AALBORG UNIVERSITY
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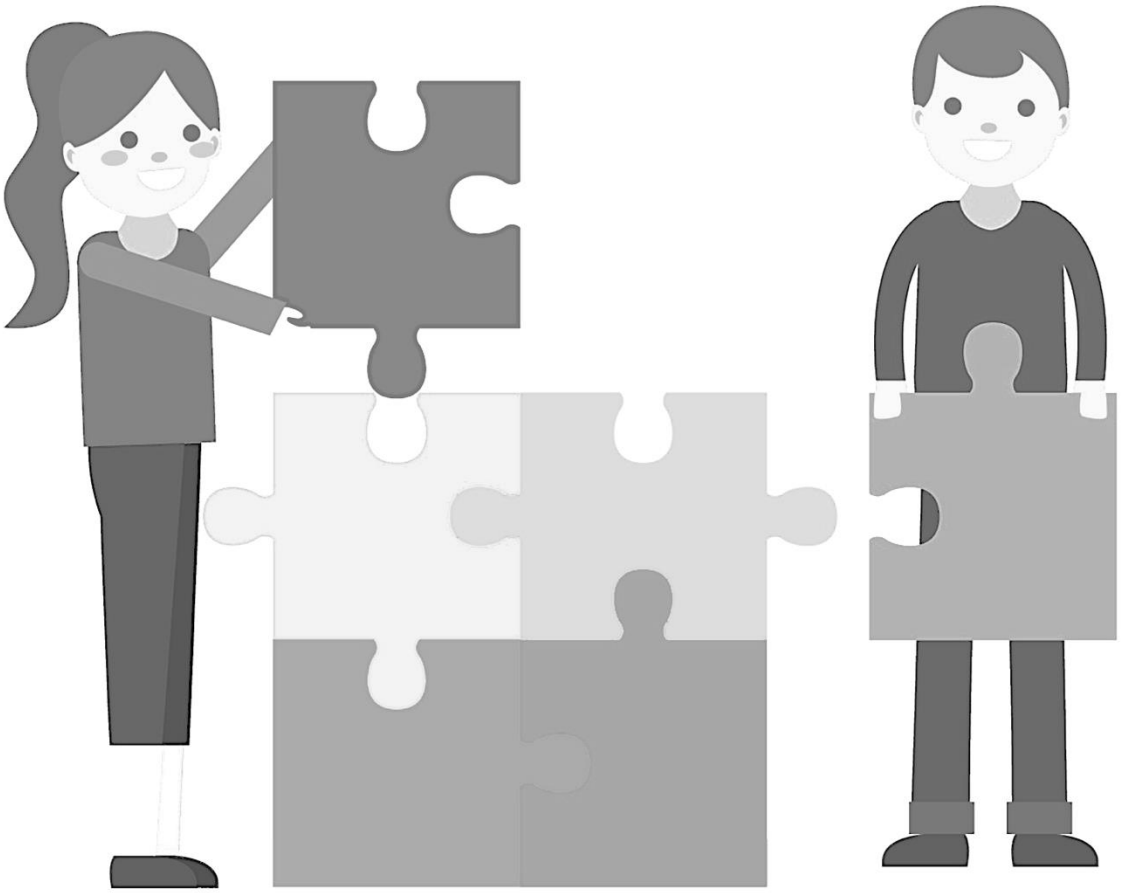
THE EFFECTS OF INTERACTION BETWEEN THE MANAGEMENT TOOLS OF BB AND ABC/M



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Abstract

Formålet med denne kandidathandling er, at nærmere undersøge et hul i forskningen omkring Beyond Budgeting (BB) og Activity Based Costing/Management (ABC/M). Antagelsen er, at da BB er en filosofi mere end et budgetteringsværktøj, og ABM er et styringsværktøj, at de komplimenterer hinanden, frem for at substituere hinanden. Formålet med afhandlingen er derfor at undersøge om ABC kan supplere BB, og hvilke følger sådan et samspil har, set ud fra et teoretisk perspektiv.

