

Differences in Management Control Systems between large and small organisations:

A configurational approach

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Preface

This thesis is the result of a study to the effect of organisational size on the use of Management Control Systems in large and small organisations in the Netherlands. The study is the master thesis for the MSc Business Administration, followed at the University of Twente, Enschede. The research subject of the effective of Management Control Systems is commissioned by the University of Twente, school of Management and Governance and it is personalised to own interest.

To map the effective of Management Control Systems in large and small organisations, I analysed existing theories and interviewed several members of top management boards of Dutch organisations. Special thanks to the respondents who were prepared to welcome me at their offices and free up time to help with my data collection for this study. Also, thanks to the openness concerning information about the Management Control Systems.

Also thanks to Boudewijn Alink, who translates the English questionnaire of Malmi and Sandelin in perfectly Dutch. This Dutch questionnaire supports the data collection on a really good way and helps me to understand the information.

Finally, I would like to thank both of my supervisors, dr. Tom de Schryver and ir. Henk Kroon for their support, input and help in this research. Their instructions have been very helpful in conducting the research.

Management Summary

This study focuses on *the effect of organisational size on the use of Management Control Systems in large and small organisations* and describes the difference in use of MCS in small and large Dutch organisations. The sample group exists of six Dutch organisations whereof three large and three small organisations. A combination of qualitative interviews and a quantitative questionnaire makes it possible to collect interesting information from this small sample group.

Organisations depend heavily on the contribution of individuals to achieve organisational goals. To guide and direct the individuals, management use control mechanisms to influence employee's behaviour to achieve organisational goals. Control mechanisms are every single component in the organisation which helps to decrease the lack of direction, lack of motivation or personnel limitations. There exists no one best package of control mechanisms which fits in every organisation, but depends of several variables. Organisational size is one of these variables.

In this study eight hypotheses are tested, divided in five control categories. *Cultural controls* include the set of values, beliefs and social norms which are congruent with what management perceive to be important for executive tasks. In small organisations culture are introduced by informal interactions, while in large organisations management insure that new employees receive proper introduction to the organisation's culture by written documents which guide the culture.

H1a In large organisations norms and values are more documented than in small organisations;

H1b In large organisations there is a more formal culture than in small organisations.

H1a is rejected because in this study there is no significant difference observed. The extent of documentation of rules, norms and values are comparable in large and small organisations. Based on this study H1a is accepted.

Planning controls focus to improve internal coordination, communication and motivation towards overall organisational goals. An increase in size results in an increase in resources, investments, and expertise, which affect the planning behaviour. Small organisations are flexible in relation to the implementation of new management approaches, which requires more short-term planning.

H2 Large organisations put great emphasis on strategic planning-related issues and activities, while small organisations put less emphasis on strategic planning-related issues and activities;

H3 Small organisations put greater emphasis on short-term goals, while large organisations put less emphasis on short-term goals.

Based on this study H2 is accepted because a clear difference between large and small organisations is observed. Contradicted, there is no significant difference concerning the emphasis on short-term goals, so H3 is rejected. Besides the results concerning the hypothesis, another interesting finding concerning planning controls is that the planning process of large organisations are more formalised than in small organisations.

Cybernetic controls include performance measuring and feeding back information. PM-Models overviews performance, but requires too many data for small organisations. Small organisations rely more on quantitative performance measurement systems.

H4a Small organisations put greater emphasis on quantitative performance measurement indicators than large organisations;

H4b Large organisations put greater emphasis on performance measurement models than small organisations.

H4a as well H4b are rejected. Most of the organisations do not use PM-models because it requires too many KPI's. Small and large organisations prefer to keep performance measurement simple to understand and so, all the responding organisations prefer the use of quantitative performance measurement indicators.

Reward and compensation focus on motivating and increasing the performance of individuals and groups by achieving congruence between their goals and activities and those of the organisation. Literature states that large organisations need to attract high qualified employees and motivate them by rewarding, while small organisations rely on motivating employees on a personal way. Furthermore, small organisations providing a lower base compensation in exchange for an array of incentive pay programs to buffer themselves against short-term financial pressures.

H5a In small organisations incentive pay is relatively higher than in large organisations;

H5b In large organisations non-financial reward and compensation is higher than in small organisations.

Based on this study both hypotheses are rejected. No significant differences are observed by H5a and H5b. Five out of six organisations have a kind of incentive pay and reward employees based on performance. Also non-financial reward and compensation is available in five of the six organisations.

Administrative controls direct employee behaviour through the organising of individuals and groups, the monitoring of behaviour and who makes employees accountable for their behaviour, and process of specifying how tasks or behaviours are to be performed or not performed.

H6 Large organisations are more decentralised than small organisations;

H7 In large organisations the decision-making authority by middle management is higher than in small organisations;

H8 Large organisations are more bureaucratic than small organisations.

Based on this study, H6 is accepted. All of the small organisations are more decentralised than the large organisations. H7 is rejected because there is no significant difference between the decision-making authority of middle management in large and small organisations. Finally, H8 is rejected. Large and small organisations use a different kind of bureaucracy, but there are no clear signs that large organisations are more bureaucratic than small organisations.

This study has contributed to the literature because in the past studies to Management Control Systems as a package is rarely done. This study shows that solely organisational size has no effect on the choice of control mechanisms and that mostly other variables have influence. Furthermore this study strengthens some existing literature and provides issues for further research.

Management Samenvatting

Dit onderzoek richt zich op de effecten van organisatiegrootte op de het gebruik van Management Control Systems in grote en kleine organisaties en beschrijft het verschil in het gebruik van MCS in grote en kleine Nederlandse organisaties. Het onderzoek bevat een steekproef bestaande uit zes Nederlandse organisaties, waarvan drie grote en drie kleine organisaties. Een combinatie van kwalitatieve interviews en kwantitatieve enquêtes heeft het mogelijk gemaakt waardevolle informatie te verzamelen over het gebruik van MCS in grote en kleine organisaties.

De effectiviteit van een organisatie is erg afhankelijk van de bijdrage van individuen. Om deze individuen effectief te laten werken, maken organisaties gebruik van controle mechanismes die het gedrag van werknemers beïnvloeden, met als doel organisatie doelstellingen te halen.

Controle mechanismes zijn losse componenten welke het management helpen bij het afnemen van een gebrek aan sturing, gebrek aan motivatie of persoonlijke beperkingen. De controle mechanismes zijn verdeeld in vijf categorieën; cultuur controle, planning controle, cybernetische controle, beloningsstructuren en administratieve controle. Elk van deze categorieën focust op een ander aspect van organisatie controle. Om effectief en efficiënt te werken is een combinatie van complementaire controle componenten, welke organisatiespecifiek zijn, vereist.

In dit onderzoek zijn acht hypotheses getest, die onderverdeeld zijn in bovenstaande categorieën. Culturele controlemechanismes omvatten de waarden, overtuigingen en sociale normen binnen een organisatie die van belang zijn voor wat het management voor ogen heeft dat belangrijk is voor het uitvoeren van taken. In een kleine organisatie wordt cultuur op een meer informele manier geïntroduceerd bij de werknemers, terwijl in grote organisaties het management de werknemers door middel van regels en documenten aan laat passen aan de cultuur. Dit resulteert in de volgende hypotheses:

H1a In grote organisaties zijn de normen en waarden in hogere mate gedocumenteerd dan in kleine organisaties;

H1b In grote organisaties is een meer formele cultuur dan in kleine organisaties.

H1a is verworpen omdat in dit onderzoek geen duidelijke verschillen waargenomen zijn. De mate van documentatie van regels, normen en waarden in grote en kleine organisaties zijn vergelijkbaar. Op basis van dit onderzoek is H1b aangenomen. In grote organisaties is de cultuur formeler dan in kleine organisaties.

Planning controle focust op het verbeteren van interne coördinatie, communicatie en motivatie met betrekking tot de doelstellingen van de organisatie. Een toename in bedrijfsgrootte resulteert in een toename in middelen, investeringen en kennis. Dit beïnvloedt de planningen. Daarentegen zijn kleine organisaties flexibeler met betrekking tot de implementatie van nieuwe managementmethoden. Dit beïnvloedt de korte termijnplanning.

H2 Grote organisaties hechten meer waarde aan strategische planning en gerelateerde activiteiten dan kleine organisaties;

H3 Kleine organisaties hechten meer waarde aan korte termijn planning dan grote organisaties.

Gebaseerd op deze studie, H2 is aangenomen omdat er een duidelijk verschil is waargenomen. Daarentegen is er geen duidelijk verschil waargenomen betreft de waarde die organisaties hechten aan korte termijnplannen. H3 is daarom verworpen. Naast deze bevindingen is op basis van dit onderzoek gevonden dat het tot stand komen van de plannen verschilt in grote en kleine organisaties. In grote organisaties zijn de processen meer geformaliseerd dan in kleine organisaties.

Cybernetische controle omvat prestatie metingen en het geven van feedback. Prestatie metingen kunnen gedaan worden door middel van modellen, die echter veel prestatie indicatoren vereisen. Omdat kleine organisaties vaak minder prestatie indicatoren gebruiken, vertrouwen kleine organisaties meer op kwantitatieve prestatie indicatoren.

H4a Kleine organisaties hechten meer waarde aan kwantitatieve prestatie metingen dan grote organisaties;

H4b Grote organisaties hechten meer waarde aan prestatie meet modellen dan kleine organisaties.

Gebaseerd op deze studie zijn beide hypothesen verworpen. De meeste organisaties maken geen gebruik van modellen om prestaties te meten, omdat het teveel input vereist. Zowel kleine als grote organisaties prefereren het gebruik van kwantitatieve prestatie indicatoren om het voor iedereen in de organisatie eenvoudig en duidelijk te houden.

Beloningstructuur focust op het motiveren en verbeteren van prestaties van individuen en groepen door hun persoonlijke doelen in overeenstemming te brengen met de doelstellingen van de organisatie. Grote organisaties die hoger gekwalificeerd personeel nodig hebben doen dit voornamelijk door middel van beloningen, terwijl kleine organisaties vertrouwen op persoonlijke motivatie. Daarnaast verstrekken kleine bedrijven lagere basissalarissen en ruil voor hogere prestatiebonussen om kortlopende financiële druk te verminderen.

H5a In kleine organisaties zijn financiële bonussen relatief hoger dan in grote organisaties;

H5b In grote organisaties zijn niet-financiële beloningen hoger dan in kleine organisaties.

Gebaseerd op dit onderzoek zijn beide hypothesen verworpen. Bij zowel H5a als H5b is geen duidelijk verschil tussen grote en kleine bedrijven waargenomen. Vijf van de zes organisaties hebben een vorm van prestatiebonussen. Ook niet-financiële beloningen zijn aanwezig in vijf van de zes organisaties.

Administratieve controle stuurt het gedrag van werknemers door middel van het monitoren en ze verantwoordelijk te maken voor hun gedrag. Daarnaast valt ook de organisatiestructuur en hiërarchie onder administratieve controle.

H6 Grote organisaties zijn meer gedecentraliseerd dan kleine organisaties;

H7 In grote organisaties is de beslissingsbevoegdheid van middel management groter dan in kleine organisaties;

H8 Grote organisaties zijn meer bureaucratisch dan kleine organisaties.

Gebaseerd op dit onderzoek is H6 aangenomen. Alle grote organisaties zijn meer gedecentraliseerd dan de kleine organisaties. H7 is verworpen omdat er geen duidelijk verschil is waargenomen tussen grote en kleine organisaties met betrekking tot beslissingsbevoegdheid van middel management. H8 is ook verworpen. Grote and kleine organisaties gebruiken beiden verschillende soorten bureaucratie, maar er is geen duidelijk verschil dat grote organisaties het meer gebruiken dan kleine organisaties.

Dit onderzoek draagt bij aan de literatuur omdat in het verleden zelden studies zijn gedaan naar het gebruik van Management Control System in een package. Dit onderzoek laat zien dat de variabele organisatiegrootte alleen niet veel effect heeft op het gebruik van Management Control Systems, maar dat andere variabelen ook een rol spelen. Daarnaast versterkt dit onderzoek sommige bestaande onderzoeken en geeft het aandachtspunten voor vervolgonderzoek op gebied van studies naar Management Control Systems.

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List of abbreviations

BSC	Balanced scorecard
BU	Business Unit
CBS	Capital Budget System
CLA	Collective Labour Agreement
CRM	Customer Relation Management
EVA	Economic Value Added
FTE	Fulltime Equivalent
KPI	Key Performance Indicator
L1, L2, L3	Name of large organisation
MAS	Management Accounting System
MCS	Management Control System
PM-model	Performance Measurement Model
PMC	Product-Market Combination
S1, S2, S3	Name of small organisation
(S)BU	(Strategic) Business Unit
SMEs	Small and Medium sized Enterprises

1. Introduction

1.1 Introduction

This thesis is the result of a study to the differences of management control systems (MCS) as a package in large and small Dutch organisations. The study contributes to the academic literature by providing a view of the effectiveness of MCS as a package in large and small organisations, where existing literature is mainly focus on the effects of size to single MCS components. This first chapter is a description of background information to management control and an explanation of the theoretical relevance of this study. Furthermore, in this chapter the research aim is described and followed by a thesis outline.

1.2 Background

Organisations depend heavily on the contribution of individuals to achieve organisational goals. Unfortunately, organisational goals could not achieve efficiency when management places random individuals together. Several gaps could limit the performance of the group individuals. In worst cases, the lack of performance leads to large financial losses, reputation damage and even to organisation failure. To avoid these scenarios, managers have to control the group of individuals. Managers have to improve, motivate and evaluate employees to achieve organisational goals in an efficient and effective manner. To realise this, control mechanisms and information from the work floor are needed. MCS include these components. As result of different internal and external forces which influence the choice of effective MCS, managers have to find the best control configuration for the organisation.

1.3 Theoretical relevance

Until now, little is known about the combined use of MCS. Recently, Malmi and Sandelin started a research with three purposes. The first objective is to find out how MCS are used in reality for which purposes and which combinations exist. The second objective of Malmi and Sandelin is to find out the different roles of the different MCS in these combinations and also which elements are most important in these combinations. Based on the framework of Malmi and Brown (2008), Malmi and Sandelin developed and tested a questionnaire which is sent out to the largest Finnish organisations (based on amount of employees). Because they are excited about the first results, they invited European researchers to send out a similar questionnaire.

Contingency-based variables like external environment, technology, organisational structure, size, strategy and national culture influences the use of MCS. This thesis is focused on the relation between organisational size and the effectiveness of MCS. In every organisation with more than one member there are control mechanisms applied to operate more effective. Based on the contingency theory it is plausible that small organisations use different MCS than large organisations. However, the research of Malmi and Sandelin just focused on the large organisations. Because the results of Malmi and Sandelin are for small organisations not interesting, this research gives insights in the differences in use of MCS in large and small organisations.

In the past, little research is done about the relationship between organisational size and organisational control. As a result, there does not exist much literature about this phenomena and the literature that does exist, is just focused on the relation of size on single control components. As a result of the lack of literature about the combination of organisational size and MCS as a package, this study is an addition to the literature.

1.4 Research aim

The aim of this research is to gain insight on the relation between MCS and organisational size. This is accomplished by reviewing the scientific literature and collecting data using the questionnaire of Malmi and Sandelin. The literature forms the theoretical background information needed for the questionnaire. Also, the literature describes some differences in the use of MCS between small and large organisations founded by other researchers and at last the literature sets out some assumptions made for the expected differences in use of MCS. The following research question will form the guideline throughout the entire research:

What is the effect of organisational size on the use of Management Control Systems as a package in large and small organisations?

1.5 Thesis outline

After the *introduction*, this study includes in chapter two a literature review. The *literature review* describes some key-definitions of management control and also the role of management in relation with organisational control is explained. The tools which management could use to control the organisation, the control mechanisms and the advantage of control mechanisms in a configuration are explained in the subsequent paragraphs. Finally, chapter two sets out the relation between the use of control mechanisms and organisational size and hypotheses. Chapter two ends with an overview of all the hypotheses. Chapter three explains the *methodology* of this study. The used research design is described and explained, also as the sampling method and the data collection. In chapter four, the *findings* of the interviews are described. These findings are based on six interviews of large and small organisations and are divided in eight hypotheses. These findings are firstly presented based on pairs, and afterwards there is an overall conclusion. In chapter five the *conclusion* of the findings are reviewed. Per hypothesis the difference between the use of management control systems per pair are explained, followed by an overall conclusion for the hypothesis. Chapter six of this study exists of the *discussion*, where the findings are compared with the existing literature described in chapter two. The findings are discussed and valuated in terms of added value to the scientific literature. Furthermore, limitations and recommendations for further research are described. Finally, this research is end with a list of used references and two appendices which included and explores the sample method and the used questionnaire.

2. Literature review

2.1 Introduction

This chapter sets out the most important definitions concerning management control and explains the relationship between the different subjects of management control. Also, this chapter describes the role of organisational size related to management control. Based on the relations between organisational size and management control some hypotheses are composed which are the base of chapter four.

2.2 Control

According to Merchant and Van der Stede (2007) three kinds of gaps may limit the overall performance of organisations; lack of direction, lack of motivation and personal limitations. Lack of direction occurs when employees simply do not know what the organisation want from them. Lack of motivation occurs when employees know what to do, but do not want to, for instance when it is not for their own-interests. Personal limitations occur when employees are unable to do the job in the right way (Merchant and Van der Stede, 2007 pp. 9). To be efficient and effective, management have to limit the gaps as much as possible. Management control helps managers to do this. *Control* is defined in numerous ways. Alvesson and Kärreman (2004) state that control includes the exercise of power (influence) in order to secure sufficient resources, and mobilise and orchestrate individual and collective action towards (more or less) given ends. Cardinal et al. (2010) defined control as any process whereby managers direct attention, motivate, and encourage organisational members to act in ways desirable to achieving organisational objectives. Malmi and Brown (2008) proposed that control is about managers ensuring the behaviour of employees or other relevant parties is consistent with the organisation's objectives and strategy. Summarised, the key points of the different definitions is that top management wants to influence employee's behaviour to achieve organisational goals (Merchant, 1982).

2.3 Control mechanisms

To control the organisation, management use control mechanisms. *Control mechanisms* describe the individual, molecular units of organisational control that are applied in control processes (Cardinal et al. 2010). In other words, every single component in the organisation which helps to decrease the lack of direction, lack of motivation or the personnel limitations is a control mechanism. Cardinal et al. (2010) state also that control mechanisms are distinguishable into two types of control mechanisms, formal and informal control mechanisms. Formal control mechanisms include a range of officially sanctioned institutional mechanisms such as written rules and procedural directives. Informal control mechanisms include values, norms, and beliefs that guide employees' actions and behaviours. The basic of literature about control mechanisms is researched by Ouchi (1979), who divides control mechanisms in three groups: market, bureaucracies and clans. Market includes markets deals with the control problem through their ability to precisely measure and reward individual contributions; bureaucracies rely instead upon a mixture of close evaluation with a socialised acceptance of common objectives; and clans rely upon a relatively complete socialisation process which effectively eliminates goal in congruence between individuals.

Another contribution to the literature is from Malmi and Brown (2008), who recognise five categories of control mechanisms; cultural controls, planning controls, cybernetic controls, reward and compensation and administrative controls. Malmi and Brown (2008) made a framework with these five components (figure 1). *Cultural controls*, including clans, values and symbols, are a slow changing and

stable control mechanism. Malmi and Brown (2008) place cultural controls at the top of the framework because of the stability of the control mechanism and the influences on the other control mechanisms. On the middle row of the framework the control mechanisms planning controls, cybernetic controls and reward and compensation are placed. *Planning controls* include determining organisational goals and the steps to achieve these goals. *Cybernetic controls* are the measurement systems of input and output. *Reward and compensation* includes the link between employees and performance. These control mechanisms are tightly linked to modern organisations. The middle row from left to right presents the temporal order of the control mechanisms. Changes in planning controls require a longer implementation period than changes in reward and compensation. Also, the effects of changes take a longer period. At the bottom are *administrative controls*, which create the structure in which planning controls, cybernetic controls, and rewards and compensation are exercised.

Figure 1 Management Control as a package

Cultural Controls						
Clans		Values			Symbols	
Planning Controls		Cybernetic Controls				Reward and Compensation
Long range planning	Action planning	Budget	Financial measurement system	Non-Financial measurement system	Hybrid measurement system	
Administrative Controls						
Governance structure		Organisation structure			Policies and procedures	

Source: Malmi and Brown (2008)

2.3.1 Cultural controls

Kaplan (1965) states that “*culture composed of patterned and interrelated traditions, which are transmitted over time and space by non-biological mechanisms based on man’s uniquely developed linguistic and non-linguistic symbolising capabilities*”. This means in other words, that culture is a pattern of linguistic and non-linguistic symbols in an organisation, which grows over time. Cultural controls include an attempt to influence what employees subjectively bring with them to the work floor. Cultural controls focus on the input of elements, emotions, norms and values that are congruent with what management perceive to be important for the tasks at hand. Organisation culture is “the set of values, beliefs and social norms which tend to be shared by its members and, in turn, influence their thoughts and actions” (Das et al. 1985). There are three aspects of cultural controls; value-based controls (Simons, 1994), symbol based controls (Schein, 1996) and clan controls (Ouchi, 1979).

