



UNIVERSITY OF GOTHENBURG  
SCHOOL OF BUSINESS, ECONOMICS AND LAW

# The Complexity of Management Control

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- A case study of Volvo Trucks, Tuve Plant

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**School of Business, Economics & Law**

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## **ABSTRACT**

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**Title:** The Complexity of Management Control

**Background and Problem:** There have been multiple studies encouraging further research of management control systems as a package. These studies imply that there has been focus towards specific controls instead of how different controls affect each other and work as a package. Organizations might find that the controls work properly independent of each other, but if they not consider how the controls affect each other this could result in incorrect conclusions. It is especially hard to make management control work properly in large corporations where middle level managers face pressure from other parts of the corporation, which creates a complexity within their management control system. This thesis investigates how a management control system could be structured and identifies the main problem areas for a middle level management team.

**Aim of study:** The aim of this thesis was to expand the empirical knowledge about problems arising within a management control system. We conducted our research at a middle level management team to investigate the additional complexity within their management control system, which arise when being a part of an organization within a corporate group.

**Methodology:** This thesis is based on a case study in an organization, Tuve Plant, within a corporate group, Volvo Group. The empirical data was collected mainly through a qualitative approach, where one observation and three semi-structured interviews from parts of the middle level management team were conducted.

**Analysis and conclusion:** In this study four main problem areas were identified: the integration of the controls, the culture, the work with sorting out the right information and the amount of measures. There were also lack of knowledge and problems with the integration of the controls indicating that the management control systems were not being viewed as a package. To create a functional management control system this study highlights the importance of working with cultural control and information system. Cultural control since it has great impact on employee' behavior, affecting the acceptance of different changes, and information as it decreases the risk of misfits between the actual work and main targets affecting the whole system. If these controls are working properly we argue that the management control systems package will be improved since these controls support other controls. An important acknowledgement is that a middle level management team does not have the authority to make all decisions; we find that these restrictions increase the complexity of working with improvements in the management control system.

**Keywords:** Management Control, Management Accounting, Management Control System, Management Control Systems Package.

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# INTRODUCTION

## 1.1 Problem Background

Management control system (MCS) has several definitions. An old perspective focuses on performance measure, in which managers set targets, measure and compare the performance to these targets and if needed, they take actions to meet the goal. (Merchant & Van der Stede, 2007) Simons (2000) maintains that “effective managers rely on performance measurement and control systems to set direction, make strategic decisions, and achieve desired goals.” (p.3) Other authors use a broader perspective; they find that there are management controls that focus on employees’ behavior instead of performance measure. These measures are used to direct employees to perform in the best interest for the organization. In this view, MCS includes all devices and systems that influence the behavior. (Merchant & Van der Stede, 2007; Malmi & Brown, 2008) Malmi & Brown (2008) consider a strategic control as part of their management control systems package (MCSP) which Merchant & Van der Stede exclude. MCSP includes all systems and devices that aim to create a better decision making, with rational choices that direct employee’ behavior in the desired direction (Chenhall, 2003; Merchant & Van der Stede, 2007). To facilitate the decision making and direct employee’ behavior the goals must be clear and the controls specific (Merchant & Van der Stede, 2007). To narrow peoples’ attention and focus are essential to successfully implement strategy in large and complex corporations (Simon, 2005).

An acknowledge mistake organizations often do is that they implement controls based on different logics, presented from different interest groups at different times; this results in a MCSP with mixed signals of control (Malmi & Brown, 2008). When organizations structure their MCSP it is important to understand how different controls within the MCSP affect each other (Merchant & Van der Stede, 2007; Malmi & Brown, 2008).

The challenge in designing a MCS is to predict how employees react on different MCSs and different controls. This means that there is no single MCS that suite every organization and all organizations within a corporate group. Difficulties increase in large corporations because different MCSs are required at different levels of organization. (Malmi & Brown, 2008) Particularly exposed to complex MCSs and incompatibilities are managers at a middle level in organizations. Middle level managers face pressure since they work with balancing controls that are forced or initiated from other parts of the corporate group. (Siverbo & Åkesson, 2009)

## 1.2 Problem Discussion

There have been multiple studies encouraging further research of MCSs as a package as they imply that there has been focus towards specific controls instead of how the controls affect each other and work as a package (Chenhall, 2003; Malmi & Brown, 2007; Otley, 1999; Sandelin, 2008). Without this view of controls as a package it could result in incorrect and unclear findings which could result in conflicting conclusions (Chenhall, 2003), if organizations find that the controls work properly independent of each other they can make incorrect conclusions if they not fit well together (Ferriera & Otley, 2009). Malmi & Brown, Otley and Merchant & Van der Stede have all developed frameworks to facilitate empirical research when investigating the complexity of MCS.

Previous research argue that it is hard to make management control work properly, especially in large companies where middle level managers face pressure from other parts of the corporation, which creates a complexity within their MCS (Malmi & Brown, 2007; Siverbo & Åkesson, 2009). Since the middle level managers feel pressure from their superiors they prioritize their directions when choosing which controls to focus on (Ferriera & Otley, 2009). Sandelin (2008) argues; working with MCSs as a package will be of support when identifying the managerial challenges of balancing the different controls.

We will use Malmi & Browns' model MCSs as a package to facilitate when investigating which controls are being used, how they are structured in a MCS, and how the middle level managers work to handle the complexity within their MCS. We have chosen middle level managers as they are especially exposed to multiple controls, both controls that they have initiated and controls which are set by higher instances in the corporate group, which creates an increased complexity of management control. We find this interesting and want to deepen our understanding about this topic, by investigating how a MCS could be structured in an organization within a corporate group, what kinds of problems arise and how a middle management team work to handle these difficulties. To answer these questions we set our research question:

***What are the main problem areas within a management control system for a middle level management team within a corporate group in the automobile industry?***

### **1.3 Purpose**

The purpose of this thesis is to expand and deepen the empirical knowledge about problems arising within a MCS in a specific case. We chose to look at a middle level management team to investigate the additional complexity within the MCS, which arise when being a part of an organization within a corporate group.

### **1.4 Definitions**

#### **1.4.1 Controls & Management Control System**

All systems, rules, practices, values and other activities which direct employee' behavior and/or create decision support should be called controls. "If these are complete systems, as opposed to a single rule (for example not to travel in business class), then they should be called MCS." (Malmi & Brown, 2008, p.290)

#### **1.4.2 Management Control Systems Package**

"The term 'package' is employed because in most contemporary organizations there are a number of MCSs. If all those were designed and coordinated intentionally, we might call the whole system a MCS. However, the concept of package points to the fact that different systems are often introduced by different interest groups at different times, so the controls in their entirety should not be defined holistically as a single system, but instead as a package of systems." (Malmi & Brown, 2008, p. 291)

