-making (Ghoshal & Nohria, 1989), and common sense-making through a focused attention, improvement of communication, interaction, and the decrease of biases, judgment errors and inconsistency (Vlaar et al., 2006). For the individual, the benefits are related to the increase of work pride, commitment, and work satisfaction (Deming, 1986; Michels et al., 1988), and the improvement of efficiency and task management performance (Deming, 1986; Adler & Borys, 1996). Table 17 summarizes all the benefits detected both in theory as well as in practice in the case organization.

Table 13. Benefits of formalization

Dimension	Benefit	Practice
Organization	Cost efficiency, information integrity in decision-making	Harmonized reporting and task streamlining, finding synergies in organization, decreasing overlapping work, time for long term planning
	Common sensemaking through focused attention, improvement of communication, interaction and reducing of biases, judgement error and inconsistency	Strategy presentation and communication, goal alignment, task harmonization, big picture setting, avoidance of suboptimization
	Continuity and risk management	Formalized practices and habits, continuity in practices despite changes, governance implementation to processes
	Company development, self-controlling, flexibility	Self-controlling, automatic development and development through cooperation, goal alignment and practices development, defining development metrics
Individual	Increasing work pride, commitment, work satisfaction, empowerment	Clarification of goals, action forward setting
	Improving efficiency and task management performance	Resources and support, cooperation and communication, guidance
	Increasing flexibility and work - personal life balance	Administrative structure, roles, tasks, decision-structures and responsibilities clarification, orientation and training, supervisory relationship
	Equality	Common communication, common rules and harmonized practices, clarified reward system, clear picture of management control system

The interview results reflected the results of the earlier research of the benefits of management control system formalization. One of the benefits was that the capability of the management control system to bring framework and certainty for actions. The harmonization of management control systems and practices were seen to bring the clarity for own work and the visibility for organization, bringing goal alignment through common sense-making, cost-efficiency through the streamlining of tasks and the decreasing amount of overlapping work, the improvements in decision-making and the avoidance of suboptimization with harmonized and thus improved quality of data. Through harmonized practices, the sharing of responsibility and decision-making to the lower levels of organization could bring openness in decision-making and possible effects on willingness for responsibility-taking in the organization. Management control systems can help the management to focus on core business opportunities, support resource allocation, and provide timely corrective actions.

Through the research data, also other factors were detected to bring utility for the organization and individuals. For the organization, the management control system formalization is seen to bring continuity and help in risk management during changes. In the case organization, the current management control system has stayed similar despite heavy changes, even bankruptcy. Although continuity can be seen as troublesome in the creation of new habits and organization culture, the continuity of practices and processes helped company to start developing operations again after the bankruptcy. Continuity is helpful also in risk management, as practices and habits are formalized. Formalized practices do not mean that the management control system cannot be agile. Management control system elements and the use of them should be planned to fit together with company the goals and the object of control, and the formalized use of flexible controls can bring agility to the organization.

Through formalization, the company development, the self-control and the capability for flexibility can be improved. As targets, process descriptions and responsibilities have been defined, employees can resolve problems without centralized decision-making leading to faster responses. Also self-control and clan control may increase as employees aim for the common goals. Formalized MCS structure was seen to create flexibility rather than constraining it. This is due to the formalized practices and trust-building in work.

Also on the individual level, other benefits were detected. Current management control system in the case organization was seen as flexible and the supervisory relationships were detected as good.

Nevertheless, the administrative control system formalization and the increase in training could bring more responsibility for own work. Management control system formalization can bring flexibility and work-life balance for employees, and administrative structure, orientation and training and good supervisory relationship can bring flexibility for the work. Although management control system is seen as a coercive type of control, several facts represent it to bring also enabling force and benefits for both the organization and employees.

Formalized management control system can also bring equality to the organization. In the case organization, the current management control system was not experienced as equal for all employees, since the interactive use of controls, the supervisory communication and the limited reward system caused inequality in the organization. In the case organization, the meaning of common communication, the formalized and clarified management control structure and the standardized use of controls were seen as important for everyone to receive the same message at the same time bringing also visibility to the organization.

4.5.2 The meaning of the MCS design in the MCS formalization

Overall, the relationship between the management control system elements design and the management control system coordination can be seen. The meaning of the design in the case organization's management control system was considered as important. In the organization, the existence of management control system elements was not experienced as sufficient, but also improvements were required to functioning of management control system elements and the links between management control system elements, the clarification to object of control, and the use of control. These all elements affected the perception of control. Control system is seen to operate as a package when the controls are internally consistent and when the controls are designed to create similar results (Abernethy & Chua, 1996). Although the management control system existed and functioned in the case organization, based on the interviews and personnel survey management control system formalization was seen as important for the purpose of using MCS better and more comprehensively.
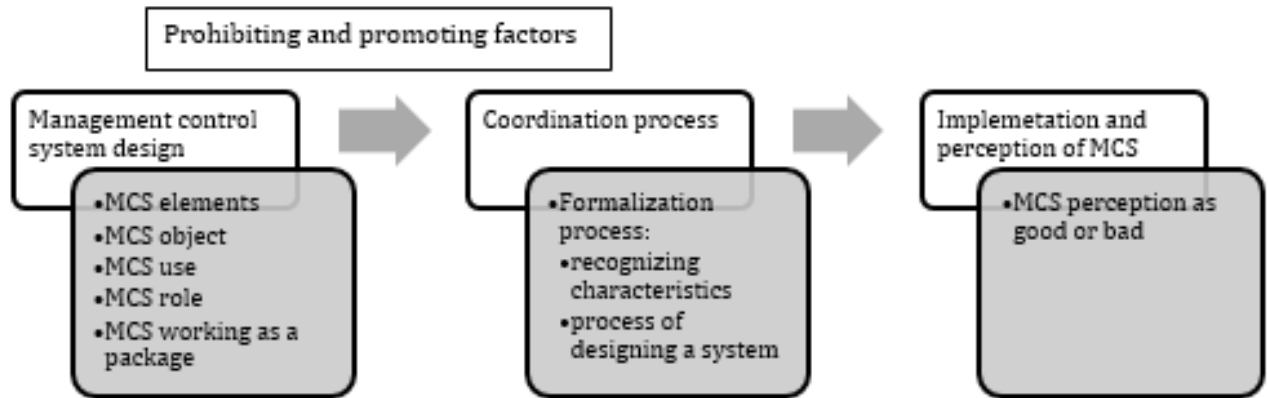
Figure 13. Relationship between management control system design and formalization