Clan controls systems place relatively greater emphasis on informal control mechanisms. Within clan control systems managers use traditions and beliefs to motivate members to succeed their individual goals with commitments to organisation values. *Value controls* are “the explicit set of organisational definitions that senior managers communicate formally and reinforce systematically to provide basic values, purpose, and direction for the organisation” (Simons, 1994). Value controls acts on three levels, recruiting personnel who fit in the organisation, recruiting personnel who have the ability to change their values on the work floor to fit in the organisation, and recruiting personnel who are agreed to adopt values despite of different personal values. *Symbol-based controls* are visible expressions, such as building/workspace design and dress codes, to develop a particular type of culture. Personnel control includes selection and placement, training and job design, as well as provision of the necessary resources.

Besides formal control cultural controls result also in *informal control*. Informal control arises spontaneously out of everyday social interaction, whereby social pressure is tacitly exerted upon the individual to conform to a group's unwritten rules about appropriate conduct (McAuley et al. 2007 pp. 153).

2.3.2 Planning controls

Planning controls are controls with the difficulty of predicting the future. Organisations use two kinds of planning, informal and formal planning. *Informal planning* is planning accomplished in the head of a few people and is not, or little, documented. *Formal planning* depends on the preservation and rearrangement of established categories, the existing levels of strategy (corporate, business, functional), the established types of products (defined as strategic business units) overlaid on the current units of structure (divisions, departments etcetera) (Mintzberg, 1994). Planning set out the goals of the functional areas of the organisation, thereby directing effort and behaviour. Planning converts organisational goals into steps which can be implemented almost automatically and articulating the anticipated consequences or results of each step. Planning also provides the standard to achieve in relation to the goals, and clarifies the level of effort and behaviour expected from organisations members (Mintzberg, 1994). Malmi and Brown (2008) called the process of translating goals into applicable steps *action planning*. Decisions made for more than one year ahead, like strategic planning, defining ends and means and making a participation strategy called by Malmi and Brown (2008) *long range planning* or *strategic planning*.

Action planning or *short-term planning* involves activities that are typical intent and nature of management planning and control. The prime focus is to improve internal coordination, communication and motivation towards overall organisational goals (Camillus, 1986, pp. 17). Effective action planning requires detailed understanding of the specific actions to be carried out by identified executives in order to achieve these goals within a prescribed deadline. *Long range planning* includes, according to Merchant and Van der Stede (2007), thinking about the organisation's missions, objectives and the means by which the missions and objectives can be best achieved. Camillus (1986) states that defining the policies about using the means are also an important part of long range planning. Based on financial and non-financial information from the past and forecasts of the future, long range planning leads to the creation of hypotheses about how the firm and each of its business will perform within an uncertain competitive environment.

Long range planning is a control system at three reasons. Firstly, boundaries for lower management are defined by higher management. This provides a limited decision-making authority by lower management and extent their involvement in the strategic planning exercise. Secondly, strategic plans are converted to reality by allocation of budgets to key decisions. Allocation of budgets controls the freedom of decision-making of lower management. Thirdly, while capital budgeting systems (CBS) can respond to requests for resources that are consistent with the accepted strategic plan, the period between formal, comprehensive strategic planning exercises can give rise to unanticipated changes in the environment or unexpected crisis. The CBS cannot normally respond appropriately with the necessary modifications to existing resource allocation priorities because the strategic plan needed to guide these decisions may have been rendered obsolete and irrelevant (Camillus 1986, pp. 20).

2.3.3 Cybernetic controls

Cybernetic controls include the use of performance standards, measuring system performance, comparing that performance to standards, feeding back information about unwanted variances in the systems, and modifying the system's conduct (Malmi and Brown, 2008).

Cybernetic controls contain three basic elements. First it contains a *measuring unit* which monitors some activity or output. Second, it contains a *comparing unit* which evaluates and compares some measurements against standards. The third element is an *intervening unit* which provides feedback to adjust the activity or process producing the outputs (Egelhoff, 1984). According Malmi and Brown (2008), there are four basic measurement mechanisms; budgeting, financial measurement, non-financial measurement, and hybrids, a combination of financial and non-financial measures.

Budgeting is a coherent summary of organisational performance. Traditionally, in most organisations profitability is the measurement mechanism of performance. Budgeting is a technique which integrates a whole range of organisational activity into a clear overview (Otley, 1999). Budgets are financial plans and provide a basis for directing and evaluating the performance of individuals or segments of organisations (Bruns and Waterhouse, 1975). Through budgeting, activities of different departments in organisations could be controlled. With budgeting, top management assigns financial budgets to managers of department who are responsible for the department. Departments with own responsibility, so called responsibility centres, exist in three¹ different types; profit centres, cost centres, and revenue centres (Melumad et al. 1992). Each type has its own degree of autonomy and freedom of decision-making.

Financial measurement includes different methods to calculate economic value added (EVA). Merchant and Van der Stede (2007, pp. 437) explains two categories of financial measurement; market measures and accounting based measures. *Market measures* are measures that reflect changes in stock prices or shareholders returns. The values can be measured precisely, and the values are usually objective, not manipulable by managers whose performances are being evaluated. *Accounting based measures*, which could be defined in either residual terms such as net income after taxes, operating profit, residual income, EVA, or ratio terms, such as return on investment, return on equity, and return on net assets. Advantages of accounting based measures are that these measures could calculate on short-term, on timely basis, and relatively precisely and objectively.

Non-financial measurement systems are performance measurements based on indicators like product quality, yields, and customer satisfaction (Merchant and Van der Stede, 2007, pp. 435).

Hybrids are a combination of financial and non-financial performance measurement systems. The most well-known hybrid system is the balanced scorecard (BSC), developed by Kaplan and Norton (1992). BSC focuses on the financial perspective, customer perspective, internal perspective, and innovation and learning perspective. An organisation weights the different kinds of information and uses the most important information. Other examples of the hybrid performance measurement systems are the performance pyramid, results and determinants matrix, integrated dynamic PM systems, integrated PM framework, integrated PM systems, Cambridge PM process, integrated measurement model, consistent PM systems, and framework for small business PM (Garengo et al., 2005).

The use of one or more measurement mechanisms provide that individuals could be held responsible for the value they create or destroy within organisations. Especially market measures provide a direct indication of the amount of value that has created or destroyed (Merchant and Van der Stede, 2007). Employees, particularly at managerial levels, are, in fact, held accountable for shareholder returns, or at least its most significant component, changes in the value of common stock. Market measures have broad appeal in part because they provide direct indications of the amount of value that has been created or destroyed.

¹ In literature, there exists also a fourth responsibility centre, the investment centre (Watson and Baumler 1975; Merchant and Van der Stede 2007; Reschenthaler and Thompson 1996). However, because in practice the term investment centre is commonly referred as profit centre, investment centres excluded from this study (Merchant and Van der Stede 2007 pp. 284).

2.3.4 Reward and compensation

Reward and compensation focus on motivating and increasing the performance of individuals and groups by achieving congruence between their goals and activities and those of the organisation (Merchant and Van der Stede, 2007). Organisations also provide rewards and compensation for other reasons, namely informing and distinguishing core and non-core parts of tasks.

Economic models of incentives generally assume that higher performance requires greater effort or that it is in some other way associated with productivity. Employees expected utility increases with observed productivity. The rewards can take different forms, like an increase in salary, bonuses, promises in future promotion, and more authority (Baker et al., 1988).

A main distinguish can be made between earnings, fringe benefits and non-financial rewarding. *Earnings* are salary directly related to employee performance (Campbell et al., 1998) and can be based on objective or subjective measures. Objective measures are based on quantitative information, like sales, divisional profits, added value etcetera. Subjective measures are mostly based on qualitative information, like the estimated value of the employee to the organisation. *Fringe benefits* are compensation in addition to direct wages or salaries, such as paid holidays, pension schemes, company car, medical insurance. *Non-financial* rewards include rewards such as promotion, training and increase in autonomy.

Reward and compensation could consist of a base rewards, performance-dependent rewards or a combination of both (Boyd and Salamin, 2001). Base reward is a fixed reward, mostly based on worked hours. *Performance-dependent rewards*, or incentives, provide the impetus for the alignment of employees' natural self-interests with the organisation's objectives. A combination provides the certainty of base rewards and the motivational of performance-dependent rewards.

Profit sharing is a reward system where employees get a part of the organisational profit (Kruse, 1992). Profit sharing could has three advantages; firstly to increasing worker effort, secondly to increasing the skills of the workforce, and finally increasing the flow of information within the organisation (Kruse, 1992). *Group sharing* has the effect that employees may be able to monitor each other more efficiently and easily than the supervisor ('horizontal monitoring'), and as a group can internalise the positive externalities from the individual decision to cooperate in interdependent tasks (Fitzroy and Kraft, 1987).

2.3.5 Administrative controls

Administrative controls direct employee behaviour through the organising of individuals and groups, the monitoring of behaviour and who makes employees accountable to for their behaviour, and process of specifying how tasks or behaviours are to be performed or not performed. Malmi and Brown (2008) consider three groups of administrative controls; organisation design and structure, governance structures within the firm, and the procedures and policies.

Organisation design and structure relates to the level of autonomy that managers have in decision-making (Gordon and Narayanan, 1984). Organisational structure is about the formal specification of different roles for organisational members, to ensure that activities are carried out. Structural arrangements influence the efficiency of work, the motivation of individuals, and information flows (Chenhall, 2003). Lawrence and Lorsch (1967) refer structure as the way in which the organisation is differentiated and integrated. Differentiation is the extent to which sub-unit managers act as quasi-entrepreneurs, while integration is the extent to which sub-units act in ways that are consistent with organisational goals. The mechanisms to achieve differentiation involve decentralising authority, while integration involves rules, operating procedures, committees' etcetera. When the control system does not fit in the organisational structure, it is difficult to achieve organisational objectives effectively.

Governance structures are internal management structures, decision-making arrangements and leadership roles and the relationship between these internal functions and the role of governing bodies (Middlehurst, 2004). An example of governance structures is the rate of centralisation. Centralisation is “the extent to which the locus of authority to make decisions affecting the organisation is confined to the higher levels of the hierarchy” (Child, 1972). A related part of internal governance structure related to management control is the separation of powers. Within an organisation, one person should not fulfil two powerful posts to avoid problems. For listed organisations, governance structures arrange the possibility for shareholders to control organisation’s management board. Governance structures are a monitoring mechanism which controls that every person in the organisation operates for the operations’ best, and not for the individual best. Different personal goals like remuneration, status, and job-security are reasons for individuals to achieve own objectives instead of organisational objectives.

Procedures and policies are written rules within organisations. Codes of conducts, codes of ethics, organisational credos, and statement of mission, vision and management philosophy are examples of procedures and policies (Merchant and Van der Stede, 2007, pp. 85). Written rules provide broad, general statements of organisational values, commitments to stakeholders, and ways in which management would like the organisation to function. Also, written rules help employees understand which behaviour is expected even in the absence of a specific rule or principle.

Organisation design and structure, governance structures and procedures and policies are combined in the term *bureaucracy*. Bureaucracy is, according to Weber (cited by Engel, 1970) “*an administrative structure based on legal domination, highly rational in its organisation, and therefore effective for goal attainment*”. According to McAuley et al. (2007, pp. 86) there are three kinds of bureaucracy; mock bureaucracy, representative bureaucracy and punishment-centred bureaucracy. Mock bureaucracy includes the existing rules and an ‘informal agreement’ between members that nobody will really obey them. Representative bureaucracy includes rules that all members agree and which are important and significant for the successful operation of the organisation. Punishment-centred bureaucracy includes a kind of bureaucracy where one party seeks to impose rules on others and where compliance of the other party is based on either the fear of punishment or the expectation of reward for compliance.

2.4 Management control systems

To control organisations, organisations use management control systems (MCS). Control systems are configurations of multiple formal and informal control mechanisms. MCS are distinguished primarily by the relative emphasis that managers place on the specific combinations of formal and/or informal control mechanisms of which they are comprised (Cardinal et al. 2010). MCS provides the information flow that is intended to be useful to managers in performing their jobs and to assist organisations in developing and maintaining viable patterns of behaviour. Any assessment of the role of such information therefore requires consideration of how managers make use of the information being provided to them. Chenhall (2003) describes MCS as the combination of management accounting system (MAS) and other controls such as personal and clan controls. MAS are the systematic use of a collection of practices such as budgeting or product costing to achieve some goal. Merchant and Van der Stede (2007) have a narrower view of MCS compared with Cardinal et al. (2010) and Chenhall (2003). Merchant and Van der Stede (2003) narrow the definition by separating management control from strategic control and define management control as “dealing with employees’ behaviour”.

“It is people in the organisation who make things happen. Management controls are necessary to guard against the possibilities that people will do something the organisation does not want them to do or fail to do something they should do. . .If all employees could always be relied on to do what is best for the organisation, there would be no need for MCS” (Merchant and Van der Stede, 2007, pp. 8).

Abernethy and Chua (1996) employ the same line of argument as Merchant and van der Stede (2007) in defining an organisational control system. They state MCS as a combination of control mechanisms designed and implemented by management to increase the probability that organisational actors will behave in ways consistent with the objectives of the dominant organisational coalition. Also the definition of Das et al. (1985) focuses on the role of the individuals in the organisation. He defines organisational controls as attempts by the organisation to increase the probability that individuals and groups will behave in ways that lead to the attainment of organisational goals. Das et al. (1985) define organisational control systems as “techniques and processes to achieve goal congruence which may be designed for all levels of behavioural influence; individuals, small groups, formal subunits and the organisation as a whole”.

2.5 Control mechanisms as package

The five categories of control mechanisms of Malmi and Brown (2008) of the previous paragraph focus on different aspects of the organisation and have different aims. The result is that individual control mechanisms could not operate solely. In literature, it is generally accepted that control mechanisms are interdependent and works in a package or configuration. A *package* is a related group of things and they are offered together as a single unit. A *configuration* contains elements or items representing multiple domains. These elements or items are tightly related and mutual reinforcing (Miller, 1987). According to Moores and Yuen (2001) *“an organisational configuration refers to any multi-dimensional configurationally or conceptually distinct characteristics that commonly occur together. Numerous dimensions of external context have been said to cluster into configurations”*.

So, to be effective, the package should exist out of control mechanisms which are complementary to each other and should fit to the organisational goals. Organisations may have numerous control mechanisms, and they all used to some extent to align individual’s activities with organisational goals. An outcome from a case study by lean-manufacturing environment of Kennedy and Widener (2008) is that elements of the MCS package were related in a system of multiple unidirectional and bi-directional relations. The result is that organisations have a large and complex control package that look like a configuration of controls.

There is not one best package of control mechanisms which fits in every organisation. The *contingency approach* is based on the premise that there is no universally appropriate control system which applies equally to all organisations in all circumstances. Thus a contingency theory must identify specific aspects of MCS which are associated with certain defined circumstances and demonstrate an appropriate matching (Otley, 1980). Factors which influence the configuration of control mechanisms are technology, size, organisational structure, (national) culture, strategy and external environment (Chenhall, 2003).

2.6 Organisational size

Size could be measured by different indicators like market share, sales turnover, value of business and number of employees. For this study, number of employees is leading for categorising organisations on size. The reason to use number of employees as measure is that the Finish researchers use it as indicator. Measuring number of employees have several advantages; it is easy to calculate and makes comparison between organisations easily.

Besides the definition of size, also different scales are used. Common terms in the literature are *small*, *medium* and *large* organisations. The terms small and medium are often aggregate to *small- and medium enterprises* (SMEs). Malmi and Sandelin define large organisations as organisations with 250 or more employees. For this study the definition of large organisations of Malmi and Sandelin is used. Like the scale of large organisations, also different definitions for small and medium sized organisations are used in the literature. Different countries use different standards of SMEs. In a recommendation of the European Union in 2003, the European Commission wants to standardise the definitions for the European Union. They suggest to use the term 'small' organisations with organisations till 50 employees and the term 'medium' organisations from 50 till 250 employees. Based on this recommendation, in this study the same standard is used.

This study focuses on the differences in use of MCS in small and large organisations because in every organisation with more than one member there are control mechanisms applied to operate more effective. Based on the contingency theory it is plausible that small organisations use different MCS than large organisations. However, other researchers aggregate small and medium to SMEs. In the used literature below, large organisations are compared with just small organisations, or with small and medium sized organisations.

For this study, not only the size of the whole organisation is relevant, but also sizes of establishment of (Strategic) Business Units ((S)BU). In a standalone firm (single establishment firm) or (S)BU determining organisational size is straightforward, the total number of employees. When an organisation has multiple establishments, the number of the employees of all the establishments is leading. However, when an establishment or (S)BU is autonomous, just that amount of employees is interesting.

2.6.1 Role of size

When organisations are small, control and coordination in the organisation happens through frequent and informal interaction between manager and employee. When organisational size increases, the higher amount of employees requires an increase in amount of interactions to control and coordinate the organisation. To avoid that the increased amount of informal interactions costs too much time and energy, control mechanisms must be adapted to fit organisational size (Davila, 2005). Mostly, a growing size results in a growing dependency on MCS (and especially MAS) (Sandelin, 2008). So, if there are too many interactions, it will lead to coordination and control costs. Efficiency in informal management will rapidly decrease when size increase.

Besides the different required information flow within the organisation, size provides also organisations with the resources to expand into global operations, sometimes by way of mergers, takeovers, licensing or other collaborative arrangements. These developments create additional administrative concerns due to increased levels of complexity within the production processes and with managing interdependencies with global partners.

2.6.1.1 Cultural controls related to size

Organisational culture, the set of values, beliefs and social norms which are congruent with what management perceive to be important for executive tasks, differs in small and large organisations. In

small organisations frequent interactions allow new employees to absorb the culture of the organisation, acquire the knowledge required to execute their job, and communicate their ideas to management (Chenhall, 2003). In large organisations, management do not rely on processes that happens through informal interactions, but they insure that new employees receive proper introduction to the organisation's culture. In large organisations, there are more written documents which guide the culture (Chenhall, 2003). These systems are most salient in human resource management systems that are important levers to manage organisational culture. Thus, size is expected to be associated with cultural controls.

H1^a: In large organisations norms and values are more documented than in small organisations.

H1^b: In large organisations there is a more formal culture than in small organisations.

2.6.1.2 Planning controls related to size

Planning controls, which focus to improve internal coordination, communication and motivation towards overall organisational goals is related with organisational size. When size increases from small to medium and from medium to large, organisations put greater emphasis on strategic planning-related issues and activities. Also, decision-making processes are simpler in SME than in large organisations (Temtime, 2003).

Temtime (2003) mentioned several reasons why large organisations put greater emphasis on strategic planning-related issues and activities. One possible justification is the fact that an increase in size results in an increase in resources, investment and expertise, which will directly affect the planning behaviour of organisations. Small organisations put more emphasis on short-term goals, while medium-sized organisations put also higher emphasis on short-term goals than on long-term goals. But, the emphasis they put on long-term goals is greater than in small organisations. Small organisations also put relatively little emphasis on environmental scanning, mission statement development, the use of quantitative targets such as market share, return on asset, return on investment, and the preparation of marketing plan.

The simpler decision-making process in SMEs compared with large organisations is a result of the characteristics of SMEs. Often, SMEs are characterised as easy to survey and understand, having short lines of communication and flexibility in relation to the implementation of new management philosophies and approaches. However, for SMEs centralised decision-making is a major problem, as decision-making revolves around a few top people in the organisation. On the other hand SMEs have more difficulties to find employees who can do tasks besides their normal work without disrupting on-going processes. Small organisations have a lack of resources, inflexibility and rigidity outlook of the owner, which results in major obstacles for planning (Temtime, 2003).

H2: Large organisations put great emphasis on strategic planning-related issues and activities, while small organisations put less emphasis on strategic planning-related issues and activities.

H3: Small organisations put greater emphasis on short-term goals, while large organisations put less emphasis on short-term goals.

2.6.1.3 Cybernetic controls related to size

Cybernetic controls, which include performance measurement and feeding back information, is related with organisational size. Literature suggests that small sized organisations rely on quantitative

performance measurement systems, while large organisations shows more emphasis on performance measurement (PM)-models.

