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MANAGEMENT CONTROL SYSTEMS:
THE RECIPE FOR STRATEGIC VISUALIZATION

- ONE CASE AND TWO CONTROL SYSTEMS; BALANCED SCORECARD AND TABLEAU DE BORD

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Master Thesis

Abstract

Purpose:

The aim of this thesis is to contribute to a richer understanding of the two management control systems, Balanced Scorecard (BSC) and Tableau de Bord (TDB), and their ability to function in a real life setting, as an important element for efficiently support organization's strategy.

Design/Methodology/Approach:

A case study, containing Company A, was executed through a qualitative approach with the intention to connect the theories, the control systems BSC and TDB, to a real life setting. The empirical findings are mainly based upon information collected through semi-structured interviews.

Findings:

The BSC is perceived as strict and controlling in its nature and as primarily establishing facts, while the TDB enhances communication with an educational intention. Regardless of the numerous of advantages the use of a TDB would entail, the current structure of Company A, with its hierarchical approach, resists its implementation. Theory, together with the employee's desire, might imply TDB as the optimal alternative for supporting the strategy, however, the reality of Company A, with the directors of the board as monitors and decision-makers, suggests the use of a BSC. As a result of the correlation between the choice of MCS and the ideology of an organization, BSC will continue to be perceived as the optimal practice within Company A as long as the top-down approach remains. Whether the theory or the reality is to decide which control system to be used is for the organization to determine. Regardless of the organization's choice of control system, advantages will emerge if a genuine implementation is completed in close connection to the theoretical framework.

Research Limitations:

The thesis intends to investigate the connection between control system and strategy, however, without providing any explicit theoretical framework regarding strategy. Nor will the strategic content of Company A be further analyzed. The small sample limits the ability to provide any general conclusions, however, similarities and parallels can be drawn and associated to related situations.

Practical Implications:

The thesis is mainly concerned with highlighting the practical relevance of the theories employed.

Further Research:

The TDB practice will require a more developed acknowledgment beyond its domestic origin before it can be recognized among organizations as a valid alternative to the BSC. In order for the BSC to continue being perceived as a respected control system, there is a need of a continued development of the theory in correspondence to the rapid changes in the business environment, which in turn would allow for greater flexibility in its use. Further, there is a need to emphasize the importance for organizations to involve their employees in open dialogue, which would ensure more precise information when implementing a BSC. This applies to both internal and external information.

Keywords:

Management Control System, Key Performance Indicators, Balanced Scorecard, Tableau de Bord.

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1. Introduction

The transformation from an industrial to an information age increased the need of perceiving organizations from multiple perspectives. Previously used control systems were challenged, and non-financial information was added to supplement the traditional accounting approach. (Kaplan and Norton, 1996:3-4) The business environment today further expands the importance of multiple perspectives as a way of understanding how achievements are created and how organizations can stay competitive (Chiapello *et al*, 2001:1). The implementation of a management control system, henceforth MCS, intends to combine the perspectives and provide an overall description of the organization's processes (Bessire and Baker, 2005:659).

The Balanced Scorecard, henceforth BSC, as an example of a MCS, became a well known management practice during the 1980's and early 1990, which combined financial and non-financial perspectives. The BSC has over the years gained a considerable amount of attention in the academic world as well as within organizations (Bourguignon *et al.*, 2004:107,115). Although the BSC was perceived as revolutionary, the practice was hardly pioneering the subject. A similar while quite unknown MCS is the Tableau de Bord practice, henceforth TDB, which was developed in the early 1930's with the intention to enhance the connection between processes and performance (Epstein and Manzoni, 1998:191). While the intentions of these practices are quite similar, what separates the two are their application and implementation processes (Chiapello *et al*. 2001:19), as well as the flow of information TDB is intended to be applied within all levels (*Ibid*. p.20) while the BSC has been criticized for its hierarchical and top-down approach (Bessire and Baker, 2005:662). When it comes to Key Performance Indicators (measurements directing decision-making (Beatham *et al*, 2004:106), henceforth KPIs, the commitment is argued to be greater when implementing a TDB, since their creation is founded upon co-responsibility. The BSC, in contrast, generates individual responsibility and optimization of the predetermined KPIs, rather than acting in the organization's best interests. (Chiapello *et al.,* 2001:19)

An efficient MCS requires a close connection to the business environment and is suggested to be of flexible and adaptive nature (Kloot, 1997:50-51). However, the well-represented and frequently implemented BSC practice, has been questioned when it comes to flexibility and is argued to have a vague connection to the external business environment (Vice President, Finance, 2011-03-10). This suggests organizations to benefit from implementing the flexible and ad hoc TDB practice (Chiapello *et al.*, 2001:31). However, the presence of TDB in English-speaking academic literature is quite

limited and, as a result of TDB's French origin, most of the conducted studies are completed within domestic organizations. Consequently, the available TDB literature, provides little connection to the global business environment and has a restricted representation within such setting.

1.2 Problem Statement

The climate within the metal cutting industry is intense and the demand for quality as well as the pressure of innovation is increasing (Vice President Product Management, 2011-03-03). As these organizations cannot afford to become comfortable in simply their main area of expertise, it is essential to develop a leading edge in all areas in order to become a prominent actor on the market (employee HR, T-area, 2011-03-11). A clearly formulated strategy, accomplished by an efficient and a well-balanced control system, could acknowledge all needed perspectives and result in a favorable situation for the organization. Without a well-established strategy, harmonized with the existing business environment, management control systems fulfill no purpose. The use of an efficient control system would ease the process of communicating the strategy within the organization and create an alignment around its objectives and KPIs. (Bessire and Baker, 2005:659, Kloot, 1997:50) However, in order for the most suitable alternative to reach top efficiency, the system needs to correspond not only to the business environment, but also to the assumptions and believes within the organization (Bourguignon *et al.*, 2004:109).

Although one of the leading actors within the industry (Internal doc.2), Company A was nevertheless affected by the previous recession. An analysis, conducted within the organization, of the current situation and the desirable position for the future, resulted in a new strategy corresponding both to industrial trends and customers' needs (Employee, Business Development, 2011-03-02). What remains for Company A, in order to be successful with their strategy, is to overcome the issue of having a control system that is decoupled from the vision of the organization. There is a wish in the organization to retain the connection between the control system used by the board of directors and the strategic actions within the different departments of the organization (Manager, Business Opportunities, 2011-03-02), which a well-functioning control system is argued to provide (Gold and Quinn, 1990:43-44).

1.3 Purpose

The aim of this thesis is to contribute to a richer understanding of the two management control systems, BSC and TDB, and their ability to function in a real life setting, as an important element for efficiently support organization's strategy.

1.3.1 Research Objectives

- *Explore important aspects for organizations to consider when selecting a MCS, in order for it to correspond with the strategy.*

- *Investigate the advantages and disadvantages of the two management practices in relation to Company A's strategy.*

- *Examine the importance of the balance between non-financial and financial KPI in order to support Company A's strategy in an optimal way.*

2. Theoretical Framework

2.1 Management Control Systems

Organizations are depended upon their employees to accomplish the established objectives, and the question: *"Are the employees likely to behave appropriately?"* is therefore crucial for an organization to consider. By understanding how the employees can be influenced to act desirable, this is the question a management control system intends to answer. (Merchant and van der Stede, 2007:7) In addition to answering the question, the MCS focuses on how to improve operational effectiveness (Kimura and Mourdoukoutas, 2000:43) and to ensure that resources are used efficiently when trying to accomplish the established strategy and its objectives (Kloot, 1997:50). A MCS is constructed to make it possible for managers to determent whether the organization is performing as desired, and if not, to provided the foundation needed for decisions regarding actions to correct any deviation from the planed vision (Gold and Quinn, 1990:43-44).

Good management control is described as when an organization has confident in its employees and expects no major unpleasant surprises. However, such a thing as a perfect control system is not a realistic expectation, since that would imply a completely trustworthy system and employees. (Merchant and van der Stede, 2007:11) A preferable and well functioning MCS needs to be closely connected to the demands of the organization. Therefore, objectives, key performance indicators, and strategy, are suggested to provide suitable guidance of what the expected actions are within the organization. (*Ibid.* p. 218) The strength of MCS is its capability to intermediate between different perspectives and to communicate the collective actions within the whole organization (Bessire and Baker, 2005:659, Kloot, 1997:50). The success of the MCS, however, is dependent upon the level of participation from the employees. The MCS impacts the behavior of the employees, and therefore the employees should have an impact on the objectives and future direction of the organization. (Bessire and Baker, 2005:663)

A MCS further addresses the importance of the surrounding environment, and the MCS needs to be related and closely connected to it. An organization adopts and changes in relation to its environment, and therefore a flexible and adaptable MCS is preferable. (Kloot, 1997:50-51) A successful MCS also needs to be sensitive and understanding of its ideological surroundings, since its effectiveness is highly dependent upon how management approaches are aligned with the employees' assumptions and believes (Bourguignon *et al*., 2004:109).

2.2 Key Performance Indicators

The intention of KPIs is to assist managers in the development and translation of objective into improved activities. It is therefore crucial that the KPIs are of an indicative nature connected to organizational activities and actions. Important success factors are that the KPIs can be understood effectively. The KPIs should also include some features connected to the learning process, embody some positive strength and provide balanced information between financial and non-financial measurements. (Beatham *et al*, 2004:106)

In order to be competitive in the market, today's organizations recognize the need to implement their own specific KPIs corresponding to their overall management system (*Ibid.* p. 111), and as a result, the distribution of information regarding these KPIs are none or very low (Beatham *et al.,* 2004:106). The involvement of KPIs in decisions-making, organizational improvements and alignment in organization's strategies is of great importance (*Ibid.* p. 111). When combining vision, mission, and strategy, organizations will develop a holistic representation and create a sustainable value added to the chosen KPI´s (*Ibid.* p. 113).