The management control system design has to be viewed comprehensively to work properly. Not only control elements need to be designed, but also the interfaces between different control elements, the objects of control as well as the use of control. In the case organization, dissatisfaction towards management control system existed due to following MCS design elements:

- ✓ MCS elements were not functioning
- ✓ MCS elements were missing
- ✓ MCS elements were not interrelated
- ✓ object of control and MCS elements design were interrelated
- ✓ objects of control and use of control dominated and suppressed other control elements
- ✓ implementation of control and communications were lacking
- ✓ MCS design and use were not coordinated

In the case organization, several management control system elements have not been functioning appropriately considering business environment needs due to the inheritance from the history. Malfunctioning management control system elements created negative perception of the functioning of the management control system. Also due to several changes in the organization, some elements such as long range planning, risk management, rewarding system, and communication were missing. This created obscurity of the company goals and created confusion in organizing.

According to Malmi and Brown (2008), management control elements should be working as a package and not as single control mechanisms for the management control system to work properly.

In the case company, the management control system elements were not well interrelated in the management control systems. Also the case company's object of control was highly related to results control as the object was to bring profitable growth to the company. Cybernetic control elements, such as traditional budgeting, could be functioning well for stabile companies, but in the case organization the more flexible cybernetic controls were needed. Thus, the design of the control elements should be fitted with the object of control.

During the uncertainty, the use of results control and interactive controls are seen to increase flexibility and the capability to react in the organization (Simons, 1995). However, although the results control and the interactive control worked well for implementing targets in the organization, interviewees longed for common corporate communication of the state and goals of the company. The use of the result and interactive control types suppressed other control element's use creating lack of common understanding. The type of control in the case organization has been enabling, but also coercive types of control, such as formalization of control and its implementation, are needed. Due to the changes and the history, several different controls exist but they have not been implemented in the organization. Overall, the result and interactive control use caused that only some parts of the management control system elements were emphasized and used.

The management control system design and its working as a package affected to the employees' perception of control. An unclear management control system created a feeling of the non-existence of the management control system although separate elements existed. Interestingly, the perception of management control was positive in the case company according to the personnel survey although several deficiencies were detected. As individual interpretation and positive perception can be related to the own responsibility area achievements, the lack of formalization, MCS implementation and the global sharing of information affected negative feedback. As the result of this study, the management control system design and coordination can be divided as separate but equally important factors of the functioning and perception of the management control systems. The prohibiting and promoting factors can affect to the possibility and the success of formalization.

4.5.3 Prohibiting factors of management control system formalization

The internal and global transparency, the flexibility and the repair are considered as practices to direct enabling formalization process to make control system elements work in corporations (Ahrens & Chapman, 2004). Management control systems' enabling formalization was prohibited by several contingency factors, such as the history and the uncertainty but also as the internal factors related to

the elements, the use and the implementation of the management control systems. The prohibiting factors that affected management control system enabling formalization are summarized in Table 18.

Table 14. Prohibiting factors of MCS formalization

Dimensions	Prohibiting factors
Internal transparency	Old business model, historical events and the fear of failure
	Logical progress of MCS recovery
	Unclear processes and responsibilities
	Information overflow and data inaccuracy hamper decision-making
Global transparency	Local policies and procedures
	Dispersed IT systems
	Fading responsibility-taking in global KPI system
	Incongruence of financial and non-financial data
Flexibility	Ownership affecting management control
	Requirements for short operating periods and long term capability building causing conflicts and prohibiting ultimate flexibility
	Traditional cybernetics control prohibit requirements for flexibility
	Inherited clan culture from the history
Repair	Centralized decision-making due to the uncertainty
	Matrix structure complicating MCS performance
	Lack of comprehensive risk management
	Limited reward system
	Use of interactive controls

Internal transparency of the company is important for understanding the logic of the system's internal functioning, providing information of the performance and bringing visibility inside the organization (Ahrens & Chapman, 2004). However, managers and employees in the case organization experienced the internal visibility low due to several factors. Unclear processes and responsibilities were considered as confusing in the company decreasing responsibility-taking. Also the wide amount of different financial and operational metrics without common harmonization globally have caused overlapping work, information overflow and data inaccuracy. Data inaccuracy has caused confusion in organizing and inefficiencies in decision-making, as it has taken time from the strategic management and hampered decision-making. History, uncertainty and management control system's recovery after the bankruptcy are external elements that prohibit internal transparency, as old habits and the fear of failure decreased the capability to implement MCS elements to support internal transparency.

For the decision-making, global transparency is important in a multinational company. However, in the case company the local policies and procedures operate strong due to the history. Although the global KPI system has put in place bringing visibility and transparency to the organization, local

habits and dispersed IT system cause inaccuracy of data. Also the separation between financial and non-financial data produced by two different management control systems have created data inaccuracy and prohibited global transparency. The global KPI system has caused fading responsibility-taking globally as profit responsibility and entrepreneurship have decreased in the local units.