Da selve grunden for det valgte forskningsområde er baseret på et hul i forskningen, er kandidatafhandlingen af teoretisk karakter. Med udgangspunkt i det funktionalistiske forskningsparadigme og baseret på "Contingency Theory" tilgangen, som kort sagt går ud på, at hver virksomhed skal finde sin egen måde at lede og organisere sin organisation, bliver de to teorier, BB og ABC/M, forklaret og kritiseret. Efterfølgende bliver de analyseret komparativt, for at finde frem til hvilke faktorer gør sig gældende, såfremt værktøjerne skal implementeres i en "økonomistyringspakke" (Management Control System (MCS)). Dernæst bliver en analyse af komplementaritet foretaget, for at fastslå om BB og ABC/M kan, fra et teoretisk synspunkt, kan anvendes samtidig. Analysen bliver afsluttet med en illustrativ case af Svenska Handelsbanken, som er en af pionererne indenfor BB.

Ovenstående analyser førte frem til en konklusion, at der er flere positive end negative følger ved anvendelse af BB og ABC/M i et MCS. Den teoretiske analyse afdækkede, at teorierne komplimenterer hinanden, samtidig som at begge kan anvendes i andre sammenhænge. Der blev fundet frem til flere positive sammenhænge, hvor især de virksomheder, der allerede anvender BB ville drage fordel af også at anvende ABC/M. Samtidig er decentraliserede virksomheder relevante for anvendelsen af begge værktøjer, da beslutningsansvaret ligger tættere på kunden, end ved en centraliseret virksomhed. Organisationskulturen er også en faktor, hvor nøgleord som åben kommunikation, ambitionsniveau og frihed under ansvar kan nævnes som de største punkter.

Afhandlingen fandt dertil frem til, at der er områder, som kræver mere forskning, hvor cases af virksomheder, som anvender det ene, begge eller ingen af værktøjerne, men som ønsker at bruge dem, ville være det største område. Der blev også afdækket, at fuld implementering af BB ikke er så udbredt, men virksomheder bruger elementer af traditionel budgettering og BB. Dette kan delvist forklares ved at polariseringen mellem de to muligvis er for radikal, men begge har elementer, som kan anvendes i den økonomiske planlægning af virksomheder, hvilket også kunne være et interessant forskningsområde at dykke videre ned i.

Preface

The research group wishes to thank Niels Joseph Jerne Lennon for his help, both in regard to the interview with the Swedish Bank but also for his guidance in connection with the preparation of this master's thesis.

Furthermore, we would like to express special thanks to the branch manager of the Swedish Bank in Aalborg, who agreed to meet with us and participate in our study. Without his responses and insights this thesis would not be the same.

Last but not least, we would like to thank the study secretary, Vibeke Jørgensen, for always replying to our inquiries and providing us with the necessary knowledge in regard to formalities.

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1. Introduction

An important aspect of all companies and organizations is financial planning, most commonly known as the budget. The budget is a framework of how many resources any given organization has to operate with. From a historical point of view budgeting is not a new concept. In an article from 1965 that refers to book which was written in 1825, L. F. G. de Cazaux (1965), who originally formulated it in French, defined a budget as:

> *The course of things to come can be traced by this accounting of past successes and mistakes. From there, we can determine the needs in the year to come, and can compare these needs with the resources that will be available: this table of resources and needs is what we call a budget.*

As the quote indicates a budget can be inspired by past successes or failures in order to determine which needs the future holds. De Cazaux's quote was written in a time when the world was relatively stable. Sandalgaard and Bukh (2008) mention that it was not until approximately a century after De Cazaux defined a budget, that some of the major companies in the United States started operating with investment- and operating budgets.

Keeping the information from De Cazaux and Sandalgaard and Bukh in mind, it is possible to define what a budget is, by using Andersen and Rohde's (2007) definition, originally in Danish and translated to English by the research group:

> *Budgeting is a periodic choice of action program, accompanied by a periodic economic impact assessment.*

Even though this quote is not defined by a timeframe, it does follow the same way of thinking as De Cazaux defined in 1825.

Being such a central part of any organization or company, budgeting and the budgeting process has been extensively researched field. Recent years' development has meant that both national and international markets are characterized by elements such as increased digitization, globalization, changing consumer preferences and other uncertainties. This has led to organizations facing far more complex situations than before, which often require quick decisions in order to remain in a competitive market. One of the budgeting approaches that has been researched and developed in recent times is Beyond Budgeting, shortened to

BB. Although the word “budgeting” is a part of this theory, it is supposed to be understood as more than just budgeting. It is a way of thinking and a management tool which includes financial planning amongst other things.