There are different reasons why SMEs rely more on quantitative performance measurement systems, like return on investment, return on assets and share value, than on PM-models. Barnes et al. (1998) state that PM-models are not applicable for SMEs. *“The small enterprise is different from the big company; you cannot simply look at the needs of SMEs by turning your binoculars upside down and making small what was big”* (Garengo et al., 2005). Very few models are developed for SMEs, and those that do exist are developed only in the last few years. Another justification of the limited use of PM-models in SMEs is the limited resources for data analysis. A study by Antonelli and Parbonetti (2002) (cited by Garengo et al., 2005) explains that SMEs do not perceive the need for balanced models, even if some SMEs do use indicators of customer satisfaction, internal processes and training because data are gathered and processes analysed in an unformalised and imprecise way, which increases the uncertainty of the measurement objectives (Barnes et al., 1998).

According to Barnes et al. (1998), SMEs focus on operational and financial performance. Performance measurement in SMEs is characterised by a poor alignment between strategy and measures. In SMEs, usually planning is absent or limited only to the operation levels where performance is measured and performance measures usually focus on past activities. In other words, the aim is to gather information to support the control activities rather than the forecasting and planning processes. Norton and Kaplan (1992) support this finding of Barnes et al. (1998) and state that small organisations rely more on quantitative performance measurement systems like return on investment, return on assets, and share value.

When size increases, organisations find it more practical and useful to place greater emphasis on a PM-model. Based on the usage of the Balanced Scorecard (BSC), a well-known PM-model, Hogue and James (2000) found that large organisations have a greater use of the BSC. The BSC supports their strategic decision-making and incorporates much broader measures of the performance of organisations.

H4^a: Small organisations put greater emphasis on quantitative performance measurement indicators than large organisations.

H4^b: Large organisations put greater emphasis on performance measurement models than small organisations.

2.6.1.4 Reward and compensation related to size

There are differences between reward and compensation systems in organisations with different sizes. In large organisations, earnings and fringe benefits are higher and there are more promotion opportunities (Storey, 1995, pp. 179).

An important contribution to clarifying the fit between reward and compensation and organisational strategy originated in the work of Balkin and Gomez-Mejia (1987), who found that the effectiveness of pay systems was contingent upon organisations' strategic characteristics such as size, stage in the product life cycle, and technology emphasis.

Focused on size, according to the literature organisational size is related to earnings and fringe benefits. Chenhall (2003) states that large organisations need to motivate employees by rewarding. Another explanation is that large organisations have both a higher ability to pay and a greater need for high

quality employees than small firms. According to the "efficiency wage" theories (Shapiro & Stiglitz, 1985), for example, worker shirking is more a problem in large organisations because it is more difficult to monitor each worker's performance. Kalleberg and Van Buren (1996) did not use the size of the whole organisation as variable, but researched the relation between establishments and reward and compensation. The authors found that a large size of establishment is related to earnings of employees. A larger establishment size results in higher earnings. According Kalleberg and Van Buren (1996) the number of establishments of an organisation has no relation with the high of reward and compensation.

Fringe benefits are related to organisational size instead of establishment size. A suggestion for this phenomenon is that most fringe benefits are organised by the organisation and distribute similarly to all the establishments. Fringe benefits follow an inverse U-shaped pattern; Increasing positively with establishment size, from small up through medium-sized establishments, but then drops off among the largest establishments.

Another explanation why reward and compensation is higher in larger organisations is from Brown and Medoff (1989), who found that the higher quality of labour in large firms explains why the firms pay more (cf. Evans & Leighton, 1989).

For small organisations, different researchers have several suggestions why reward and compensation is lower than in large organisations. Chenhall (2003) explains that motivating employees in small organisations rely on the judgement of the founder. The founder is closer to employees, what increases the possibility to motivate employees on a personal way. Another suggestion why reward and compensation in small organisations is lower comes from Gerhart (1990). He states that small firms have fewer slack resources than large firms, which results in a higher concern of fixed costs. By providing a lower base compensation in exchange for an array of incentive pay programs, smaller organisations can buffer themselves against short-term financial pressures. Small firms may therefore pay lower base salaries than large firms. Another explanation is that small firms have more often growth as primary objective. An adequate short-term cash flow and incentives that encourage a long-term perspective enhance long-term investments to achieve growth. Although use of long-term incentives is consistent with these needs. Short-run (typically annual) bonuses, in contrast, would not be helpful in needs and protecting short-term cash flow or encouraging a long-term orientation (Balkin and Gomez-Meija, 1987).

A non-financial reward and compensation, promotion opportunities, are more available in large establishments (in single-establishment firms). Among multiple-establishment firms, there is no difference in promotion opportunities among establishments or firms of different sizes. Only the fact that these firms have more than one establishment appears to be associated with greater promotion changes. The relationship between establishment size and promotion opportunity remains fairly strong (Kalleberg and Van Buren, 1996)

H5^a: In small organisations incentive pay is relatively higher than in large organisations.

H5^b: In large organisations non-financial reward and compensation is higher than in small organisations.

2.6.1.5 Administrative controls related to size

The use of administrative controls, which include directing employees' behaviour by the organisation, differs in organisations of different sizes. Mostly, large organisations have a more decentralised structure and have middle management with a higher freedom of decision-making. Also, larger organisations are more bureaucratic than smaller organisations.

Within organisations an increase in size results in an increase in complexity, which could result in a lack of direction. The first reason of the increasing complexity is the amount of interactions among participants, which is higher in large organisations (Lawrence & Lorsch, 1967). Second, in large organisations a broader set of information and measurement issues arises (Hoque and James, 2000). Finally, large organisations are often associated with new markets and new products, which make organising more complex (Mintzberg, 1979). Administrative controls help to decrease the complexity by decentralising, structuring and formalising.

Decentralisation increases when organisational size increases. According to Daft (1995) a decentralised organisation stimulates effective communication flows, results in more layers of management, greater number of departments, and an increase in specialisation of skills and functions. By decentralisation, large organisations could decrease the complexity.

The level of autonomy that managers have in decision-making is higher (Gordon and Narayanan, 1984) and budgetary participation refers to the extent to which managers are involved with, and have influence on, the determination of their budgets (Brownell, 1982).

According to Mellow (1982), bureaucracy increases when organisational size increases. This is a result of a growing complexity in a larger organisation, which increases difficulties in monitoring worker performance. A more rigid bureaucracy, with more formal work rules, regimentation and the use of more shifts can decrease the lack of direction. It also provides a more rigid bureaucracy in higher public control.

Size also drives the need to codify organisational processes. In particular, processes within the human resource function benefit from formalisation because they clarify expectations, facilitate coordination, and simplify control through organisational rules and employee roles.

H6: Large organisations are more decentralised than small organisations.

H7: In large organisations the decision-making authority by middle management is higher than in small organisations.

H8: Large organisations are more bureaucratic than small organisations.

3. Methodology

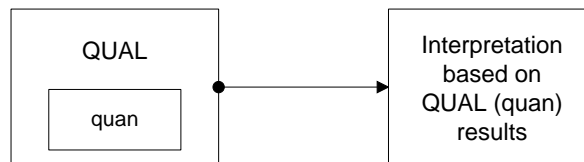
3.1 Introduction

In this chapter the methodology of this study is explained. Based on the reviewed literature of chapter two and the composed hypotheses, this chapter set out the methodology which is used to approve or disprove the stated hypotheses. The methodology includes firstly the used research design. Secondly the method of data collection is described and finally this chapter sets out information about the cooperating organisations en the settings of the interviews.

3.2 Research design

This study follows a deductive approach, which includes that the literature and hypotheses of chapter two are leading for the findings. To achieve the objective of approve or disprove the stated hypotheses, a survey strategy combined with mixed methods research is used. Both, qualitative and quantitative data is gained. More specified, this study is an embedded design of a QUAL → quan design, which means that the used method firstly describes the qualitative data and that the quantitative data support it (Creswell and Plano Clark, 2007, pp. 41).

Figure 2 Embedded research design



Source: Creswell and Plano Clark (2007)

The most valuable characteristics of a mixed method research for this thesis are that it yields textual as well as statistical data and that pre-determined and emerging methods are applicable (Creswell, 2009, pp. 15). This design is applied for this study because of the data collection method. Based on a quantitative questionnaire, data is qualitatively collected by a survey. Because this study includes six respondents, it is very difficult to say something about the use of MCS in large and small organisations just based on the questionnaire. The collection of qualitative data makes it possible to learn why organisations choose for some control system. Collecting qualitative helps answer the ‘why-question’ and helps to find out the reason behind a decision. Also, qualitative data could yield opinions of respondents, which is valuable for this study. This background information is very valuable and useful for this study to give insights in the use of MCS in large and small organisations. The gathered qualitative information is difficult to collect with just a quantitative method, in particular because the sample group exists of six organisations. Just relying on the quantitative data in combination with the low amount of respondents makes it difficult to make an appropriate conclusion concerns the use of MCS in large and small organisations.

However, the quantitative questionnaire yields useful information and is a good support for the collected qualitative data.

3.3 Data collection and sampling

3.3.1 Data collection

The empirical part of this study focuses on collecting data that will contribute to the verification of the hypotheses in the literature review. The aim of the data collection is to gain information about the use of MCS in organisations. The empirical data collection in this study is a primary data collection gained by semi-structured interviews. The guide of the interview is the questionnaire of Malmi and Sandelin (appendix II). The questionnaire consists of eight different sections which covers the five categories of MCS based on the findings of Malmi and Brown (2008).

The main part of the questionnaire consists of questions based on an interval scale (seven-point Likert-scale). Besides, also questions based on a ratio scale consist. The advantage of this method is the comparability of the answers. Interval and ratio scaled answers of different respondents are easy to compare with each other as result of the same scale. The questionnaire of Malmi and Sandelin is taken during the interviews. The researcher, together with the respondent, fills in the questionnaire. The advantage of interviewing the questionnaire is the possibility to obtain background information. This qualitative information could give insights and information about MCS which are not obtainable with just the questionnaire. Because the number of respondents is low, the reason behind a given answer is interesting for this study because it could tell a lot about the effect of size on MCS. With the additional information of the background information the quality of this study is higher.

The data is collected by Dutch organisations of different sizes. Respondents are members of top management of organisations. Those members have the know-how about control systems in organisations and have responsibilities concerns (the way to) achieving goals.

3.3.2 Sampling

For this study, different sample techniques are used to determine the population of large organisations on one hand, and small organisations on the other hand. Medium sized organisations are excluded from the sample. Expected is that excluding medium organisations results in a clearer view of the differences between large and small organisations. Also, including medium sized organisations is time consuming and does not fit in the timetable of this study. The sample of this study exists of three pairs of organisations. Each pair includes a large and small organisation, which both operates in the same industry. This homogeneity excludes the influence of industry on the use of MCS and do not bias the results.

For determining the pairs of respondents, the industry of large organisations are the leading search criteria. The first explanation is that the population of large organisations is smaller than the population of small organisations. Finding a matching large organisation by a small organisation narrows the population of large organisations because it should be filtered on industry. After filtering small organisations on industry, the population of small organisations is still large enough to find suitable respondents. The second explanation is that respondents from large organisations are more difficult to contact and are less willing to cooperate the research than respondents of small organisations. So, for this study it is easier to find a small organisation which matches a large organisation, than finding a large organisation which matches a small organisation.

In this study, organisations are anonymous. This is a result of a request of one of the respondent who prefers to be anonymous. The next parts of this study treated the three pairs in succession, mostly followed by first the large organisation and then the small organisation. The large organisations are characterised with the L (large) followed by the number of the pair. Small organisations are characterised with an S (small) and followed by the number of the pair.

3.3.2.1 Sampling method large organisations

The first step of the sampling method is preparatory work of Malmi and Sandelin. Based on AMADEUS and Orbis, they created a list of about 300 Dutch organisations which are suitable for this research (see Appendix I for detailed sampling method of Malmi and Sandelin). This list of Dutch organisations is the base for the sampling for this study.

The second step is to choose of the list of 300 organisations. The highest difficulty is to get large organisations prepared to cooperate with this study. Top management receives many requests for researches and have to invest time for the interviewer. To increase the change of cooperating, there is searched to personal connections with the organisations or to connections between organisation and University of Twente. Such connections make the willingness of members of top management to cooperate more likely.

The last step is to call and write the organisation with the request to help with this study.

3.3.2.2 Sampling method small organisations

Based on the industry of cooperating large organisations, small organisations are searched which match with the large organisations. For sampling small organisations no database software is used, but searching on the internet. Based on the information on organisational websites the decision of the organisation is applicable for this study is made. The match on industry is based on NACE codes. NACE is the “statistical classification of economic activities in the European Community” and is the subject of legislation at the European Union level, which imposes the use of the classification uniformly within all the Member States (NACE Rev. 2).

3.3.2.3 Sampling results

Pair 1 exists of two organisations operating in NACE division 22, manufacture of rubbers and plastic products. L1 is a listed international organisation and operates in 26 countries. The mother company is located in the Netherlands. Worldwide, the organisation has 6448 employees, whereof about 700 are located in The Netherlands. These Dutch employees are divided over 20 establishments. L1 has NACE 22.2 and manufacturing of plastic products. More detailed, L1 is an organisation which is a supplier of plastic pipe systems for under and above the ground. They provide systems and solutions which are essential for tap water, surface heating and cooling, rain and storm water, water and gas distribution and telecommunications applications.

S1 is an organisation with one establishment and about 5 employees. The organisation operates on an international business to business market and produces for customers of different sizes. The organisation has NACE 22.2, manufacture of plastic products. More detailed, they produce plastic product for water management like plastic basins, gutters and drain boxes. Furthermore the small organisation produces plastic crates for the transport industry.

Pair 2 exists of two organisations operating in NACE division 35, Electricity, gas, steam and air conditioning supply. The large organisation is a non-listed Dutch organisation with about 650 permanent employees and 200 peripheral employees. These employees are divided over three (S)BUs. The organisation operates in NACE group 35.13 distribution of electricity, 35.22, distribution of gaseous fuels through mains, and 43.21 Electrical Installation. The organisation describes itself as ‘underground contractors’ and served the market of technical infrastructure between source and consumer. The main market focus is on infrastructure between utilities, like gas, water, electricity, data transmission and heating and cooling systems.

The small organisation is an organisation with about 60 employees and one establishment, located in The Netherlands. The organisation operates in the NACE groups 35.13, distribution of

electricity and NACE 43.21 Electrical installation. More detailed, S2 is engaged in the construction and installation of wiring for data networks and telecommunication.

Pair 3 exists of two organisations with a matching activity in NACE division 43 specialised construction activities. The large organisation is a listed organisation which operates in 25 countries worldwide. The mother company is located in The Netherlands. Worldwide, they have about 25.000 employees (2010) and in The Netherlands about 7000 employees divided over 4 BU and 26 establishments. The large organisation operates in NACE 43.21, installation of electrical wiring and fittings. Furthermore, the organisation has activities in NACE 71.12, Engineering activities and related technical consultancy. The large organisation is an organisation which serves a total solution that lead to better business processes and higher revenue for clients and they offer technological solutions in the fields of energy, environment, water and mobility.

The small organisation is an organisation which operates in The Netherlands. The organisation has one establishment and has about 40 employees. The small organisation operates in NACE 43.21 installation of electrical wiring and fittings. Furthermore, the organisation operates in NACE 42.22 Construction of utility projects for electricity and telecommunications, and 61.10, telecommunications. More specific, S3 operates in the technical installation and focuses on three divisions, electricity, engineering and communication. S3 has about 40 employees and are business to business focused.

3.3.3 Interviews

The first respondent for this study is a Manager Consolidation & Reporting of the SBU of the large organisation of pair 1. The location of the interview was the respondent's office and duration of the interview was about two hours. In these two hours, the questionnaire was the guidebook and the respondent filled in the questionnaire simultaneously with the interview. The respondent did not consent to record the interview, so notes were taken. The respondent consented that the questionnaire could use for multiple purposes, namely this study and the international study. One condition was that it is anonymous.

In the two hours, the respondent filled in the questionnaire section by section. After each section, background information was taken to clarify given answers. When questions of the questionnaire were not clear, the respondent asked. During the interview, two sections kept unanswered. The respondent promised to consult with colleagues and send the specific blocks later on.

The result of this interview is a filled in questionnaire and little background information. However, the method to do the interview and the questionnaire simultaneously is time consuming and reduced the time to gain background information.

The second respondents of this study were the General and Financial Manager of the large organisation of pair 2. Location of the interview is the office of one of the managers and the interview was with both managers together. Duration of the interview is about one hour and a half. In this time, open questions about the main subjects of the questionnaire were the guidebook for a semi-structured interview. The interview was recorded and afterwards used for this study. The questionnaire was also afterwards completed by the Financial Manager and sent. Because this organisation is not on the sample list of the Finish researchers, approval to use the questionnaire for multiple studies was not required.

The method to separate the interview and the questionnaire yields more background information and produces more useable data compared with the first interview.

The third respondent of this study was a Controller of the Strategic Business Unit Industrial Services of the large organisation of pair 3. The respondent was interviewed in a closed conference room and took

about one hour. The respondent consented to record the interview. Open questions were the guideline for this semi-structured interview and the respondent sent a completed questionnaire afterwards.

This method to separate interview and questionnaire yields also good information about the use of management control systems in the organisation.

The fourth respondent of this study was the director of a small organisation which fits in pair 3. The respondent was interviewed in his office and took about 50 minutes. The respondent consented to record the interview. Open questions were the guideline for this semi-structured interview and the respondent sent a completed questionnaire afterwards.

The reason for this way of data-collection was the result of good experiences with the interviews of the second and third interview for this study.

The fifth respondent of this study was the general director of a small organisation which fits in pair 1. The respondent was interviewed in a meeting room and took about 105 minutes. Included was a little tour through the plant of about ten minutes. The respondent consented to record the interview with the note to delete the recordings when research is finished. Open questions were the guideline for this semi-structured interview and the respondent sent a completed questionnaire afterwards.

The reason for this way of data-collection was the result of good experiences of the interviews of the second and third interview for this study.

The sixth and last respondent for this study was the controller of a small organisation which fits in pair 2. The respondent was interviewed in his office and the interview took about 60 minutes. The respondent gave permission to record the interview. Open questions were the guideline for this semi-structured interview and the respondent sent the questionnaire afterwards. The respondent states that some questions of the questionnaire were difficult to understand or to translate to the organisation.

4. Findings

4.1 Introduction

In this chapter, the findings of the interviews are reviewed. Based on eight hypotheses, the use of MCS in the large and small organisations is explored. The exploration of every hypothesis starts by the exposition of the qualitative data, the data from the interviews. When relevant the qualitative data is followed by quantitative data of the questionnaire. After each pair a conclusion is described.

4.2 Review hypotheses

H1^a: In large organisations norms and values are more documented than in small organisations.

Based on pair 1, there are no significant differences on the extent norms and values are documented. In the large as well as the small organisation written rules, procedures and codes of conducts are documented.

In the large organisation value statements, credos, and statements of purposes of the SBU are strictly codified in formal documents. Also, the organisation takes care all employees know these documents. Organisational direction, like vision statement and statement of strategic intent, is also on high extent codified. An example of the importance of values in the organisation is a list with important values on the wall by the coffee machine, which reminds subordinates to these values. To motivate subordinates in sharing responsibility, formal statements of values are also used.

Besides values, organisational purposes are formalised also. The large organisation has a formalised mission and vision, which is known by everybody in the organisation. The large organisation believes formal documentation helps guiding and directing subordinates. Furthermore, L1 believes that documenting norms and values helps by motivating and involving employees. Overall, organisation culture and values are important in guiding and directing subordinates' behaviour.

In the small organisation there are written rules, procedures and a code of conduct available and signed for acceptance by every employee. In the 22 years the general manager works in the organisation, handling the code of conduct is never been required. Values and purposes of the SBU are on average extent codified in formal documents, also like the direction of the SBU wants to go. The questionnaire makes also clear that motivating and involvement is not a goal of documenting norms and values.

Concluded on pair 1, the hypothesis that *in large organisation norms and values are more documented than in small organisations* is rejected. There are some small differences between the extent of documentation culture. In both organisations norms and values are documented, but in the large organisation it is on a higher extent than in the small organisation. However, this difference on extent is just small so the hypothesis is rejected. The difference in the use of the documented norms and values is treated by hypothesis 1b.

Based on pair 2, there are significant differences on the extent norms and values are documented. In the large organisation norms and values are on average extent written in formal documents. Top management wants employees to use the documentation as little as possible. Top management states exemplary behaviour is more important than documented rules, in order to create a decent culture. He also wants that employees' behaviour is not based on procedures and rules, but based on intrinsic behaviour. Overall, organisation culture and values are important in guiding and directing subordinates'

behaviour. The extent of documentation and codified values and purposes is average. Goals like motivating and involving is on average extent applicable for the large organisation.