There are two types of indicators, lagging and leading. The first focuses on the past, i.e. post-result, only supporting completed performance results. Leading indicators, on the other hand, offers an opportunity for change, and are used to either predict the future or to present other directions of actions. If the indicator is of a leading nature, the process of identifying problems will be eased and as a result facilitate the decision-making. This gives organization a possibility to adjust and influence their course of action in a positive way. (Beatham *et al.,* 2004:106) On the other hand, the correlation between indicators is hard to distinguish in a business environment, which raises the question of the possibility of benchmarking[1] for numerous organizations. Without any information about other organization's experiences, KPI´s can only be based on intuition. (*Ibid.* p. 107)

2.3 The Historical Development of the Balanced Scorecard

The industrial age and its need of economics of scale and scope increased the need of strong financial control (Kaplan and Norton, 1996:2). As a result, the competitive advantage was mainly focused on specialization of functional skills, and customer relationships together with non-financial perspectives were not of high priority. However, the shift to the information age brought new possibilities for competitive advantage. (*Ibid*. p. 3-4) Consequently, organizations had to refocus their attention to intangible assets (Voelpel *et al*. 2006:43).

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[1] Benchmark is used for learning which organization is representing "best practice" within the industry and making cross-company comparison to gain from their implemented techniques (Thompson *et al.,* 2010:122).

As a response to the changing business environment and the criticism of current performance measurement system, Kaplan and Norton (1996) introduced the BSC to organizations and managers in the late 1980s and early 1990s (Neely *et al*. 2003:129). The BSC was created with the intention to integrate the financial measurements (presenting the past) with non-financial measurements (drivers for the future) into a management system available to all levels in the organization (Kaplan and Norton, 1996:8). The introduction of future-oriented measurements was intended to reduce the short-term financial focus and encourage long-term goals for the organization (Bourguigono *et al*. 2004:114).

2.3.1 First Generation Balanced Scorecard

The BSC was an eye opener, and organizations began to supplement their traditional measurements with non-financial ones. Non-financial measurements were used to balance and even out the traditional performance measurement systems (Neely *et al*. 2003:129). Kaplan and Norton (1996) stressed the importance of viewing the organization from different perspectives and for organizations to develop KPIs in relation to all these perspectives. The suggested four perspectives are: **Financial, Customers, Internal Process** and **Learning & Growth**. The perspectives and the information they provide are intended to support and at all time correspond to the organization's strategy and vision. A correctly structured BSC should present the strategy of the organization through cause-effect relationships between these perspectives and the organization's objectives. The cause-effect relationship is exemplified by if-then statements, for example, if the employees receive product training then their knowledge level will increase and if their product knowledge-level increase, then their sales effectiveness will improve (Kaplan and Norton, 1996:149).

Strategy and vision are at the center of attention within the BSC, and are intended to enhance the clarity and focus of the objectives within an organization (Kaplan and Norton, 1996:19). It is argued that the establishment of awareness regarding organizations' strategy is of great significance and that the traditional financial framework never will be beneficial or supportive of it in the long run (Kaplan and Norton, 2001:310-311). These ideas are supported by Olve *et al*. (1999:13) who state that a BSC provides the employees with a more comprehensive picture of the organization. It is further suggest that the use of a BSC combines information regarding the external factors surrounding the organization with their internal processes, creating a more competitive situation for the organization (Olve *et al*., 1999:38). The BSC was additionally created to provide flexibility, allowing the organization to adopt and react to a changing environment (*Ibid.* p. 10).
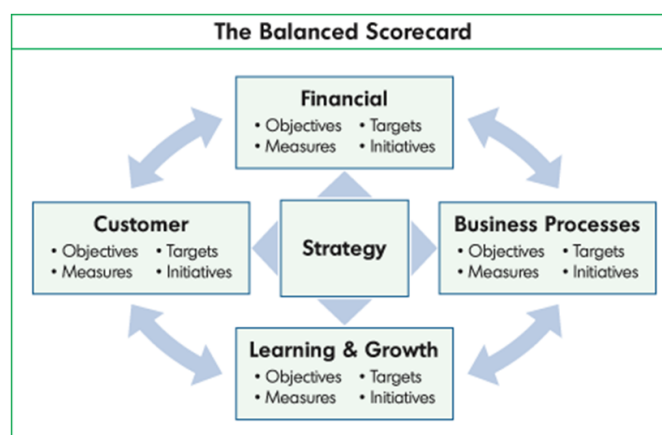
Figure 1: BSC

In brief, the ***Financial*** perspective, presents the strategy for growth and profitability seen from the shareholders point of view (Kaplan and Norton, 2001:311). This perspective provides the long-term story of the organization (Svensson, 1999:51) and the financial KPIs should emerge from the organization's economic situation and objectives. Organizations develop over time and attention within their strategies shift, and this should be reflected in the financial perspective and its KPIs. (*Ibid.* p. 54) The financial perspective summarizes consequences of the actions already taken and contributes to the evaluation of whether the strategy has contributed to the improvement of the overall welfare and profit of the organization (*Ibid.* p. 33).

The importance of the ***Customers*** perspective has increased for all organizations. However, a central issue, which also applies to the financial objectives, is that they are not of leading nature and can therefore not influence action in present or future time. However, measurements such as satisfaction, profitability per customer, and markets shares, are often used as indicators for the future. (*Ibid.* p. 84) Poor responses from these measurements may indicate a decline in the future, despite an otherwise strong financial perspective (*Ibid.* p. 33). A complexity to this perspective concerns the diversity of preferences among existing and potential customers, therefore the information received requires deep analysis (*Ibid.* p.65). Despite this complexity, the demands of the customers are important to understand, since the significance for the organization to decide what not to produce is as highly stressed as the decision of what to actually produce (*Ibid.* p. 66).

The ***Internal Process*** perspective aims at providing the management team with the accurate information regarding how well the processes are running, all with the intention to meet the requirements of the customers (*Ibid.* p. 33). The objectives developed for this perspective should reflect the ones most critical for the organization's strategy to be a success, along with providing maximum impact on customer satisfaction and financial objectives (Kaplan and Norton, 1996:62-63).

Therefore, the development of the objectives and measurements for this perspective requires knowledge of the internal processes, in order for organizations to be able to establish the accurate processes for the chosen strategy (Svensson, 1999:33). It is recommended for organizations to develop an internal value chain, from innovation and supply to market analysis. The analysis should generally be based upon costs, quality, flow, and time variables. (*Ibid.* p. 91) Several organizations see the innovation process as more important than the operative processes (*Ibid.* p. 95-100). However, with the development of an internal value chain, the organization has the opportunity to simultaneously focus on innovation, long-term perspectives and what is important for the future, as well as on the operational cycle, current production and customer satisfaction (Kaplan and Norton, 1996:63).

The **_Learning & Growth_** perspective is identified as the infrastructure of an organization, and is therefore argued as highly essential for long-term development and improvements (Svensson, 1999: 119). The perspective aims at enabling individual- as well as organizational self-improvement, while at the same time being seen as the foundation for the other perspectives and enable innovations. If an organization seeks to achieve their long-term objectives, investments in their infrastructure (such as employees, systems and procedures) are necessary (Kaplan and Norton, 1996:127). This investment is especially important within knowledge-intense organizations (Svensson, 1999:119). Measurements such as employee-satisfaction, training, and retention are suggested to ensuring this perspective (Kaplan and Norton, 1996:64). However, many organizations have experienced some shortage in this area and creativity is needed for reaching satisfying results (Svensson, 1999:135)

The original version of the BSC was criticized for being quite vague and simple, and as mainly focusing on how it could be used and how it relates to organizational attributes rather than offering a clear definition of the practice. (Lawrie and Cobbold, 2004:612). Voelpel *et al* (2006:50) among others have further criticized the BSC and argue that the suggested four perspectives forces the organizations to develop measurements which correspond to only those four and eliminates the development of cross-perspectives. However, the four perspectives are not to be perceived as written in stone, and it is encouraged to add other perspectives if needed (Bourguignon *et al*., 2004:118).

The accuracy of the cause-effect relationship which Kaplan and Norton (1996) argue exist between the perspectives has been further questioned (Nørreklint, 2000:68). It is questioned whether one could conclude that having satisfied customers will result in financial success, as Nørreklint (2000:75)

states "*Although we know that if it is raining, then the streets will be wet, we cannot conclude that if the streets are wet, then it is raining.*"

All these issues taken together, several attempts to suggest changes have been made, most clearly concerning the weaknesses in the design of the BSC. As a response to the criticism, design descriptions and "how to" books were developed to explain the approach further. However, this was not enough, since questions about how the actual design choices should be made still remained. (Lawrie and Cobbold, 2004:613) The need to filter and cluster information was still a problem. The founders quickly responded to these problems and clarified the concept of strategic objectives, hence creating the second generation balanced scorecard. These changes were supposed to explain the nature of the goals and create a connection between chosen objectives, perspectives, and measures. Although this updated BSC is today perceived as a quite subtle upgrade, it addressed certain issues, specifically those concerning filtering. (*Ibid.* p. 614)

2.3.2 Second Generation Balanced Scorecard

As a result of the criticism a second generation BSC, henceforth 2[nd]G BSC, was developed in the early 2000s, and intended to clarify strategic objectives by suggesting a map, attaching each of the objectives to the four perspectives. This connection became increasingly important for the design of the 2[nd]G BSC, and graphic links were developed across all perspectives, relating to financial performance. These graphic images were later given the name strategy map. (Lawrie and Cobbold, 2004:614)
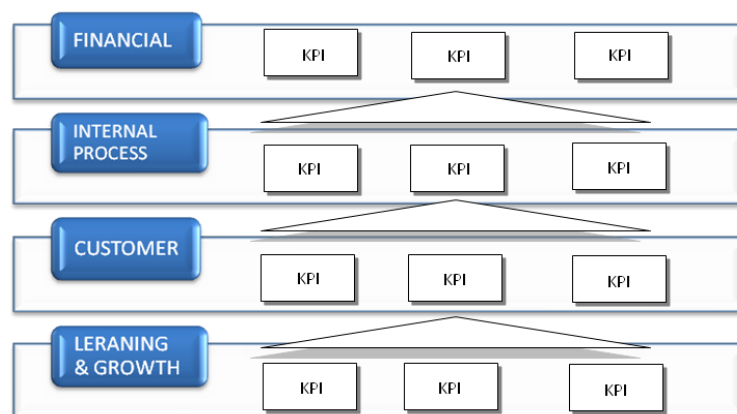

Figure 2: 2[nd]G BSC

The strategy map and its logical architecture facilitates a common reference point of the strategy at all levels within the organization (Kaplan and Norton, 2001:90). The strategy map still shares the same logic as the original BSC, however, with a different visualization. The 2[nd]G BSC addresses the

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value creation issue in more detail than the original BSC by investigating the transformation of resources. It is therefore a great improvement for organizations. However, despite these modifications, it is still argued that organizations are more complex than what the strategic map can illustrate. Instead of being supportive, the map can restrict the organization if too much emphasis is put on only the four suggested perspectives. (Neely *et al.*, 2003: 130)

The creation of a strategy map at this stage resulted in some conceptual problems. It was still difficult to integrate the strategic links with the need for causality. Over time these ideas become increasingly important, which encouraged a development of BSC to further show graphic models of these links. (Lawrie and Cobbold, 2004:611) The improvement of visualization of causal relationship was the key enhancement from the original BSC (*Ibid.* p. 615).