When planning an organization’s budget, cost allocation is one of the main elements in the budgeting process. Cost allocation has also been a subject of research and several theories on how to do this allocation right have been researched and developed. The reasoning behind this field of research is that it is of critical importance for the management of any given organization to know how much a service or product costs in order to make the right decisions. The allocation of overhead costs, in particular, has been in focus in the area of cost allocation research. In the 1980’s Robert Kaplan and Robin Cooper started to develop the Activity Based Costing theory, which in this project will be called ABC. The basic thought of this theory is that the product or service that requires the most resources should also carry most of the costs. Furthermore, the research on ABC has led several variants of the theory including Activity Based Budgeting (ABB) and Activity Based Management (ABM) where the basic principle of ABC is the same but, as the names indicate, the newer variants can be used for other purposes than cost accounting.

As budgeting is mainly considered a planning tool and ABC is a cost allocation model, it can be argued that they serve different purposes. However, as companies are complex, as well as operating in a world influenced by external factors, both planning and cost allocation are crucial for the decision making. Management needs both tools in order to make correct decisions for an upcoming period, as well as it needs to correctly allocate costs in order to price the products/services, cut products from the assortment, optimize production or sell an asset, to a name few of the decisions linked with planning and cost allocation. Thus, it can be argued, that companies need several tools to aid to their decision making.

One of the main tools available to create a unified direction for the entire organization and thereby get the chosen strategy to be the focal point of all of its individuals is management control systems, shortened to MCS (Merchant & Van der Stede, 2012), where the linkages of tools and data influence the management when decisions are being made. As decisions will influence future performance of a company, the need of an effective MCS is crucial as a wrong decision can, in a worst-case scenario, lead to bankruptcy.

Based on the two theories, the research group's personal interest and the fact that the world and business environment are changing rapidly, the research group's plan is to research if these two theories can be used simultaneously and aid (in) any given company for making the correct decisions.

2. Problem area

As mentioned in the introduction, and due to the changing business environment, companies need to employ better and more efficient management tools that give the management the right information at the right time. ABC represents a tool that is proved to be giving a more accurate overview of the costs connected with products and processes. The information generated by an ABC system is of high value for the management as it facilitates greater insights into the business processes, as well as reveal duration and costs of specific activities in the value chain, which can aid managers in governing the organization. Moreover, the given information enables the management to make comparisons with other companies and benchmark on costs, quality problems and customer satisfaction rates, thus enabling improvements of the business processes by modelling or simplifying activities, reducing the amount of time used per given activity, as well as evaluating alternative possibilities of how procedures are to be carried out.

Due to the fact that an ABC system deals with continuous monitoring of the business processes, it can provide and serve as an information basis for the process of BB. Shank and Govindarajan (1992) argued that ABC facilitates planning and development of relevant strategies, as well as their implementation and control. In the book "Håndbog i økonomistyring", that Jan Mouritsen has edited, Jens Aaris Thisted, Ph.D. and Associate Professor in the Department of Production and Business Economics at the Copenhagen Business School, wrote a chapter on the purpose and tasks of budgeting. The chapter is based on previous research, where Thisted argues that a budget is more than just planning and control tool, by mentioning the subsequent nine tasks of budgeting: target setting, planning, control, capacity management, coordination, resource allocation, information source, motivation and management culture. The first two tasks are ex ante, which means that they are performed before the numbers are realized. The control task is conducted after the numbers are realized, which is also called ex post. It includes keeping up the actual figures against the budgeted ones in order to explain why the variations in the budget have arisen (Thisted, 2004). This is the first point where by extracting the necessary information from an ABC system, one can explain where the deviations lie and what the reason for that may be. The tasks of capacity management, coordination and resource allocation can

immediately be considered solved by an ABC system as well. Therefore, the research group believes in the idea that by combining BB and ABC, complementarity advantages might be acquired.

2.1. Problem statement

The research question for the paper is thus formulated as follows:

From a theoretical perspective, how can Beyond Budgeting be supplemented by Activity Based Costing, and what are the effects of such an interaction?

In the prior literature, there has been a demand for studying the tools in a MCS either in combination or as a "package", rather than separately. Foreman of the idea is Otley (1980) later followed by numerous other researchers who also believed that the components of management control systems are interdependent (Simons, 1995) (Abernethy & Chua, 1996). In 1997, Abernethy & Brownell (1997) stated, "It is clear that organizations rely on combinations of control mechanisms in any given setting, yet virtually nothing is known about how the effects of any one control are governed by the level of simultaneous reliance on other forms".