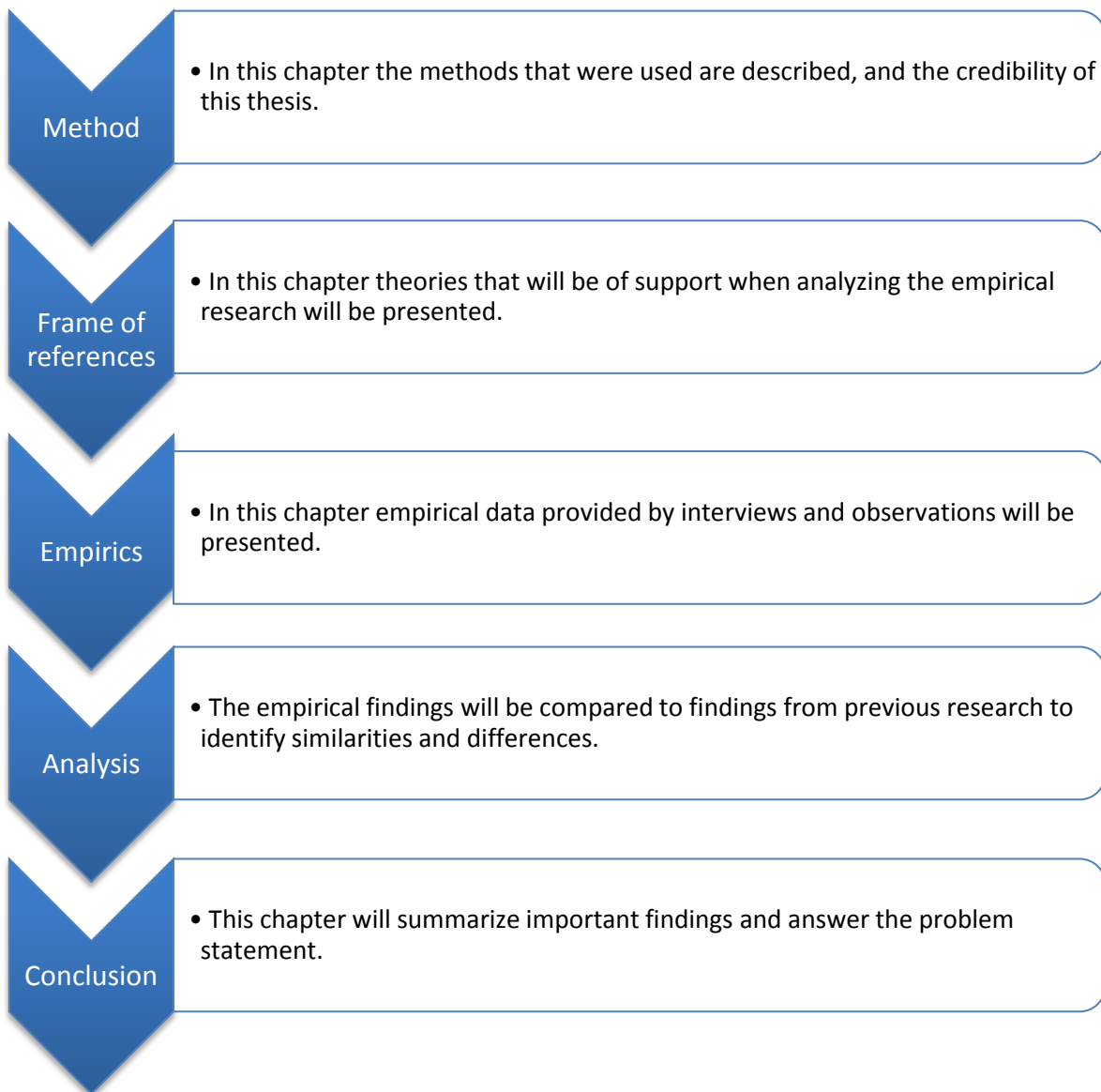
### 1.4.3 Middle Level Management Team & Manager

Our definition of a middle level management team is the management team in an organization within a corporate group. A manager refers as follows: a single person in the management team.

### 1.5 Delimitations

We discussed working with multiple organizations from different corporations in order to be able to compare our observations, but due to the time limit we decided to work with only one company to be able to get a deeper insight into the MCS within this specific company. Further, also due to the time limit, we focused on a single level in the organization, the middle level management team, to get their perspective on the different forms of controls, both internally and externally initiated.

### 1.6 Disposition



## **METHODOLOGY**

### **2.1 Research Approach**

We have chosen the qualitative perspective for a method of our analysis; according to Holme & Solvang (1997), this perspective makes it easier to come closer to the object. Backman (2008) explains how this perspective helps to focus on the individuals' interpretation and perception of reality. This provides the opportunity to see the situation from the respondents' perspective and get a deeper understanding of the whole situation (Holme & Solvang, 1997). This was an appropriate method as we strived to get a deeper understanding of the MCS in practice and to identify individual thoughts and perspectives about the subject.

An advocated approach in the qualitative perspective is case studies (Backman, 2008). According to Strauss & Corbin (1990), one reason for doing a qualitative research is to analyze situations in which a person's experience is important to get an understanding of an unexplored area. We chose a qualitative case study because few empirical studies handle the complexity of MCS, whereas a study of personal experiences contributes to a deeper understanding of MCS. Criticism of a single case study focuses on the risk of generalizing unique findings characteristic of one organization (Yin, 2006). However, this study will focus on one organization to get deeper knowledge and experience within the whole area. When the purpose is to describe or explain complex organizations or systems, Backman (2008) argues, case studies are the appropriate method. This thesis strives to get a deeper understanding of management control in a complex environment, and a case study has been chosen as a method appropriate for its aim.

In our frame of references, Malmi & Brown's study of MCSP is surveyed to give an overview of the control mechanism to simplify the complexity for the reader. Malmi and Brown (2008) developed the MCSP as an analytical framework to facilitate in empirical studies.

### **2.2 Selection**

When selecting a case organization, we were looking for a middle level management team in an organization who face control mechanism initiated or forced from other parts of the corporate group to investigate the additional complexity within the MCS, which arise when being a part of an organization within a corporate group. To be able to do this, we interviewed three members of the middle level management team, the Plant Manager, Production Manager and Financial Manager, to understand what kinds of problems arise when controls are initiated externally in the group and internally within the organization.

One of the authors, Sandra Jakobsson, worked at Tuve Plant, a major plant within Volvo Trucks but a small part of the Volvo Group, during the summers of 2010 and 2011 with different internal projects regarding the area of management control. Since Tuve Plant is part of a large organization and face controls from different directions it creates a complexity within their MCS, making it an interesting object for our thesis. We chose respondents from the middle level management team as they are responsible for the MCS at Tuve Plant, and had already identified problems within the area.



## 2.3 Data Collection Design

In our frame of references we used academic papers, professional journals and textbooks as references. We used databases, such as Web of Science and Scopus, to find relevant papers for our research. According to Blumberg (2011), secondary data is information that has been already collected and recorded, such as annual reports for public companies, encyclopedia and business brochures. Public and non public documents from Volvo were also used in this research as empirical findings; according to Blumberg (2011), these documents are important sources in a business research.

Travers (2001) distinguishes five methods applied in qualitative research: observations, interviews, ethnographic fieldwork, discourse analysis and textual analysis. In this research interviews and observations were used as methods to get a deeper understanding of the complex environment and these findings are the main sources for the empirical study.

### 2.3.1 Interview Design

Holme & Solvang (1997) highlight difficulties related to qualitative and quantitative interviews. In the case of the quantitative interview, everyone gets the same instructions, but the problem is that respondents perceive information differently (Holme & Solvang, 1997). Bryman & Bell (2011) argue that interview is the most frequent method in qualitative research as the flexibility of interviews makes this method attractive. Another strength with the qualitative interview is that situationally the interview is close to a real-life conversation (Holme & Solvang, 1997). There are two major approaches in qualitative interviewing, unstructured and semi-structured interviewing. An unstructured interview is usually based on a single question allowing the respondent to respond freely around a topic. We worked with semi-structured interviews, which according to Bryman & Bell (2011), differs in the way that the researcher usually works with a list of questions on a fairly specific topic. Two focus areas that were covered in our research were to identify used controls and individuals' thoughts about how the MCS work within the given organization. Semi-structured interviews allowed us to vary our questions to create a mix between specificity and openness. The interview questions were formulated deductively according to Pastel & Davidson (2011).

During the interviews we chose not to record the conversations as we wanted our respondents to feel as comfortable as possible. To handle the uncertainty with not recording one asked questions and the other took notes and immediately after the interviews we discussed and summarized the material to make sure that we had the same impression and made sure that we had all the material. We were also able to contact the respondents if questions occurred and the respondents had the opportunity to read the empirical findings to clarify or correct any misunderstandings.

### 2.3.2 Observation Design

Observations put a lot of pressure on the observer who must take into account the nature of the observed environment (Holme & Solvang, 1997). Observations can occur in different forms; thus Bryman & Bell (2011) outline a method known as structured observations. This method implies systematical observations of individuals' behavior according to a coding schedule. One observation was made in this thesis, less structured than the one presented in

Bryman & Bell (2011). There is a distinction between an open and hidden observation; if it is open, participations accept that we act as observers. A hidden observation implies that participations do not know that they are being observed; this method has a strength in the way that participations act naturally, but in some cases it may present ethical problems. (Holme & Solvang, 1997)

The observation was open as we participated in a meeting between one of the respondents from Tuve Plant and a consultant from a consultant company. The meeting was an initiative from the plant aiming to improve some parts of their MCS. They talked freely about how they should work together and their goal with the partnership. We were invited to participate in the meeting on their initiative and acceptance, playing the role of an open observer. During the observation we did not take part in the conversation; we listened and took notes about the discussion.