These improvements caused the BSC to be evolved from a measurement system into a core management system (*Ibid.* p. 611). These questions, together with the material differences, contributed to the creation of a new balanced scorecard. The 2ndG BSC relates the KPIs to specific objectives associated to measures assigned to one of four perspectives. However, organizations using the 2ndG BSC encountered practical issues when connecting these measurements to the objectives of the organizations strategy. The objectives were soon presented together with titles and descriptions, offering an explanation of the meaning of objectives in detail. (*Ibid.* p. 615) Despite these changes obvious weaknesses still remained with the 2ndG BSC. There was a persistent concern as to of the BSC presented accurate strategic objectives and if their links were meaningful. The issue of filtering information was solved with the introduction of the 2ndG BSC, however, the clustering issue remained unsolved, along with the issue of how managers should be able to implement the BSC within the whole organization (*Ibid*. p. 616).

2.3.3 Third Generation Balanced Scorecard

The third generation BSC, henceforth 3rdG BSC, is a refined version of the 2ndG BSC, and aims at providing greater functionality and strategic relevance (Lawrie and Cobbold, 2004:616). The 3rdG BSC allows organizations to further investigate the links between non-financial measurements and financial dimensions of the organizations performance (Neely *et al.*, 2003:132). The 3rdG BSC was created to provide a framework which is adaptable to the changes in the organization's dynamic environment (*Ibid*. p.130). As a result, the relevance of a clear destination statement was reevaluated in the 3rdG BSC and became a useful reference point for the setting of objectives. It is further suggested in the 3rdG BSC that a strategy is seen as more articulated if a future date is associated with the destination statement. (Lawrie and Cobbold 2004:616)
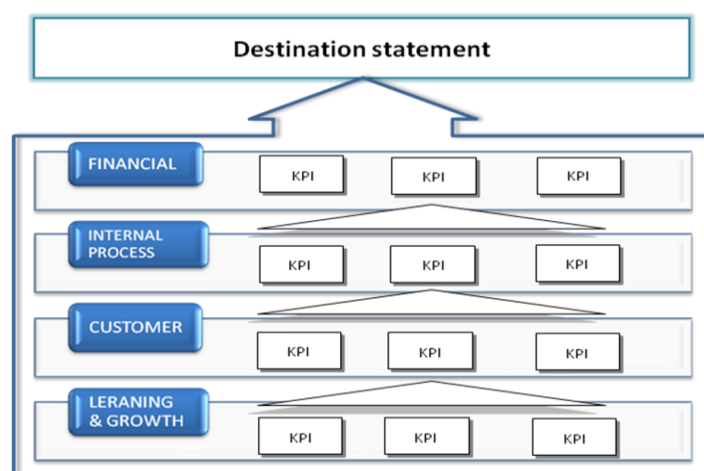
Figure 3: 3rdG BSC

The main difference with the 3rdG BSC, compared to the previous versions, is that managers are able to discuss and relate to the destination statement. As a result, the design process is reversed, and the creation of destination statement is understood as the first step in the design of the BSC rather than the last. This leads to an opportunity to easily select measurements and articulate causal relationships, hence consensus between mangers are more easily achieved. However, the label of the categories remains an issue. (*Ibid*. p.617)

2.4 Tableau de Bord

Debates concerning management control practices largely focus on BSC, rather than the similar practice Tableau de Bord (Bessire and Baker, 2005:646). TDB was developed in France in the beginning of the nineteen thirties (Epstein and Manzoni, 1998:191) by engineers who viewed organizations as dynamic and prioritized decision-making (Bessire and Baker, 2005:651). TDB is often seen as an antithesis of financial accounting systems (Chiapello *et al*, 2001:16), because it provided and discusses a larger portion of data (*Ibid*. p.20). The originally idea was to direct an organization similar to how an instrument panel is used to drive a machine (*Ibid*. p.4), intended to enhance the understanding of the cause-effect relationship (Epstein and Manzoni, 1998:191).

TDB is action-oriented and future based (Chiapello *et al*. 2001:9), and is easily reconciled in daily operations. Consequently, decision-making will be more systematic and therefore ease the process of meeting external expectations (*Ibid*. p.11). The practice is often described as a "dashboard" used to guide managers and organizations towards a strategically correct direction, and to inform them about the organization's current situation (Bessire and Baker, 2005:650). TDB includes a continuous

challenge of the choices made, and as a result, always be in line with the current situation (*Ibid*. p.651). The practice has a strategic dimension, where managers need to evaluate variables regarding the status of the key parts, including the external situation.

TDB is designed to support, assist, and integrate behavior by creating a common base for the whole organization. Due to the need of different types of information and purposes, the objectives for each department (self, superior, peers, and all managers) are different. (Chiapello *et al*, 2001:5) Each of these possesses specific needs and contributes to the organization by performing differently. The shared information flow also differs in detailed and aggregated data. Higher up in the organization the information becomes more financial, in contrast to the lower level where focus will be on operational information. (*Ibid*. p.6) TDB is also based on a representation of the organization in relations to the environment. This makes it possible to review the conditions of the organization and take appropriate action.

TDB contains indicators and key variables, from different parts of the organization. The variables intend to describe areas of, for example, innovation, costumers, internal, and financial depictions. The variables will differ, both for managers and over time, and as a result, organizations might need to implement several TDBs, relating to each department and context. (*Ibid*. p.9) The description of the organization and along with its key variables and measurements convert TDB into a device for deployment and implementation of strategy (Bessire and Baker, 2005:651).
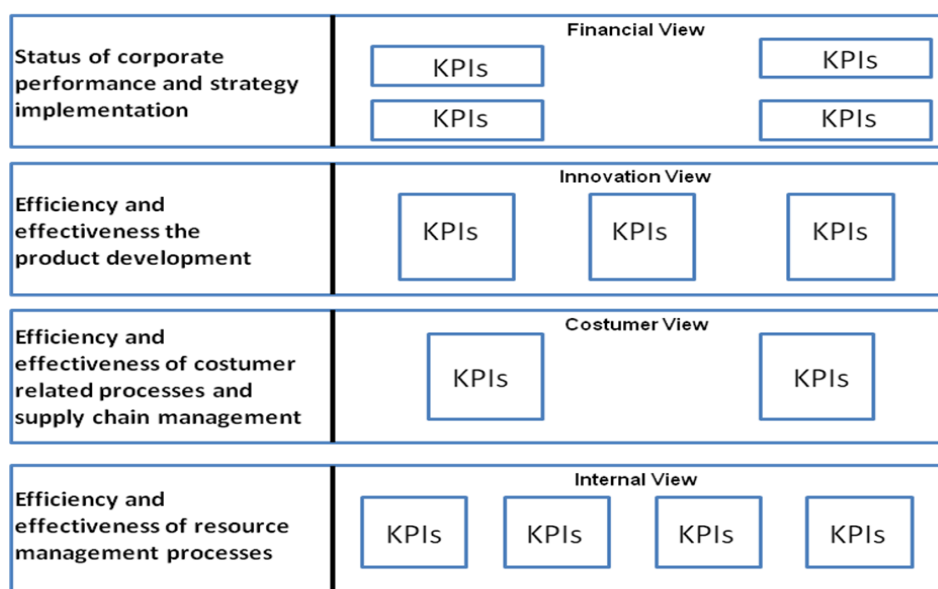

Figure 4: TDB

2.4.1 Tableau de Bord as a Practice

The aim of the practice is to support and facilitate the processes for managers at all levels by providing information about the organization's status; future, present, and past, as related to the selected KPIs. In addition, TDB must have a certain minimum of information available for any given time to be essentially observable for managers. TDB is dependent on physical measurements, however, it might also include some economic variables in order to confirm decisions. (Chiapello *et al*. 2001:14) TDB further supports management by creating a general foundation of information, support different divisions, and monitor the delegated responsibilities (*Ibid*. p.5). The information is represented at four different levels; local, vertical, horizontal, and firm wide. TDB suggests that all these perspectives are included at all levels in the organization, but the structure of information will diverge depending on the levels in the hierarchy. However, some information is shared at all levels in the organization. (*Ibid*. p.6)

The chosen KPIs within a TDB are intended to provide an overall picture of the organization and guide managers to monitor, compare, and take correct action in different situations (Epstein and Manzoni, 1998:191). TDB should contain measurements with a causal relationship and an interpretation of these. The KPIs also intend to measure the status of a specific function or department of the organization while simultaneously present guidelines for the organization to achieve its objectives. (Chiapello *et al*. 2001:3) The KPIs can be classified in broad categories and represent different levels and needs, while at the same time being coherent with one another. Measurements within a TDB can be broad and general, providing both financial and non-financial for the whole organization, however, the importance will vary between different levels. (*Ibid*. p.8) This approach facilitates bottom-up as well as top-down activities, and is a tool for establishing coherence and coordination in continuous foundation with both financial and non-financial aspects of performance (*Ibid*. p.12). The logic of the TDB is to choose significant, and highly important, KPIs and not only use information available. They do not have to be quantifiable; their importance lies in that they direct the organizations towards potential outcomes. (*Ibid*. p.26) The core of a TDB can be found at lower levels in the organization where the actions are implemented and the value created (*Ibid*. p.31).