Chenhall (2003) argued that studying control tools individually may have an impact on the conclusion if the use of one control element is related to the function of the existing broader control package. In relation to contingency theory, this implies that an observed relationship between a contextual variable and a control practice may be false due to the contextual variable's relation to another control practice that is not related to the first control practice (Grabner & Moers, 2013) (Malmi & Brown, 2008).

The above-mentioned studies indicate that it makes sense to consider the control systems as part of a wider control package. Analysing the control tools in relation to each other will add to the contingency theory of how the full set of control tools functions and will thus fill in a "research gap" in the current literature. This leads us to examine if the framework of ABC/M has a positive relationship with the philosophy of BB in an MCS package, taking into account that the two control systems may be linked in different ways in the broader

package. The aim of this paper is hence to explore the possibility of supplementing a modern control system with the cost management tool of ABC/M. By studying the matter, this report will provide new knowledge on the interdependence of control system elements and practices.

3. Delimitation

The purpose of this section is to argument for the choices made by the research group in regard to the problem statement. The essence would be to provide the reader with the considerations that the research group made in regard to what not to include in this thesis.

The project is written from a theoretical perspective with an illustrative case from a company using one of the two theories analysed. As the research group discovered a "research gap" in the field of BB and ABC, it was considered important to add knowledge on the area by initially writing a theoretical project.

The project is written under the assumption that the reader has an academic background and a certain degree of knowledge on the subejct of finance and accounting.

The research group will not analyse other variants of the ABC, such as ABB or Time Driven Activity Based Costing. Furthermore, the research group will not discuss or analyse other budgeting theories, such as Zero-Based Budgeting or traditional budgeting. As far as traditional budgeting is concerned, the research group will use the criticism of the theory, as it is one of the reasons that BB was developed. The same is applicable for the traditional costing system.

The implementation processes of the two theories, such as change management procedures, will not be analysed, as the purpose of the theoretical approach is to show how the theories could be used, and not how to implement them.

Moreover, the research group will analyse under the assumption that BB is fully implemented. Since it is possible to use elements of BB in other budgeting theories, the research group is aware of the fact that organizations may use parts of the BB philosophy in their management.

Furthermore, the research group will delimitate from studying the strategic implications of designing a Management Control System, as those are company specific. The findings of the research will thus not be generalized, even though it could be interesting to examine the relationship between the control tools in a strategic context. This was, however, not

possible to do since the research group could not get in contact to a company that uses both tools in practice.

The thesis has been based on Flamholtz (1983) framework, and since the management control systems contain several different control tools, it has been necessary to focused on a rather narrow range of contingencies characterizing the control systems, specifically in the face of "soft" controls, which can be regarded as a limitation.

The research group decided on using an illustrative case in order to supplement the analysis, as the chosen company for the case is using BB successfully, as well as operating in a business with a high level of overhead costs, making it eligible for ABC as well. As the purpose of the case of Svenska Handelsbanken is illustrative, the research group will neither conduct a thorough ABC analysis, as it has not been researched whether or not SH operates with an ABC system, nor will the research group allocate costs to cost pools, calculate activities or find relevant drivers. Since this would require additional data, as well as the problem statement is not related to **how** to create an ABC/M system, but rather on **if** BB can be supplemented with ABC, it is not deemed relevant.

3.1. Word definitions

In the analysis section, the assumption of implementation of ABC/M is that it is done correctly. Therefore it will be stated that ABC/M "will" generate data. The research group is aware that this is not a general truth, as wrong drivers could lead to wrong data, but since these are described and analysed in the theory, the research group will use the previously explained assumptions. Words such as could, should, might and so on, are purposely deselected as they could give the reader the feeling that other cost allocations are generating better data than ABC/M for the project.

Abbreviations: In order for the reading process to become easier, the research group will use abbreviations of the most used concepts in the project. Beyond Budgeting will be abbreviated into BB, Activity Based Costing/Management will be referred to as ABC/M and Management Control Systems is called MCS in the project. Svenska Handelsbanken will be abbreviated to SH.

The research group: The authors of this thesis will refer to themselves as the research group.

Effects: In the problem statement, the research group chose to use the word effects on interaction between BB and ABC/M. Effects are supposed to be understood as both positive and negative effects of the interaction.

Complementarity: When we talk about complementarity, we use Milgrom and Roberts (1995) definition. They argue that complementarity exists when an increase in one variable does not prevent others from rising and vice versa. Moreover, through the mathematical concept of super modularity, the two Stanford professors proved that the whole is greater than the sum of the individual parts thus the complementarity analysis of the tools in an MCS will not only contribute new knowledge on how they affect each other but also how that affects the organization as a whole.