Tight ownership has decreased company's capability for independent decision-making and flexibility. Also the old clan culture from the old owner company is still influencing in the company and the current company culture has not yet succeeded to bring common goal orientation in its culture. The need for flexibility has highlighted the meaning of short operating periods and flexible cybernetic controls. Traditional financial controls such as traditional budgets do not fit into current the needs of the company. However, the need for short operating period conflicts with the needs for longer term requirement building and can cause financial and operational risk in the company.

Employees' capability for bringing improvement suggestions has been complicated by the matrix structure and centralized decision-making. Also the limited use of reward system as a motivational factor has caused less interest in improvements. The unsystematic use of the interactive control system affects that the targets may not go through to daily activities and repair is difficult to practice. According to Almqvist and Skoog (2006), the management control system literature has focused mostly on the external forces which disrupt the management control systems functioning, but the internal changes can have as big or even greater impact on the MCS change as well. Although uncertainty has affected largely to the company's current state, internal aspects have affected more the management control system's functionality. The most of the factors affecting to transparency, flexibility and repair are related to the management control system elements and the management control system use. The management control system should be managed inside the organization, because it has an impact to the whole company and employee efficiency.

Mundy (2010) has found external and internal factors affecting to the balance control in companies. Mundy's (2010) five factors affecting control balance are internal consistency, logical progression, historical tendency, dominance, and suppression which are listed in Table 19. The same factors affected also the balanced way of using controls in the case company. These factors have a higher level of meaning to why some factors have prohibited enabling formalization in the case organization.

Table 15. Factors hindering the balanced way of using controls in the case organization

Mundy's (2010) factors	Factors hindering balanced use of control	Affects to
Internal consistency	MCS Design	Alignment of management control elements, objects, use, and role of controls
	Uncertainty	Communication and participative strategy formulation, hinders forecasting accuracy
	Unclear processes	Inefficiencies, hindered cooperation, less interest for development
	Information overflow	Distracts decision-making, harmonization of metrics
Logical progression	Processes recover faster than strategy	Confusion of company direction
	Matrix organization structure	Unclear communication, reporting and decision-making rights, faded responsibility taking
	Lack of training and orientation	Supervisors and employees lack support before task compilation
Historical tendency	Slow, centralized and careful decision-making	Slow decision-making, low esteem of trust in organization
	Failed strategy in history	Careful strategy implementation and communication
	Limited reward system	Motivational support only for limited number of employees
	Old culture and habits	Slowering implementation of new methods
Dominance	Diagnostic control system and results control	Reducing improvement of compliance, risk management and long term objectives management
	Interactive control system	Creates inefficiencies, slow implementation, enables biases, unclear messages and equal communication
	Non-financial management control system	Hinders financial control participation and target communication in all departments, splits management control system into two
Suppression	Boundary control system and compliance	Exposure to risks
	Beliefs system	Problems of motivation and commitment, hinders HR development and clan control

In this thesis it is important to notice that Mundy's (2010) five factors affecting to the balanced use of MCS have also affected to the enabling formalization to bring transparency and flexibility in the company. History and contingency factors are relevant factors in the MCS functionality, but also the management of controls should not be forgotten. The functionality depends on how the external factors and the internal use of MCS are coherent in the organization and aligned with the common goal.

Regarding internal consistency, the management control system should be designed to ensure that employees receive clear and coherent messages (Mundy, 2010). In the case company, the lack of visibility of management control systems has created a feeling of the lack of management control. The non-visibility of management control system has been due to the dominance of non-financial management control system elements focusing more on the quality, the lack of company strategy and formalization of processes. The transparent KPI management has created transparency into whole

organization but also created information overflow. Uncertainty has affected the formal strategy foundation and communication creating insecurity of company's goals and disconnection between departments. Uncertainty has also affected forecasting making the strategy formulation difficult.

Logical progression describes the order in which different control mechanisms are used (Mundy, 2010). In the case company, the matrix organization has caused confusion and unclear communication. Messages flow from different persons without clear information channel as communication has been interactive supervisory communication. The matrix structure has caused fading of responsibility taking as well. Highlighting the logical progression of the MCS change, also the recovering from the bankruptcy has caused confusion inside organization as processes recovered faster than the company was able to build a strategy. As history has had a great impact oto the development of the MCS, the use certain control instruments may hinder or facilitate attempts to balance control (Mundy, 2010). Management can actively impact on the management control system design, and the emphasis or suppression of one control element can have a high impact on how control is perceived.

According to Sandelin (2008), the functionality of the management control system working as a package depends the internal consistency of the control elements and linkages between them. Increasing other control elements use, such as harmonizing processes, clarifying organization structure, responsibilities and decision-making forums, and increasing corporate communication could support cooperation in the case company. Balance can be found from using different control elements (Bedford et al., 2016) and considering the primary control elements (Sandelin, 2008).

5 CONCLUSIONS

5.1 Conclusions of the study

Formalization has had an ambivalent role in the management control system design literature. One objective of the study was to examine whether management control system design relates to management control system formalization. As some researchers (e.g. Ghoshal & Nohria, 1989; Adler & Borys, 1996, Bartlett & Ghoshal, 2002; Ahrens & Chapman, 2004) see formalization as part of the coordination mechanisms and as independent but not a self-evident part of the management control system design and other researchers understand formalization as an automatic part of the management control system (e.g. Bedford & Malmi, 2015), simultaneously the target was to investigate whether the formalization process is related to the management control system functionality automatically by itself or whether it is an independent element without relation to the management control systems' functioning. In this case study, formalization can be interpreted as an enforcing mechanism of the management control system design and it can be taken as a relevant part of the management control system functionality despite Bedford and Malmi's (2015) argument. Formalization can be integrated together with the management control system design as formalization acts as a coordinating element in control implementation in multinational organizations.