It is suggested that the practice has two important implications. First; an organization's responsibilities and objectives differs between units and therefore the overall TDB need to consist of different information to facilitate local decision-making. Second; the practice should include objectives connected to vision and mission, which then are translated into KPIs. These should also

focus on operational measurements, and not only on financial, in order to improve information on the process of decision-making and the causal relationship of local events. (Epstein and Manzoni, 1998:192)

TDB might appear as simple at first sight. However, it enables communication between key managers in order to formulate suitable decision for both short- and long-term perspectives. TDB provides relevant and timely information for decision making (Chiapello *et al*. 2001:16), and due to the focus on information that is materially significant at any given time, it will reduce problems concerning information overload (*Ibid*. p.17). The strength of the practice is its ability to constantly stay updated, since it is based on solid data and can be evaluated to indicate warning signals (*Ibid*. p.18).

2.5 Balanced Scorecard in Relation to Tableau de Bord

A significant difference between BSC and TDB is the way in which they are applied and implemented within the organization. BSC is constructed to provide a broad view of the whole organization, however primary visible for the management team, while TDB is established in cooperation with departments within the organization and presented differently at various levels. (Chiapello *et al*. 2001:19) As a result, the flow of information when using the BSC is limited to the management team, whereas the TDB concept allows information to flow at all levels within the organization. The information presented in a BSC has a predetermined structure and is only visible to the responsible one. TDB, however, customized the information to suit the receiver though still presenting the overall view of the organization. (*Ibid*. p.20)

The level of commitment and participation, when applying the TDB practice, is perceived as high among the employees, since co-responsibility exists in the creation and selection of the KPIs. BSC and its holistic nature, on the other hand, bring about individualized responsibility and therefore generate optimization of specific KPIs rather than an all-embracing utility. (*Ibid*. p.19) The BSC is seen as a hierarchical practice whereas TDB is perceived as a customized ad hoc instrument. BSC is, as a result, more frequently applied within headquarters whereas TDB can be found at all levels within the organization. (*Ibid*. p.31) The hierarchical—top-down perspective—within a BSC has been criticized by Bessire and Baker (2005:662), who propose that the BSC is to be used by managers and decision makers only.

The BSC has been further criticized as only providing two perspectives and not four, since the first two perspectives can be seen as targets and objectives for the organization and the latter two as means to achieve the first two (Bessire and Baker, 2005:653). On the other hand, the dashboard used

within TDB has been criticized for not providing any information about the quality of the activities and for having a weak connection to the strategy (*Ibid*. p.655).In contrast to TDB, BSC do not differ between levels in the hierarchy, the perspectives with information are the same as one moves up or down. (Chiapello *et al*, 2001:6) TDB orientation is common up and down the organization, however, as each level sees it in its own way (*Ibid*. p.8). The information within BSC still emphasizes anticipating financial result. The original idea did not include related indicators throughout the whole organization. This was corrected later, yet still without recognizing the need for different emphasis on each perspective. Therefore, the BSC remains within a hierarchical logic, and is not focus on lateral relationships in creation of performance. (*Ibid*. p.31)

2.5.1 Implementation of BSC and TDB

An implementation of a BSC is intended to increase the understanding of a strategy, and therefore also enhance the motivation among the employees to act correspondingly (Kaplan and Norton, 1996:202). The KPIs the organization agrees upon should therefore work as a framework for reaching the objectives of that strategy (*Ibid*. p.272). A TDB, on the other hand, offers an instrument panel approach where it is possible to identify the situation within an organization. As a result of the placements of the KPIs in critical areas of performance, corrective action will be identified and implemented. (Chiapello *et al*. 2001:21)

Though a first step when creating both a BSC and a TDB is data collection (Kaplan and Norton, 1996:303, Chiapello *et al*. 2001:23), how the information and data is gathered separates the two practices. The BSC suggest collecting data from within the organization through internal documents, but also through interviews with senior managers. The interviews are conducted with the intention to gather multiple perspectives on the strategy and how it can be translated into KPIs. (Kaplan and Norton, 1996:303) As a result of the interviewee selection, the BSC has been criticized for being a product of top-management mentality and to have a top-down approach, ignoring participation from the whole organization, since it is perceived as time consuming (Johansson *et al*, 2006:845, Scheider and Vieira, 2009:504). In contrast, the data collection when creating a TDB is carried out among the different departments (Chiappello et al., 2001:6). Step one for TDB is to identify shared objectives and connect them to variables supported by an action-plan (*Ibid*. p.23). It is suggested to use a matrix as a support function when visualizing the interaction between variables and objectives, all to enhance understanding among the employees (*Ibid*. p.24). The BSC promotes using a strategic map to create a common reference point regarding cause-effect relationships (Kaplan and Norton, 2001:90). However, several studies refer to BSC as an abstract practice, who only focus on what is

easily measured within the organization. This suggested one-size-fits all practice is highly questionable (Johansson *et al*, 2006:847). A BSC represent an idea, and various implementation attempts show it to be open to interpretation, where the most successful cases are increasingly flexible, compared to the origin practice (*Ibid*. p.853).

The final step when creating a TDB is to develop a report, which should—apart from describing the development over time—contain an analysis and interpretation of the chosen KPI's. It is important that the report facilitates understanding for how the information is presented, what kind of references to use, and how many details and comments it will offer. To establish an acceptance among managers, and to review the KPIs along with a clear delegation and co-responsibilities, are critical for the success of its implementation. (Chiapello *et al*. 2001:29) A final element in the TDB is to develop a system for integrating the practice within the organization (*Ibid.* p.27). The BSC is perceived as finished when one are able to -by looking at the objectives and KPI's- distinct and understand the organization's strategy and vision (Kaplan and Norton, 2001:97).

2.6 The practices in brief

Since the intention of the two practices, TDB and BSC, differ in several aspects (Chiappelo et al., 2001:19), a table demonstrating the main characteristics of the two further enables a comparison and a clarification of their divergences.

Table 1: Theory	BSC	TDB
Transparency	Management team[1], HQ[1]	All levels[1]
Information	Predetermined structure[1]	Ad hoc[1], customized[1], large amount possible[1], detailed and aggregated[1]
Intention	Overall picture[1], Integrate financial and non-financial[2], provide several perspectives[2],	Internal cooperation[1], communication[1], Support and assist[1], action and future oriented[1]
KPI's	Individualized responsibility[1], to some extent predetermine[1]	Co-responsibility[1], Dashboard[6] Department specific[1], warning signals[1]
Strategy/Vision	Central[2], Visualized by map[3], destination statement[7]	Central[6]
Environment	Linking internal and external surrounding[4]	Flexible and closely related to the environment[1], situation based[6]
Main criticism	Top-down & hierarchical[6], too abstract[8], ignoring employees' participation[9], mainly financial[5], One-size-fits all[1]	Weak connection to strategy[6]

1: Chiapello *et al*., 2001   6: Bessire and Baker, 2005
2: Kaplan and Norton, 1996   7: Lawrie and Cobbold, 2004
3: Kaplan and Norton, 2001   8: Johansson *et al*., 2006
4: Olve *et al.,* 1999   9: Scheider and Veieira, 2009
5: Svensson, 1999

3. Method

3.1 Research Approach

The aim of this thesis is to contribute to a richer understanding of BSC and TDB, and their ability to function in a real life setting, by using well-established theories, mainly provided by Kaplan and Norton, Bessire and Baker and Chiapello *et al.*, The characteristic of the purpose suggests the research is based upon a qualitative approach, and is carried out in collaboration with Company A, who initiated the contact and desired a modification of the current BSC in order to correspond with a newly developed strategy. The thesis mainly provides a practical contribution in contrast to suggesting new insight in to the existing theoretical framework. The presentation of existing theories consists of both critique as well as views in favor with one or the other.

The qualitative approach chosen makes it possible to study the theories in practice. The qualitative approach also enhances the study without having to control or eliminate situational variables (Saunders *et al*, 2009:146). As a result, the research is flexible and tolerant to ambiguity, and provides results which are context-specific. The chosen approach is valid since a richer understanding often is created in an uncontrolled setting and in situations with semi-structured interviews (Bryman and Bell, 2007:474, Saunders *et al*., 2009:146), which is in close connection to the purpose of the study. The personal engagement is relatively low in the specific context, however, the commitment to interpret and analyze the data is high, which provides an opportunity to filter biased information and establish an objective and context-specific picture of the conditions. As a result of only studying one organization (hence the small sample), the thesis does not provide general conclusions. However, as a result of demonstrating how the theories are connected to the empirical material, this thesis can contribute useful insights for other organizations in a similar situation as that of Company A. (Saunders *et al*, 2009:335)

3.2 Research Design

As a result of the purpose a case study was completed to bring further insight in how BSC and TDB may be applied to a real life setting. A case study was found appropriate, since it answers questions such as how and in what way. It further facilitates a detailed and intense analysis (Saunders *et al*, 2009:146). It is also suggested that a case study is the most suitable option when empirics are collected from a specific company and setting. (Saunders *et al*., 2009:321, Bryman and Bell, 2007:62) The chosen case, Company A, is in need of closer connections between their control system and strategy. This makes Company A a suitable candidate for the study of exploring the BSC's and TDB's ability to connect to the company's strategy.

3.3 Sources of information

The thesis is based on well-established theories closely connected to the purpose and the chosen subject of discussion. The theories were collected through recognized academic journals, where the main search theme was centered on "Balanced Scorecard", "Tableau de Bord", "Management Control Systems" and "Key Performance Indicators". The theories used regarding BSC and TDB started out as consultant concepts, however, have later developed into recognized theories, and are today included in the universal theory of control systems by the academic community.

3.3.1 Primary Data

Face to face interviews were conducted with the intention to establish a deeper understanding of how the employees within Company A perceived the existing control system, and what would be desirable for a future one. The interviews were conducted with the expectations to provide detailed and rich information (Bryman and Bell, 2007:474) and therefore the questions were written with an open approach, facilitating follow-up questions (*Ibid*. p.259).