In the small organisation some norms and values are documented, but not much. Some rules of engagement and values are documented, but management knows that many employees do not know these rules. According to the respondent this industry attracts a certain kind of employees who are raw and are theoretically bad. They forget rules easily which makes it difficult to maintain rules. Furthermore, when employees are good in the field, conflicting with employees because they forgot the rules is an unnecessary distraction. Besides rules and procedures, a mission and vision is not documented. Management and directors have a certain mission and vision in mind and have the same thoughts about the future, but it is not documented.

Concluded on pair 2, the hypothesis that *in large organisations norms and values are more documented than in small organisations* is accepted. The reason that the hypothesis is accepted is that the documentation in the large organisation is more extensive than in the small organisation. Also, the large organisation does have a documented mission and vision, while the small organisation has not.

Based on pair 3, there are some differences in the use of documented norms and values between the large and small organisation. In the large organisation norms and values are on high extent documented. Employees could win 'value-awards' as reward for compliance organisation values, which is a characteristic how important values are for L3. Also, award winning employees are a role-model for other employees. *Committing subordinates to long term SBU objectives* and *codifying the direction of the SBU in formal documents* are on high extent an aim of formal documents. Other formalised documents are provided on average extent to make clear the mission and vision and motivate subordinates. Overall, organisation norms and values are average important in guiding and directing subordinates' behaviour.

In the small organisation, rules, procedures and codes of conducts are documented. Every employee could find these documents on intranet. The mission and vision are also available on the website. Also organisation values and information about safety, handbooks, and rules of engagement etcetera are published on the intranet. The respondent states that everybody in the organisation could find all the information they need. Concerns safety, documenting is also an insurance when there are problems. When there is an accident and there is a dispute about responsibility, the director can show that the employee could find all the safety information he needed.

Concluded on pair 3 the hypothesis that *in large organisations norms and values are more documented than in small organisations* is rejected. There are no notable differences between small and large organisations concerns documentation of culture. Both organisations documented culture on high extent and uses it for guiding and directing employees.

H1^b: In large organisations there is a more formal culture than in small organisations

Based on pair 1, the hypothesis that *in large organisations is a more formal culture than in small organisations* is accepted. In this pair, the culture of the large organisation is characterised as a strong culture. Values are important and every employee should know the value purposes and the direction of organisation. Furthermore, L1 has also an open culture. The respondent described the situation that an employee has stolen products from the organisation. Based on the strong norms and values the employee was discharged. Based on the open culture, the situation was not covered-up for all the other employees. Within the organisation everybody could know the reason of the departure of the

employee. According to the respondent, this situation characterised the culture. The open culture is also characterised by symbols; doors are open to provide approachability.

In the small organisation, culture and ethical behaviour is important for guiding and directing the organisation. The culture is informal and open. There is no visible hierarchy internal in the organisation. According to the general director: *"People have authority based on their knowledge and exposure. Nobody insisted upon he is the manager. It is more likely that employees dismiss the director because he walks in each other way"*. Also, described by hypothesis 1a, the informal culture is characterised by the slight use of documented culture. Despite of everybody in the organisation knows and accepted the written rules, the documentation is never used. According to the general manager; *"documented rules requires someone who controls compliance"*. Also, the general manager stated that *"documented rules require sanctions when the rules are not compliance"*. The general manager does not want to control and punish. So, there is a documented code of conduct, but in practice it is never used. In the 22 years the general manager works in the organisation, handling the code of conduct is never been required. For customers, the small organisation is also informal and open. This will be characterised by the way the organisation talks. It is an open communication and information like cost prices and margins is no secret.

Concluded on pair 1, the hypothesis that *in large organisation there is a more formal culture than in the small organisation* is accepted. The difference between the large and small organisation is that in the large organisation the culture is more formalised than in the small organisation. This is characterised by the extent formal rules will be followed. In the small organisation the culture is more informal, characterised by the non-visible hierarchy and that the organisation does not rely on the documented culture.

In the large organisation of pair 2, culture is important. The organisation believes in clan culture. This is characterised by top management, who states that culture is a result of what employees do. The finding of hypothesis 1a, that exemplary behaviour is more important than documented rules, is also an example of the strong clan control. The culture that top management believes is best for the organisation is that staff and back office functions are serviceable for the employees who work directly for the client. Those employees make money for the organisation and are the face of the organisation. On short-term, top management wants to strengthen the clan control through changing rules-based control to a culture that employees searching for solutions.

Besides clan culture, symbols are important. This is characterised by the open culture and that there is the possibility that everyone can contact top management with questions or suggestions, also beyond official consultation moments. However, this are not the moments that people talk a lot about money. Top management does not want that. They want to create a culture where money is not the most important issue.

In the small organisation there is a reasonable formal culture. Clan culture is low in this organisation. Culture is reasonable formalised. This is characterised by the agreement that when project leaders need a staff member, they could call and consult or make an appointment. Organisation structure and hierarchy is important for the organisation. Employees contact firstly one level above instead of staff members. A symbol which characterises this formal culture is the different offices for staff members, production leaders and foremen. Normally the doors between the offices are closed and it is not used that at any time project leaders could walk into offices of staff members.

Concluded on pair 2, the hypothesis that *in large organisations there is a more formal culture than in small organisations* is rejected. There are differences between formality of culture in large and small

organisations. In the large organisation top management relies on an informal and open culture whereby approachability and openness is important. In the small organisation, the approachability is low and the formal organisation structure is important.

According to the respondent of the large organisation of pair 3, the organisation has an *formal* and *informal culture*. The respondent states that the informal side of the culture are symbols; the manners on the floor, which are characterised by informal forms of addresses and a high approachability. On the other side, the formal culture, are characterised by the strong norms and values in the organisation. In L3 exists three themes concerns culture: *together*, *involvement* and *continual improvement*. These themes are a guideline for the employees and also used by the evaluation of employees. According to the respondent, as result of the crisis service to the customer is more and more important in this industry.

According to the respondent of the small organisation of pair 3, the organisation has a very open and informal culture. The respondent states that the open culture is characterised by the business information the employees gets. Every end of the year, the director presents the results of last year in detail. He also tells the net profit and what happens with the profit. Furthermore the results of last year will reviewed with the results of last three years to show a trend and the expectations of next year will be told. The mission and vision of S3 is clear and documented on the website and intranet. However, expected is that not every employee knows the mission and vision. According to the director it is important that every employee knows the mission and vision, but he realises that it is very difficult to implement it with employees low in the hierarchy.

Concluded on this pair 3, the extent of formalisation is higher in the large organisation compared with the small organisation. The hypothesis that *in large organisation culture is more formalised than in small organisations* is accepted. The hypothesis is accepted because in both organisations cultures are informal and open and characterised by informal forms of address and high approachability. However, the large organisation is beside informal also formal and strong norms and values are important for guiding and directing employees.

H2. Large organisations put great emphasis on strategic planning-related issues and activities, while small organisations put less emphasis on strategic planning-related issues and activities.

Based on pair 1, there are similarities and differences concerning the strategic planning. Both organisations have a strategic planning period of five years. The respondent of the large organisation states that the period of five year is related with the period of the Management Board, who is also appointed for five years. In L1 strategic plans are determined by top management. Objectives are *quantitative* as well as *qualitative* set and are documented. The objectives will be declined by SBU management together with corporate management. The ends will be declined just by top management of the SBU. The means are declined by subordinates and controlled by SBU management.

The small organisation, which has also a strategic planning period of five years, does not have a specified reason to choose a period of five years. However, the respondent states that the purchase of new machinery is important for the continuity of the organisation. The process between thinking about a new machine and using it takes about three years. Partly, the strategic planning period and the strategic plans are influenced by the turnaround time of the purchase of machinery. Furthermore, the respondent states that a long term planning is difficult to make. According to the respondent water management is a relatively new industry which means that many changes could be expected for the coming year. Because the small organisation has to react on these changes, predicting future is difficult.

Furthermore, in this industry it is unusual to get long-term contracts with customers and when you have one, it is a disadvantage because of the pricing. While in the large organisation the strategic plans are strictly documented, in the small organisation it is just an appendix of the annual report. Because the shareholders are families and the small organisation does not use bank credits, it is not necessary to document an extensive strategic plan. The general manager stated also that *“everything you trust to the paper, you also write for competitors”*.

In the small organisation the strategic plans contain information about objectives, and ends and means, which are all declined by Top management.

Concluded on pair 1, the hypothesis that *large organisations put great emphasis on strategic planning-related issues and activities, while small organisations put less emphasis on strategic planning-related issues and activities* is accepted. Overall, for the large organisation is strategic planning important for guiding and directing subordinates while in the small organisation it is not. The importance of the strategic plans in L1 is characterised by the extent of specification of the strategic plans. Furthermore, in L1 organisational goals, ways of creating competitive advantage and determining programmes and resources are more important and specified than in the small organisation.

Based on pair 2, there are similarities and differences concerning the strategic planning. In the large organisation the strategic planning period is a rolling forecast of three years, and every year the strategic plans will be evaluated and adjusted for the following three years. The motivation of a strategic planning period of maximum three year is the old-fashioned client-contractor market, where contractors are depended of clients and the outsourcing of work of these clients. Looking ahead more than three years could result in a misfit with the market. Customers could expect something different than the organisation wants to offer. Also, when the organisation wants to move vertical in the distribution chain, clients must be prepared to outsource work. The large organisation evaluates and adjusts the strategic plan more than once a year.

In the large organisation, strategic plans are determined by the management team, existing of top management, BU management and manager HRM. All these people have know-how about management and engineering. The reason that not just top management decides about the strategic planning is because BU management are responsible for achieving the targets. When BU management has a voice in determining the targets, they are more motivated to achieve it. Another reason to involve the responsible managers in the decision-making process is that normally, the responsible manager set higher targets than top management expects. The aim of strategic planning is to make clear the organisational objectives for subordinates. L2 documents these objectives in a strategic plan. This strategic plan includes the market and organisational perspective. Top management wants to make clear which market the organisation will serve with which product-market-combination (PMC). When making this strategic plan, L2 also state in mind the competences of the organisation. The plan of organisational perspective includes a clear mission statement. This provides a better understanding of the organisational goals by subordinates.

In the small organisation, according the interview there is no strategic planning process. The reason there is no strategic planning period is that it is not required for the market. The organisation operates on a client-contractor market where clients offer new projects to the small organisation. Clients know their competences and qualities and the organisation has a certain price per unit and accepts or rejects the offered project. The respondent expects to have enough projects for the next five years, so according to him a strategic plan is not required. According to the questionnaire, S2 has a strategic planning period of two years.

In the small organisation, strategic plans are determined by top management and are not very important for guiding and directing subordinates. The strategic goals are mainly qualitative described and are accurate. On yearly bases, the plans will be reviewed and revised.

Concluded on pair 2, the hypothesis that *large organisations put more emphasis on strategic planning than small organisations* is accepted. Between the two organisations is a big difference concerns strategic planning. In the large organisation is a strategic planning period of three years with a rolling forecast, while the small organisation does not look on the long term ahead. The small organisation relies on the continuity of projects, while the large organisation wants to give employees a clear view of the future plans.

Based on pair 3, there are similarities and differences concerns the strategic planning. The large organisation has a strategic planning period of three years. When L3 determines the budgets for one year ahead, L3 also determines globally the direction for year two and year three in aggregate. After year one the plans for year two, which are already directed, will be (possibly) revised and specified for the following year. The reason of L3 to use a strategic planning period of three years is that prediction the future is difficult in the industry of L3. Planning more than three years ahead is not realistic. On monthly bases the strategic plans are evaluated. L3 measures results mainly on financial data like order intake, profit and lost, and sales. When these indicators are positive, L3 revises the short-term forecasts. In other cases, the strategic plans will not be revised.

Setting objectives and ways of creating competitive advantages are important parts of the strategic planning for L3. The strategic objectives are on high extent based on qualitative and quantitative data. Overall, the strategic planning is on high extent documented. The means to achieve the objectives are high extent documented. Overall, the strategic planning of L3 is on average extent important in guiding and directing subordinates' behaviour.

In the large organisation the strategic plans are determined by top management and specified by the budget unit controller and the general manager. Top management needs confirmation for the strategic plans of the board of directions. The board of direction is also responsible for the strategic planning. In the small organisation the strategic plans are also formalised by top management only and is on yearly base evaluated. However, just rarely revised (three years or more).

Overall, strategic planning is important for the large organisation. They stated that *"the strategic planning is for the long term, but you have to learn from that what happens on short-term"*. So, the strategic planning is not always leading. The strategic planning includes also a risk analysis. Top management knows which plans and activities are risky and which not. For these risky activities, a strategic reserve is included in the budgets.

In the small organisation there is no structural strategic-planning period. The organisation looks incidentally more than one year ahead for strategic changes or business opportunities, but they do not look on structured based more than one year ahead. An example of the strategic planning is of 2008, where the organisation decided to change the focus of the organisation. Since 2008, S3 focuses just on projects in the retail market, utility market, and communication market. By this strategic decision, S3 pushed off markets like housing corporations, industries and individuals.

Another example of strategic planning is the focus on social responsibility. Nowadays, the market for solar systems is rising. This market is promoted by media and government and S3 gets good projects in this market. However, the director expects that about a couple of years, solar panels are available in the retail market and that the needs of customers for specialised organisations will decrease. About a few years, the focus will shift from solar systems to other durable systems, like heating systems.

In the small organisation, strategic plans are determined just by top management. On yearly bases the strategic plans are reviewed and once in the three years revised. The strategic plans are qualitative set, and are detailed, accurate and on high extent documented. The most important information of the strategic plans are *the organisational objectives*.

Concluded on pair 3, the hypothesis *that large organisations put greater emphasis on strategic planning than small organisations* is rejected. There are differences in the emphasis on strategic planning-related issues and activities. Overall, strategic planning is in the large organisation on average extent important while in the small organisation strategic planning is on high extent important. Based on the information of pair 3, it is unclear which organisation has more emphasis with strategic planning. Based on the overall score of the importance of strategic planning in guiding and directing employees and the extent of detail the strategic goals include, the small organisation has more emphasis with strategic planning. However, the large organisation is more formalised and structured engaged in strategic planning and revises the strategic plans more often.

H3: Small organisations put greater emphasis on short-term goals, while large organisations put less emphasis on short-term goals.

Based on pair 1, there are differences and similarities concerning the emphasis on short-term goals. In the large organisation short-term plans are important for guiding and directing subordinates. L1 uses result-oriented action plans which are mainly composed by subordinates. Important areas of action are defined by top management and subordinates are required to develop specific action plans. Short-term targets are autonomously set by subordinates. Strict and specific budgets, which are set by top management, are the boundaries for subordinates concerning the autonomy of decision-making freedom. Also, top management has to confirm the prepared short-term plans of subordinates. In L1 the most important information of the short-term plans are the *financial resources requirements* and *human-resource requirements* (table 1). A note during the interview is that the extent of importance of information differs between different departments. Targets and action plans are quarterly updated. This period is based on the seasonal cycle, which is an important factor for the organisation. The weather could increase and decrease the periods when the construction market is running. Besides the quarterly update of the targets, they are also yearly updated, when a full seasonal cycle completed. The resource commitment within L1 is twice per year.

In the small organisation, for guiding and directing subordinates short-term planning is less important than in the large organisation. In the small organisation short-term planning is characterised by simplicity. There is a spread sheet with amount of machines and an overview which machine produces which amount of which product. The machine is leading for the speed of production. In the organisation there is not one formal consultation moment, but consultation happen ad-hoc. Mostly, the five members of the management team walk in changing formation through the production line and every member takes notes concerning the personal field of interest. At the same time the members will discuss about short-term planning. Other times, the members have a formal meeting in a conference room in the building. The decisions which are made will be overviewed in a spread sheet for the employees. More detailed, in the small organisation short-term planning is based on three steps. The first step is calculating an overview of direct and indirect costs related to the current planning. The second step includes that the management team looks to the realised and expected turnover. The third and last step is the combination of the two points. The management team looks to the difference in costs and income and decide to continue the production on the same way or to fasten it up. This process happens on weekly and monthly bases.

In S1, according to the questionnaire, short-term plans include no important information. Well, there is information which is very unimportant, like; *Forming cross-functional projects and project teams, financial resource requirements, and IT-resource requirements* (table 1).

Concluded on the information of pair 1, the hypothesis that *small organisations put greater emphasis on short-term goals, while large organisations put less emphasis on short-term goals*, is rejected. The hypothesis is rejected because the large organisation has more emphasis with short-term planning than the small organisation. In the large organisation subordinates have a decent role in composing the short-term plans, while in the small organisation top management makes all plans. Another difference is the information the short-term plans include. In the large organisation the focus is on financial required resources and human required resources, while in the small organisation no suggested kind of information is highly important for short-term planning. Overall, the large organisation relies more on short-term planning for guiding and directing subordinates than the small organisation.

Based on pair 2, there are differences and similarities concerning the emphasis on short-term goals. In the large organisation short-term planning is important for guiding and directing subordinates. Action plans are made by subordinates in consultation with top management. Action plans are useful in the organisation, but not very important. The different SBU managers make action plans for the establishment they are responsible for. Top management sets just the targets and what they need (for instance: information about working hours), SBU managers decide how they will organise it. The action plans which subordinates write should include specific targets and performance measurement indicators. These performance measurement indicators are not extended, but three or four indicators are enough.

In the small organisation short-term plans are made by the directors and staff members. The directors accept or reject offered projects and staff members assign project teams to projects. On a memo-board, which is approachable for every employee, the current projects and names of the executive employees are placed. After a project, which could last till nine months, the names will be replaced to another project. On a daily basis, the project leader has a good overview of the progress of the project. When necessary, the project leader guides and directs the executive employees and reports to staff members.

Concluded on the information of pair 2, the hypothesis that *small organisations put greater emphasis on short-term goals, while large organisations put less emphasis on short-term goals* is rejected. The hypothesis is rejected because the information of the organisations does not make clear that the small organisation puts more emphasis on short-term planning. The main difference between the two organisations is that in the small organisation short-term planning is the only planning, while the large organisation also has a strategic planning. However, a difference in extent of emphasis is not clear. Furthermore, the process of short-term planning has several similarities. In both organisations the top management/directors makes the decision about accepting or rejecting projects. In both organisations, they are supported by subordinates. In the large organisation top management is supported by line managers, while in the small organisation the directors are supported by staff members.

Based on pair 3, there are differences and similarities concerning the emphasis on short-term goals. In the large organisation, top management together with management of local business units translates strategic planning into action plans. Top management determines the budgets till local business unit level. The local business unit operates as profit centres, which gives them the decision-making authority to decide at which way subordinates short-term action plans have. Like the strategic planning, action plans are monthly reviewed and revised. This monthly evaluation is with top management and

management of the business units. At this meeting, top management and local management looks also to 'local entrepreneurship' which includes the local activities and market changes of the local business unit. The action plans are reasonable detailed. An example is that they talk about orders of next week. Important information which is included in the short-term plans of the large organisations are *progress schedule of activities, projects, and forming cross-functional projects and project teams* (table 1).

The small organisation has three kinds of short-term planning; a yearly, monthly, and weekly based planning. On yearly base, the director plans one year ahead and focuses on expected projects and billable hours. On this way, the director knows what he could expect for the next year. This planning will only be revised when the organisation gets a client with a big project (larger than 240 hours). On monthly base, the director does the same, but more detailed. Performance indicators like turnover, billable hours and purchase of materials are planned. Combined with the results of the administration department, the director set challengeable targets. The weekly based planning is the responsibility of the division heads. The division heads make the schedules for the employees and different projects. Once a week, this planning will be revised and updated with the latest circumstances. The weekly based planning is not the same for the whole organisation. The division Communication makes use of pda's for their planning. When employees work on projects by clients, they have a clocking system on the pda. When employees are faster or delayed with a scheduled project, back office of S3 administers could directly reschedule projects from employee A to employee B and vice versa.

In the short-term plans information about *Progress schedule of activities, projects, programs, Coordinating activities within and/or across the units, Forming cross-functional projects and project teams, Human resource requirements, and Skills and competency requirements* are important (table 1).

Concluded on pair 3, the hypothesis that *small organisations put greater emphasis on short-term goals, while large organisations put less emphasis on short-term goals* is accepted. There are differences in approach of short-term planning between large and small organisations. Overall, short-term planning is in the small organisation more important than in the large organisation. In both organisations short-term planning are set up by top management together with employees. These plans are controlled in the large organisation by meetings. In the small organisation, the short-term plans are controlled by quantitative data, especially results and billable hours.

Table 1 information short-term plans

	Pair 1		Pair 2		Pair 3	
	L1	S1	L2	S2	L3	S3
Progress schedule of activities, projects, programs	5	3	7	1	6	7
Coordinating activities within and/or across the units	3	3	7	5	5	7
Forming cross-functional projects and project teams	3	1	7	1	7	6
Financial resource requirements	6	1	7	1	4	5
Human resource requirements	7	4	7	1	5	6
Skills and competency requirements	3	4	7	1	5	6
IT-resource requirements	4	2	7	4	3	5

Table 1, section B4 of the questionnaire (appendix II). The table gives an overview of components which could include in the short-term plans and the importance of including information about the components in the short-term plans. Answers are based on a seven-point Likert-scale, where 1 means including information about the component is totally not important for subordinates, and 7 means including information about the component is very important for subordinates.