Different design elements affect to the need for formalization. First, the management control system elements existence or non-existence affects to the perception of control and the need for formalization. For example, in the case company the MCS formalization was interpreted as needed as a long term strategy and risk management were missing. To the perception of MCS success as a system affected also if some control elements were not functioning or they were not related to each other. Also the objective of control had an important meaning. The objective of control defined the use of management control system and caused domination of some forms of control while suppressing others. In the study, the meaning of strategy, communication and implementation of control were highlighted throughout the results. In conclusion for the first research question, the MCS elements design, the objective of control and the use of controls are inter-related subjects in the MCS design, and without common coordination different controls do not work together harmoniously as a package and do not support common goal achievement in the organization. The MCS design and formalization

have an important meaning to the MCS perception, which strengthens partly the theoretical interpretation of the MCS design's impact on the MCS perception by Tessier and Otley (2012).

The second objective of the study was to examine the prohibiting factors for management control system formalization. Although the prohibiting factors of the management control system functioning have been studied from various perspectives including the impact of external environment and uncertainty (Chenhall, 2003), internal factors (Almqvist & Skoog, 2006) and the balanced way of using controls (Mundy, 2010), the prohibiting factors for management control system formalization have been studied less. This case study recognized several factors that were hindering the efforts of creating internal and global transparency and the capabilities for flexibility and repair in the organization. Several contingency factors such as the history and the uncertainty affected the ability to formalize practices, but also internal factors such as the control system elements functioning, the existence and the use of controls were hindering the process of formalization strengthening also the hypothesis of the tight relationship between management control system design and formalization.

The third objective of the study was to explore the benefits related to management control system formalization. Earlier research has recognized several benefits of formalization including cost efficiency and information integrity (Ghoshal & Nohria, 1989), common sense-making and improved communication (Vlaar et al., 2006). For individual, the benefits are related to increase in work pride, commitment and empowerment (Deming, 1986; Michels et al., 1988), and improving task management (Deming, 1986; Adler & Borys, 1996). In this study also other factors were recognized. For organization, formalization can bring continuity of operations with formalized practices and risk management with the balanced use of management control system. Although the case company fell in bankruptcy, working practices continued helping company to recover from the fall. Also company development, self-control and flexibility are seen to be generated through MCS formalization. Surprisingly, formalization was considered to help in achieving balance between work and personal life and bring equality to the organization. Especially nowadays in current changing business environment when employees have varying expectations for control than in the history (see Deloitte, 2014), the findings of the importance of formalization highlight the need to study different aspect of control from both organization's and employee's point of view to find out how control is perceived.

Uncertainty has been in the focus of contingency research in the management control system area in the last years. Uncertainty has been studied by its effect in operating environment as well as to company functions. In general, the findings highlight the meaning of communication of long term

plans, moderate level of administrative controls, flexible but accurate diagnostic systems, and the meaning of values, mission and vision in uncertain environment. This case study showed that the needs for increasing flexibility are relevant in the future in manufacturing organizations (Hartmann & Vaassen, 2003) and flexibility is important to be created to the management control system.

5.2 Managerial implications of the study

A variety of researchers have expressed their concern over the little impact research is making on the managerial practice and innovation (Berry et al., 2009; Seal, 2012, 228). Of course, the responsibility for the limited practical impact lies on the academic research and company managers, as results may be ignored (Seal, 2012). Although case studies are hard to generalize (Yin, 2009), some factors are found in the study that could be researched in larger samples. In this study, suggestions for MCS improvement under uncertainty are given and the needs for MCS formalization are presented, which can hopefully give benefits for other organizations. The relationships between different control elements are combined in Table 16 based on the interviews. Managers may not always be able to understand control relationships (Ahrens & Chapman, 2004; Speklé, 2001) and small alterations of may destroy complementarities between components (Miller & Mintzberg, 1984).

Planning and cybernetics control integrates performance measurement, and management control system elements, object, role and use of control should be planned as flexible in changing organization. For example, if strategy period of three years cannot be hold, shorter operating periods and capability forecasting are suggested. Also the meaning of mission and vision gets emphasized to give cornerstone for actions in case of frequently changing strategy. Primary control element should be designed together with objective of control, and other control elements should be designed to support primary control element due to limited resources. As planning includes also other things as just financial performance planning, financial and non-financial measurement should be streamlined and support target setting and give indicate the development of targets. Administration, especially organization structure, is seen to work as a basis for management control system system and planning, cybernetics control and reward system as a core of the system. For planning to be realistic, organization structure, policies and procedures, and governance structure must support the progress by harmonizing working practices. The definition of common procedures and policies can help to implement cybernetics control and responsibilities, governance limits and policies can be harmonized. The findings of the relationship of different control elements are found important to

model in the case organization to bring efficiencies into the organization, but they are difficult to generalize and thus more research should be directed to the area.