## 2.4 Credibility

To increase the credibility of our study we worked to make it as valid as possible. There are several methods how to make a study valid; one method distinguishes internal validity and external validity. Internal validity can be interpreted by the researchers as a good match between the theoretical framework developed and their observations. One question about external validity is whether researchers' findings could be generalized in theory or not, where focus is on the quality of the theoretical conclusions. (Bryman & Bell, 2011) In this thesis it is important to understand that the question about external validity does not regard generalization of population; instead it regards a certain area where focus is on the quality of the theoretical conclusions.

To make the interviews credible we used relevant theories when we constructed the questions; further a comparison to other interview guides from similar case studies was made. The interviews were semi-structured, and the guide can be found in Appendix I so that other researchers can use it to make similar research. As mentioned above, we did not record the interviews, which created uncertainty because we could not listen to them again. To handle this one asked questions and the other took notes; the reason for this approach was to make the respondents feel more comfortable to make them talk freely and give honest answers to our questions. Immediately after the interviews we discussed and summarized the material to make sure that we had similar impressions and collected enough material. We were also able to contact the respondents if questions occurred, and the respondents had the opportunity to read about our findings, when needed, clarify or correct any misunderstandings. Another aspect which made the interviews more credible was the fact that Volvo Group recognized that the management control was not as good as it could be, and therefore Tuve Plant decided to reorganize parts of their MCS. This made it easier for managers to speak more freely about topics that they were dissatisfied with.

Due to the time limit, we only interviewed one level in the organization, and with their opinions and thoughts we cannot make generalizations about the organization. We freely chose our respondents, which made our interviews more credible as the managers could not

promote employees according to their preferences. We only made interviews with managers of the same level, which was our deliberate choice to get their perspective of our study.

Sandra Jakobsson's previous experience from working at Tuve Plant could have been expressed in different preconceptions affecting this thesis. To make this study more credible we did not use these thoughts in our study, instead we worked to only use this knowledge to create relevant questions and as support during the interviews.

## FRAME OF REFERENCES

*In this chapter we will present some theories, within the area of management control, which will be of support when trying to understand the problems and the complexity within the management control system. We will describe the purpose of management control, describe different reasons why some adoptions of new management technique does not turn out as good as expected, and present a model that shows the different areas of control.*

### 3.1 Management Control

The purpose of management control is to contribute to an increased probability that organizations strategic objectives will be achieved (Merchant & Van der Stede, 2007; Ax, Johansson & Kullvén, 2007). The MCS is considered to be tight if there is a high possibility that employees will act in the best interest for organizations objectives. There are many ways to affect tightness; it is important that organizations have knowledge about how controls are related to overall organizational objectives, and it is also important that the controls can be implemented effectively. Multiple controls are often used, and controls either strengthen or overlap each other in creating a tighter control over all factors critical to organizational achievements. To generate a tight control, different controls – result, action and personnel/culture – obey different criteria. (Merchant & Van der Stede, 2007)

“What gets measured gets done” (Meyer, 1994, p.96) is a widely spread expression explaining the importance of working with the most efficient objectives and measures. According to Otley (2003), “What gets measured usually does get done; the problem is often that what is not measured gets rather less attention paid to it” (p. 325). Owing to the purpose of management control, organizations work to make sure that there are no gaps between their strategic objectives and measures (Denton, 2005). Many organizations focus too much on how to work in organizations which results in spending extra time on collecting data and monitoring activities instead of performing the actual work (Denton, 2005; Meyer, 1994). To manage these problems, Denton (2005) argues that organizations should begin looking at their strategic plan and “identify three to five objectives related to the key concerns for the company or group” (p. 283).

Adding more controls do not have to result in an improved MCS contradictory it can result in “stifle initiative, creativity, and innovation” (Merchant & Van der Stede, 2007, p.4). According to Denton (2005), there is also a risk of confusion, hostility and apathy. Malmi & Brown (2008) explains how a common difficulty for organizations is to get to know how all the controls affect each other. This brings us to a question of why organizations adopt techniques even though they are not sure about the fit or the benefits of the adopting techniques.

#### 3.1.1 Diffusion of new Management Techniques and Toyota Production System

Abrahamsson (1991) developed a model to explain the diffusion of new management techniques, diffusion driven by performance gaps. He highlights two influencing forces for whether or not organizations choose to adopt or reject a technique. One of the forces is imitation, within a group or outside a group, usually driven by an uncertainty in the outcome of the technique. The other force presented is outside pressure from organizations, within a

group or outside a group, resulting in lost decision making, forcing the organization to adopt an efficient or inefficient technique. Given these forces Abrahamsson (1991) made a model based on four perspectives.

The efficient choice perspective argues that if there is a rational organization or top management team who are certain about their preferences, goals and the benefits with the adoption, then this will be the most efficient choice. When a powerful organization outside a group with a technology to diffuse forces adoption, insignificant of the outcome, this is called the forced selection. (Abrahamsson, 1991) The fashion perspective occurs when organizations is uncertain about environmental forces, goals and the benefits with the technique and their “... decisions centre less around which technology they should adopt, and more around which organizations they should imitate.” (Abrahamsson, 1991, p. 595). Abrahamsson (1996) describes the process of management fashion where new technique is diffused from trend setters and advocated to have the appearance of rationality and progress. According to Meyer and Rowan (1977) the appearance occur when adopting a technique that stakeholders believe to be a rational way of managing organizations and employees to keep their support. The fad perspective is similar to the fashion perspective but occurs when “organizations within a corporate group imitate other organizations within that group.” (Abrahamsson, 1991, p. 597).

A management technique spread over most parts of the automobile industry, which has been imitated by some of the world’s best manufacturing companies, is the strategic tool Toyota Production System (TPS). TPS is believed to be the source of Toyota’s outstanding performance as a manufacturer and even though Toyota has been very open about their practice it seems that few manufacturers have successfully imitated TPS. (Spear & Bowen, 1999) TPS is a modular system that grew naturally under decades in Toyota, which allows working with improvements in one part without affecting other parts. Major features in TPS are “just-in-time production” where they work with eliminating waste, and “respect-for-human” which is about getting full utilization of workers’ capabilities. (Sugimori, Kusunoki, Cho & Uchikawa, 1977) Problem areas for many adopting companies are that there can be confusion between the tools and practices with the system itself, and also the challenge of having standardize routines and still accomplish a flexible and challenging environment for improvements (Spear & Bowen, 1999).

### **3.2 Management Control Systems Package**

This study uses Malmi & Brown’s MCSP to make it easier to identify and understand different kinds of control. Malmi & Brown (2008) have developed a MCSP in which they focus on controls that affect employees’ behavior.

<b>Cultural Controls</b>						
Clans		Values			Symbols	
<b>Planning</b>		<b>Cybernetic Controls</b>				<b>Reward and Compensation</b>
Long range planning	Action planning	Budgets	Financial Measurement Systems	Non Financial Measurement Systems	Hybrid Measurement Systems	
<b>Administrative Controls</b>						
Governance Structure		Organisation Structure			Policies and Procedures	

Figure 1: Management control systems package (Malmi & Brown, 2008)

As seen in Figure 1, Malmi & Brown (2008) use three levels in their MCSP. The top of the figure includes cultural controls which are described as broad controls that are slow to change. The middle section includes planning, cybernetic controls, reward and compensation. Administrative controls are at the bottom and these controls structure the controls in the middle sector. Further, we will describe the different types of control.