H4^a: Small organisations put greater emphasis on quantitative performance measurement indicators than large organisations.

Based on pair 1, there are differences and similarities concerning the performance measurement in large and small organisations. The large organisation uses a *budgetary system* as well as a *performance measurement system*. The budgetary system is mainly used for controlling and guiding subordinates' behaviour. Controlling subordinates' behaviour is characterised by the budgeting at the end of a period. Subordinates performance will be controlled based on *financial measures*, like pre-determined budgets. For guiding subordinates' behaviour some budgetary systems will be used, but not much. Budgets are more supporting than guiding. The large organisation makes on a high extent used for *providing a recurring and frequent agenda for top management activities, continual critical reviewing of underlying data, assumptions and action plans*, and budgets also *encourage and facilitate dialogue and information sharing* with subordinates (table 2). For the performance measurement system, just the *continual critical reviewing of underlying data, assumptions and action plans* are on high extent used (table 3).

Concerning the use of *performance measurement systems* for guiding and controlling subordinates' behaviour. Just like the budget systems, performance measurement systems are mainly important for controlling at the end of a period, because subordinates are relatively free to make their own agendas. At the end of the period financial measures like turnover and net result will be evaluated, just like non-financial measures like service, absenteeism and personal development. Performance measurement of subordinates is on high extent based on *financial measures*, and *aggregate summary measures* (which is according to the respondent almost the same as the financial measures) (table 4). These indicators are on high extent related with pre-set numbers and average based on internal benchmarks and past performance. The aim of performance evaluation is on high extent providing feedback for learning and continuous improvement and direct subordinates' attention to important issues, determine subordinate compensation compared with the other two, and determining compensation is also an important purpose. The *performance measurement system* of L1 is lowly focused on strategic uncertainties.

In the small organisation the most important performance indicators are *failure rate of the machines* and *personal efforts*. According to the respondent, measuring on financial performance measures is unrealistic, because the machinery provides the production speed and not the employee. However, keeping the machine running is a performance measurement variable. Besides the variables machine failure rate and personal efforts, the questionnaire complements the performance indicators with health and organisational profit.

The small organisation makes also use of *budgetary systems* and *performance measurement systems*. However, the budgetary system is not important for the organisation. Concerning performance measurement of the small organisation, *focus attention on strategic uncertainties* is the most important variable for performance measurement systems. The other suggested possibilities of the questionnaire are on average extent important for performance measurement in S1.

For the small organisation, performance measurement of subordinates is on low extent based on *financial measures*, and *achievements in leadership behaviour*. There is no performance criterion which is on high extent used (table 4). In S1, these criteria are most related with *pre-set numbers* and *past performance*. Both are on highly extent important with respectively a score of 6 and 7. *External benchmarks* are lowly important for performance measurement. Overall, performance measurement and evaluation in S1 is highly important for guiding and directing subordinates' behaviour.

Concluded, the large organisation rely more on quantitative performance measurement than small organisations. The hypothesis that *small organisations put greater emphasis on quantitative performance measurement systems than large organisations* is rejected. Based on pair 1, there are differences between the large and small organisation concerning performance measurement. In the large organisation financial measures and aggregate summarised measures are on high extent important for performance evaluation and are budgets important for setting and controlling targets, while the small organisation focuses on failure rate of the machinery and personal effort. Similarities between the two organisations are the extent of use of non-financial measures for performance evaluation as well as actions and activities taken.

The large organisation of pair 2 relies mostly on quantitative performance indicators. The key performance indicators (KPI's) of the organisation are production, productivity, result of project, working capital, and EBIT. Production includes product development and added value, EBIT includes the EBIT, indirect costs, costs employees and costs cars. These KPI's are on weekly base available and will be on monthly bases discussed with top management and SBU management. The measurement of these indicators is mainly based on *absolute pre-set numbers*.

L2 makes use of a budget system and performance system to measure organisational performances. The budget system is mainly focused on *identifying critical performance variables, setting targets for critical performance variables, monitoring progress towards and to correct deviations from pre-set performance targets, and focussing attention on strategic uncertainties* (table 2). The performance system aims mainly on *focussing attention on strategic uncertainties* (table 3).

In the small organisation the most important KPI is the output. Overall performance will be measured on project team bases. The whole team is responsible for progress and failure instead of one person. The measure unit for the organisation are for 90 per cent output, namely; distance constructed. The organisation gets an order to dig from point A to B and install wiring. Each meter has a certain value and the ratio time/accomplished distance is an indicator of the progress of the project. The other 10 per cent of the performance measurement is based on the ground conditions. When these conditions are bad, measuring in distance is not reliable.

Besides measuring on constructing distance, quality of the work, like placing wiring at the right deep, paving, cleaning are also judged. The foreman and client will control this before finalising the project.

Concluded on the information of pair 2, the hypothesis that *small organisations put greater emphasis on quantitative performance measurement systems than large organisations* is rejected. Both organisations put great emphasis on the use of quantitative KPI's for performance measurement. Comparing the specific KPI's, the large organisation does use much more indicators than the small organisation. Also, the large organisation uses quantitative financial results as performance indicators, while the small organisation uses the output (distance) as indicator and calculates afterward the financial results.

Based on pair 3, the large organisation uses a budget system as well as a performance measurement system. The budget system includes a detailed budget on BU level. Monthly, results of the BU are evaluated and compared with the budget. Also short-term orders (per example: an order of next week) of the BU will be evaluated and compared with the budgets. The performance measurement system on individual level is based on financial and non-financial performance indicators. The financial indicators are indicators like order-intake, price margins, pro-activity, working capital, and indirect costs. Non-financial indicators are performance of subordinates related with the values of L3.

For the large organisation, budget and performance systems are important for guiding and directing subordinates. However, the performance measurement system has to move focus from only qualitative indicators to a combination of quantitative and qualitative performance measurement indicators. According to table 2, budgetary systems are on high extent used for *identifying critical performance variables, target setting for critical performance variables, and monitoring progress towards and to correct deviations from pre-set performance targets*. Performance systems are mainly used for *identifying critical performance variables, target setting for critical performance variables, and providing a recurring and frequent agenda for top management* is important (table 3). Performance measurement of subordinates is on highly extent based on *financial measures and aggregate summarised measures* (table 4). These criteria are most related with pre-set numbers. In L3, top management evaluates subordinates performance lowly related with internal and external benchmarks. The aim of performance evaluation is on high extent to determine subordinate compensation.

Overall, performance measurement and evaluation in the large organisation of pair 2 is average important for guiding and directing subordinates' behaviour.

The small organisation of pair 3 makes no use of budget and performance systems. The organisation has great emphasis on quantitative measures to performance measurement. Because the director administers expectations of projects (a pre-calculation) and billable hours and the administration department administer the realised results (post-calculation), the director knows what the performance of the executive employee is. Because the expected performance is based on a pre and post-calculation, just quantitative data is used for performance measurement. Main indicators are billable hours and purchased materials. Comparing the expected performance with the realised performance gives an indication of the performance. When realised performance is less than the expected performance, explanation of executive employee is required.

Concluded on the information of pair 3, the hypothesis that *small organisations put greater emphasis on quantitative performance measurement systems than large organisations* is accepted. The hypothesis is rejected because the large organisation relies on a combination of qualitative and quantitative performance measurement indicators, while the small organisation relies just on quantitative indicators. There is no indication that the large organisation put less emphasis on quantitative performance

measurement indicators compared with the small organisation. Furthermore, the other suggested option of performance evaluation, *achievements in leadership behaviour* and *actions and activities taken* differ. In the small organisation this is on high extent important, while in the large organisation on low extent. The last difference is the use of a budget and performance measurement system. These systems are used in the large organisation, while the small organisation does not use these systems.

Table 2 Aim of budget systems

	Pair 1		Pair 2		Pair 3	
	L1	S1	L2	S2	L3	S3
Identify critical performance variables	2	1	7	n/a	6	n/a
Set targets for critical performance variables	5	1	7	n/a	6	n/a
Monitor progress towards and to correct deviations from pre-set performance targets	5	1	7	n/a	6	n/a
Provide a recurring and frequent agenda for top management activities	6	4	5	n/a	5	n/a
Provide a recurring and frequent agenda for subordinate activities	2	1	4	n/a	4	n/a
Enable continual challenge of underlying data, assumptions and action plans with subordinates	6	4	4	n/a	4	n/a
Focus attention on strategic uncertainties	2	4	6	n/a	3	n/a
Encourage and facilitate dialogue and information sharing with subordinates	6	3	4	n/a	4	n/a

Table 2, section C2 budget system of the questionnaire (appendix II). The table gives an overview on what extent SBU top management uses budgets systems for the subjects on the left. Answers are based on a seven-point Likert-scale, where 1 means that the budget system are not used for the subjects and 7 means that the budget system on high extent is used for the subject. N/A means that there is no budget system available in the organisation.

Table 3 Aim of performance system

	Pair 1		Pair 2		Pair 3	
	L1	S1	L2	S2	L3	S3
Identify critical performance variables	4	1	5	3	6	n/a
Set targets for critical performance variables	5	1	5	3	6	n/a
Monitor progress towards and to correct deviations from pre-set performance targets	5	1	4	1	4	n/a
Provide a recurring and frequent agenda for top management activities	5	4	4	2	6	n/a
Provide a recurring and frequent agenda for subordinate activities	5	1	4	1	5	n/a
Enable continual challenge of underlying data, assumptions and action plans with subordinates	6	4	4	1	4	n/a
Focus attention on strategic uncertainties	1	6	6	1	3	n/a
Encourage and facilitate dialogue and information sharing with subordinates	5	3	4	2	4	n/a

Table 3, section C2 performance system of the questionnaire (appendix II). The table gives an overview on what extent SBU top management uses performance systems for the subjects on the left. Answers are based on a seven-point Likert-scale, where 1 means that the budget system are not used for the subjects and 7 means that the budget system on high extent is used for the subject. N/A means that there is no budget system available in the organisation.

Table 4 Performance Evaluation

	Pair 1		Pair 2		Pair 3	
	L1	S1	L2	S2	L3	S3
Financial measures	7	1	6	7	6	5
Non-financial measures	5	4	6	1	4	5
Detailed measures	4	4	6	4	3	5
Aggregate, summary measures	7	4	6	1	6	5
Achievements in leadership behaviour	4	2	5	1	1	6
Actions and activities taken	3	4	5	1	2	6
Individual effort	3	4	5	1	4	6

Table 4, section C3 of the questionnaire (appendix II). The table gives an overview of which criteria SBU top management evaluates performance. Answers are based on a seven-point Likert-scale, where 1 means that the indicator are not used performance evaluation and 7 means that the indicator is on high extent used for the performance evaluation.

H4^b: Large organisations put greater emphasis on performance measurement models than small organisations.

Based on pair 1, there is no difference between the large and small organisation concerning the use of PM-models. Both respondents state that a PM-model is superfluous when you have KPI's which fits the organisation. The respondent of the large organisation states that a model is an *"unnecessary distraction"*. The organisation uses quantitative and qualitative KPI's for performance measurement, but separate from each other. In the small organisation the management uses a couple of KPI's and a PM-model is more extensive than necessary for the organisation.

Concluded on pair 1, there is no difference between the large and small organisation concerning the use of PM-models. Despite of the many KPI's of the large organisation, they make no use of a PM-model. Even as in the small organisation, while they have just a few KPI's.

Based on this information, the hypothesis that *large organisations put greater emphasis on performance measurement models than small organisations* is rejected, because in both organisations it is the same.

Based on pair 2, both organisations do not make use of PM-models. The respondent of the large organisation mentioned that a PM-model requires too many performance measurement indicators, which is not useful for the organisation. The large organisation has a performance measurement system with just a couple performance indicators, which makes it easier to understand for management as well as employees.

The small organisation also makes no use of a PM-model. The organisation uses just a few KPI's, which makes a PM-model unnecessary.

Concluded based on pair 2, there is no difference between the large and small organisation concerning the use of a PM-model. In both organisations they make no use of a PM-model. So, the hypothesis that *large organisations put greater emphasis on performance measurement models than small organisations* is rejected, because in both organisations it is the same.

Based on pair 3, there are differences in the use of PM-models. The large organisation makes use of a PM-model for the non-financial performance measurement. The organisation has a grid system, with on one axis the values of L3 and on the other axis the performance of the employee. The final position of the employee on the grid is based on a flowchart. In this flowchart, personal development and pre-setted personal goals of the employee are also included.

Since a few years the small organisation makes also use of the balanced scorecard for the division Communication. This BSC includes indicators like targets, turnover, profit, failure costs, customer satisfaction, and amount of complains. However, the organisation has difficulties with the implementation and how to benchmark performances. Furthermore, the director doubts over the usefulness of the BSC and gives a low priority to optimise the use of the BSC for the division Communication. According to the director, the reason to decrease the use of the BSC is that the organisation does not have a bonus system. Also a detailed overview of good performance is not necessary when employees are not rewarded on this performance.

Concluded on pair 3, there are differences in the use of PM-models in the large and small organisation. The large organisation makes use of a PM-model, but just for non-financial performance measurement. The small organisation tries to make use of a PM-model in one department. However, because the PM-model is not organisation wide implemented and also not working adequately, the hypothesis that *large organisations put greater emphasis on performance measurement models than small organisations* is accepted.

H5a: In small organisations incentive pay is relatively higher than in large organisations

Based on pair 1, there are differences between the large and small organisation concerning the high of incentive pay. In the large organisation incentive pay is between ten and thirty per cent. The actual percentage depends on the position in the hierarchy and years of experience.

In the small organisation, the high of incentive pay is variable. On yearly base, management team decides the destination of profit. Depending of the size of profit and the need of investments, the

management team gets a part of the profit. On average, incentive pay is about ten per cent in the small organisation.

Concluded on pair 1, the hypothesis that *in small organisations incentive pay is relatively higher than in large organisations* is rejected, because the incentive pay in the small organisation is not higher than in the large organisation. Also, the incentive pay in the large organisation is not a formal percentage, but will be ad-hoc decided.

Based on pair 2, there are differences between the large and small organisation concerning the high of incentive pay. In the large organisation incentive pay on management level is an extra of two months payment. Incentive pay for team leaders are one month of salary. Incentive pay for subordinates not categorised to 'management level' have a profit sharing. Subordinates earn an incentive pay between five and ten per cent. Incentive pay is important for this large organisation. However, in the recent last years the organisation did not have profits and so incentive pay for subordinates was not applicable.

In the small organisation staff employees receive two per cent of incentive pay. For subordinates there is no incentive pay. Salary is just a fixed salary and based on the collective labour agreement (CLA). This salary is based on job descriptions and include per job different scales. Depends of the performance, employees could get into a higher scale. Good performance is not exactly described in the organisation, based on a combination of results, made damages (excavation damage) and behaviour in the field. Earning more than the pre-set scales is not possible, also when the performance of employees is too good or there is a shortage of employees of a function. According to the respondent, too much differences in payment results in imbalance by employees and could arrange trouble. Employees who want a higher salary could leave the organisation.

The small organisation does not make use of incentive payments. When the respondent has the authority, he wants to introduce it. He states that money motivates and there is a lack of motivation by employees and said that "employees are good in the field, but exactly at 16.15 hour they are on the road to home". The board of directors is not supporting the introduction of performance based payments.

Concluded on the information of pair 2, the hypothesis that *in small organisations incentive pay is relatively higher than in large organisations* is rejected. The hypothesis is rejected because incentive pay is not available in the small organisation, while the large organisation makes use of incentive payments.

Based on pair 3, in the large organisation incentive pay are about fifteen till thirty per cent. The exact percentage incentive pay depends of the position in the organisation. Furthermore, incentive pay is more important for employees higher in the organisation than lower employees.

In the small organisation there is no incentive pay available. In good economic conditions, earning a bonus is not difficult for employees. However, in economic down fall, employees have to work much harder to achieve the same results as in good times. Employees have to work harder and have no influence when, for instance, the market decreases or clients go bankrupt. According to the director in this example it is unfair to withdraw incentive payment. The director states employees earn a bonus earlier when business decreases than when it increases. For the small organisation three aspects are important, a satisfied client, a satisfied employee and a satisfied employer. According to the respondent, an employee is satisfied when he goes to work with pleasure, colleagues appreciate his work and when he gets a good salary. Because the organisation pays good salaries above collective labour agreement (CLA), incentive pays are not necessary.

Concluded on pair 3, the hypothesis that *in small organisations incentive pay is relatively higher than in large organisation* is rejected. There are differences in the use of incentives pay between small and large organisations. In the large organisation, there is a bonus structure present for employees and management. In the small organisation, there is no incentive pay structure available. However, in the small organisation is base pay higher than CLA salaries.

H5^b: In large organisations non-financial reward and compensation is higher than in small organisations.

Based on pair 1 there are differences in the high of non-financial reward and compensation between large and small organisations. The large organisation makes use of non-financial reward and compensation for subordinates. An example is the promotion opportunities for subordinates within the organisation. When subordinates are capable for higher functions, subordinates could promote. However, only subordinates who have the capacities are suitable for promotion. When they are not available, the organisation searches externally in order to fulfil the vacant position.

Besides the promotion opportunities, there are also training opportunities. Mostly these are compulsory trainings which are required in the industry.

The small organisation has also some non-financial rewards and compensations. Promotion opportunities are not available within the organisation. Top management operates 22 years in the same formation and promotion from the production line to top management is not possible. However, the members are thinking about business succession, so maybe there are promotion opportunities in the near future. Training opportunities are available in the small organisation. The relatively young market of water-management results in a changing required knowledge. So, training is important to be up-to-date in this industry.

Concluded on pair 1, the hypothesis that *in large organisations non-financial reward and compensation is higher than in small organisation* is accepted. The hypothesis is accepted as result of the promotion opportunities in the large organisation, while these promotion opportunities are not available in the small organisation. Also, the large organisation offers training opportunities for the whole organisation. In the small organisation, the trainings opportunities are mainly for the members of the management team.

Based on pair 2 the large organisation has besides financial rewarding also non-financial rewarding. Within the large organisation there exists promotion opportunities. Vertically, there are promotion opportunities to functions on management level. However, the large organisation in this pair is not an organisation with lots of shifts on management level. The current employees with management function are loyal, which results in less space for promoting subordinates. Also, it is difficult for the organisation to get subordinates with the capacity of potential to promote to a management level. Higher educated subordinates, who are required for these functions, do choose rarely this organisation as employer. When vacancies are available, the organisation has to search external. Horizontally, there are more promotion opportunities. Examples are shifting between different project or functions on the same level. Furthermore, the non-financial reward system of the large organisation includes training opportunities. Part of the training opportunities includes compulsory trainings for this industry, which are mainly based on safety. Besides compulsory training, facultative training is possible. This training is mainly focused on subordinates who have the potential to promote.

In the small organisation there are training and promotion opportunities available, but in practice rarely used. For many employees the education is too difficult. They are good in the field, but do not have the

capacities to study theories. The employees who do not want the study are pleased with the current job and salaries. The VCA (Dutch certificate for security), which is compulsory, is for employees also a difficult obstacle to take. The lack of motivation for training hinders promotion opportunities in the organisation. The organisation has to look external for competent employees.

Concluded on pair 2, the hypothesis that *in large organisations non-financial reward and compensation is higher than in small organisation* is rejected. There is no significant difference concerning the availability of non-financial reward and compensation in large and small organisations. Both organisations have mandatory training programs and offer other training programmes and promotion opportunities. Also, both organisations have the limitation of the education of employees, which decrease the amount of employees who actually promote within the organisation.

Based on pair 3, in the large organisation there are non-financial reward and compensation possibilities like promotion and training opportunities. Promotion opportunities are also available in this large organisation. With vacancies, the organisation searches firstly intern in the organisation. However, they want the best people for the function. When intern is not a suitable option, L3 searches external. For promotion within the organisation, L3 recruits a specific group of higher educated young professionals who could learn in the organisation.

In the large organisation, voluntary staff turnover is low. Staff turnover is mostly the result of resignations. Non-performance is an issue in the organisation and top management is continually evaluating performance in the organisation. When subordinates do not perform, they will be evaluated and finally subordinates will be replaced. The replaced subordinates could get another function in the organisation or resigned. However, non-performance is not always the result of the subordinate, but could also be a result of bad leadership.

As a result of the crisis, training opportunities are narrow at the moment. The organisation offers just the indispensable and mandatory training programs. Individual trainings are possible, but the organisation weights carefully the additional value of the training.