Table 16. Relationships between different control elements

Planning and cybernetics	- meaning of mission and vision in place of strategy - short operating periods and capability forecasting - short term planning and results control - primary control definition and support due to limited resources - define key projects to be implemented - flexible cybernetics control, e.g. budgeting and forecasting processes - forecasting accuracy and visibility to be improved - streamlining of metrics - unify financial and non-financial MC systems - decisions based on metrics - information overflow to be decreased - common understanding and big picture sharing
Cybernetic controls and administration	- decrease overlapping work - clarify meeting structures and information flow - unify working practices between units/departments - cooperation between different teams and businesses - define responsibility of tasks - take care of governance and standards - avoid sub optimization
Administration structure and culture building	- trust building and decentralized decision-making through organization structure, governance and responsibility unification - teams and processes responsibility building - risk management through governance and processes, strategic risks recognition - improve training - clan control to be used for team cooperation and responsibility building
Planning, culture and rewarding	- improve common communication and strategy, management and supervisor communication - reward system to be rethought and tight to responsibility and development - use of control common and clear - common communication and support for lower level communication - streamline design of control with use of control

Malmi and Brown's (2008) model of management control system as a package has been experienced as simple and easy to perceive among the case organization's employees for MCS modelling, and could be suggested as a framework to be used also in other organizations. Only management control system modeling for the case organization brings practical relevance for the case organization as well as the interviews which bring more depth regarding the current perception and future development of the control system. Although management control system was modelled on high level without going

too detailed to single KPIs, modelling gives a framework of company's current control environment. In the study, the interfaces between different control elements were tried to be detected to find and lots of overlapping work and inefficiencies in current MCS were detected.

Improvements help to build flexibility, repair, and internal and global transparency and suggestions for management control system elements improvements for the case company are listed in the Table 17. More focus should be directed to balancing the requirement for short operating periods and the capability building. More flexibility can be increased with flexible financial controls such as improving rolling forecasting and budgeting in the case organization. Also the meaning of administrative controls and cultural controls are important in bringing goal achievement and thus more emphasis should be placed upon communicating long term goals and current business state.

Table 17. Suggestion for MCS improvements in the case company

Cultural controls						
Clans		**Values**			**Symbols**	
• Organization culture • Clan based team culture, global team target setting and team control		• Values: customer orientation, agility, quality commitment, pioneering, innovation, safety attitude and culture, and respect for people • Mission: Provide innovative drive train solutions to improve wind power competitiveness. • Vision: Recognised by our partners and our people as the leading provider of drive train technology and services in the wind industry. • Strategic decisions based on values and mission			• Innovative branding	
Planning		**Cybernetic controls**				**Reward and compensation**
Long range planning	Short range planning	Short term performance follow-up	Financial measurement systems	Non-financial measurement systems	Hybrid measurement systems	**Reward and compensation**
• Short period strategy process • Development KPIs • Period planning for 6M • Strategic projects • Sales and capability planning	• Rolling budgeting • Rolling forecasting • Sales and Operations planning • Capability planning	• Team and individual based target follow-up • Budget and forecast follow-up • Cost follow-up	• Sales, Operation, Finance, R&D, Product Management KPIs	• QEHS and operational excellency standard follow-up • Interactive tactical follow-up • Personnel and customer surveys	• Balanced Scorecard • Current Management System Reviews and Standard fulfillment	• Team based target setting and individual base follow-up • Continuous improvement process
Administrative controls						
Governance structure		Organization structure			Policies and procedures	
• Committee / Board of directors Management team Unit Management Shop stewards and accredited parties Teams • Decision-making groups, meetings and limits defined • Corporate governance policies included into decision-making • Risk management		• Matrix structure • Team-based organization structure globalized, target and reward setting for teams • Legal unit based organization responsibilities defined			• Working policies and processes globalized • Training provided for all units • Job descriptions clarified • Responsibility definition and global communication	

In practice, management control system design has been recognized as an important study object. The need for more studies has been recognized in the research, consultancy companies and in practice, as

Accenture (2014) and Bain & Company (2014) separate studies informed the need for optimizing and developing of control models and operating systems. The practical findings of this study supported Sjöblom's (2003) statement that the purpose of management control system is to help management to focus on the core business opportunities, support resource allocation and provide timely corrective actions and therefore, the importance of well-designed control system is critical.

5.3 Contribution for the current MCS research

Contribution of the study is evaluated through Ladik and Stewart's (2008) framework which is based on four categories: target audience, subjectivity of contribution, passion towards research topic, and effect of surprise. Target audience refers to stakeholders which are expected to receive benefits from the study. In this study the audience consists of the case company's management but similar problems can also appear in other companies. Contribution of the study is always a target of subjective analysis, making the evaluation difficult, but MCS has been a popular research topic in Scandinavia within 21st century and also consultancy companies have increased interest regarding the subject. Formalization is not an active research topic in MCS literature, but the results reflect the needs for more research of the topic. The findings of the needs for formalization, the prohibiting factors of formalization and the benefits of formalization are study areas that have not been studied together with MCS design, and the study can benefit the research society with giving more understanding of the phenomenon.

Ladik and Stewart (2008, 163) represent eight steps in contribution continuum which move from identical replication to developing new theory which predicts new phenomenon. The eight steps in contribution continuum are:

1) Straight replication
2) Replication and extension
3) Extension of a new theory/method in new area
4) Integrative review
5) Develop a new theory to explain an old phenomenon
6) Identification of a new phenomenon
7) Develop a grand synthesis, integration
8) Develop a new theory that predicts a new phenomenon

This study's contribution is related to integrative review, as management control system studies were integrated with the coordination and formalization studies. The meaning of the integrative review is to organize and integrate prior research in new and useful ways. Often, these also propose new opportunities for empirical research which have not been previously identified. (Ladik & Stewart, 2008.)

The study was constructed from the needs of the case company, but the researcher's interest towards the study object was directing the selection of the study object. Without the interest and coherent knowledge of the case company's control system, the depth and extent of the study could perhaps not have succeeded and practical implications could not have been given. The study gave also surprising results for the research. Although the design of management control system has been evaluated as an important study object, the notions of how the functioning, the existence and the relationship between management control elements can affect heavily the perception of MCS were unique. Additionally, it has been important to note that employees long for management control system proper functioning and some form of formalization. Formalization can be seen as enabling rather than coercive unlike other studies may premise.