### 3.2.1 Cultural Controls

There are three aspects of cultural controls: clan controls, value-based controls, and symbol-based controls. Clans can be seen as groups within the organization, for example an organization unit. Ceremonies and rituals that create beliefs and values are two kinds of clan controls. Value-based controls could be mission statements and vision statements. A symbol-based control is used when managers want to form a specific type of culture through visual expressions, for example by having dress codes or a particular workspace design. Cultural control may be beyond managers' control and exists as a context for an organization, but it can also be used as a control. (Malmi & Brown, 2008)

Personnel/cultural controls are usually seen as loose control, but some organizations use multiple forms of these controls, and their combinations can provide tight control. Generally, organizations cannot only use personnel/cultural controls to get tightness, except for organizations with strong cultures. Personnel controls are difficult to access because it is hard to know what the outcome will be, for example by implementing education. (Merchant & Van der Stede, 2007) Cultural control, on the other hand, is often powerful and stable, with impact on all controls, as it involves beliefs and values that guide employees' behavior (Merchant & Van der Stede, 2007; Hofstede, 1984). Many large corporations are weak culturally because of their diversity and dispersion of people; such corporations are struggling to maintain the culture. (Merchant & Van der Stede, 2007)

### 3.2.2 Planning Controls

There are two types of planning controls: long range planning and action planning. Long range planning has a strategic focus, and the goals and actions are set for a medium and long-run perspective. Action planning has a tactical focus, and goals and actions are set for the near future. Planning may affect employees' behavior, and it is important to understand what

purpose planning has for the organization, whether it is done to predict the future or if it also aims at getting the employees' involvement. (Malmi & Brown, 2008)

Meyer (1994) argues that it is the managers' responsibility to "ensure that each team understands how its job fits into the strategy" (p. 101). To make sure that the measures support the daily work, the measures should be created by the users, and to keep the strategic objectives in mind, managers should provide training (Denton, 2005; Meyer, 1994). By letting the team be involved in the process, the probability of a team taking ownership and accountability for performance will increase. During the process of creating measures the organization will also benefit of the teambuilding and common language the team are creating. (Meyer, 1994)

### **3.2.3 Cybernetic Controls**

Malmi and Brown (2008) identify four cybernetic controls: budgets, financial measures, non-financial measures, and hybrid measures. Budgeting have several purposes, for instance to evaluate performance in the past. Financial measures, such as return on investment, can be used to give employees responsibilities to reach a specific target. Non-financial measures may be used to complement financial measures and to identify value drivers. The hybrid measurement system combines financial and non-financial measures such as balance scorecard.

Merchant & Van der Stede (2007) explain "For management control to be considered tight in a results control system, the results dimension must be congruent with "true" organizational objectives; the performance targets must be specific, with feedback in short time increments; the desired results must be effectively communicated and internalized by those whose behaviors are being controlled; and if results controls are used exclusively in a given performance area, the measures must be complete" (p.118-119).

Organizations tend to add too many measures (Meyer, 1994; Denton, 2005), often with the ambition of creating a rational control system to encourage employees to work harder (Meyer, 1994). As presented above it is important for organizations to work with the most efficient objectives and measures. During the review of measures it could be realized that there are too many measures and that some measures might contradict with another (Denton, 2005). Meyer (1994) also suggests that a team should not have more than 15 measurements. "Measures are only valuable if they are consistent with the user's needs" (Denton, 2005, p.283). Yet, it is common that the reason for measures not being used is because managers and employees are not aware of their impact on those measures (Denton, 2005).

### **3.2.4 Reward and Compensation Controls**

Organizations use rewards and compensations to motivate their employees to increase their effort and performance (Malmi & Brown, 2008). Incentive systems, as reward and compensation, are important to direct employees to perform in the desired way and focus on the main targets. It is important that rewards and targets are clear; by linking rewards to targets that employees can influence, it can motivate them. If incentives are used properly, employees' self interests can be related to organizations objectives. Rewards are often monetary-based, but they could also be anything that employees' value, such as freedom,

promotions, and recognition. Rewards can be connected to organizations performance for making the compensation more variable. Organizations should develop a reward system that is cost efficient and motivates employees in a powerful way. There are seven criteria to reach the ideal motivation through a performance-dependent reward system. The reward should have value for the employee and be large enough to affect the employee. It should also be understandable, timely, durable, reversible and cost efficient. Money is highly valued, and even if it not always meets all criteria, it is the most efficient reward in satisfying the important ones, such as the criteria that it should have value for the employee. One issue in designing a reward system is that people react differently to different types of rewards; in a large organization, it is costly and complex to adopt different reward systems to individuals or units. (Merchant & Van der Stede, 2007)

### **3.2.5 Administrative Controls**

Governance structure, organization structure, policies and procedures are three groups of administrative controls that Malmi & Brown (2008) discuss. Governance structure includes authority and accountability, as well as the communication and coordination system. Meetings are one example of an activity that is used as a control. Policies and procedures are used to specify how things should be done and how employees should behave. Malmi & Brown (2008) see organization structure as something that managers could change, and therefore it can be used as a form of control, for example by structuring the organization in a way that tends to draw specific types of relationships. Important for managers to consider when structuring their organization is what level of innovation they desire. Reasons for limiting innovation are often related to quality, efficiency and safety, for example it might not be optimal that assembly line employees at large-scale semi-automated plants try to innovate if they have no specialized training. Standard operating procedures and job descriptions are two kinds of controls that organizations use to limit innovations, when organizations tell employees what to do and ensure that they do just that; employees cannot innovate and try new things. (Simons 2000) In this case, managers believe that they know best, but this is not always the case; when the marketplace is competitive and change rapidly, innovations and employees' freedom to experiment are important to create value, for example it is important to implement new technologies, cost efficiencies, and best practices (Simons, 2000; 2005). In this case, organizations must focus on monitoring outputs instead of process, employees are encouraged to experiment with inputs and processes, and the employees must be allowed to make mistakes (Simons, 2000).

Administrative controls, also called action controls, can be considered tight if employees engage consistently in all actions connected to the operation's goals and will not react in an undesirable way. Behavioral constraints, preaction reviews, and action accountability are examples of action control types. Behavioral constraints could be physical, for example security systems, or administrative, such as limiting decision making to higher levels in the organization. If preaction reviews are frequent, detailed, and performed by knowledgeable reviewers it is considered tight; one example is when employees must get approval from managers at higher positions before they spend an amount of money. Action accountability tightness can be achieved if actions are specific, congruent with organizations goals, well



communicated, and complete. It is also important that controls are understandable and acceptable. Policies and procedures can be used to tighten control. (Merchant & Van der Stede, 2007)

An important form of administrative control is information system;”Information is essential to all well-managed businesses and nonprofit organizations. The amount and quality of information available to managers of any organization is a good barometer of organizational health.” (Simons, 2000, p. 57) To be able to use the gathered information properly, it is important to understand which factors affect the output, i.e. the cause-effect relationship (Simons, 2000). A working information system is essential to keep the whole MCS together, to make the information system work there are several factors to acknowledge, for example; the level of detail, relevance and selection (Ferreira & Otley, 2009).

Malmi & Brown (2008) highlight that these five perspectives should be seen as a package and that they should not focus on individual systems. The challenge in designing a MCSP is to predict how employees react on different controls. People react in different ways on controls which depends on many factors, such as which country they live in, what firm and which department of a firm they work at. This means that there is no single MCS or MCSP that every organization can use to get a desired effect. Another type of complications occurs if an organization is spread worldwide; this situation requires observations about differences from firm to firm which helps to choose the best kind of MCS for each firm. (Malmi & Brown, 2008) Merchant & Van der Stede (2007) identifies three causes of management control problems; lack of direction, motivational problem and personal limitation. These situations occurs when people do not know what is being expected from them, when people act in their own interest at the expense of the company and when people are unable to perform because of limitations such as education and information (Merchant & Van der Stede, 2007).

## **EMPIRICS**

*In this chapter we will begin by describing Tuve Plant, our case object, the reorganization they are facing and their strategic tool, Volvo Production System, which both have major impact on their work with management control. Finally, to be able to further identify and analyze their problem areas we will describe the different controls within their MCSP, and present the managers thoughts on areas of improvements to reach their potential capacity.*

### **4.1 Tuve Plant**

These empirical findings were provided by interviews with parts of the management team at Tuve Plant, if nothing else is stated the empirical findings came from these interviews. Tuve Plant faces controls from different directions since it is a part of a large corporation within a corporate group. Tuve Plant is a major plant within Volvo Trucks, one of the world's leading manufacturers of diesel engines and heavy trucks for commercial use. (Volvo Trucks, 2012) Volvo Truck is also a member of the Volvo Group, and together with UD Trucks, Renault Trucks, Mack Trucks and the JV between VECV and Eicher Motors Ltd and DND and Dongfeng the Truck operations within the Group reaches almost 2/3 of the total revenue (Volvo Group, 2012).

### **4.2 Management Control**

The management team at Tuve Plant work to coordinate controls initiated or forced externally from the corporation or corporate group together with controls initiated internally which creates a complex MCS. Processes and standard routines are examples of things initiated higher up in the hierarchy, within these frames each plant decides what activities and tools to use to get the desired results.