In the small organisation besides the financial rewarding, there is also non-financial rewarding, for instance training and learning opportunities. For the employees job related training programmes are available, whereby some training programmes are mandatory for the industry. The director states that learning and improving is important for the employees. Also, the organisation offers education programmes for students to get practice experience. Another form of non-financial reward and compensation are the staff parties, however, these are not official documented. On yearly base there are several events for employees and families which are a sort of non-financial reward for the overall performance of the organisation.

However, the questionnaire does not support the data of the interview. The questionnaire states that non-financial reward and compensation is not available, while non-financial reward and compensation is certainly available.

Concluded on the information of pair 3, the hypothesis that *in large organisations non-financial reward and compensation is higher than in small organisation* is rejected. There are mainly similarities in non-financial reward and compensation systems between large and small organisations. Both organisations have training and promotion opportunities. Education is important for both organisations. The large organisation highlighted that HR department searches firstly intern for vacant position. For trainings, there are nation-wide training programmes, compulsory for the industry. Besides that, the small organisation highlighted that they offer education programmes for students. Besides the training

and promotion opportunities, the small organisation offers many events for employees as reward for performance.

H6: Larger organisations are more decentralised than smaller organisations.

Based on pair 1, there are differences in large and small organisations concerning decentralisation. The large organisation of this pair is an organisation with four management layers. The top of the organisation is the supervisory board. This board consists of five members and has the task to control the management board. This management board is the second management layer and is responsible for the long term planning of the organisation. The third management layer is the SBU management, responsible for a specific business unit. The fourth and last management layer is the 'group direction', distinguished in sales and operations.

According to the respondent, the large company is moderate decentralised. The different layers of management are autonomous concerning decision-making, excluded decisions concerns exceeding budgets and strategic planning. Decisions about these are made in consult with higher management. The management layer has to propose their plans, which has to confirm by higher management. According to the chart, every subordinate is guided and directed by one manager. According to the chart a subordinate has one reporting line. However, subordinates can also be guided and directed by managers who are not directly in line with the subordinates. In these cases, reporting lines between management and subordinate are different from task to task and could pass a management layer.

Consultation frequency differs in this large organisation. SBU management meets about nine times a year, while the management of a business unit meets monthly. The management board meets fortnightly. The different layers of management teams control the organisation and have a decision-making authority. However, the freedom of decision-making excludes determining budgets. Top management has to confirm the budgets which middle management wants to use and also have to confirm strategic planning.

In the small organisation decentralisation is low. The organisation has a centralised structure. There is a management board with a general manager and four members with specific knowledge. This board takes all the decisions. Decisions will be taken by the member with the specific knowledge about the subject of the decisions. This could be in dialogue with the general manager.

Consultation frequency in S1 differs. SBU management meets weekly. These meetings could be formally planned, but also ad hoc while walking through the production line. The management group in this organisation is stable. However, the formation for the meetings differs. This depends on the subject and the specialist.

Concluded on pair 1, the hypothesis that *large organisations are more decentralised than small organisations*, is accepted. The rate of decentralisation between the organisations differs. This is mainly a result of the lack of middle management and multiple establishments of the small organisation. The large organisation is moderately decentralised. So, based on pair 1, the hypothesis is accepted.

Based on pair 2, the extent of decentralisation differs between the large and small organisation. The large organisation has a flat and centralised organisation structure. Contact between top management and subordinates is open and top management has more attention for subordinates. The reason top management made the organisation flat is because negative results with the decentralised organisation in the past and because of cuts of FTE's.

There are several consultation moments in the large organisation. Monthly, there are result consultations with top management, SBU managements, a controller and HR-manager. In these

consultations the results of the individual establishments will be compared with the targets and the results of the other establishments.

Fortnightly, there are consultations between the management teams, which consist of top management, SBU management and a HRM manager. Two or three times a year there is a strategic consultation, where the overall strategy of the organisation will be evaluated. In the establishments, there are also consultations, whereby sometimes top management is also present.

The small organisation has a centralised structure. All the important decisions will be made by the two directors. The small organisation is an organisation managed by two directors, which are supported by staff members. Below the directors are two production leaders. Each production leader manages two project teams, existing of a foreman and about six executive employees. On weekly or fortnightly base the production leaders consult with one of the directors and two foremen about the current projects and the progress. There is just one establishment and the organisation structure is moderately flat and small that it does not take much effort to communicate with the whole organisation. Communication lines are also short, which is an advantage for a centralised structure.

Concluded on pair 2, the hypothesis that *large organisations are more decentralised than small organisations* is based on this information rejected. The hypothesis is rejected because the large as well as the small organisation has a centralised structure. Decisions will be taken by top management and communication lines are short. In the large organisation, they have more consultation moments than in the small organisation.

The large organisation of pair 3 has a decentralised structure. Every business unit is responsible for the local market and works on its own way. The business unit Industrial Services is excluded from this structure and has no own responsibility. Top management decides, also on local-level, which markets are served or not.

The large organisation has a small staff on top management level and large local staff functions. Monthly, members of top management consults with management of BU. In this consultation, the general manager, financial manager, HR manager and commercial manager together with the local management reviews BU's results of last month and looking forward three months ahead.

The small organisation has a centralised structure, because it has just one establishment. The organisation has two management layers. At top of the organisation is the director. The other management layer is the head of the Division Electricity and Engineering division and the head of division Communication. Between these layers are the staff-functions, Administration, Facility, a department for safety, quality, healthcare and environment, and the drawing office. Underneath the heads of both division, there are execute employees in the organisation, hierarchical from project-leaders to students.

Consultation moments are mostly monthly with a stable formation. Because communication lines are flat and management groups are small, besides the official moments there are weekly meetings with employees.

Concluded on pair 3, the hypothesis that *large organisations are more decentralised than small organisations* is accepted. The large organisation has a decentralised structure, while the small organisation has a centralised structure. This is a result of the number of management layers in the organisation. The small organisation operates with two management layers. This amount of management layers and the total amount of interactions between employees makes a centralised structure possible. For the large organisation, the total number of management layers and possible

interactions makes a centralised structure too complex and time consuming. Also, the multiple establishments of the large organisation make a centralised structure inefficient.

H7: In large organisations the decision-making authority by middle management is higher than in small organisations.

Based on pair 1, middle management of the large organisation has a high degree of freedom concerning the decision-making process and is on high extent authorised to make decisions. However, this high rate of decision-making authority is not applicable on decisions about budgets. Middle management has the freedom to make decision, when it fits within the budgets declined by top management.

Based on table 5, middle management has only a high rate of freedom concerning decisions about the *development of new products, prioritising of activities and work process arrangements within the BU*. Middle management has low decision-making authority on the other options (table 5).

The small organisation exists of one management layer, the management team, which include five members. Each member has his own responsibility on technical, financial, human resources, and marketing base. The fifth member is the general manager. These members take all the decisions and there is no hierarchical relation between these members. It is like an anarchistic management. The second layer exists of the employees on the production line. The amount of these employees differs. The freedom of decision-making of the second layer is low. All the decisions will be made by the members of the management team.

Concluded on pair 1, the hypothesis that *in large organisations the decision-making authority by middle management is higher than in small organisations* is accepted. There is no valid comparison possible between the large and small organisation as result of the lack of middle management in the small organisation. In the large organisation there is a middle management with decision-making authority. Compared with the second layer (no management layer) of the small organisation this decision-making authority is higher in the large organisation. Based on this comparison, the middle management of the large organisation has more decision-making authority than in the small organisations.

Based on the interview with L2, the decision-making authority is low by middle management. The middle management are comfortable with just doing higher management charges. In the future, the top management wants that middle management takes more responsibility and get more decision-making authority, but nowadays it is not yet applicable. Based on table 5, top management has lots of influence on possible activities in the organisation.

Based on the interview, in S2 decision-making authority by middle management is average. Decisions about investment and other important decisions will be spoken in the staff meetings. The staff members have a voice, but at the end the two directors are responsible and they decide. For decisions on higher scale, the staff members have decision-making authority. Examples are approval of bills or the purchase of a new computer screen.

Overall, staff members have to say what they are doing, but faith of the directors in the staff members is high and there are no problems when they make decisions.

Concluded on pair 2, the hypothesis that *in large organisations the decision-making authority by middle management is higher than in small organisations* is rejected because there is no difference. Note is that in the near future the large organisation top management wants to increase the decision-making authority of middle management. The decision-making authority of middle management in the large as well as the small organisation is low. In the large organisation middle management is comfortable with

just doing what higher management charges. In the small organisation the staff department has some freedom to decision-making, but the line management has not.

In pair 3, in the large organisation the degree of decision-making authority of middle management is organised in a matrix. According to the respondent, the degree of decision-making authority is average and comparable with other organisations in the industry.

In the small organisation the director has the vision that it should not be a problem to run the organisation when the director is absent. This results in high freedom of decision-making by middle management. The heads of both divisions have a high decision-making authority. However, financial transactions need permission of the director.

The staff department Administration has by absenteeism of the director also decision-making authority. For this department, this authority is also documented by the Dutch Chamber of Commerce.

An example is the intake new projects. When there is a new project by an existing client, project leaders have the freedom to accept them. If there is a new project by a new client, the division heads could make the decision. Another example is the purchase of new cars. The Facility department search for possible options, the director will make the final decision, based on the information of the facility department.

Concluded on pair 3, the hypothesis that *in large organisations the decision-making authority is higher than in small organisations* is rejected. The hypothesis is rejected because in the large as well small organisation middle management (in the small organisation the division heads) have several authorities. Also, in the small organisation there are official documents which states who have decision-making authority in case of absence of the director.

Because there is no significant difference between the large and small organisation, the hypothesis is rejected.

Table 5 degree of influence decision-making

	Pair 1		Pair 2		Pair 3	
	L1	S1	L2	S2	L3	S3
Establishment of new businesses	2	n/a	3	1	1	2
Development of new products/ services	6	n/a	3	1	1	n/a
Extension/ enlargement investments	2	n/a	2	1	3	4
Replacement investments	4	n/a	3	1	3	1
Project/program financing	2	n/a	2	1	2	1
Product/ service pricing	2	n/a	2	1	5	4
Distribution channel choice	2	n/a	n/a	1	n/a	6
Choosing and contracting customers	2	n/a	2	1	4	4
Choosing and contracting suppliers	2	n/a	3	1	2	4
Prioritizing activities	6	n/a	2	1	5	5
Compensation policy and rewards within the BU	2	n/a	3	1	n/a	1
Hiring and firing employees within the BU	2	n/a	3	1	2	1
Work process arrangements within the BU	6	n/a	3	1	4	3

Table 5, section E3 of the questionnaire (appendix II). The table gives an overview of decision-making authority of subordinates. Answers are based on a seven-point Likert-scale, where 1 means that just top management has the decision-making authority and 7 means that subordinates have decision-making authority. The intermediate ratings are the weight of voice in consultations concerns the subject. N/A means that the respondent did not answer the question.

H8: Large organisations are more bureaucratic than small organisations.

According to the respondent, the large organisation of pair 1 is a moderate bureaucratic organisation. On one side, subordinates have a voice in the organisation and are autonomous concerning their own tasks. However, this autonomy is limited by the borders of the budgets. On the other side, the industry of L1 requires a lot of rules and procedures with regards to safety. Safety is an important issue. To guarantee safety L1 cannot ignore rules and procedures. Also, a large organisation needs rules to operate more efficiently.

The organisation structure and rules and procedures are very important for guiding and directing subordinates. Also the use of *written authorisation levels and decision rules* are important for L1. Concerning reporting lines L1 scores average, which means subordinates have on average extent *multiple reporting lines*.

The small organisation of pair 1 is a non-bureaucratic organisation. The organisation exists of two layers. The top layer is the layer with the five members of the management team. They are on the same level compared with each other. Every member has his own specialty and knowledge, and makes (in consultation with general manager) the decisions with regard to his specialty. The second layer consists of the employees by the production line. Most of the decisions will be made ad-hoc and just with the specialised member. In the organisation, there are no formal rules.

The organisation structure is on high extent important for S1. Rules and procedures are average important. In S1, subordinates have on low extent *multiple reporting lines* and the use of *written authorisation levels and decision rules* are not applicable for this organisation.

Concluded on pair 1 the conclusion is that both organisations use bureaucracy in the organisation, but different kinds of bureaucracy. The hypothesis that *large organisations are more bureaucratic than small organisations* is rejected. The hypothesis is rejected because there are differences in bureaucracy within large and small organisations. The differences are mainly based on the organisation structure. Because of the lack of management layers in the small organisation, a good comparison with the autonomy of middle management in large organisation is not possible. Furthermore, the large organisation relies on representative and punishment bureaucracy; formal rules and procedures which are compulsory. The small organisation rely more on mock bureaucracy, informal agreements as guidebook for rules without the documentation as guard.

The large organisation of pair 2 is not a bureaucratic organisation. Just like decentralisation, this has changed recently. In the past L2 was very bureaucratic. Subordinates worked for the organisation just for work and had not the feeling to be a part of the organisation. The organisation had a lot of rules and procedures. Nowadays the organisation is changing. Subordinates get more responsibility and freedom to make decisions. A certain degree of rules and procedures still exists, but it is less than a couple of years ago. According to top management a large organisation needs also rules to manage the organisation.

In the large organisation structure is very important. The use of rules and procedures are average important. The use of written authorisation levels and decision rules are average important, also like the amount of reporting lines. In L2 subordinates have on average extent multiple reporting lines.

Based on the interview, S2 is an average bureaucratic organisation. On one hand, there are lots of rules and procedures which are required in this industry to provide safety. Also the organisation structure is important. When necessary, employees contact the man who is directly responsible for the employee, and do not have multiple reporting lines.

Concluded on pair 2, the hypothesis that *large organisations are more bureaucratic than small organisations* is rejected. The hypothesis is rejected because in both organisations organisation structure is important and there are nationwide mandatory rules to provide security.

In pair 3, the degree of bureaucracy of the large organisation is average. Subordinates have freedom to decide about their own tasks and have responsibilities, but the industry requires lots of rules and procedures to guarantee safety. Top management could not ignore these requirements. The organisation structure and rules and procedures are of average importance for L3. Also like the use of written authorisation levels and decisions rules and the use of multiple reporting lines, which are also on average extent important for this organisation.

The small organisation is non-bureaucratic. The organisation exists of two layers and has a flat organisation. This results in a fast decision-making process with short hierarchical connection. Structure is important for the organisation. Everybody is equal to each other. The respondent compares it with a football team; “we are a team with a captain. The captain is also visible when the situation required”. Management processes and organisation structure, use of rules and procedures are very important for the small organisation. The use of written authorisation levels and decision rules are also high important.

Concluded on pair 3, the hypothesis that *large organisations are more bureaucratic than small organisations* is rejected. Based on the information, the degree of bureaucracy has similarities and

differences in both organisations. As a result of the industry, both organisations could not ignore mandatory procedures and rules concerns guarantee safety (representative bureaucracy). This is bureaucracy as result of the industry. The degree of bureaucracy differs also. Based on the interviews the large organisation is more bureaucratic than the small organisation. However, based on the questionnaires the small organisation is more bureaucratic than the large organisation.

5. Conclusion

5.1 Introduction

In this chapter the conclusion of the eight hypotheses are described. Each hypothesis is accepted or rejected based on the findings and the conclusions of chapter four. Each description starts with a judgement about the hypothesis, followed by an explanation why the hypothesis is accepted or rejected. After all, an overall conclusion is made.

5.2 Conclusion

Hypothesis 1a, *in large organisations norms and values are more documented than in small organisations* is rejected. In pair 1 as well pair 3, the difference in use of documentation for norms and values between large and small organisations is too small to accept the hypothesis. Pair 2 does have a clear difference between the large and small organisation, but this result is not enough to support the hypothesis. Concluded is that no differences exists between the large and small organisation.

Hypothesis 1b, *in large organisations there is a more formal culture than in small organisations* is accepted. Observed is that in pair 1 and pair 3 is a more formal culture in the large organisation compared with the small organisation. In pair 1 this is characterised by the compliance of the written documentation. In the small organisation they have a written documentation, but do not use it. In the large organisation top management expects compliance of the rules. In pair 3 the respondent of the large organisation states to have a formal as well an informal culture, while the small organisation mainly has an informal culture.

In pair 2, the small organisation has a formal culture while the large organisation has an informal culture. Because it is just one pair, the evidence is too small to reject the hypothesis.

Hypothesis 2, *large organisations put great emphasis on strategic planning-related issues and activities, while small organisations put less emphasis on strategic planning-related issues and activities*, is accepted. In pair 1 as well pair 2 the large organisation put greater emphasis on strategic planning-related issues compared with the small organisation. This is most characterised by the small organisations, which do not plans a fixed number of years ahead, but looks more to opportunities. In the 3 large organisations the strategic planning-related issues are a recurring task of top management.

The small organisation of pair 3 states that strategic planning is important for the organisation, but they make just long-term plans when they see threats or opportunities in the market. The difference between the large and small organisation is too small to accept the hypothesis.

Hypothesis 3, *small organisations put greater emphasis on short-term goals, while large organisations put less emphasis*, is rejected. In pair 1 as well pair 2 the small organisations do not put greater emphasis on short-term goals than the large organisations. The differences between the emphases on short-term planning in these pairs are not significant enough to accept the hypothesis.

Just in pair 3 is the emphasis on short-term planning greater in the small organisation than the large organisation. Overall, the hypothesis is rejected because the differences are too small.

Hypothesis 4a, *small organisations put greater emphasis on quantitative performance measurement indicators than small organisations*, is rejected. In pair 1 and pair 2 the large as well the small organisations put great emphasis on quantitative performance measurement. There is nothing observed

which could indicate a greater emphasis on quantitative performance measurement indicators in the small organisations than in the large organisations.

In pair 3, the small organisation does have greater emphasis on short-term goals because the large organisation relies also heavily on qualitative performance measurement. However, this proof is not strong enough compared with pair 1 and pair 2. So, the hypothesis is rejected.

Hypothesis 4b, *large organisations put greater emphasis on performance measurement models than small organisations* is rejected. The large and small organisations of pair 1 and pair 2 make no use of a PM-model because it requires too many KPI's.

In pair 3 the large organisation uses a PM-model for the non-financial performance measurement and combines it with quantitative performance measurement to get an overall performance indication. The small organisation of pair 3 put less emphasis on the PM-model. In the past they have introduced a PM-model for one division, but they use it rarely. So, based on this study, the hypothesis is rejected.

Hypothesis 5a, *in small organisations incentive pay is relatively higher than in large organisations* is rejected. In all the three pairs the large organisations use higher incentive pays than the small organisations. Also, in the small organisation of pair 3 there is even no incentive pay available. So, based on this study the hypothesis is rejected.

Hypothesis 5b, *in large organisations non-financial reward and compensation is higher than in small organisations* is rejected. In pair 2 and pair 3 there is no higher non-financial reward and compensation in the large organisation than the small organisation. The offered non-financial reward and compensation is mostly the same in both kinds of organisations.

In pair 1 of this study the large organisation offers a higher non-financial reward and compensation than the small organisation. However, because it is a minority the hypothesis is rejected.

Hypothesis 6, *large organisations are more decentralised than small organisations*, is accepted. In pair 1 and 3 the small organisations have a centralised structure and decisions will be made by top management. In the large organisations of pair 1 and 3 the management teams of the establishments and middle management has decision-making authority.

In pair 2, the small organisation is just as in the other pairs centralised, but the large organisation of this pair has also a centralised structure and decisions will be made by top management. Because there are more pairs which confirms the hypothesis, this hypothesis is accepted.

Hypothesis 7, *in large organisations the decision-making authority by middle management is higher than in small organisations*, is rejected. In pair 2 as well pair 3 the middle management of the large organisation has no more decision-making authority compared with the middle management of the small organisation.

In pair 1, the middle management of the large organisation has more authority, but this is mainly a result of the lack of layers of the small organisation of pair 1. So, because there is no significant difference that large organisations have a middle management with a higher decision-making authority, the hypothesis is rejected.

Hypothesis 8, *large organisations are more bureaucratic than small organisations*, is rejected. Based on all pairs, there is no clear difference on the extent of bureaucracy between the large and small organisations.

5.2.1 Overall conclusion

Overall could be concluded that the organisational size has some influence on the use of MCS in large and small organisations, but that also other variables are important for the choice of MCS. This conclusion is based on the majority of rejected hypotheses and the opinion of respondents. Also, the finding that there are just two hypotheses, namely 5a and hypothesis 8, showing an unanimous conclusion is a sign that there are more important variables important than organisational size.

6. Discussion

6.1 Discussion

The results of this research proved some of the expectations and show the effect of organisational size on the use of MCS. Other expectations were not met. There are several causes why the results of this study do not match with the existing literature. Possible causes are described in this chapter. Also, per hypothesis the value of the findings are described and some other interesting findings are proclaimed.