4. Theory of Science and Methodical Procedures

The following chapter is included in order to clarify and explain the theoretical scientific framework of the project. The research group will argue its theory of science and methodological considerations that are being used in order to answer the problem statement. The framework of these considerations is found in the two books, written by Saunders et al., "*Research methods for business students"*, and Burrell and Morgan, "*Sociological Paradigms and Organisational Analysis: Elements of the sociology of corporate life"*. In addition to the aforementioned books other authors are being used in order to help answer the problem statement.

The following research paper will reflect the philosophy of positivism, as the research group will be operating with an "observable social reality", meaning that the researchers will only rely on data that is observable and therefore credible (Remenyi, et al., 1998). In order to collect such data, the research group will start from the two theories of BB and ABC. As to assure higher validity of the findings, the research group will limit bias by being "independent of and neither affects nor is affected by the subject of the research" (Remenyi, et al., 1998). Ultimate unbiasedness cannot be reached as the research paper's design and the procedure of data collection will be related to the project group's values and understanding of the problem.

The method that the research group will follow for answering the research question will be the so-called archival research. While the term can imply historical documents, it can just as well include recent works (Bryman, 1989). Archival research documents are not to be mistaken with secondary data sources, as even though they are collected for a different purpose, they are used for analysing the reality being studied (Hakim, 2000). This research paper will be constructed by using a mono method, implying that the strategy for data collection and analysis will be to use that single quantitative data collection technique.

In order to abridge and filter on the scientific considerations discussed above, the research group will elucidate on the works of Burrell and Morgan, who have developed a chart with two axes that is intended to explain how social theorists are supposed to work based on two dimensions. The two dimensions can define different research paradigms that are based on different concepts and analytical tools. By using this chart, four paradigms are being

formulated. The figure illustrates two axes: subjective and objective from left to right and the sociology of regulation in the bottom half and the sociology of radical change in the top half. A visual illustration can be seen below.

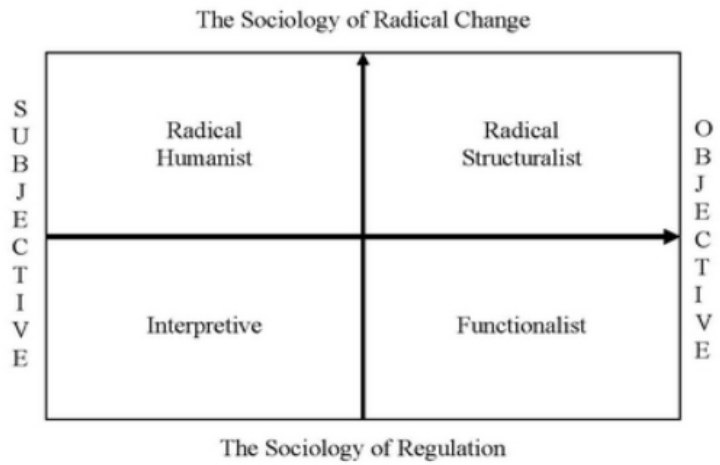

Figure 1 Burrell & Morgan's research paradigms (Burrell & Morgan, 1979)

Before conducting any form of research, it is important that the research group decides on whether it will look at the problem from an objective or subjective point of view; whether it will participate in the research or act as an outside observer. This is due to the fact that a problem may be observed from two poles, that of objectivity and subjectivity. Moreover, Burrell and Morgan state, that the research group has to determine if the purpose of the research is to change or regulate a phenomenon. A discussion of the research group's choices will follow below.

Subjectivity		**Objectivity**
Nominalism	Ontology	Realism
Anti-Positivism	Epistemology	Positivism
Voluntarism	Human nature	Determinism
Ideographic	Method	Nomothetic

Figure 2 Burrell & Morgan's research poles, own production (Burrell & Morgan, 1979)

4.1. Ontology

Ontology is an explanation of how an individual views *reality*. Reality can be illustrated by two extremes, one of them being that the social world and its constitutes have an observable, tangible existence that is independent of the observer. The other one claims that reality is created by the perceptions of individuals and thus can only be explained and understood through such. Translating the nature of reality in, one can argue that ontology is how the project group views the problem. Reflecting on the project group's ontology is thus one of the first actions the research group has to make in regard to the scientific theory. As the figure above illustrates the two theoretical assumptions have two poles on how the problem could be studied (Burrell & Morgan, 1979), namely nominalism on the subjective axe and realism on the objective axe. Researchers relating to the nominalist view observe the world as if it depends of their actions and understandings, while researchers with a rather realistic view observe the world as concrete, tangible and independent of a person's actions and understanding.