#### **4.2.1 Organizational Structure**

Volvo Group is going through a reorganization process which aims at creating an organizational structure that supports faster decisions and coordination within the corporate group. Previously there was a focus on the result of the corporation, and today the focus has shifted to function and operation. The purpose with the new structure is to help coordinate and visualize opportunities and areas of slack. According to the management team, one benefit for Tuve Plant is that communication and information between the different manufacturing facilities will improve their network and support. The new organizational and reporting structure at Volvo Group, with a Tuve Plant perspective, is shown below. The reporting structure will be described further under administrative controls in the MCSP.

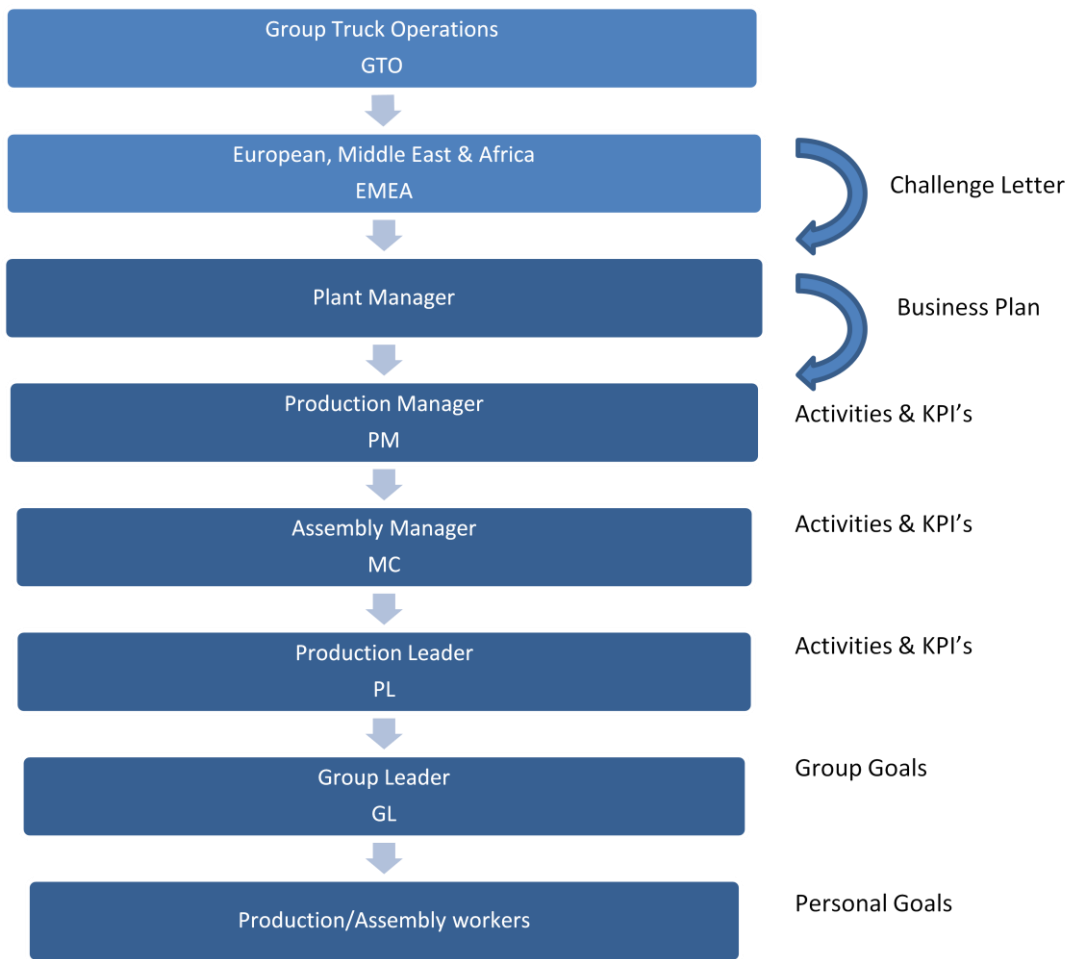


Figure 2: Tuve Plant's new organizational and reporting structure

In this new structure marketing and sales are excluded to other functions of the corporate group to focus more on the operations. Before the Plant Manager reported to Volvo Trucks, who further reported their collected result to European Manufacturing, and Global Manufacturing not fully evaluating the results of the operations, instead the old structure focused on each corporation and their result. This new structure will act to improve the result of the corporate group instead of only focusing on each corporation to better support cross functional collaboration. As a result of the new structure, Tuve Plant will no longer hide within the great result of Volvo Trucks; instead, Tuve Plant will be included in Group Truck Operations and be benchmarked to 50-60 other major plants within the corporate group. These changes put extra pressure on the results of Tuve Plant, and the management team is seeking ways to improve their organization. In an historical view, the culture at Tuve Plant has been very forgiving. Since Tuve Plant has delivered mostly on time and the cost has been a small part in the total amount for Volvo Trucks the pressure on lowering cost has been low. When the production often delivers on time, this could be an indication of an expensive production line. They have evaluated their results and benchmarked with other plants identifying a gap between the actual and possible results. For example, compared to the plant in Gent, the quality of the production is lower for Tuve Plant; this results in putting more time in the adjustment area which evolves increased costs, lowering their result. As a consequence of the gap between actual and possible result, presented in figure 3, Tuve Plant hired a

consultant company to help them reach their potential capacity, by identifying problem areas. According to the consultant the main reason for the gap between performance today and preferred performance is that Tuve Plant lack in the culture to deliver results. Further, he argues that they need to change from an activity-based culture to a results-oriented culture, and start from the goals and then find the activities instead of vice versa.

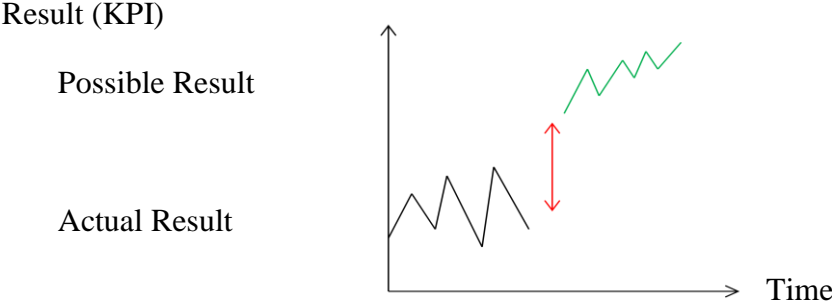


Figure 3: Potential Capacity

**4.2.2 Volvo Production System**

Volvo Production System, VPS, is a strategic tool often used in the automotive industry which origin from Toyota Production System, and Toyota’s development of the concept of lean. Tuve Plant is working to create a positive attitude and involvement in further development of VPS. The purpose with VPS is to create a lean culture within the company focusing on continually improving and challenging the work at the plant, “It is a way of living and acting that should be found in everything we do.” (The Production Manager) Tuve Plant has shown a lack of knowledge which has resulted in problems with a negative attitude towards lean. According to one of the respondents these problems is caused by implementing different lean modules without fully evaluating the conditions for each module to work. As an example Tuve Plant work with line production, buffers, standardized routines, 5S and Kanban, all different modules included in the concept of lean, since all these modules are not integrated as tight as they should be the purpose with VPS are not met and the knowledge of potential gains are not fully known and accomplished. For example 5S is viewed as only a method for cleaning by many employees in the plant when the actual purpose is to create order and structure to ease the daily work in the plant.

The management team at Tuve Plant is working to solve these problems; during 2012 they presented three key words for the organization: all colleagues, teamwork, culture and mindset. This is to support the work with VPS by creating involvement and a culture where every employee feels responsible for their work.

In the process of working with VPS one of the respondents highlights the importance of working with deviations in all of their processes. There has been a negative attitude towards deviations and single persons have been blamed personally, which is wrong according to one of the respondents. He argues that all employees should learn not to blame a single person, instead take ownership for the deviation and have a positive attitude towards deviations and learn how to share them in groups to create long-lasting results and improvements. Previous, only employees in leading positions have been responsible and since the deviations have been

too many, some have never been investigated and only few solutions have shown long-lasting results.

### **4.3 Management Control Systems Package at Tuve Plant**

In this section, we will describe the different controls at Tuve Plant as Malmi & Brown suggests with one exception; we have chosen to merge planning and cybernetic controls to one section since both concerns KPIs.

#### **4.3.1 Cultural Controls**

Beside Volvo Groups vision and mission statement, Tuve Plant has their specific vision and mission. Core values at Tuve Plant are environment, safety, and quality; for example, they work with green electricity and long-distance heating. One focus area in their culture is a healthy profile; they have a fitness centre, a wellness factory, an activity day, and they are allowed to do rehabilitation during work hours.