Although generalization of case studies is always difficult, Nørreklit et al., (2016, 297) classify generalizations in three types, generic, empirical and semi-logical generalizations, which affect differently to the relevance of the study. Semi-logical generalizations of the study were given as results are partly practical and partly generic. Although empirical part consisted of different persons' *topos* in the case company, generic but also practical generalizations could be given of current management control system perception and prohibiting factors of formalization as well as improvement suggestions. This study's aim was more to give sufficiently specific generalizations for organization's use, but surprisingly, also more generic and abstract suggestions can be given as well. The study can benefit the research society with giving more understanding of the phenomenon.

5.4 Evaluation and critique for the study

Critique for the study can be directed towards selected theoretical framework, the research object, methodology and participation to the daily activities of organization. The theoretical framework consisted of combining several management control system studies data, using the idea of Tessier and Otley's (2012) framework of MCS design's effect on MCS perception, and theories from the management control system formalization research area, which is more common in international

management studies. The analysis of single elements has been limited due to extent of the research, although vast theoretical understanding has been tried to reach. The testing of theoretical framework realized in interviews and in constant interaction between theory and empiricism. However, critique can be directed to effective synthesis of the theory.

Critique can be also subject to choices made in the thesis. As the need for the study comes from the case company's management's need, the biggest focus is put on the controlling and the business management function of a firm. Nilsson, Olve & Parment (2011) recognize that the production control, the quality control, the personnel control and the environmental control are also central in the management control system but the management control should be central in linking those systems together and gathering all the relevant information to support management's decision-making. Also critique can be applied to the focus on the role of headquarters in designing management control system but in this study headquarters' central role in designing of management control system is emphasized.

Management control systems and corporate governance have many similarities, and management control systems is often seen as part of internal control and corporate governance. In both, design, responsibilities, communication processes, monitoring and reviewing are seen as important functions but also several differences between the terms exist. Internal control is strongly related to control over financial reporting and corporate governance comprehends the relationship between shareholders, board of directors and CEO. Although corporate governance and management control systems share interests in supervision and managerial decision-making, management control system examines different control elements and hierarchical and hybrid control relationships within and between organizational hierarchies (Speklé & Cruz, 2014).

As single-case study was selected as research method. Generalization of one case study's data can be difficult, although it is not recognized as a perquisite for a reliable study. The amount of interviewees (12) can be suggested as sufficient but also the challenges of analyzing only a small amount of personnel to be recognized. Also the group of interviewees can be questioned since only the top management and white collar preventatives were interviewed. The reliability of the study depends on the ability of other researchers or professionals to reach same data and conclusions. Reliability is achieved when maintaining adherence to procedures related to *topoi*. (Norreklit et al, 2006, 44.) Within the study, the collection and analysis of the empirical data was conducted similarly to all interviewees, and although *topos* were analyzed within the context, sufficient generalizations were

made to conclude the data bringing practical generalizations and the most accurate picture of reality was tried to be created. Validity refers to how a statement, an analysis or a model or a set of concepts correspond reality consisting of basic structure and arguments, and when the procedures of the study are able to provide an adequate picture of reality (Norreklit et al, 2006, 44). During the analysis, a saturation point was achieved as data started to repeat itself. According to Norreklit et al. (2006, 50) theory is valid if it integrates all practical constructivist dimensions, to say facts, logic, values and communication adequately for organization. This was tried to maintain by describing several contextual factors affecting the case organization and current state.

Daily work in the case company can decrease reliability of the study, but during interviews, the role of an interviewer was perceived as researcher by interviewees. Interviews were held as anonymous to encourage interviewees to express freely their thoughts. Also prior experience could have affected to interpretations of management control systems current state, but interviews and personnel survey helped to reach a common and more objective understanding of MCS. The participation in the daily work has given also positive aspects as the suggestions for the case organization could be given. Researchers state that knowledge-doing gap should be avoided since both theoretical and practical solutions are needed (Norreklit et al, 2006, 50), and this was taken account also in the analysis.

5.5 Further research directions

This research givrd a holistic picture of the management control system design and formalization, and thus lots of research suggestions can be given to expand knowledge of both of them. In management control system design, more studies could be directed towards the understanding of how the existence and non-existence of some control elements, the relationships between different elements and the use of control are related to the organizational performance. Also the coordination processes of the management control systems should be studied more in different organizations. Promoting and prohibiting factors of the management control system's functionality should also receive more attention. These factors could be studied in wider context than in single-case company to increase generalizations.

Otherwise, the transformation of management control systems in traditional manufacturing companies are relevant since manufacturing companies will face new challenges as information, communication and new digital technologies change. The needs for change could be studied

internally and externally from management control systems point of view. Also the effects of uncertainty could be tested for the needs and perception of management control system formalization. Although future needs for management control systems in manufacturing companies was not addressed comprehensively in this study, the importance of the subject will increase in following decades. Therefore, also the complexity in the environment should be researched more to understand its effects on companies' performance in the future.

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APPENDICES

Appendix 1. Interview frame for internal interviews in English

Theme 1. Management control systems as a package

1. What is the meaning of management control in the company?
2. What are the management control system elements in the company? Does everything exist?
   a. Explaining the management control system framework by Malmi & Brown (2008)
3. Are the elements of management control systems related to each other?
4. How is control exercised in the case company?
   a. Results control, action control, personnel control, cultural control?
   b. Beliefs systems, boundary systems, diagnostic systems, interactive control systems?
5. What is the meaning of management control for company performance?