Hypothesis 1a, *in large organisations norms and values are more documented than in small organisations* is rejected. The findings of Chenhall (2003) that large organisations has more written documents which guides the employees is not proved by this study. A possible explanation for this result is that the industry has large influence on the extent of documented norms and values. The responding organisations operate in a technical industry, which is characterised by rules and safety marks by national government to provide safety. To compliance to the rules and safety marks, an extending documentation of norms and values is required. Because the respondents are matched on industry, each pair has the high standards of documentation.

The scientific relevance of this finding is that just the variable organisational size has no influence on the extent documented norms and values are used for guiding and directing employees.

Hypothesis 1b, *in large organisations there is a more formal culture than in small organisations*, is accepted. The hypothesis is accepted because in two of the three pairs the culture was in the large organisation more formal than in the small organisation. In pair 2 the culture in the small organisation was more formalised. A quote of one of the respondents of the large organisation of pair 2 stated that the organisation is based on the criteria of this study a large organisation, but actually he thinks the organisation operates as a small organisation. 650 Employees divided over three establishments is not comparable with lots of the large organisations. This could be a reason why the hypothesis is based on pair 2 rejected.

The scientific relevance of this finding is that proved that the formality of the culture is related with organisational size, but that it is unclear by which amount of employees an informal culture changes to formal culture. Based on the statement of the respondents of L2, concerning the culture the definition that an organisation with more than 250 employees is large is untrue. Also, the information of this study suggests that in smaller organisations the rate of formality of the culture is a choice, where it is in large organisations a need. This conclusion is based on the finding of the small organisation of pair 2, which has a formalised culture while the organisation is categorised as small organisation.

Hypothesis 2, *large organisations put great emphasis on strategic planning-related issues and activities, while small organisations put less emphasis on strategic planning-related issues and activities* is accepted. The hypothesis is accepted because in two out of three the emphasis on strategic planning-related issues and activities is greater in large organisations than in small organisations. The difference between the emphases on strategic planning-related issues in pair 1 and pair 2 a very clear and supports the existing theory about this subject. The finding in pair 3 is different. Based on the information of this pair it is unclear to make a conclusion.

Besides the findings related to the hypothesis, another interesting finding of this study is the difference of emphasis on formal and informal planning in one of the three pairs. Chapter two describes the difference between formal and informal planning as the extent that plans are accomplished in the head of a few people and the lack or conciseness of written plans. This study found that in two of the

three pairs the small organisation has more emphasis with informal planning, while the large organisation has more emphasis with formal planning. This conclusion is based on pair 1, where it is characterised by the quote of the respondent of the small organisations, who states that: *“everything you trust to the paper, you also write for competitors”*. Also in pair 3, differences in formality of the planning process are accountable.

The theoretical relevance of this finding is that the conclusions of other researchers are strengthened concerning the difference in emphasis on strategic planning-related issues and activities in large and small organisations.

Hypothesis 3, *small organisations put greater emphasis on short-term goals, while large organisations put less emphasis on short-term goals* differs also from the literature described in chapter two. Unless the existing theory that small organisations put greater emphasis on short-term goals, the practice in this study shows that there are no significant differences in emphasis on short-term goals. A possible explanation for the difference between this study and the literature is that not the emphasis on the goals is different, but that the process of formation of the short-term goals differs. Like hypothesis 1a, an additional finding is that small organisations have great emphasis with informal planning, while large organisations have greater emphasis on formal planning. This conclusion is based on the information of pair 1 and pair 3, where short-term planning is a no formalised process and happens mainly in the head of top management.

Hypothesis 4a *small organisations put greater emphasis on quantitative performance measurement indicators than small organisations* and 4b, *large organisations put greater emphasis on performance measurement models than small organisations* have different findings in this study than expected based on the literature review. The main difference was the expectation that large organisations shifts to the use of PM-models when they outgrow the size of a small organisation. However, this study shows that PM-models not always applicable to large organisations. The most important reason to not use a PM-model is that these models requires lots more KPI's than necessary for the organisations, which makes it unnecessarily difficult and time consuming for the organisation. To keep performance measurement easy, clear and understandable large organisations put great emphasis on quantitative performance measurement indicators.

Theoretical relevance of this finding is that solely organisational size has no relation with performance measurement. As well the use of quantitative performance measurement indicators as well the use of PM-models depends not solely on organisational size, but are also dependable of other variables.

Hypothesis 5a, *in small organisations incentive pay is relatively higher than in large organisations* is rejected as result of an unclear difference between large and small organisations. Another explanation that the results of this study do not match the expectations is the liquidity of the small organisations. Gerhart (1990) states that small organisations have fewer slack resources which results in a lower base pay and higher incentive pay to create a buffer. However, all the responding small organisations have good financial results. Possible they do not need a buffer against short-term financial pressure and could pay employees a higher base salary.

An interesting finding that is not based on a pre-set hypothesis is the formality of payments. Based on information of the respondents in large organisations is the decision-making about the high of incentive pay more formalised than in small organisations, where ad-hoc will be decide of employees will be reward with an incentive pay.

The theoretical relevance of this finding is that solely organisational size is no variable which influences the rate of incentive pay, but that incentive pay is also related to other variables.

Hypothesis 5b, *in large organisations non-financial reward and compensation is higher than in small organisations* is rejected by a lack of significant differences. A possible explanation is that the cause of the small differences is not a result of the size of the organisation, but of the industry of the organisation. This explanation is based on the respondents of L2, who state that people with the education, knowhow and ability to work on a higher level do not choose for L2. According to the respondents finding attracting higher educated employees is a problem of the whole industry.

On the other hand, an explanation which provides a stronger match between theory and findings is that the industry in small organisations could be that also small organisations have difficulties with finding employees with the ambitions to promote. This suggestion is based on the respondent of S2, respondents states that there are promotion opportunities available, but employees do not have the motivation to promote.

The theoretical relevance of this finding is that non-financial reward and compensation depends not on the organisational size, but on the type of employees and their behaviour. Non-financial reward and compensation is not always useful or applicable.

Hypothesis 6, *larger organisations are more decentralised than smaller organisations* is accepted. The most obvious cause of this finding is that all the responding small organisations have a simple structure and very short communication lines, which makes it possible to make the decisions central in the organisations. Also, each small organisation exists of just one establishment. The responding large organisations on the other hand consist of multiple establishments which make it inefficient and time consuming to make decisions centralised. An exception is the large organisation of pair 2, which states to have a centralised structure. An explanation could be that the respondents' opinion are that the organisation is a small organisation, despite of the definition of large organisation of this study. Also, the small establishments could result in a centralised structure.

The theoretical relevance of this finding is that organisation size has influence on the extent of decentralisation of large and small organisations.

Hypothesis 7, *in large organisations the decision-making authority by middle management is higher than in small organisations*, is according to the findings rejected. Note is that not all small responding small organisations have a middle management, which bias the results. An example is the small organisation of pair 1, which exists of 2 layers with a management layer and an executive layer. Also the small organisation of pair 2 does not have a middle management. However, according to the respondent of pair 2 the staff management has also decision-making authority. Expected is that the members with staff functions are comparable with a middle management. In the small organisation of pair 3, there are division heads. For this study, these division heads are taken as middle management.

The theoretical relevance of this finding is that solely organisation size has no influence on the decision-making authority of middle management.

Hypothesis 8, *large organisations are more bureaucratic than small organisations* is rejected because there are different kinds of bureaucracy and there is no kind of ranking which kind of bureaucracy is more bureaucratic than others. Furthermore, by one of the respondents there was a difference in the given answers in the interview and on the questionnaire. For this study, the answers on the interview are more valuable as result of the research method.

The theoretical relevance of this finding is that it is difficult to say something about the extent of bureaucracy in an organisation. There are different types of bureaucracy and based on the respondents there are difference in the use of bureaucracy in large and small organisations.

6.2 Relevance

6.2.1 Theoretical Relevance

The theoretical relevance of this study is that in past rarely research is done to the influence of organisational size on the use of management control system as a package. This study provides insights in this phenomenon and shows the role of size. Furthermore, this study gives insights in the use of MCS in Dutch organisations. In past Dutch organisations are never used as population for a research to the effect of organisational size on MCS as a package. So, this study gives new insights about this subject and makes it possible to compare it with other countries.

Also, the theoretical relevance of this study is that the outcome that just the variable organisational size has no influence on the use of MCS as a package. Most of the hypothesis are rejected what means that the effect of organisational size is too small to provide the use of MCS in an organisation. This study shows that other variables than organisational size have also influence on the use of MCS and includes suggestions which variables are relevant for researching components of management control. Furthermore, this study has strengthened existing literature about the contingency theory and shows that there is no best package of MCS for small and large organisations.

6.2.2 Practical Relevance

The practical relevance is that this study confirms the findings of previous researchers that there is no best fit concerning MCS in large and small organisations. In practice this means that organisations do not should change their package of MCS as result of the findings of this study. When the organisation has adapt the MCS to their organisation and it operates efficient and effective, there is reason to change the MCS based on this study. For small as well large organisations this study could use as supporting tool for designing the MCS in the organisation. The different findings and different opinions of respondents could help estimating effects of implementing control mechanisms. Also, this study could guide finding appropriate control mechanisms to direct employee behaviour.

6.3 Limitations

The first possible limitation of this study is that not all literature is treated. Excluded literature could include evidence which does not support the stated hypotheses. However, expected is that the most important literature which describes a relation between MCS and organisational size is used.

The next limitations are based on the data collection. The first limitation is the sample size. Concerning *sample size*, the used sample of six organisations is a small sample size which makes it difficult to generalise the results to a higher order. One exceptional use of MCS of one of the six organisations could give a different view of the use of MCS and results in a biased conclusion.

Concerning the *sample group*, a limitation which biases the generalisation to a higher order is the industries of the organisations in the sample. All the sampled organisations operate in a technical industry which makes a generalisation to other large and small organisations more difficult. The effect of this bias is decreased by making pairs based on industry, but the total sample includes just technical oriented organisations.

Within the sample group, the *interviews* and related respondents have also limitations. The refuse of permission of organisation L1 to record the interview could have negative effects of the given answers. The written notes, what was allowed by the respondent, could include different interpretation of the given answers. However, by transcribing the notes directly after the interview, this bias could be limited. Another bias is the top management of L2, who is just one year in function. Despite of their experiences in other functions could this limit the results of the effective of Management Control

Systems. Top management wants to change their Control Systems in the near future, but the effects of the MCS are an expectation instead of an observation.

The last limitation concerning the data collection is the questionnaire. The questionnaire is developed for large organisations. For small organisations, the questionnaire is not always applicable. Based on this study is that in small organisations, members of top management of small organisations do not always have the theoretical background knowledge of members of top management of large organisations. Questions of the questionnaire could possibly be too difficult to understand and too easy to misinterpret. This could bias the results.

Besides the limitations above, the collected data for this study have also limitations. For hypothesis 5a, *in small organisations incentive pay is relatively higher than in large organisations*, a limitation is the different rates of incentive pay in the organisation. It could be difficult for respondents to say something about the incentive pay organisation wide, when it could differ in the different departments. Also, the questionnaire focuses on organisational wide performance systems, while it could differ per department.

For questionnaire 5b, *in large organisations non-financial reward and compensation is higher than in small organisations* a signalled limitation is the definition non-financial reward and compensation. Non-financial reward and compensation could include reward components which not by all the respondents are seen as non-financial rewarding. An example is the staff party of S3. Differences in understanding the term non-financial reward and compensation could possible bias the results.

Concerning hypothesis 7, *in large organisations the decision-making authority by middle management is higher than in small organisations*, a limitation is that two of the three small organisations do not have an official middle management, which results in a biased comparison between the authorities of middle management in large and small organisations.

6.4 Recommended further research

Based on the limitations of this study, the findings of this research and the findings of existing literature could be strengthened by future research. The main recommendation is to enlarge the sample size of the research to make it easier to generalise to Dutch organisations. Enlarging the sample size has also the advantage that organisations of other industries are included.

Also, this research is limited by the use of one contingency theory, namely the size contingency. Other contingencies like technology, organisational structure, (national) culture, strategy, and external environment (Chenhall, 2003) influence the use of MCS as a package. Despite of the choice to decrease the effects of the industry by comparing pairs, the results are probably not clear from this bias. Enlarging sampling size could improve the strength of the research.

For some hypotheses, specific additional sample criteria are recommended to strengthen the outcomes. Recommended for hypothesis 1a, *in large organisations norms and values are more documented than in small organisations* is to focus on the additional documented rules, norms and values in an organisation. Mandatory rules by government are the same and do not differ in large and small organisations, but influences the answers of the respondents.

For hypotheses 2 and 3, the hypotheses about planning controls, recommended is to focus also on the difference in formal and informal planning. Searching for existing literature and focussing in the interview on this subject could result in an interesting difference in the use of MCS in large and small organisations.

For Hypothesis 4b, *large organisations put greater emphasis on performance measurement models than small organisations* respondents state that a PM-model requires too many KPI's to be

effective. Expected is that the amount of KPI's is the variable which influences the emphasis on the use of PM-models or not. For further research, recommended is to use besides organisational size the amount of KPI's as selection criteria. The results will be more significant when large and small organisations with the same amount of KPI's are compared.

For hypothesis 5a, *in small organisations incentive pay is relatively higher than in large organisations*, recommended is to be more specific on the incentive pay of different departments of the organisation. Also, the observed phenomenon that in large organisations payment is more formalised than in small organisations is interesting for further research.

For hypothesis 8, *large organisations are more bureaucratic than small organisations*, recommended is to research the differences kinds of bureaucracy and the use of it in large and small organisations.

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Appendix I Sampling method

The list of 300 Dutch organisations that are suitable for this study is created by Malmi and Sandelin. This population is based on the databases AMADEUS and Orbis, which generates a final list of about 300 Dutch organisations in the sectors manufacturing, service and trade. The sampling method of Malmi and Sandelin is described below and overviewed in table 6.

Because AMADEUS and Orbis are worldwide databases, with respectively about 16 million and 75 million organisations included, filters of AMADEUS en Orbis are used to come to the final list of 300 organisations. The base of the population is all the organisations of the database of March 2011. The first filter is that the organisation should be active. Second filter is selecting on legal form. Public and private organisations are included. Third filter is the region the regions Austria, Belgium, Denmark, Finland, Germany, Italy, Netherlands, Norway, Sweden and United Kingdom are included in the population. The fourth criterion is the amount of employees. Malmi and Sandelin defined 250 employees as the minimum amount of employees for a large organisation. The fifth and last filter is the criterion of ultimate owner. This means that 50,01% of the shares must be held by the organisation. The reason for this criterion is to exclude subsidiaries of the same corporation from the basic population. The limitation of this last criterion is that corporations with subsidiaries in many countries (for example IKEA) are excluded of the list. These filters result in a list of 9884 European organisations which are suitable for the research. Based on the country code the final population is composed. Using the NACE-codes of the organisations results in the distinction between manufacturing, trade and service organisations.

Table 6 Filter criteria large organisations

Data update	8546	
Username	Aalto_University-40	
Export date	18/03/2011	
1	Status: Active	61.781.023
2	Public/Private/Branch: AG/SA/SPA/Public/NV/OYJ/ASA/KK etc., GmbH/SARL/SRL/Private/BV/OY/AS/YK etc., Other legal forms, US industrial companies, Non-European industrial companies, European industrial companies, Banks, Insurance companies	80.932.882
3	World region/Country/Region in country: Austria, Belgium, Denmark, Finland, Germany, Italy, Netherlands, Norway, Sweden, United Kingdom	16.925.925
4	Number of employees: 2010, 2009, min=250, for at least one of the selected periods	183.491
5	Ultimate Owner: Def. of the UO: min. path of 50.01%, known or unknown shareh., closest quoted company in the path leading to the Ultimate Owner (if any); GUO and DUO	897.009

Source: Malmi and Sandelin

Appendix II Questionnaire

EFFECTIVE

MANAGEMENT AND CONTROL SYSTEMS

Confidential International Survey Research
2010-2011

Questionnaire

PURPOSE OF THE RESEARCH

This interview contributes to an international research project that seeks to understand what kind of management control arrangements exist, what arrangements are effective and in what kind of settings. This holistic approach to management control is addressed in this questionnaire. The questionnaire is structured as follows:

- Section A: Strategic planning
- Section B: Short-term planning
- Section C: Performance measurement and evaluation
- Section D: Rewards and compensation
- Section E: Organizational structure and management processes
- Section F: Organization culture and values
- Section G: Organization and environment

KEY TERMS

SBU refers to the strategic business unit or autonomous/standalone firm which you are part of.

SBU Top Management refers to the top two levels in the SBU as a whole (e.g. CEO, CFO, COO and other personnel on the executive management team).

Subordinates refer to the direct reports of the Top Management team that typically are responsible for a business unit, department, profit centre, or cost centre performance.

ANSWERING PERSPECTIVE

The questions are to be answered from the perspective of the **Top Management team** of a strategic business unit (SBU) or autonomous/standalone firm, but **not** from the perspective of management of a head/corporate office of a group of firms.

Questions mainly focus on SBU Top Management – subordinate relationships. It is acceptable to focus on those managers who run the major business functions and have large number of subordinates of their own. This means that support and administrative managers can be excluded if necessary.

ANSWERING TECHNIQUE

→ Most questions are asked in the form of scales (e.g. 1-7). For these questions, please circle the single number that reflects your SBU practice.

→ Some questions are asked in the form of alternatives followed by boxes. For these questions, please check the box next to the relevant alternative. If there are more than one column of boxes, please check one alternative in each column.

There are no right or wrong responses. Not applicable (N/A) is always an option as well.

Please start here:

How many years have you worked for your current SBU? _____

What is title of your position? _____

What is your highest degree? _____

Section A. Strategic Planning Content and Process

What was your field of study? _____

A1. Please indicate how many years is the strategic planning period in your SBU. (if 9≤, ask for exact number)

1 2 3 4 5 6 7 8 9≤ years

A2. Please indicate how much weight your SBU's strategic planning puts on specifying...

	Not at all							Very significantly						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
objectives														
ways of creating competitive advantage														
programs and resources														

Please indicate what comes first, second, third and fourth in your strategic planning process. Please number 1.-4. or mark N/A, if an alternative does not fall in the domain of your strategic planning.

_____ strategies _____ resources _____ core competencies _____ objectives

A3. Please indicate to what extent your SBU's strategic planning produces ends and means that are:

	ENDS							MEANS						
	Not at all							Very high						
								Not at all						
								Very high						
Qualitative (e.g., vision, strategic intent, new markets, new technologies)	1	2	3	4	5	6	7							
Quantitative (e.g. EVA, ROCE, Turnover, market share, brand value)	1	2	3	4	5	6	7							
Detailed (e.g. it is clearly outlined what to aim at or how to proceed)	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Accurate (e.g. achievement / implementation can be determined with confidence)	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Documented (i.e. written down)	1	2	3	4	5	6	7	1	2	3	4	5	6	7

A4. Please indicate how often your SBU's strategic ends and means are reviewed and revised. (Please check one box in each column)

	ENDS		MEANS	
	Review	Revise	Review	Revise
Monthly				
Quarterly				
Three times a year				
Twice a year				
Once a year				
Every second year				
Every third year or less frequently				

A5. Please indicate who participates in the formation of your SBU's strategic ends and means (Please check one box in each column)

	ENDS	MEANS
Top Management of SBU with corporate management		
Only Top Management of the SBU		
Only SBU management, including one level of managers below SBU top mgt		
Only SBU management, including two levels of managers below SBU top mgt		
More than two levels of managers below SBU top mgt		
Please also check here if support functions are participating		

A6. How important is strategic planning in guiding and directing subordinate behaviour? Not at all 1 2 3 4 5 6 7 Very important

Section B. Short-term Planning Content and Process

B1. Please indicate how strategic ends and means are translated into **short-term action plans** in your SBU. (Please check one box)

Action plans are decided at the top and given to lower level to be implemented	<input type="checkbox"/>
Important areas of action are defined at the top and subordinates are required to develop specific action plans	<input type="checkbox"/>
Action plans arise in intensive negotiations within planning guidelines given from the top	<input type="checkbox"/>
Action plans are based on subordinates' interpretations of how to affect upper level strategic objectives	<input type="checkbox"/>
Subordinates autonomously determine actions within strategic themes along the business	<input type="checkbox"/>

B2. Please indicate how short-term targets are set in your SBU (Please check one box in each column)

	ENDS	MEANS
Top Management sets targets and passes them to subordinates	<input type="checkbox"/>	<input type="checkbox"/>
Top Management sets targets, but revises them in negotiations with subordinates	<input type="checkbox"/>	<input type="checkbox"/>
Targets setting is quite long, iterative negotiation process between organizational levels	<input type="checkbox"/>	<input type="checkbox"/>
Subordinates set autonomously targets, but they are subject to Top Management acceptance	<input type="checkbox"/>	<input type="checkbox"/>
Subordinates set targets autonomously with little, if any, management involvement	<input type="checkbox"/>	<input type="checkbox"/>

B3. Please indicate how often targets, action plans and resource commitments are updated in your SBU

	TARGETED PERFORMANCE	ACTION PLANS	RESOURCE COMMITMENTS
Almost continuously (i.e. weekly basis)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monthly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bimonthly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quarterly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Three times a year	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biannually	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Annually	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B4. Please indicate how important it is that subordinates' short-term plans contain information about...