At Tuve Plant, the white collars have one dress code which includes a white or blue shirt and safety shoes; they do not need to have safety shoes by law, but these shoes have a symbolic meaning. Tuve Plant has always supplied the production workers with identical working clothes but not with any commands other than safety restraints, this changed recently when the management team at Tuve Plant introduced a more strict clothing policy, for the workers at the assembly line, where they need to wear identical clothes supplied by the company. This new policy is important since it is a question of showing quality to customers, Tuve Plant is next to the headquarter and therefore also work as an exhibition plant for Volvo Trucks.

Teamwork and motivation are their working concepts; they are flexible and believe that they manage to make things work, but they tend not to solve problems in the long run. To improve the quality of their production, they need to encourage changes and improvements in production processes. The problem is that in the production process employees working in the adjustment area and not the ones initiating proactive solutions are considered the heroes, this is a strong and old culture which is hard to change. The managers argues that they need to change the culture to eliminate the adjustment section, as it is a waste function, the true heroes should be the employees that create real value through improvements in processes.

The managers work a lot to achieve a consensus between the individual and the primary goal, as they find it important for success. One shortcoming in their culture is that in some situations at work it is not acceptable to say that you like your company, even if you openly show it to your friends outside work.

To support the culture and to be a leading example the Plant Manager makes appearances regularly, usually a couple of days a week, in the production line. Sometimes he just takes a stroll in the production line, and other times he invites himself to information meetings as a support if there are any questions and he believes that this creates honest and open discussions. To improve the efficiency within the Tuve Plant the management team took another step in this direction by shortening the 45 minutes daily meeting that took place in conference rooms to 15 minutes meeting that take place in the production area.

As discussed earlier with VPS the importance to view lean as a strategy has been highlighted, it should be viewed as a way of living and not as something that you easily can implement; instead it is about creating a culture and then live by it. Employees at Tuve Plant do not only lack knowledge and understanding about lean, some also has a negative attitude about it. The challenge is to adjust the organization and culture so it fits VPS and creates a positive attitude through the whole organization, and at the same time create employee commitment that is less forgiving then before.

#### **4.3.2 Planning Controls and Cybernetic Controls**

For cybernetic controls, long-range planning and action planning, Tuve Plant uses key performance indicators (KPI's). The only time Tuve Plant uses budgets is in the case of IT and investments. The KPI's are measured on yearly, monthly, weakly, and daily basis. Around two years ago, they decided to focus on four KPI's that are central to the organizations performance: safety, quality, delivery precision and hours per vehicle. These are both financial and non-financial. For example, non-financial measures are quality and safety. Hours per vehicle could be seen as both non-financial and financial, as it focuses on time, but the main purpose is to lower the cost. There is a discussion if hours per vehicle should be changed to cost per vehicle for the reason that hours per vehicle is less interesting for some unites, such as the logistic unit. Also, the consultant considers cost per vehicle to be easier to implement as it is easier to get acceptance from the employees, hours per vehicle could be a sensitive measure since the employees might see a connection between less hours and less workforce. One of the respondents argues that it is important that every employee understands that innovations are needed and the employees need to have an incentive to work with improvements. As a result, they are now working to make the employees understand that innovations open up for more employees to work with improvements and do not decrease the workforce.

The different units, managers and workers are responsible for more measures; some units call these measures KPI's, and others call them performance indicators (PI's), for example the Production Manager is accountable for approximately 9 weekly measures plus 13 monthly measures and the Assembly Manager, MC, have 14 measures per week. According to the management team, all measures are related to the four main KPI's; to inform every employee about this connection, they have developed a KPI-tree which visualizes how all KPI's and PI's are connected. If the four KPI's are green, in other words if the KPI has reached its expected performance, then the accountable do not need to check the underlying measures. The managers argue that they need to measure a lot, to create quality assurance in every operation, but not talk about every measure instead they have to focus on the right measures. Previously, they used to work with a large number of KPI's and had no clear focus on which measures were most important.

The business plan is scheduled in agreement with the vision, and it starts with the Production Manager of all facilities in Europe, Middle East and Africa (EMEA), by giving the Plant Manager at Tuve Plant information about what is important and what are the KPI goals for the next year. The next step in the process is that the Plant Manager together with his management team identifies the activities important for reaching the objectives, and then he

gives the Production Manager of EMEA feedback about their thoughts, conditions they are up for, and activities they are going to focus on. If the Production Manager of EMEA is satisfied with this, the business plan is confirmed. When the business plan is confirmed, the management team breaks down the plan into different responsibility areas; these are set on a management level. Further, they create activities and KPI's for the Assembly Managers and the Production Leaders, and finally they set goals on group and individual levels.

The measures are mainly based on trends and prognoses; productivity is the only measure that solely is based on prognoses from last year. The PPE, the acceptance level of delivery to customer, and audit, the quality acceptance level, is set by higher instances in the organization.

### **4.3.3 Rewards and Compensation Controls**

The reward system differs between the white collars and production workers. They get the same percentage of their annual salary if they reach the desired outcome, but they have different goals. The targets for the white collars are Volvo Trucks operating income and cash flow, while the production workers' rewards are based on quality, direct runners (the number of trucks that do not need adjustments when passing the production line) and Volvo Trucks cash flow. In their previous reward system Tuve Plant did not have a parameter for positive cash flow for the production workers, which sometimes led to a high bonus for the workers while the fabric was showing negative cash flow and no one besides the workers got bonus. They implemented the positive cash flow parameter to avoid these bonuses when the cash flow is low, and to motivate the employees' to care about the result of the corporation. One of the respondents points out that he does not like the differences in the reward system because it creates gaps between the white collars and the production workers, and he says that he would prefer having the same reward system for every employee. Further, he is not sure that the reward works as a good incentive because it is such a small part of the total salary, but he explains that Tuve Plant has no authority to affect this because this is set by higher instances of the organization. One of the respondents considers the use of salaries as a reward, by giving different salaries based on performance, but Tuve Plant has an agreement with the labor union which makes it impossible to implement it now.

### **4.3.4 Administrative Controls**

The communication and coordination structure at Tuve Plant is precise on day, week and monthly basis. Internally, at Tuve Plant every day 15-minute meetings are being held at different levels of the organization. During these meetings they discuss yesterdays' results, focusing on prioritized KPIs, and give status update on critical resources such as the number of the crew and delivered materials. Further, they discuss safety, order and structure in the plant and other problems that occur; these problems could demand support from other areas, and they help each other solve these problems. Other meetings that are continuously held are management team meetings every Monday afternoon; these are much longer than everyday meetings. Every other week meetings are held with the communication council and other collaborations groups such as the management team and the labor union.

Externally most of the communication is between the Plant Manager and the Production Manager of EMEA, and it occurs at a weekly, monthly and yearly basis. During the year the Production Manager of EMEA and the Plant Manager have a telephone meeting every week to discuss the weekly reports on prioritized KPI and other supporting measures. In the end of the month, the Plant Manager also gives a monthly report and presents the result analysis.

The consultant argues that it is important to focus on culture and structure; he says that Tuve Plant has a great structure, including meetings, communication, vision and business plan, but he questions if they use the structure properly. He also highlights the importance of every employee and new recruit having consensus about the organization, and believes coaching as an important factor to get there.

At Tuve Plant, there are several teams which work at the production line, and there are many standardized routines, but different teams tend to create their own routines, which could create difficulties when investigating problems. The managers at Tuve Plant argues that procedures are important to make the work efficient; they want to standardize more procedures at the production line; for example pick to light is a new procedure in which there is a light at the shelves where there are components which a worker will gather. Tuve Plant has chosen to work with tools such as kanban, buffers, standardization and 5S which all are connected to the lean strategy, but they are struggling with the implementation and use of the tools, and one reason for this is a lack of knowledge about different tools; for example, to implement standardization requires some preconditions, and knowledge of the long run benefit. Further, the management team finds that they need to work harder when they are integrating new procedures; as mentioned above, it is important that every employee gets knowledge about the benefits with different procedures before implementing them.

Tuve Plant have several policies, but they are struggling to get the employees to follow them; for example, two new policies, clothing policy and mobile policy, are hard to implement because there is a strong resistance to follow these rules. Regarding restrictions Tuve Plant have several; for example, they have an administrative system that restricts employees from information at the intranet, and managers have financial thresholds.