3.3.1.1 Selection of Informants

The thesis is built upon KPIs and therefore employees (as users and providers of KPIs) within different departments and hierarchical levels were chosen. This selection of informants lead to a more comprehensive picture of the current BSC and what was desired for a future control system, and made it possible to ensure a description of the reality within Company A. The wide selection was made to ensure the broad collections of perspectives and to recognize differences within the hierarchical levels of Company A. The interviews were also intended to suggest new KPIs, and therefore the informants were selected according to their connection to KPIs and objectives. Six interviews were executed with directors of the board, six with middle managers and two with employees. Two interviews were also conducted within the T area (one employee and one manager), with the intention to present a supportive perspective to the interviews conducted within Company A. The interviewed individuals all had several years of experience of the industry and Company A, reassuring the accuracy of the given information. The extensive number of informants from diverse settings increases the generalisability and significance of the thesis (Saunders *et al*., 2009:335).

3.3.1.2 The Execution of Interviews

Prior to the interviews, a document was sent out for the informants to read, outlining the main areas of discussion and describing the purpose of the study. No further specification of the questions was presented, with the intention to avoid influencing the informants and coloring their answers.

Further, an interview guide was established prior to the interviews, with a connection to the used theories. However, this was not made known to the informants, who would then be able to control the outcome of the interviews. The guide was created with the purpose to reduce the risk of leaving out important questions (Bryman and Bell, 2007:482). The guide was structured to first inquire about general information regarding the company as well as the specific department. Secondly, the strategy and its relevant KPIs were discussed, and finally control systems were addressed. This setup, a guide rather than predetermined questions, made it possible to follow up on specific and interesting information raised during the interviews, and to allow for a certain amount of flexibility. This setup is preferable for in-depth studies (Saunders *et al.*, 2009:329).

The length of the interviews varied to some extent, however, the majority of the interviews were around 50 minutes, with one exception (the interview with the Vice President, Communication, who arrived late and had no possibility to extend the appointment). All interviews were recorded, with consent from the participant, at the same time as notes were taken. The recording was executed with the intention to eliminate errors and the possibility to misrepresent the informant's answers (Bryman and Bell, 2007:220). The interviews were transcribed and a summary of the result were sent out to each participant. This offered them the opportunity to review the content and reformulate the statements if needed. This was made to minimize the possibility of the empirical material being based on inadequate information.

3.3.2 Secondary Data

Secondary data was collected from the company´s own information material, such as the annual report, strategic documents, and web site. The information material contributed to the understanding of the situation within Company A, and provided a comprehensive picture of both the strategy and the control system used. As a result of the company specific material being created by the company itself, a biased situation could be argued to emerge. However, the information was used primary to create a descriptive background about the company and was to a large extent confirmed by the interviews, which is the primary data source for the empirical material.

3.4 Data Analysis

To handle the large amount of qualitative data collected from the interviews, the transcribed material was broken down and structured according to the following categorization; Company A Information, Department Information, Strategy, KPIs and Control Systems. The systemization of the collected information was structured in a similar way as were the interviews; this was done with the intention to retain the context of the material (Bryman and Bell, 2007:597). The categorization also

eased the transformation of the collect information into empirical material for later analysis, since the categorized information revealed relationships and patterns regarding control systems, as well as general information about the company and its departments (Saunders *et al.*, 2009:492). Categorizing the collected data also provided an opportunity to monitor redundant information and highlighted unique reasoning.

3.5 Ethical Considerations

The informants are not entitled by their name in the thesis, but rather by their organizational position. This is done with the intention to foster honest opinions and accurate information. This form of anonymity reduces the risk that the board of directors takes advantage of power relationships towards the middle managers or employees. To further minimize the harm to informants, the recorded material is and always will be handled with confidentiality (Bryman and Bell, 2007:133, Saunders *et al.*, 2009:194,200). The issue of biased information as an outcome of the interviews was eliminated through a large amount of informants, as well as by the fact that two interviewers were present at all the interviews (Saunders *et al.*, 2009:326). The fact that the informants were selected according to convenience selection, selected by the organization and not the interviewers, is not seen as an issue nor as affecting the study, since most of the informants were also suggested by other informants, which is a method closely related to snowball sampling (Bryman and Bell, 2007:499).

The thesis contains sensitive information regarding Company A's competitive situation, and therefore anonymity is necessary. In this study, anonymity refers to concealing all participants' identities, however not position, and documents, along with providing the studied organization with a pseudonym. (Saunders et al., 2009:548) The anonymity concerns mainly external readers and competitors, however, internally the content of the thesis is well known and permitted for distribution (*Ibid.* p.201). Due to these factors, the strategy of Company A cannot be revealed in detail and its activities cannot be specifically addressed and named.

The main difficulty and ethical dilemma concerns the fact that Company A initiated the contact and creation of a new control system, and there is the possibility of Company A wanting to control and affect the end-result. While this risk has been recognized and taken into account in the study, this thesis will suggest a beneficial control system, hence BSC or TDB, according to the information provided by Company A, according to the theories as well as to the situation within the organization.

4. Real Life Setting of Company A

4.1 The Metal Cutting Industry

The industry, as well as Company A, primary produces machine tools for the purpose of cutting or shaping metal with the assistance of electronic techniques. The industry also includes providing services for these metal cutting tools, such as rebuilding and replacements of tool parts. (Internal doc. 5) The industry today is mainly supplying such areas as aerospace, automotive, power generation, and industrial equipment (Annual report, 2010:16). The industry is expanding and there is a global potential of 1 to 1.2 million customers (Vice Executive President, Marketing and Business, 2011-03-28). According to the vice president of Product Management (2011-03-02), the lifecycle of the products has become shortened and customers within the industry are therefore demanding new products and new solutions more frequently.

This global industry is intensely competitive, and as a result, the demand for quality and precision among the customers has increased. This heightens the necessity for strong innovation and development among the companies most active on the market. The demands that drive the metal cutting industry is closely linked to the US industrial activities, but the industry is also sensitive to the overall global economy. (Internal doc. 5) The recession of 2009 had an enormous impact on the market, and consequently forest many actors in the global industry to reconsider their objectives (Annual Report, 2009:4).

4.2 Case Presentation: Company A

Company A is one of the major actors within the steel industry for metal cutting tools, and has been so since it was founded in 1862 (Internal doc.2). Company A is part of a greater organization (here referred to as The Group), which is further divided into three core areas where Company A is part of the T area. Each core area is responsible for managing research and development, henceforth R&D, production and sales of their products. All told, The Group has over 47 000 employees with an annual sales of about SEK 83 billion. (Internal doc. 1)
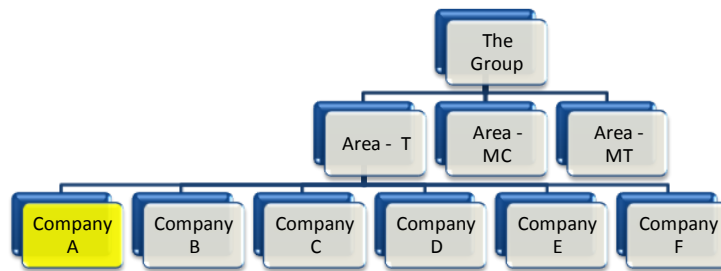
Figure 5: Organizational Chart

The head-quarter of Company A is located in Sweden, however, over 8 000 employees within both sales- and production- units are spread all over the world (Internal doc. 2). The organization is described as decentralized, with the aim to reduce the number of hierarchical levels. However, the strong existing routines and traditions within the organization heighten the complexity of intangible activities, while the financial processes remains rather strong. (Vice President, HR, 2011-03-02) Instead of directly controlling the global sales units, each market has a mentor within the board of directors, who represents the head-quarter's perspective in important decisions (Vice President, HR, 2011-03-02). In addition to the mentorship, Company A provides sales support for all the sales units, along with offering advice on particular activities or on how to prioritize different initiatives (Manager, Sales Process, 2011-03-08).

R&D is central to the company, and its resources spent are twice as high as the industry's annual average. As a result of the focused R&D efforts, Company A is often first movers when it comes to new material and machining concepts, always being able to offer the most recent and modern tools. (Internal doc. 2) The manager of Business Opportunities (2011-03-02) describes how Company A actively seeks out new opportunities by analyzing the market and their customers' needs. Innovation is not only concentrated around the products in Company A, but also colors their customer-contracts, services and employee training. (Internal doc. 2)

4.2.1 The Strategy and Objectives of Company A

Prior to the formulation of the new strategy, Company A analyzed their situation and position on the market by observing both external and industrial trends. Their analysis enabled Company A to establish their position in the market today as well predict where they need to be in the future. (Senior Manager, Business Development, 2011-03-02) The main objective in their new strategy is to become "*the unquestionable market leader*" within their industry by 2015. This is hoped to be accomplished by, among other things, being perceived as a growth oriented company: in both market shares as well as in sales volume. (Internal doc. 3:13) The growth can be realized by hunting

for new business and by increasing sales volume, and consciously working towards a long-term business driven internal environment (*Ibid.* p.19). By offering the best service and sales channels, Company A also seeks to be perceived by their customers as the main supplier of products.

Innovation is continually an important factor for Company A in its aim for growth in market shares. (*Ibid.* p.13) All leaders and managers within Company A encourage new ideas and support creative thinking, as well as each employee's individual development. Knowledge development is central and is meant to contribute to the expertise of Company A. (*Ibid.* p.19) For Company A to achieve the desired position, three main areas of improvement have been identified:

Area 1: Competitive Advantage

Company A aims to develop their already successful products and to become leaders in both sales and volume within selected segments and customers. The aim for 2015 is to control more than 30% of the market (Internal doc. 3:15) and to develop customized services. This will be realized through a strengthening of their competitive advantage by increasing their number of strategic customers, that is, customers who are important to the organization not only due to volume and profitability, but as partners within R&D as well as technical aspects (Employee, Business Opportunities, 2011-04-11). Further, there is an aim to deliver strongly engineered products and capture more shares of the rapidly developing markets (Internal doc. 3:16).