	Not at all				Very important		
	1	2	3	4	5	6	7
progress schedule of activities, projects, programs	1	2	3	4	5	6	7
coordinating activities within and/or across the units	1	2	3	4	5	6	7
forming cross-functional projects and project teams	1	2	3	4	5	6	7
financial resource requirements	1	2	3	4	5	6	7
human resource requirements	1	2	3	4	5	6	7
skills and competency requirements	1	2	3	4	5	6	7
IT-resource requirements	1	2	3	4	5	6	7

B5. How important is short-term planning in guiding and directing subordinate behaviour? Not at all 1 2 3 4 5 6 7 Very important

Section C. Performance Measurement and Evaluation

C1. Please indicate how SBU Top Management seeks to control OPEX and CAPEX of the units managed by subordinates.

Expenses are...

set fixed (e.g. fixed annual budget)

set relatively fixed (e.g. additional budgets are rare but possible)

set relatively flexible (e.g. additional budgets are common)

flexible, they scale down / up with output volume (e.g. unit costs are monitored, €/unit)

flexible, they scale down / up with sales revenue (costs are % of sales, ROI, ROCE)

determined case by case

OPEX	CAPEX

C2. Does SBU Top Management use budgetary systems to guide and control subordinate behaviour (e.g. budgets, forecasts and variance analysis)? ____ Yes ____ No

Does SBU Top Management use performance measurement systems to guide and control subordinate behaviour (e.g. financial and non-financial measures)? ____ Yes ____ No

Please answer only to columns to which you answered **Yes** above. To what extent SBU Top Management use budgets and/or performance measurement systems for the following:

	Budgetary Systems							Perf. Measurement Systems						
	Not at all			Very extent		high		Not at all			Very extent		high	
Identify critical performance variables (i.e. factors indicating progress towards strategic objectives)	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Set targets for critical performance variables	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Monitor progress towards and to correct deviations from preset performance targets	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Provide a recurring and frequent agenda for Top Management activities	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Provide a recurring and frequent agenda for subordinate activities	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Enable continual challenge of underlying data, assumptions and action plans with subordinates	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Focus attention on strategic uncertainties (i.e. threats and opportunities)	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Encourage and facilitate dialogue and information sharing with subordinates	1	2	3	4	5	6	7	1	2	3	4	5	6	7

C3. Please indicate to what extent SBU Top Management bases subordinates' performance evaluation on:

	Not at all			Very extent		high	
Financial measures	1	2	3	4	5	6	7
Non-financial measures	1	2	3	4	5	6	7
Detailed measures (e.g. budget line item, input volume, time, quality etc.)	1	2	3	4	5	6	7
Aggregate, summary measures (e.g. EBIT, Profit, ROI, ROCE, market share, brand value, brand image, total customer satisfaction, etc.)	1	2	3	4	5	6	7
Achievements in leadership behaviour	1	2	3	4	5	6	7
Actions and activities taken	1	2	3	4	5	6	7

Individual effort 1 2 3 4 5 6 7

For how many performance measures does SBU Top Management hold subordinates accountable?

C4. Please indicate to what extent SBU Top Management evaluates subordinates' performance in relation to...

	Not at all				Very extent			high
Absolute, preset numbers (euros, time, %)	1	2	3	4	5	6	7	
Internal benchmarks (league table position)	1	2	3	4	5	6	7	
External benchmarks (league table position)	1	2	3	4	5	6	7	
Past performance (trend-based evaluation)	1	2	3	4	5	6	7	

C5. Please indicate how important the following purposes of performance evaluation are in your SBU:

	Not at all				Very important		
Provide feedback for learning and continuous improvement	1	2	3	4	5	6	7
Determine subordinate compensation	1	2	3	4	5	6	7
Direct subordinates' attention to important issues	1	2	3	4	5	6	7

C6. Please indicate how often **formalized** performance evaluations (for determining compensation or providing individual feedback) are conducted in your SBU. (Please check one box in each column)

	LEADERSHIP PERFORMANCE	BUSINESS PERFORMANCE
Monthly	<input type="checkbox"/>	<input type="checkbox"/>
Quarterly	<input type="checkbox"/>	<input type="checkbox"/>
Three times a year	<input type="checkbox"/>	<input type="checkbox"/>
Twice a year	<input type="checkbox"/>	<input type="checkbox"/>
Once a year	<input type="checkbox"/>	<input type="checkbox"/>
Less frequently than once a year	<input type="checkbox"/>	<input type="checkbox"/>
Not applicable (N/A)	<input type="checkbox"/>	<input type="checkbox"/>

C7. How important is performance measurement and evaluation in guiding and directing subordinate behaviour?

	Not at all			Very important			
	1	2	3	4	5	6	7

Section D. Rewards and Compensation

D1. a) Please name the most important performance measures for determining subordinates' financial rewards

b) Please indicate weight (%) of each measure in rewarding formula

c) Please indicate the level at which performance measure is calculated

C= Corporate

S = SBU

B = BU

P = Personal (leadership)

Measure 1: _____

Measure 2: _____

Measure 3: _____

Measure 4: _____

Measure 5: _____

D2. Please indicate to what extent the following statements describe the way of evaluating and compensating subordinates' performance in your SBU

We determine weights of performance measures as the evaluation takes place

Not at all Very high extent

1 2 3 4 5 6 7

We evaluate performance on the basis of quantitative metrics

1 2 3 4 5 6 7

We adjust the amount of bonus based on actual circumstances

1 2 3 4 5 6 7

We use predetermined criteria in evaluation and rewarding

1 2 3 4 5 6 7

D3. Please indicate to what extent...

Not at all Very high extent

Performance-pay contracts are customized for each subordinate

1 2 3 4 5 6 7

Financial rewards are shared evenly to subordinates (e.g. profit sharing)

1 2 3 4 5 6 7

Financial rewards increase as subordinate's performance exceeds targets

1 2 3 4 5 6 7

Rewarding is financial (bonuses, share-based rewards)

1 2 3 4 5 6 7

Rewarding is non-financial (e.g. recognition, promotion, training)

1 2 3 4 5 6 7

D4. How important are the following purposes of financial and non-financial rewarding in your SBU:

Financial

Not at all

Very important

Non-financial

Not at all

Very important

Committing subordinates

1 2 3 4 5 6 7

1 2 3 4 5 6 7

Motivating subordinates

1 2 3 4 5 6 7

1 2 3 4 5 6 7

Directing subordinates' attention

1 2 3 4 5 6 7

1 2 3 4 5 6 7

D5. Significance of rewarding

Percent (%) of annual salary

How many percent of their total annual income can subordinates receive as performance-based bonuses in your SBU?

How important are rewards and compensation in guiding and directing subordinate behaviour?

Not at all Very important

1 2 3 4 5 6 7

Section E. Organisational Structure and Management Processes

E1. Please indicate how often different types of management groups convene (Please check one box in each column)

	Mgt groups within the SBU and BUs							Mgt groups across SBU and BU boundaries						
Weekly														
Fortnightly														
Monthly														
Bimonthly														
Quarterly														
	Dynamic			Stable				Dynamic			Stable			
To what extent are management group structures stable? (i.e. the same people form always the mgt group = stable)	1	2	3	4	5	6	7	1	2	3	4	5	6	7
	Narrow			Broad				Narrow			Broad			
How broadly based are management groups? (besides business unit managers, operative middle-level managers and/or experts participate = broad)	1	2	3	4	5	6	7	1	2	3	4	5	6	7

E2. Please indicate to what extent subordinates...

	Not at all							Very extent							high						
have multiple reporting lines	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
assume roles besides managing a unit (e.g. heading quality development)	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
receive relevant information through informal discussions	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
receive relevant information through management information system	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
have free access to broad-scope information regarding the performance of business units and whole company	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7

E3. Compare the **degree of influence** that SBU Top Management has to that of subordinates on the following decisions.

		SBU top mgt has all influence							equal							Subordinates have all influence						
Establishment of new businesses	n/a	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Development of new products/ services	n/a	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Extension/ enlargement investments	n/a	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Replacement investments	n/a	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Project/program financing	n/a	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Product/ service pricing	n/a	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Distribution channel choice	n/a	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Choosing and contracting customers	n/a	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Choosing and contracting suppliers	n/a	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Prioritizing activities	n/a	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7

Compensation policy and rewards within the BU	n/a	1	2	3	4	5	6	7
Hiring and firing employees within the BU	n/a	1	2	3	4	5	6	7
Work process arrangements within the BU	n/a	1	2	3	4	5	6	7

E4. In guiding and directing subordinates' behaviour, to what extent does SBU Top Management...

	Not at all				Very extent		high
use company wide codes of conduct or similar statements?	1	2	3	4	5	6	7
review plans before action?	1	2	3	4	5	6	7
employ written authorization levels and decision rules?	1	2	3	4	5	6	7
make the sanctions of unethical business conduct known for subordinates (e.g. by written statements)?	1	2	3	4	5	6	7
employ written guidelines that stipulate specific areas for, or limits on, opportunity search and experimentation?	1	2	3	4	5	6	7
actively communicate in writing the risks and activities to be avoided by subordinates?	1	2	3	4	5	6	7
apply sanctions to subordinates who engage in risks outside organisational policy, irrespective of the outcome?	1	2	3	4	5	6	7
specify minimum requirements (e.g. ROI, implementation times) for business opportunities?	1	2	3	4	5	6	7

E5. How important are the following in guiding and directing subordinate behaviour?

	Not at all				Very important		
management processes	1	2	3	4	5	6	7
organization design	1	2	3	4	5	6	7
rules and procedures	1	2	3	4	5	6	7

Section F. Organization Culture and Values

F1. Please indicate to what extent...

	Not at all				Very extent		high
are promotions made from within the organization?	1	2	3	4	5	6	7
is subordinate rotation between various positions seen as an important precondition for promotion?	1	2	3	4	5	6	7
are skills and technical competence of importance when recruiting for managerial positions?	1	2	3	4	5	6	7
are psychological tests and values of importance when recruiting for managerial positions?	1	2	3	4	5	6	7
is leadership-based performance connected to significant rewards (e.g. promotions, equity-based rewards)?	1	2	3	4	5	6	7
are training and development processes used to reinforce SBU objectives, expectations and norms?	1	2	3	4	5	6	7
are social events and functions used to develop and maintain commitment to the SBU?	1	2	3	4	5	6	7
are mentoring, orientation and induction programs used to acclimatise new managers to acceptable behaviours, routines and norms?	1	2	3	4	5	6	7

F2. Please indicate to what extent...

	Not at all				Very extent		high
are the values and purpose of the SBU codified in formal documents? (e.g. value statements, credos, statements of purpose)	1	2	3	4	5	6	7
are formal statements of values used to commit subordinates to the long-term objectives of SBU?	1	2	3	4	5	6	7
are formal statements of values used to motivate subordinates in sharing responsibility?	1	2	3	4	5	6	7
do you count on value and mission statements guiding actions of your subordinates?	1	2	3	4	5	6	7
is the direction of the SBU codified in formal documents? (e.g. vision statement, statement of strategic intent)	1	2	3	4	5	6	7
is the vision statement so concise that your subordinates can remember it all the time?	1	2	3	4	5	6	7
is the vision statement so specific that it guides your subordinates to say 'no' for some business opportunities?	1	2	3	4	5	6	7
do you count on the vision statement guiding actions of your subordinates?	1	2	3	4	5	6	7

F3. How important are values and organization culture in guiding and directing subordinate behaviour?

Not at all				Very important			
1	2	3	4	5	6	7	

Section G. Organization and Environment

G1. Please indicate to what extent you agree with the following:

	Not at all					Very extent	high
We compete by the lowest price	1	2	3	4	5	6	7
We compete by rapid product/service introductions	1	2	3	4	5	6	7
We compete by offering solutions that lower customers' costs	1	2	3	4	5	6	7
We compete by providing superior use experience, because many products and services complement our offerings	1	2	3	4	5	6	7
Our success depends on market share of our product/service	1	2	3	4	5	6	7
Our success depends on customer share (share of customer wallet)	1	2	3	4	5	6	7
Our success depends on product/ service novelty	1	2	3	4	5	6	7
Our success depends on the number of complementary product/service providers	1	2	3	4	5	6	7
Our success is driven by process innovations	1	2	3	4	5	6	7
Our success is driven by product innovations	1	2	3	4	5	6	7
Our success is driven by thorough customer and industry understanding	1	2	3	4	5	6	7
Our success is driven by open collaboration with various organizations	1	2	3	4	5	6	7

G2. Please indicate how important the following performance areas are for your SBU right now:

	Not at all				Very important		
Financial results (e.g. annual earnings, return on assets, cost reduction)	1	2	3	4	5	6	7
Customer relations (e.g. market share, customer satisfaction, customer retention)	1	2	3	4	5	6	7
Employee relations (e.g. employee satisfaction, turnover, workforce capabilities)	1	2	3	4	5	6	7
Operational performance (e.g. productivity, safety, cycle-time)	1	2	3	4	5	6	7
Quality (e.g. defect rates, quality awards)	1	2	3	4	5	6	7
Alliances (e.g. joint marketing or product design, joint ventures, open technology platforms)	1	2	3	4	5	6	7
Supplier relations (e.g. on-time delivery, input into product/service design, supplier assistance)	1	2	3	4	5	6	7
Environmental performance (e.g. government citations, environmental compliance or certification)	1	2	3	4	5	6	7
Innovation (new product/ service development success, process innovation, business concept innovation)	1	2	3	4	5	6	7
Community (e.g. public image, community involvement)	1	2	3	4	5	6	7
Lobbying (e.g. local, national, EU authorities)	1	2	3	4	5	6	7

G3. Please indicate to what extent you agree with the statement.*The entire package of management control systems helps SBU Top Management to...*

	Not at all					Very high extent	
set challenging/aggressive goals to subordinates	1	2	3	4	5	6	7
issue creative challenges to subordinates instead of narrowly defining tasks	1	2	3	4	5	6	7
reward or punish subordinates based on rigorous measurement of business performance	1	2	3	4	5	6	7
hold subordinates accountable for their performance	1	2	3	4	5	6	7
give subordinates sufficient autonomy to do their jobs well	1	2	3	4	5	6	7
push decisions down to the lowest appropriate level	1	2	3	4	5	6	7
give subordinates ready access to information that they need	1	2	3	4	5	6	7
make subordinates to base their decisions on facts and analysis, not politics	1	2	3	4	5	6	7

G4. Please indicate to what extent you agree with the following statements.*The SBU's entire package of management control systems...*

	Not at all					Very high extent	
works coherently to support the overall objectives of this organisation	1	2	3	4	5	6	7
causes us to waste resources on unproductive activities	1	2	3	4	5	6	7
gives people conflicting objectives so that they end up working at cross-purposes	1	2	3	4	5	6	7
encourages people to challenge outmoded traditions/practices/sacred cows	1	2	3	4	5	6	7
is flexible enough to allow us to respond quickly to changes in our markets	1	2	3	4	5	6	7
evolves rapidly in response to shifts in our business priorities	1	2	3	4	5	6	7

G5. Please indicate to what extent you agree with the following statements.*Our SBU succeeds because we...*

	Not at all					Very high extent	
are able to explore and develop new technologies	1	2	3	4	5	6	7
are able to create innovative products/services	1	2	3	4	5	6	7
find creative solutions to satisfy our customers' needs	1	2	3	4	5	6	7
find new customer segments and needs	1	2	3	4	5	6	7
increase the level of automation in our operations	1	2	3	4	5	6	7
fine-tune our offerings in order to keep our current customers satisfied	1	2	3	4	5	6	7
deepen and create long-lasting customer relationships	1	2	3	4	5	6	7
collaborate extensively with different organizations	1	2	3	4	5	6	7

G6. Please fill in the following financial and non-financial information

Annual sales	2010	_____	M€	2009	_____	M€
Total assets	2010	_____	M€	2009	_____	M€
Operating profit (EBIT)	2010	_____	M€	2009	_____	M€

How does your organization perform in relation to industry average?
(ROI in relation to industry average)

Well Below	Industry average					Well Above
1	2	3	4	5	6	7

G7. This question is about competitive and operating environment of your SBU. Over the past three years:
How many changes have occurred that have had a **material impact** on the nature of your business?
How predictable or unpredictable have changes in the external environment been?

	i) Number of changes							ii) Predictability						
	Very few changes			Very many changes				Very unpredictable			Very predictable			
<i>Customers</i> (e.g. levels of demand, customer requirements)	1	2	3	4	5	6	7	1	2	3	4	5	6	7
<i>Suppliers</i> (e.g. markets for key inputs, quality of resources)	1	2	3	4	5	6	7	1	2	3	4	5	6	7
<i>Competitors</i> (e.g. competitors entering, leaving, tactics/strategies)	1	2	3	4	5	6	7	1	2	3	4	5	6	7
<i>Technological</i> (e.g. R&D advances, process innovations)	1	2	3	4	5	6	7	1	2	3	4	5	6	7
<i>Regulatory</i> (e.g. new initiatives for laws, regulations)	1	2	3	4	5	6	7	1	2	3	4	5	6	7
<i>Economic</i> (e.g. interest and exchange rates)	1	2	3	4	5	6	7	1	2	3	4	5	6	7

G8. The following questions relate to the **complexity** and **hostility** of your external environment

	Very similar						Very diverse
How diverse are the product/service requirements of your customers to each other?	1	2	3	4	5	6	7
How diverse are the strategies and tactics of your key competitors to each other?	1	2	3	4	5	6	7
	Not intense at all						Very high intensity
How intense is the competition for your main products/services?	1	2	3	4	5	6	7
	Not difficult at all						Very high difficulty
How difficult is it to obtain the necessary inputs for your business?	1	2	3	4	5	6	7

G9. Please indicate which functions are fully controlled by your SBU, i.e. these functions are not part of shared resource pools with other SBUs in your organization. (check relevant boxes)

MAIN FUNCTIONS

Research and development (R&D)
Inbound logistics
Operations / production
Outbound logistics
Marketing and sales
After-sales service

SUPPORT FUNCTIONS

Information technology
Human resource management
Accounting and finance
Procurement

G10. SBU / DIVISION INFORMATION

What is the number of employees in your SBU? _____ employees

In how many countries does your SBU have operations? _____ countries

What is your SBU's main industry? _____

In which country is your parent company registered? _____

Is your SBU part of a publicly quoted company? _____ Yes _____ No

Who is the most significant owner of your organization? (Please tick one)

i. _____ Members of cooperative society v. _____ Venture capitalist(s)

ii. _____ Large institutional investors vi. _____ Families

iii. _____ Small individual investors vii. _____ Government

iv. _____ Municipalities viii. _____ Partners

Which accounting standards are your SBU's financial reports based on? _____ IFRS _____ US-GAAP
_____ Local GAAP _____ Other

Does your SBU comply with SOX (Sarbanes-Oxley Act)? _____ Yes _____ No _____ Partially

How many percent of your SBU's revenues are based on internal sales? _____ %

Has your SBU significantly changed competitive strategy over the past three years? _____ Yes _____ No

Has the management control system in your SBU gone through minor, major or no changes over the past three years? _____ Minor _____ Major _____ No chgs

If your SBU has had major changes, please specify in which area(s) of the management control system

- | | |
|------------------------------------|---|
| i. _____ Strategic planning | v. _____ Rewards and incentive systems |
| ii. _____ Short-term planning | vi. _____ Rules, procedures and policies |
| iii. _____ Performance measurement | vii. _____ Reporting relationships & management teams |
| iv. _____ Performance evaluation | viii. _____ Cultural control (values, vision, personal goals) |

G11. Please indicate which of the following alternatives best describes HQs impact on your SBU?

Corporate management is primarily interested in financial results of the SBU and thus, pays attention to achievement of financial targets. SBU has large autonomy in strategic planning.

Corporate management emphasizes, besides financial results of the SBU, specification of strategic targets and achievement of these targets. The SBU has mainly short-term planning autonomy.

Corporate management accepts strategic plans of and defines strategic and financial targets for the SBU. HQ sets targets case by case.

Corporate management actively participates in strategic planning of the SBU. Specification and achievement of strategic targets is emphasized even at the cost of financial targets.

G12. Please distribute 100 points to the following alternatives according to how SBU Top Management emphasize them in seeking to guide and direct subordinates' behavior.

Strategic and short-term planning, performance measurement and evaluation, and rewarding

Administrative structure (management groups, reporting lines, rules, procedures)

Organisation culture (mission, vision, values, etc.)

Autocratic command and direct control

Leading by own example

Participative coaching

TOTAL

100 points