Theme 2. Change

6. How has management control system changed during the changes?
   a. What elements have been stressed at different times?
7. How have different strategies affected to the use of different management control
   a. Elements
   b. Exercise of control
8. Has the change had effects on management control creation?

Theme 3. Implementation, formalization and Perception of MCS

9. How has the implementation of management control system succeeded?
10. What have been the problems in the implementation of management control systems?

Theme 4. Uncertainty

11. What effects has the uncertainty had to the configuration of management control systems?
12. Is uncertainty denoted in management control system?
13. How is risk denoted in management control system?

Appendix 2. Interview frame for internal interviews in Finnish

Teema 1. Johdon ohjausjärjestelmäpaketti

1. Mikä on ohjausjärjestelmän ja johdon kontrollin merkitys yrityksessä?
2. Mitä elementtejä kuuluu johdon ohjausjärjestelmään? Mitä ei esiinny?
   a. Johdon ohjausjärjestelmän esittely Malmi & Brown (2008) –mallin pohjalta
3. Miten eri ohjausjärjestelmän osat ovat liitoksissa toisiinsa?
4. Miten ohjausta ja kontrollointia harjoitetaan yrityksessä?
   a. Tuloskontrollit, toimintakontrollit, henkilöstökontrollit, kulttuurikontrollit?
   b. Uskomusjärjestelmät, säännöt ja määräykset, diagnostinen kontrolli, interaktiivinen kontrolli?
5. Mikä merkitys johdon ohjausjärjestelmällä on yrityksen suorituskykyyn?

Teema 2. Muutos

6. Miten johdon ohjausjärjestelmä on muuttunut muutoksien myötä?
   a. Mitä elementtejä on painotettu eri aikoina?
7. Miten eri strategiat ovat vaikuttaneet seuraavien osalta:
   a. Ohjausjärjestelmien eri elementtien käyttöön?
   b. Kotnrollin harjoittamiseen?
8. Onko muutoksella ollut vaikutusta johdon ohjausjärjestelmien luontiin?

Teema 3. Jalkauttaminen, formalisointi ja mielikuva ohjausjärjestelmästä

9. Kuinka johdon ohjausjärjestelmän jalkauttaminen on onnistunut?
10. Mitä ongelmia on esiintynyt johdon ohjausjärjestelmän jalkauttamisessa?

Teema 4. Epävarmuus

11. Mitä vaikutuksia epävarmuudella on ollut johdon ohjausjärjestelmän rakenteeseen?
12. Miten epävarmuus on huomioitu johdon ohjausjärjestelmässä?
13. Miten riski on huomioitu johdon ohjausjärjestelmässä?

Appendix 3. Central definitions of management control systems

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STAFF SURVEY 2015

Please answer the following questions by ticking the appropriate box or writing down the answer in the space provided.

---

1. Country

1. ❑ Finland   5. ❑ Canada

2. ❑ Germany   6. ❑ England

3. ❑ Australia   7. ❑ Spain & Italy

4. ❑ USA

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2. Cost centre

1. ❑   3. ❑

2. ❑   4. ❑

---

3. Staff category

1. ❑ manual worker   3. ❑ upper-level employee

2. ❑ lower-level employee

---

4. Gender

1. ❑ male   2. ❑ female

---

5. Age

1. ❑ under 35 years   3. ❑ 45–54 years

2. ❑ 35–44 years   4. ❑ over 54 years

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6. How long have you worked for Company (or its predecessor)?

1. ❑ under 2 years   4. ❑ 11–20 years

2. ❑ 2–5 years   5. ❑ over 20 years

3. ❑ 6–10 years

---

7. Do you work in a managerial role?

1. ❑ yes   2. ❑ no

---

8. Have you had a performance appraisal interview with your supervisor in the past 12 months?

1. ❑ yes   3. ❑ don't know

2. ❑ no

---

9. How satisfied or dissatisfied are you with the company as a place of work? Please explain below.

1. ❑ very satisfied   3. ❑ fairly dissatisfied

2. ❑ fairly satisfied   4. ❑ very dissatisfied

Please specify here: _____

---

10. How would you say the work climate in your unit has changed in the past two years? Please explain below.

1. ❑ clearly for the better   4. ❑ slightly for the worse

2. ❑ slightly for the better   5. ❑ clearly for the worse

3. ❑ No change

Please specify here: _____

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11. Would you recommend company to a friend/acquaintance as a place to work? Please explain below.

1. ❑ yes, and I already have   3. ❑ yes, but with reservation

2. ❑ if asked, I would absolutely recommend   4. ❑ no, probably not

Please specify here: _____

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12. Listed below are a number of statements. Please rate each statement twice:

A. First rate the statement according to its _importance to you._ Circle the number that corresponds to your view with respect to the statement. Scale: 1=not important to me … 7=very important to me

B. Then rate _the accuracy of the statement_ with respect to your company or you personally, in other words indicate your level of agreement with the statement. Circle the number that corresponds to your view with respect to the statement.