Area 2: Sales Channels

Company A intends to update their way of presenting their products to the market. Although direct sales will continue to be their most important channel, the utilization of external distributors and web sales will increase. (Internal doc. 3:17) However, the vice president of Product Management (2011-03-02) believes the online customers will demand more advanced product data and even simulation programs. A presence online will challenge Company A when it comes to price and profitability (Vice President, Product Management, 2011-03-02). There is a need to analyze which channels of sales correspond most harmoniously with Company A's brand image and its associated values (Senior Manager, Business Development, 2011-03-02).

Area 3: Market Growth

Company A will adjust their projects and way of working to facilitate the aim of expanding their core business and new areas with 25 % (Internal doc. 3:15). Today the metal cutting industry is estimated to have a potential of 120 BSEK, and Company A is aiming at increasing their presence on the market and among their main customers (*Ibid.* p.18). To be successful in this area, the vice president of Product Management (2011-03-02) stresses the need to develop innovative products, not only

replacing themselves with modified versions of earlier products. The importance of *"planting seeds for the future and encourage innovative thinking"* is highly emphasized (Vice Executive President, Marketing and Business, 2011-03-28).

4.2.2 Short-Term Plan

To ensure the success of their strategy, Company A has developed a short-term plan for the upcoming year, hence 2011 (Vice Executive President, Marketing and Business, 2011-03-28). The plan consists of 3 categories that together hold 11 initiatives (Vice President, Finance, 2011-03-10). The plan was created in collaboration with the sales units and provides them with information regarding the priorities for 2011 and where their resources should be located (Vice President, HR, 2011-03-02).

Category 1: Sales and customers

This element of the plan is highly prioritized and mandatory for all global sales units. It involves activities which intend to increase both the volume of products sold as well as the number of customers (Internal doc. 4:6-8). The aim is to claim business from the competitors and retaining their customers, primary by developing a relationship connected to these customers' life cycle, but also by focus on projects and products that will secure future business and sales (*Ibid.* p.4).

Category 2: Segments

The main business opportunities for 2011 are presented, and three segments have been selected, in which Company A needs to be active and strong in order to gain markets shares and reach their objectives for 2015 (*Ibid.* p.12). The three selected segments represent future openings for Company A (Vice President, HR, 2011-03-02).

Category 3: Knowledge and relationship

The Change Programs and strategically important initiatives are activities stated in this category (Internal doc.4:14). The aim is to develop a closer relationship with the customer and together customize their solutions (Manager, Business Opportunities, 2011-03-02). To enable these kinds of close relationships, technical knowledge is prioritized, with the expected outcome that all sales units will increase their technical knowledge during 2011 (Internal doc. 4:16).

4.3 Reflections on Company A's Control System

The control system current in use in Company A, a BSC, is perceived within the organization as more of a collection or list of technical and financial KPIs rather than a complete and balanced control system. At present, it does not provide the directors of the board with enough information regarding

the business situation to guide their decision-making process. (Vice President, HR, 2011-03-02) Further, the current control system is inflexible and not aligned with Company A's new strategy, and is therefore seen as inadequate (Vice President, Finance, 2011-03-10). Several informants describe the BSC as retrogressive, and not at all provide as many indications for future development (Vice President, HR, 2011-03-02, Vice President, Product Management, 2011-03-02, Vice Executive President, Marketing and Business, 2011-03-28).

The vice president of Communication (2011-03-02) stresses the lack of non-financial measurements in the current BSC. However, she recognizes the increased efforts of collection and analyses such material might require. At present, the only employee-related KPI is attendance, which is believed to add next to nothing to the holistic or strategic perspective of the organization (Employee, HR, 2011-03-09).

Another problem with the current BSC is its lack of presenting a holistic perspective of the entire organization and its processes (Manager, Sales Process, 2011-03-08). *"To understand its message is a very time consuming activity, there is a need to immediately recognizing what areas needs attention and where we are not reaching our objectives"* (Vice Executive President, Marketing and Business, 2011-03-02). The manager for the Pricing management department (2011-03-02) is concerned about the current KPIs and the average information they provide. "*A KPI taken out of its context may not provide accurate information, and therefore demands perfect understanding of the factors behind the KPI to see the cause and effect relationship"* (Manager, Pricing management, 2011-03-02). This is supported by the vice executive president Marketing and Business (2011-03-28), who believes that only one KPI alone can never tell the whole story. However, it can provide an indication in which direction the organization is heading. The current BSC and its focus on specific activities rather than on objectives is thus seen as a disadvantage. This narrow focus of the BSC might be explained through Company A's many years of success, and their knowledge of what has worked and what has not. However, *"[…] the activity focus may have a negative effect on the motivation among the employees, the creativity decreases".* (Employee, HR T-area, 2011-04-11)

The existing BSC is only available to the directors of the board of Company A, and is therefore argued by several of the informants to be rather loosely connected to the actual internal processes. As a result, the actual use of the BCS and its connection to daily routines has been questioned throughout the organization. (Manager, Business Opportunities, 2011-03-02, Manager, Sales Process, 2011-03-08, Vice President, HR, 2011-03-02) As a result of this inability to access the BSC, several departments are creating their own versions of monthly follow-ups of KPIs, disconnected from the overall

company evaluation (Manager, Sales Process, 2011-03-08). The vice president of HR (2011-03-02) acknowledges the inaccessibility of the BSC, and believes several of the managers within the organization today both local and global are not provided with enough information, even though it exists in the current BSC.

4.4 Suggestions for an Optimal Control System

Since a higher transparency of the information within the organization is believed to result in more highly motivated employees and enhance a business driven atmosphere, an optimal control system for Company A would be a *"[…] dashboard with daily updated information relevant for each specific department"* (Vice President, Product Management, 2011-03-02). This belief is supported by the executive vice president of Business and Management (2011-03-28), who claims that, with *"an increased transparency more employees having the complete picture will result in better decision making throughout the organization. However, certain sensitive information will have to remain limited to only the directors of the board."* The vice president of Communication (2011-03-02) also agrees, and stresses the importance of managers being the source of information for the employees, argues that information should be shared through them out to the rest of the organization.

The importance of well-formulated objectives is stressed within the T-area, since the use of a control system enables the process of breaking down of stated objectives within the organization in to specific activities and actions. *"If the objectives are too vague and catchy, the departments will face difficulties when transforming them into activities, the objectives become meaningless"* (Employee, HR, T-area, 2011-04-11). The vice president of HR (2011-03-02) believes *"[…] the BSC has to be used in the way original intended and present all the perspectives."* He also claims that the BSC has to be challenged more frequent, to always provide up-to-date KPIs which corresponding to the company's strategy, objectives, and environment (Vice President, HR, 2011-03-02).

Relevant and prospective KPIs are also signaled as an important area of improvement by several informants. Such KPIs would ease the decision-making process for the board of directors. (Senior Manager, Business Development, 2011-03-02, Vice President, HR, 2011-03-02) The KPIs used in an optimal control system have to include a long-term approach, interact with each other, and not be confusing (Manager, Sales Process, 2011-03-08). This wish is supported by the vice president of R&D, who believes *"[…] the KPIs have to be valid in a long-term perspective, and a control system can not only consist of KPIs which are only accurate from one minute to the next."* Despite the fact that Company A is a global and large company *"[…] the chosen KPIs have to be kept short and concise"* (Manager, Opportunity management, 2011-03-07) *"An optimal set of KPIs is one in which they work*

together to create a holistic perspective, however, alone may not say anything" (Vice Executive President, Marketing and Business, 2011-03-18).

There is a need for a control system which presents objectives that strongly correlate to the objectives of the organization and its departments (Manager, Business Opportunities, 2011-03-02). There is also a desire for the possibility among departments to break down the holistic objectives into department-specific ones (Manger, Opportunity Management, 2011-03-07). For this to be possible cause-effect relationships need to be apparent. Hence, an understanding of which activities work towards the established objectives needs to be clarified. (Senior Manager, Business Development, 2011-03-02)

4.4.1 Measurements for Strategic Activities

The manager of Business Opportunities (2011-03-02) suggests that all activities stated in the strategy and short-term plan should be measured and included in a new and efficient control system. An equal focus on all areas of Company A -not only the financial and technical- is important, since all activities are significant for its success (Vice Executive President, Marketing and Business, 2011-03-28). The need to measure non-financial aspects within Company A has been pointed out by several of the informants, however, so has the time consuming and complex process such work would require (Vice President, Communication, 2011-03-02, Manager, Sales Process, 2011-03-08). The issue of measuring the employees' behavior is widely recognized within Company A, for example, in relation to issued of creativity, an area raised by the vice president of R&D (2011-03-10) as well as the vice president of Product Management (2011-03-02).

The arrangement and structure of each KPI needs to be individually evaluated, and the decision should reflect the desired outcome. For arrangement concerns for example, the amount of historical data or the possible way of inspecting the KPI. This need of independence can especially be seen in connection to the KPIs related to external invoicing, where the data needs to be divided and followed-up according to different segment such as products, customers, and short-term plan activities. (Vice President, Finance, 2011-03-10) From a sales perspective, there is a need to establish through which channels (direct sales, distributors, web sales) the products are sold, and how efficiently the sales persons are performing (Manager, Sales Process, 2011-03-03).

When it comes to developing new products in relation to already established ones, a balance in the product portfolio is requested by the vice president of Product Management (2011-03-02). *"Monitoring the balance is relevant for minimizing the risk of building an inactive portfolio"*

(Manager, Business Opportunities, 2011-03-02). A suggestion for a KPI that monitors the balance in the portfolio is the one who measures the percentage of the total stock, which represents 80% of the cost of goods sold (Planning director, T-area, 2011-03-10). Another way of assuring a relevant and active assortment of products is to observe the sales connected to the most recently released products. A central KPI connected to the sales of new products is the introduction security, which needs to be 100% in order to secure delivery, and in turn retain the customer satisfaction. (Manager, Opportunity Management, 2011-03-07) The current KPI *Stock Availability* is considered still valid, however, in relation to the measurement *Days in Inventory for Finished Goods,* the current KPI would be given an additional parameter (Vice President, R&D, 2011-03-10). Furthermore, to ensure that volume of products in stock is correct, a KPI measuring the accuracy of the forecast for a new product project is needed (Manager, Opportunity Management, 2011-03-08).