## ANALYSIS

*In this chapter we shortly describe the main problem areas within the management control at Tuve Plant, give an overview of the main issues to further analyze the different controls in the MCSP. Finally, we summarize the main problem areas and try to explain reasons for why they occurred and why they are of importance.*

### 5.1 Management Control

Tuve Plant has identified multiple problem areas within their management control. The main problem areas are: the integration of controls in their MCS, their culture, sorting out their information to be able to focus on the right areas of improvements, and the amount of measures being used in the organization.

Management control aims to direct employee' behavior in a desired way by using different controls in a MCS. To accomplish this tightness is important, to know how all types of control affect each other to identify the result of the controls. (Merchant & Van der Stede, 2007) In this area, Tuve Plant is struggling with the integration and negative attitude towards the controls, which will further be presented when explaining VPS, one of the main controls used to direct employee' behavior at Tuve Plant, and their cultural challenges. One explanation to this phenomenon could be that Tuve Plant during the years has added controls without fully evaluating the effect on the MCS. According to Malmi & Brown (2008), this could result in lost initiative and innovation and further create confusion and hostility (Denton, 2005). Indications of lost initiative, confusion and hostility will be presented when analyzing the MCSP.

Another problem presented during the interviews is sorting out information to be able to focus on the right areas of improvements. When struggling with such problems, Denton (2005) argues, it is important to work with eliminating gaps between the measures and strategic objectives. Tuve Plant has started to work with a KPI-tree which is just in line with this statement on eliminating gaps. They have also started to focus on less KPI's by choosing the four most important KPI's, which is in line with Denton (2005), who says that an organization should identify three to five objectives to manage to avoid the situation when organizations spend too much time on collecting data and monitoring activities instead of performing the actual work.

#### 5.1.2 Volvo Production System

The management team at Tuve Plant finds that they do not use their full capacity, and believes that by working harder with VPS they can create a culture that can reach the potential level of capacity, which is in line with Abrahamsson's (1991) statement that the diffusion of new management ideas is driven by performance gaps. Volvo Production System, VPS, originated from Toyota and is a strategic tool advocated in the automotive industry. Volvo Truck initiated VPS and decided that it should be used within the whole corporation which differs from the conditions in Toyota where the system grew naturally under decades (Sugimori, Kusunoki, Cho & Uchokawa, 1977).

One of the respondents believes that they made a mistake of not fully evaluating the conditions of implementation for each lean module. According to Malmi & Brown (2008), it is important to acknowledge not only the effect which different controls have on each other, but also the impact different cultures have on the implementation and success of different techniques, explaining why one technique might not work in different levels in an organization and in different cultures. According to Abrahamsson (1991), there are two forces driving implementation of new techniques that have an essential impact on how well the new technique fits into the organizations MCS. These forces are imitation, driven by an uncertainty in the outcome of the technique, and outside pressure from organizations, resulting in lost decision making. When evaluating the conditions for Volvo Trucks to implement VPS and for Tuve Plant to implement VPS, we identified different conditions for implementation. Toyota Production System were developed in Japan and then spread all over the world, including Volvo Trucks, with less success. This is in line with the fashion perspective, in which organization chose to adopt a technique uncertain about environmental forces, goals and the benefits with the technique (Abrahamsson, 1991), diffused from trendsetters to have the appearance of rationality (Abrahamsson, 1996, Meyer & Rowan, 1977). In the Tuve Plant perspective, they were forced by Volvo Trucks to adopt VPS, which is in accordance to Abrahamsson's (1991) description of forced selection. At Tuve Plant they are having problems with fully integrating the modules, and there is also shown a lack of knowledge resulting in lost potential gains, confusion and a negative attitude towards VPS. Normal problems for companies adopting TPS is, according to Spear & Bowen (1999), companies' focus on the tools and practices instead on the purpose of the system itself. We also find that these problems could be the cause of not freely choosing when and how to implement VPS at Tuve Plant.

## **5.2 Management Control Systems Package at Tuve Plant**

### **5.2.1 Cultural Controls**

Tuve Plant work with cultural controls in different forms; their clan control is shown through their healthy profile, but they do not prioritize celebrations and rituals which according to Malmi & Brown (2008), are two controls that creates beliefs and values. Through their own mission and vision at Tuve Plant, they create a value-based control (Malmi & Brown, 2008). Their dress code could be seen as a symbol-based control as they strive to show quality to their customers. According to Malmi and Brown (2008), dress codes could be used to form a specific type of culture through visual expressions. The management team is trying to get a better cohesion between the white collars and the production workers, and their dress code could be a disadvantage because it could create a gap and hostility between the different groups.

Tuve Plant does have a strong culture in the sense that the employees have strong opinions to do things as they always have done. Although, we find it as a weak culture since the culture does not result in a desirable employee' behavior; the management team wants to open peoples' mindset and attitudes, try new things and work together. They are trying to build a strong culture as they believe it is an important part of the MCS; this goes in accordance with Merchant & Van der Stede (2007) who say that culture control could be a powerful and stable

control mechanism, but many large corporations have a weak culture and are struggling to maintain it. It is not easy to change a culture, especially not in an organization as Tuve Plant where there are gaps between the white collars and the production workers, and the production workers have strong beliefs to keep it as it has always been. We argue that gaps between the different groups complicate the work in regards to culture, since it creates a culture of us and them in which the production workers question initiatives from the white collars and act hostile to changes, for example the implementation of VPS.

### **5.2.2 Planning Controls and Cybernetic Controls**

As cybernetic controls the KPI's are used as financial- and non-financial measures, in accordance with Malmi & Brown (2008), to identify value drivers and to affect employee' behavior by giving them responsibilities to reach the targets.

Both the long-range planning and the action planning at Tuve Plant are done to predict the future and to get the employees' involvement, as the goals and activities are broken down at all levels in the organization, and then the employees are followed up on these measures. These goals and activities are congruent with Tuve Plants objective since they are derived from the vision and the business plan. Further, they are specific and have a governance structure through which they communicate and follow up these measures regularly. Result controls should be seen as tight if they are congruent with the organizational objectives, in this case the targets are specific with feedback in short time, and further the controls must be effectively communicated and internalized by those whose behaviors are being controlled (Merchant and Van der Stede, 2007). Tuve Plant meets these criteria, and the planning control and cybernetic control could be seen as tight control. Hours per vehicle might not be seen as internalized, and it might be better for Tuve Plant to follow the consultant's advice and implement cost per vehicle instead, as it might be easier to get acceptance and internalize this measure.

Tuve Plant has broken down the four most important measures to loads of measures, as one of the respondents described it "we need to measure a lot but we do not need to talk about many measures", which is in line with what Meyer (1994, p.96) believes when he states "what gets measured gets done"; he also suggest that a team should not have more than 15 measures.

The management team is involved in the process of deciding which measures they are going to be accountable for; when they break down these goals and activities to lower levels, the employees are not involved. According to Meyer (1994), the involvement in this process will increase the probability that a team will take ownership and accountability for the performance, and during this process the organization will benefit from teambuilding and a common language they are creating. This process will also support Denton's (2005, p.283) argument that "measures are only valuable if they are consistent with the user's needs".

Tuve Plant have a well developed structure broken down to measures with detailed information, even though the quantity of information is high, Tuve Plant have problems to sort their information to make sure that they focus on the right areas of improvement. Simons (2000) argues that information is essential to a well-managed business; it is not only the amount but the quality of information that gives an indication of a healthy organization. To

understand the cause-effect relationship of the gathered information is essential for organizational health (Simons, 2000). Tuve Plant gathers a lot of information through all their measures, and their KPI-tree describes how measures are affecting each other and the strategic objectives. According to Denton (2005), it is important to work with eliminating gaps between the strategic objectives and measures to contribute to an increased probability of reaching strategic objectives.

### **5.2.3 Reward and Compensation Controls**

Tuve Plants purpose with the reward system is to motivate employees to increase their performance, which Malmi & Brown (2008) explains as a reason to have a system, but the reward system is only connected to one of the four most important KPI's, not helping the employees to focus on the main targets (Merchant & Van der Stede, 2007).