Scale: 1=I strongly disagree … 7=I strongly agree

	A.	**B.**
	Importance to me	_Agreement with statement_

	1 = not important	7 = very important	1 = strongly disagree	7 = strongly agree

Employer image

1. I am familiar with our objectives

1 2 3 4 5 6 7   1 2 3 4 5 6 7

2. I am committed to our objectives

1 2 3 4 5 6 7   1 2 3 4 5 6 7

3. Our company has a strong focus on employee wellbeing

1 2 3 4 5 6 7   1 2 3 4 5 6 7

4. Our company is a good and competitive employer

1 2 3 4 5 6 7   1 2 3 4 5 6 7

5. The future looks bright for the wind power industry

1 2 3 4 5 6 7   1 2 3 4 5 6 7

Customers

6. Our company delivers a high level of service

1 2 3 4 5 6 7   1 2 3 4 5 6 7

7. Our company is genuinely customer-focused

1 2 3 4 5 6 7   1 2 3 4 5 6 7

8. Our company delivers what it promises

1 2 3 4 5 6 7   1 2 3 4 5 6 7

9. My work has a direct impact on customer satisfaction

1 2 3 4 5 6 7   1 2 3 4 5 6 7

Ways of doing things

10. The way we operate across the company is organised and structured ....

1 2 3 4 5 6 7   1 2 3 4 5 6 7

11. Employees are given enough opportunities to participate in the development of the company ....

1 2 3 4 5 6 7   1 2 3 4 5 6 7

12. Our company has well-defined roles and responsibilities

1 2 3 4 5 6 7   1 2 3 4 5 6 7

13. Employees are given clear instructions and guidelines for doing their assigned tasks ....

1 2 3 4 5 6 7   1 2 3 4 5 6 7

14. Co-operation between different departments works well

1 2 3 4 5 6 7   1 2 3 4 5 6 7

15. Co-operation between different units works well ....

1 2 3 4 5 6 7   1 2 3 4 5 6 7

16. Our company pays enough attention to health and safety at work ....

1 2 3 4 5 6 7   1 2 3 4 5 6 7

17. All employees are treated equally..................................

1 2 3 4 5 6 7   1 2 3 4 5 6 7

18. Our company has been successful in achieving gender equality ....

1 2 3 4 5 6 7   1 2 3 4 5 6 7

19. Employees are given enough opportunities to participate in training or other activities to develop themselves professionally 1 2 3 4 5 6 7   1 2 3 4 5 6 7
20. Employees undergo a thorough orientation process 1 2 3 4 5 6 7   1 2 3 4 5 6 7

Top management

21. The management's actions are taking our company into the right direction 1 2 3 4 5 6 7   1 2 3 4 5 6 7
22. The management can justify their decisions well 1 2 3 4 5 6 7   1 2 3 4 5 6 7
23. Co-operation between management and employees works well 1 2 3 4 5 6 7   1 2 3 4 5 6 7

Work climate and team spirit

24. I usually feel good about going to work 1 2 3 4 5 6 7   1 2 3 4 5 6 7
25. We have a positive working environment in our company   1 2 3 4 5 6 7   1 2 3 4 5 6 7
26. We have a positive working environment in our department
27. People in my work community work well together..........   1 2 3 4 5 6 7   1 2 3 4 5 6 7
28. I feel I can openly address any issue in my work community 1 2 3 4 5 6 7   1 2 3 4 5 6 7

Workplace communication

29. Communication is adequate in our company 1 2 3 4 5 6 7   1 2 3 4 5 6 7
30. There is adequate communication about changes 1 2 3 4 5 6 7   1 2 3 4 5 6 7
31. I am adequately informed about matters affecting my day-to-day work 1 2 3 4 5 6 7   1 2 3 4 5 6 7
32. Communication is adequate between different departments 1 2 3 4 5 6 7   1 2 3 4 5 6 7
33. Communication is adequate between different units.......   1 2 3 4 5 6 7   1 2 3 4 5 6 7

Supervision

34. My supervisor has good management skills   1 2 3 4 5 6 7   1 2 3 4 5 6 7
35. My supervisor takes enough time to listen to the staff   1 2 3 4 5 6 7   1 2 3 4 5 6 7
36. My supervisor trusts in my ability to work independently   1 2 3 4 5 6 7   1 2 3 4 5 6 7
37. My supervisor treats all his/her subordinates equally   1 2 3 4 5 6 7   1 2 3 4 5 6 7
38. I am happy with the amount of feeback from my supervisor   1 2 3 4 5 6 7   1 2 3 4 5 6 7
39. I can trust my supervisor to follow through with what has been agreed   1 2 3 4 5 6 7   1 2 3 4 5 6 7

Duties and coping at work

40. My work often gives me a sense of personal accomplishment 1 2 3 4 5 6 7   1 2 3 4 5 6 7

41. I find my duties meaningful 1 2 3 4 5 6 7   1 2 3 4 5 6 7

42. I am clear about my objectives................................... 1 2 3 4 5 6 7   1 2 3 4 5 6 7

43. I can have a say in matters related to me and my work 1 2 3 4 5 6 7   1 2 3 4 5 6 7

44. I have the necessary tools and conditions to perform my duties... 1 2 3 4 5 6 7   1 2 3 4 5 6 7

45. I feel appreciated as a person and for the work I do in our company 1 2 3 4 5 6 7   1 2 3 4 5 6 7

46. I feel alert and my ability to work is good...................... 1 2 3 4 5 6 7   1 2 3 4 5 6 7

47. I have not felt exhausted at work recently 1 2 3 4 5 6 7   1 2 3 4 5 6 7

Self-evaluation

48. I understand how my work contributes to how smoothly the different processes run 1 2 3 4 5 6 7   1 2 3 4 5 6 7

49. I actively participate in the development of our company 1 2 3 4 5 6 7   1 2 3 4 5 6 7

50. With my own actions, I contribute towards wellbeing in the work community 1 2 3 4 5 6 7   1 2 3 4 5 6 7

51. With my own actions, I contribute towards efficient communication in the work community 1 2 3 4 5 6 7   1 2 3 4 5 6 7

My overall rating for company as an employer

(1=poor - 7=excellent) 1 2 3 4 5 6 7

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13. OPEN-ENDED FEEDBACK

A. Are there any health and safety-related observations you would like to share with us?

B. Is there anything else you would like say about how your company operates?

THANK YOU FOR YOUR VALUABLE FEEDBACK!