Knowledge development is stated in the strategy as an essential activity for 2011, and therefore a KPI showing its development is desired. One example of such measurement could be the yearly number of educational hours for both employees and managers (Manager, Sales Process, 2011-03-08). When it comes to the education of sales persons, a KPI demonstrating the result of such education and illustrating the sales development after the training is requested (Manager, Technical Marketing, 2011-03-10). The emphasis on knowledge and education increased the interest for employee turnover. Some turnover is necessary, however, unwanted turnover is a KPI in need of monitoring, along with how the vacancies are being filled (internally or externally) (Vice President, HR, 2011-03-02). Monitoring of gender balances with regards to managerial positions is also requested within Company A (Vice President, Product Management, 2011-03-02). The number of women in staff positions is measured within the organization today, however, this information is not included in the current control system (Employee, HR, 2011-03-09).

The result of the current personnel survey, which evaluates the internal perception of concepts such as motivation, responsibility, and authority, is another KPI suggested to be included in the new control system (Employee, HR, 2011-03-09). Furthermore, the survey delivers leadership- and empowerment index, which is suggested by the vice president of HR (2011-03-02) to be included as well. Support is another KPI recommended be included in the control system, both for managers as well as for employees. For managers, the support should be related to communication and the level of satisfaction regarding adequate information to manage and inform the employees. For employees, the KPI should measure satisfaction regarding how information contributes to their understanding of the brand, strategy, and overall responsibilities within the organization. (Vice President, Communication, 2011-03-02)

The need of measuring and monitoring the satisfaction among the customer is recognized throughout the entire company. A new KPI, *Net Promoter Score*, is being evaluated among the sales units in the US, and *"if the trial is successful, a global implementation for all sales units within Company A could be an option."* (Vice Executive President, Marketing and Business, 2011-03-28) An already existing KPI, *Customer Savings,* is argued to be valid and strong, even in relation to the new strategy, and should therefore be kept for the future (Vice President, Finance, 2011-03-10). Increasing the number of customers is prioritized in the short-term plan for Company A, and it is therefore suggested this is measured in order to monitor the developments towards that objective (Vice President, Finance, 2011-03-10). It is also suggested to measure how many customers are advancing from casual customer (less than 3 purchases per year for less than 100 000 SEK) to becoming regular customers (Manager, Sales Process, 2011-03-08). The focus of strategic customers is an important activity in the strategy, and is also suggested to be monitored and included in the new control system since *"[…] strategic customers are important indicators for the future and the growth of Company A"* (Employee, Business Opportunities, 2011-04-11). A suggested KPI for strategic customers might be the percentage of invoices related to that group of customers (*bid*.).

As an innovation intense company, Company A ought to give the R&D perspective a more distinct presence in an upcoming control system. The resources allocation between different projects, such as product development, strategic, and basic, is in need of monitoring to ensure the right focus of the R&D work. (Vice President, R&D, 2011-03-10) At present, the KPIs New Sales Ratio and New Product Sales are available, where the latter one is created to push for faster introductions (Manager, Business Opportunities, 2011-03-02). However, the vice president of R&D (2011-03-10) suggests several KPIs be introduced illustrating the level of creativity among the employees, for instance, through the number of creative ideas and the number of rolling projects.

Most of the current financial KPIs, such as *Net Working Capital*, *Earning Before Interest and Tax*, *Days in Inventory, Net Price Change* and *Credit Days*, have not lost their validity with the implementation of a new strategy, and it is suggested that they are maintained for the future (Vice President, Finance, 2011-03-10). Also, the monitoring of Company A's *Market Shares* and the Industrial *Production Index (IPI)* is recommender to continue (Manager, Opportunity Management, 2011-03-07). The IPI corresponds with the company's invoicing and is therefore interpretable as providing indications towards the future production of the company (Senior Manager, Business Development, 2011-03-02). A financial measurement in relation to inventory is the KPI: "*Percent of Inventory which Stands for 80% of the Cost of Goods Sold"* which will ensure the right products are kept in stock (Planning director, T-area, 2011-03-10). The development of the activities included in the short-term

plan is also in need of being monitored. Measuring growth and profitability in relation to these activities is recommended. (Manager, Business Opportunities, 2011-03-02)

4.5 The Findings in Brief

An illustration of how Company A understands the development, towards a closer connection to the strategy, of their current control system into a desirable one, is to be seen in Table 2. The suggested changes, for a desirable control system, present the areas of focus for the future within Company A.

Table 2: Empricial findings	Current Company A	Desirable Company A
Transparency	Directors of the board[10]	Directors of the board & Middle managers[16]
Information	Time consuming[11]	Daily updated[17], historical[14], level specific[14]
Intention	Guide in decision making[10]	Holistic[18], future oriented[10], long-term approach[18]
KPIs	Technical & Financial[10], retrogressive[10], average information[12]	Increase non-financial[16], indicators for the future[10], level specific[14]
Strategy/Vision	Not up-to-date[13]	Central[13], closely related[13]
Environment	Inflexible[14]	Constantly challenged[10]
Main criticism	Unbalanced[15], Activity rather than objective oriented[19], loose connection to organizational activities[13]	

10: VP HR, 2011	16: VP Communication, 2011
11: VEP Marketing & Business, 2011	17: VP Product Management, 2011
12: M Pricing Management, 2011	18: M Sales Process, 2011
13: M Business Opportunities, 2011	19: E HR T-area, 2011
14: VP Finance, 2011	
15: E HR, 2011	

5. Analysis of theoretical framework and real life settings

The current BSC in Company A has not functioned in a satisfactory manner (Vice President, Finance, 2011-03-10). This might be the result of the gradual disconnect between the organizational activities and the theoretical intention of the original BSC framework. For example, at present, the BSC in Company A is only accessible to the board of directors (*Ibid*.), which contradicts the original intention of the BSC, which promotes involving all levels and employees within the organization (Kaplan and Norton, 1996:8). However, throughout the years, the BSC practice has been developed into a more hierarchical framework and is primarily used within head-quarters (Chiapello *et al*., 2001:31), which is also the case within Company A. Despite the obvious issues with their use of the BSC, Company A has shown little to no interest in finding an alternative option. One of the possible reasons why Company A is not even considering TDB as an option—even though the desired outcome is closely related to the ideology behind the TDB practice—could be explained by the unfamiliarity of the practice (Epstein and Manzoni, 1998:191). The desirable need among organizations to benchmark their performance, could be argued as another reason to why BSC is more frequently implemented (Beatham *et al*., 2004:107), since its one-size-fit all character with recommended KPIs enables benchmarking (Johnsson *et al*., 2006:847). The TDB, on the contrary, emphasizes the importance of a profound consideration of the surrounding information in order to evaluate the organizational specific needs (Chiapello *et al*., 2001:31), and might therefore offer little to no possibility to benchmark.

Another desired aspect of a new control system raised by representative of Company A is the issue of flexibility and adaptation to its environment (Vice President, HR, 2011-03-02). From a theoretical point of view, both the BSC and the TDB practices are designed to assist with the interpretation of the relevant business environment and its conditions (Olve *et al.,* 1999:10, Chiapello *et al.,* 2001:9). However, the flexibility associated with a BSC can be questioned. The amount of effort connected to maintaining the flexibility and its correlation with the strategy could be argued as requiring extensive resources in the use of BSC. Furthermore, it is argued that the BSC constantly needs to be updated to ensure the relevance of its content (Vice President, HR, 2011-03-02). The ad hoc nature of the TDB practice and its up-to-date information requires less maintenance, because the employees' commitment to the KPIs is higher due to the co-responsibility connected to the those (Chiapello *et al*., 2001:19). This co-responsibility could be argued to prevent the control system from loosing significance, while in a BSC, the individualized responsibility result in no such effect, but rather diminishes its holistic relevance.

Transparency is a central feature in a new control system for Company A, however, with some restrictions (Vice Executive President, Marketing and Business, 2011-03-28). It is claimed that the chosen control system needs to correspond well to the ideological atmosphere within the organization (Bourguignon *et al.*, 2004:109). Therefore, since it requires participation from all levels, the TDB practice and its corresponding philosophy is suggested to be more closely connected to the ideology within Company A. Additionally, since there will be a need for yearly replacements of KPIs in relation to Company A's short-term plan, and the TDB provides the possibility to customize the presented information, it might therefore be more preferable for Company A than a BSC with a predetermined information structure (Chiapello *et al*. 2001:20). The customization of the information will further reduce the efforts needed to understand the message of a new control system. This recommendation is supported by the statement: *"To understand its message is a very time consuming activity, there is a need to immediately recognize what areas needs attention and where we are not reaching our objectives"* (Vice Executive President, Marketing and Business, 2011-03-02). The request for instant indications further proposes the use of a TDB as a control system, which abilities to provide an organization with warning signals as a result of the practice is closely connected to the organization's actual activities. The need of instant indicators is also stressed by the vice president of Product Management (2011-03-02) who suggest a *"[…] dashboard with daily updated information relevant for each specific department"* be implemented to further address the issue*.* However, the use of a dashboard has been criticized for not attending to issues of quality of activities, and therefore not concentrating on what is essential (Bessire and Baker, 2005:655). This could be considered a weakness when the control system functions as a guide for decision-making.

Regardless of the choice of control system, organizations need to develop company specific KPIs in correspondence with their strategy and purpose, in order to become as competitive as possible in the market (Beatham *et al.,* 2004:111). If organizations do not recognized and utilize the knowledge among their employees, the chances are their KPIs will be inadequate (Scheider and Vieira, 2009:504). Given that Company A encouraged participation from all departments, the opinions and knowledge of the employees will serve as a foundation of the prospective control system, and as such, the accuracy of the KPIs might be secured. A desirable control system for Company A includes KPIs providing indications for future actions and problems (Vice Executive President, Marketing and Business, 2011-03-28). Encouragement to develop leading KPIs to balance their otherwise quite retrogressive ones could be what Company A seeks for.