Their reward system is monetary based, and according to Merchant & Van der Stede (2007), it is the most efficient system to reach the ideal motivation and meet the most important criteria of the seven criteria, namely it should have value for the employee, be large enough to have impact, and it should be understandable, timely, durable, reversible and cost-efficient. According to one of the respondents, the reward system does not meet all these criteria; for example, it is not large enough to have an impact, and he believes that the system does not achieve its purpose. The reward system at Tuve Plant is set by higher hierarchy in the organization, and the management team cannot change the system. As Merchant & Van der Stede (2007) explains, it is costly and complex to adopt different reward systems to different units.

The management team is trying to get a better cohesion between the white collars and the production workers, and as one of the respondents pointed out, the differences in the reward system could create a gap between the different groups, and this might also result in a question about the criteria understandability for the production workers. The use of salaries as reward could be a better system to meet the most important criteria, for example it could be large enough to have impact for the employee, and motivate the employees to increase their performance.

### **5.2.4 Administrative Controls**

Governance structure is an important part of the whole MCS; without proper communication and coordination system it is hard for all controls to work. According to the management team and the consultant, Tuve Plant has a great coordination and communication system. The problem might be, as presented earlier, to sort out the right information and use it properly. As the consultant described, "they have the tools and structure to make it work as good as possible" but we question this statement since Tuve Plant have not succeeded by using this system.

At Tuve Plant they have a lot of policies and procedures, but they are struggling to make the employees to follow them; for example, there is a strong resistance against the implementation of clothing and mobile policies. Policies and procedures are designed to specify how things should be done and how people should behave (Malmi & Brown, 2008), and this could tighten the control if policies are well communicated, understandable and

acceptable (Merchant & Van der Stede, 2007). Tuve Plant does not meet these criteria, and the policies and procedures could not be seen as tight control.

Tuve Plant has a lot of action controls; for example the administrative system that restricts information at the intranet, and managers who has financial thresholds. These controls could be seen as tight at Tuve Plant, since the controls are frequent, detailed, and then direct employees in the desired way (Merchant & Van der Stede).

At Tuve Plant, quality, safety and efficiency are three important factors for the organizations' result and health. According to Simons (2000), this is in line with the use of standard operating procedures. The managers at Tuve Plant have knowledge about the importance of innovation, and they are trying to encourage it. Thus, they are monitoring outputs and are working to change their view to appreciate deviations which allow employees to make mistakes. Simons (2000) describes these as important factors to support innovations, he sees the importance of innovations when a marketplace is competitive and change rapidly, and that controls such as standard operating procedure limit employees' freedom to experiment and innovate.

### **5.3 Main Problem Areas at Tuve Plant**

Tuve Plant uses a variety of controls, as described previously; they overlap and strengthen each other, as Merchant and Van der Stede (2007) explain. We find that the management team prioritizes the planning/cybernetic (KPIs) controls, and today they are also working in the change of the cultural control. Further, we find the change in culture as essential for Tuve Plant in making their whole MCS to work, as culture limits some types of control, for example the implementation of VPS and new policies.

Due to the reorganization Tuve Plant has more pressure from Group Truck Operations, and has been forced to question their MCS and processes at the plant. For many years the pressure on Tuve Plant was low, and they believed that they were the best plant with good results, and had few reasons to question how they work at the plant. We identify two major challenges for Tuve Plant to succeed in changing its culture. First, it might be hard for the employees to understand the purpose of the new structure and philosophy, since they have been convinced that the plant and the employees themselves have done a good job with great results. Second, there is still a gap between the white collars and the production workers, resulting in a negative attitude towards new changes initiated by the white collars. Another observation which we made during the interviews was that the respondents did not show consensus about the subject culture, and some of them were more focused on the result-oriented culture. If this is the case and they have different perceptions, we argue that the culture at the plant will be affected negatively.

We find VPS to be an interesting control since it affects many controls in the MCS; and the fact that VPS was forced on Tuve Plant from Volvo Trucks might be a reason for not fully succeeding with the implementation of VPS. This resulted in Tuve Plant implementing a strategic control without having a full knowledge of the impact it would have on the rest of

their MCS, which we find as one reason for the poor integration and why they did not succeed in employees' involvement.

We find that Tuve Plant does not look at the controls as a whole system and tries to work with individual parts to handle their difficulties. The management team does understand that all controls have value, but in some cases they do not see the connection between the controls; for example, their reward system is not connected to all of their four most important KPI's which are related to the overall objective. According to Merchant and Van der Stede (2007), it is important to relate the reward system to the objective in order to direct the employee in the desired way. Further, the reward would probably be more understandable if it is connected to the KPI's, since the management team has well informed the employees about the importance of these measures.

As Tuve Plant has problems to sort out the information to focus on the right areas of improvements, we are questioning if they have such a good structure and tools as the management team and the consultant believes. Since Tuve Plant does not solve its problems, they either do not use the structure and the tools properly, or the structure and the tools do not solve the problems; either way we find that they need to reevaluate their information system. The information system is a major source for deciding what to prioritize; if this does not work properly, it could result in wrong prioritizing and cause gaps between the measures and strategic objectives.

Tuve Plant has started to focus on the four most important KPI's, and we find this to be a step in the right direction, but still these measures are broken down to loads of measures, and we question whether the employees have enough knowledge and information about the four KPI's to know which of their KPI's they need to prioritize. A statement during the interviews was that Tuve Plant needs to measure a lot but not talk about all of these measures; which we find might result in confusion because of the difficulty in communicating this information. At the same time, we consider their new initiative to work with a KPI-tree to be of support in managing these issues.

## CONCLUSIONS

*In this thesis we worked to expand and deepen the empirical knowledge about problems arising within a MCS. In our research, we investigated the main problem areas for a middle level management team, and found that cultural control and information system were of most importance. Since we only studied one organization we cannot contribute with generalized conclusions. Despite this, we identified similarities with previous research, which is interesting to highlight in this thesis as it could be of interest for similar organizations.*

Previous research emphasize the importance of working with MCS as a package to make the MCS work properly, and also how many organizations are struggling to identify how different controls affect each other. This study supports these arguments since we identified a lack of knowledge about how the different controls affect each other, and further we find consensus with previous research since the controls cannot be viewed separately. It is argued that organizational culture is an important control which affect employee' behavior. In this case study, culture was highlighted as a main problem area, which would have maximum leverage to improve organizational result, as we find it to be of most importance when implementing new controls.

We identify four main problem areas in our case study: the integration of their controls in their MCS, their culture, sorting out the right information and the amount of measures being used in the organization. In these areas we find the culture and information system to be of most importance to create a functional MCS. First, we find cultural control significant since it has great impact on employees' behavior, which affects the acceptance of different changes and new controls, and could have crucial impact of the health of the organization. Second, we find that a working information system is essential to keep the whole MCS together. If the cultural control and information system are working properly we argue that the integration of controls and the measures being used will improve as a consequence, as the employees' will have the right information the right main targets will be set, and employees' will understand the targets and accept changes.

The aim of this study was also to highlight the added complexity for a middle level management team when working with the MCS. We find that an important acknowledgement is that even though the middle level management team identifies and wants to work with different issues, their level in the organization are making it hard as they do not have the authority to make all decisions. We find that these restrictions increase the complexity for managers working in a middle level management team. Also, as previous research explains; middle level managers feel pressure to prioritize directions from superiors, which we argue, also adds to the complexity since they indirectly focus on these directions even if they might want to prioritize something else.

## **FURTHER RESEARCH**

This thesis is based on a single case study and investigated the main problem areas within the MCS. We found cultural control and information system to be of most importance, and we would encourage further research to find if this is generalizable or not. Further, it would be interesting to know if the main problem areas differs between different industries, and if so, the reasons for these differences.



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## APPENDIX I

### Interview Guide

#### What are the elements of your MCS as a package?

- Which controls are prioritized? Do you find it to be the right areas to prioritize?
- Which advantages and disadvantages do you identify with the different controls?

Cultural Controls						
Clans		Values			Symbols	
<b>Planning</b>		<b>Cybernetic Controls</b>				<b>Reward and Compensation</b>
Long range planning	Action planning	Budgets	Financial Measurement Systems	Non Financial Measurement Systems	Hybrid Measurement Systems	
Administrative Controls						
Governance Structure		Organisation Structure			Policies and Procedures	

- Have Tuve Plant identified how the different controls affect each other?
- What are your thoughts about the size of your MCS as a package?
- How do you perceive the reorganization?
- Which controls are set from higher instances in the organization?
- Are you able to affect all controls?