The current KPIs could be argued to illustrate a strong correlation between Company A and the industry they are active within, explaining why the majority of the KPIs are closely connected to the

company's products and technology. This raises the issue of presenting a holistic perspective of the whole business situation, which Company A considers being an important aspect of any new control system (Manager, Sales Process, 2011-03-08). There is an obvious need for additional, non-financial KPIs, which is also recognized by Company A. However, the resources such KPIs might require are perceived within the company to be too demanding and time consuming. (Vice President, Communication, 2011-03-02) A possible outcome of ignoring the non-financial KPIs might be an inability to reach any long-term objectives, since the importance of employee-perspective is disregarded (Kaplan and Norton, 1996:127). Another possible outcome could be that the organization fails to recognize a decline in demand (Svensson, 1999:33), since their focus would be on financial KPIs which are known to be lagging in their character.

Another possible explanation for the unbalance of KPIs within Company A could be the production and technological oriented content of their strategy. As a result of the strategy being central within both TDB and BSC, the outcome of the control system will be a perfect reflection of the organization's strategy and its contents. In the case of Company A, with their product- and technical-oriented strategy, a control system including mainly financial and lagging KPIs would be reckoned with. Although, the nature of some of the activities within Company A's strategy, and foremost within the short-term plan, would imply an increased appearance of leading KPIs. However, this would mean an acceptance within Company A regarding the resources needed to analyze the information required for generating such KPIs. The strategic statement provided by Company A: *"to become the unquestionable market leader in the industry by 2015, by being perceived as a growth oriented company, in both market shares and sales"* (Internal doc. 3:13), is suggested by the 3[rd]G BSC framework to enhance the visualization of the objectives and as a result align the managers towards the destination (Lawrie and Cobbold, 2004:617). This reasoning, along with the advantages of using a strategy map (Kaplan and Norton, 2001:90), demonstrated the positive potential of using a 3[rd]G BSC in the case of Company A. Based on the understanding of the criticism, put forward by the theories, directed towards TDB's weak connection to the strategy, implementing a TDB within Company A could leave the organization "fumbling in the dark" without receiving any information regarding the effect of their strategy.

5.1. A Brief Comparison of Theory and Real Life Settings

Table: 3 Analysis	BSC	TDB	Current Company A	Desirable Company A
Transparency	Management team[1], HQ[1]	All levels[1]	Directors of the board[10]	Directors of the board & Middle managers[16]
Information	Predetermined structure[1]	Ad hoc[1], customized[1], large amount possible[1], detailed and aggregated[1]	Time consuming[11]	Daily updated[17], historical[14], level specific[14]
Intention	Overall picture[1], Integrate financial and non-financial[2], provide several perspectives[2],	Internal cooperation[1], communication[1], Support and assist[1], action and future oriented[1]	Guide in decision making[10]	Holistic[18], future oriented[10], long-term approach[18]
KPIs	Individualized responsibility[1], to some extent predetermine[1]	Co-responsibility[1], Dashboard[6] Department specific[1], warning signals[1]	Technical & Financial[10], retrogressive[10], average information[12]	Increase non-financial[16], indicators for the future[10], level specific[14]
Strategy/Vision	Central[2], Visualized by map[3], destination statement[7]	Central[6]	Not up-to-date[13]	Central[13], closely related[13]
Environment	Linking internal and external surrounding[4]	Flexible and closely related to the environment[1], situation based[6]	Inflexible[14]	Constantly challenged[10]
Main criticism	Top-down & hierarchical[6], too abstract[8], ignoring employees' participation[9], mainly financial[5], One-size-fits all[1]	Weak connection to strategy[6]	Unbalanced[15], Activity rather than objective oriented[19], loose connection to organizational activities[13]	

1: Chiapello *et al.*, 2011	6: Bessire and Baker, 2005	10: VP HR, 2011	17: VP Product Management, 2011
2: Kaplan and Norton, 1996	7: Lawrie and Cobbold, 2004	11: VEP Marketing & Business, 2011	18: M Sales Process, 2011
3: Kaplan and Norton, 2001	8: Johansson *et al.*, 2006	12: M Pricing Management, 2011	19: E HR T-area, 2011
4: Olve *et al.,* 1999	9: Scheider and Veieira, 2009	13: M Business Opportunities, 2011	
5: Svensson, 1999		14: VP Finance, 2011	
		15: E HR, 2011	
		16: VP Communication, 2011	

The desirable changes for a new control system, presented by Company A, indicate a close connection to the theoretical framework of the TDB practice, which is demonstrated in Table 3. However, Company A's expressed desire to have a distinct connection between control system and strategy (Vice President, Finance, 2011-03-10), indicates the use of a BSC (Kaplan and Norton, 1996:19). The subject of transparency is further an aspect which is closer related to the BSC practice, and suggests its implementation, rather than TDB.

6. Concluding Remarks

Organizations tend to rely greatly on earlier experiences and recommendations when it comes to the choice of control system, and consequently they most often select a system which is most recognized and commonly used within the industry. As such, selection will occur at the expenses of the control system's suitability and relation to the strategy, its vision as well as its mission. This in turn might result in a disconnection between the system used and its actual theoretical framework and purpose. Hence, due to the lack of appropriate evaluation of the organization's need and the interaction with the theoretical framework, the organization risk losing the original intention of employing a control system. In a long-term perspective, the control system will not provide the expected outcome and guidance the organization seeks.

The intense business environment and its emphasis on efficiency requires insight and participation from the whole organization, especially so if awareness regarding the competitive situation is to be raised, as within Company A. The importance of understanding the holistic view of the organization (perhaps due to the recession) is recognized to a large extent among the middle managers and employees within Company A today. There is an obvious desire to increase the transparency and the flow of information between the different departments, which indicates the benefits of implementing a widespread control system. To generate actual success through the use of such a control system, the organization will need to establish consensus among employees, and therefore a top-down approach is no longer optimal. The confirmed commitment within Company A and among its employees brings about the foundation for developing consensus of their strategy and its KPIs.

This commitment is directly connected to the co-responsibility stated in the theoretical TDB framework, which suggests the implementation of the widespread and communicative practice of TDB within Company A would be preferable. However, the intense focus within Company A towards the strategy and its accomplishment, restrain the use of a TDB, since the practice is criticized for its vague correlation towards strategy. This promotes the use of a BSC, which position the organization's strategy at the central of its attention. The request for flexibility and indications for the future, which is associated with the use of a TDB, does not triumph the desire within Company A to control and monitor the outcome of their strategy, and the TDB is therefore not perceived as a viable option. Nevertheless, applying a one-size-fits-all solution, that is, a BSC with predetermined perspectives and KPIs, will by no means result in a functional control system. Customization of the BSC is needed for Company A to incorporate all directions included in the strategy, for instant, the innovation aspect. The original four perspectives are insufficient, and a fifth, innovation, ought to be integrated to complete the holistic picture.

The imbalance of the current control system is recognized within Company A. However, the nature of their strategy, technically and financially driven, obstructs the introduction of non-financial KPIs into their control system. As a result of the strategy being accessible only to the board of directors, so is also the structure of the control system. Hence, an alteration in the balance of the control system is required, including deviating from the traditional control approach of the board of directors and welcoming additional, non-financial indicators. The use of a BSC enhances the current and traditional top-down approach, though if greater participation and involvement is desired (as was insisted on by the employees), a TDB, with its bottom-up approach is the preferable practice for Company A. The implementation of a TDB would further meet the request among the employees of being able to understanding the relevance and use of the KPIs, whereas a continued use of a BSC, even if it is modified, would mean that employees would still only be reporting data to the board of directors. The questioning of their connection to the organizational processes would remain.

The BSC is perceived as strict and controlling in its nature, and as primary establishing facts. The TDB, on the other hand, enhances communication with an educational intention. To answer the purpose of this study, the main objective of Company A's strategy is to become "*the unquestionable market leader*" the optimal control system would be a TDB, due to its constant ability to stay updated against their external environment and to provide indicators for the future. However, regardless of the numerous of advantages the use of a TDB would entail, the current structure of Company A, with its hierarchical approach, resists its implementation. Theory, together with the employee's desire, might imply TDB as the optimal alternative for supporting the strategy, however, the reality of Company A, with the directors of the board as monitors and decision-makers, suggests the use of a BSC. As a result of the correlation between the choice of MCS and the ideology of an organization, BSC will continue to be perceived as the optimal practice within Company A as long as the top-down approach remains.

Whether the theory or the reality is to decide which control system to be used, is for the organization to determine. Regardless of what control system the organization decides on, the desired advantages will emerge only if a genuine implementation is completed along with a strong connection to the theoretical framework.

6.1 Further Research

The TDB practice will have to spread beyond its domestic origin before it can be considered a valid alternative to the BSC, among global organizations. In order for the BSC to continue its reign as a respected control system, however, it needs to be continually developed so as to provide greater flexibility in coherence with the rapid changes pervading the global business environment. Further, there is a need to modify the BSC practice to increase its valuation of involving employees at all levels in an open dialogue, which would ensure precision of both internal and external information.

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Appendix 1

Interview questions for directors of the board:

- How would you describe Company A in a few words? Both the organization per se and the way things are done.
- Please describe your position and function within the Company A.
- How are your performance measured today? What KPIs are used?

- How would you describe the new strategy in a few words?
- How do you facilitate the implementation of the strategy in your function?

- What are your main thoughts regarding the current BSC?
- What are your general thoughts regarding BSC and its function?
- What are the crucial aspects for a successful MCS?
- What advantages and disadvantages do you see with the use of a MCS?
- What would you like to see in a future MCS, when it comes to KPIs?
- Who do you believe a successful MCS should be addressed to?

Appendix 2

Interview questions for managers and employees:

- How would you describe Company A in a few words? Both the organization per se and the way things are done.
- Please describe your position and function within the Company A.
- How are your performance measured today? Are they, according to you, the most important ones or are there others which could be used?

- How would you describe the new strategy in a few words?
- How does the new strategy affect your function?
- Will the current activities change in your department in order to align with the new strategy? Will the performance measurements have to change?
- What are the main objectives in your specific area which supports the organizations strategy?

- What are your main thoughts regarding current BSC and its function?
- What advantages and disadvantages do you see with the use of a MCS?