The project group believes that reality consists of both objectivity and subjectivity and that the fact-filled system structures, as well as the subjective, individual opinions about those structures are considered as facts. In this regard, reality is to be studied as different wholes and forms, and not in isolation as the project group believes that not only the parts of a system but also the relationships between them are influencing the system as a whole. The researchers are thus applying the systems view theory, motivated by the idea that reality is not of a summative nature but the whole is more than the sum of its parts. Systems theory is a framework for the study of organizations, where the researcher describes, explains and analyses organizations with the help of system language and thinking (Arbnor & Bjerke, 2009). For the purpose of this paper, it will be the open system theory that the investigators will follow, as the research group believes that it is not only the context but also the environment of the system that has an influence on how the system is viewed and understood.

4.2. Epistemology

Epistemology is the study of how to acquire knowledge on a specific problem. Burrell and Morgan define two philosophies, namely positivism and anti-positivism (1979). While

positivism deploys that knowledge is best acquired under observations, anti-positivism implies a more subjective viewpoint where knowledge is to be explained by first understanding the subject of the study. As mentioned earlier in the ontology paragraph, and as a continuation hereof, the research group is to conduct the research from an objective point of view. Therefore, the natural choice in epistemology is positivism. However, due to the fact that the research group beliefs that the MCS must be studied from a holistic perspective, the reality will constitute a minimum amount of subjective considerations. This means that the research group's way of acquiring knowledge is through looking for regularities and examining relationships between the reality and its constituents.

4.3. Human nature

One important assumption in social science is human nature. Human nature is how individual human beings interact in the real world. Burrell and Morgan claim that there are two philosophies that define individuals' interaction in real world: determinism and free will. Through an objective point of view individuals' actions are considered deterministic whereas through a subjective point of view they are considered independent. The research group believes that humans have a rather complex, deterministic nature that is determined by the system they are in.

4.4. Method

The fourth and last theory of science assumption is the method. On the subjective axe is the ideographic approach, stating that reality is to be observed and understood from first-hand experiences since it is important to gain an understanding of how the individual perceives phenomena. It seeks to explain and understand what is unique, rather than what is universal and general. The nomothetic approach, on the other hand, focuses on the importance of basing studies on systematic tools and techniques (Burrell & Morgan, 1979).

This thesis will be based on the nomothetic approach. This is the natural choice based on the three other assumptions as it follows the objective point of view. Additionally, the problem statement is defined by using two well-known theories and the purpose is to find out if they can be used simultaneously.

4.5. Paradigm

As previously mentioned, apart from choosing an objective or subjective paradigm the research group is to determine whether the purpose of the thesis is to regulate or create a radical change. The regulation and radical change dimension can be seen in the figure below.

The regulation-radical change dimension

The sociology REGULATION is concerned with:	The sociology of RADICAL CHANGE is concerned with:
a) The status quo	a) Radical change
b) Social order	b) Structural conflict
c) Consensus	c) Modes of domination
d) Social integration and cohesion	d) Contradiction
e) Solidarity	e) Emancipation
f) Need satisfaction	f) Deprivation
g) Actuality	g) Potentiality

Figure 3 The regulation-radical change dimension (Burrell & Morgan, 1979)

The thesis seeks to understand and explain whether and how the two theories of ABC/M and BB can be used simultaneously in an organisation's control system. The research group has no intention of making changes, but rather to explain and contribute with knowledge about the status quo. The thesis therefore relates to regulation rather than radical change, as there is a need to regulate the behaviour of individuals and gain an understanding of the individual elements and their cohesiveness. The results will thus not lead to changes but will contribute new knowledge to the already existing one. In addition, the results can contribute with considerations of how organizations could design their management control systems in order to make use of a package solution.

As explained earlier, the project will take an objective point of view. Along with the choice of regulation, it will mean that this project will take its scientific frame of reference in the paradigm called functionalism, as shown in Figure 1. This paradigm is deeply rooted in the assumption that society is changing through regulation and is characterized by searching for

rational explanations about the status quo, the current social order and social events and actions without any desire to change it. The assumptions of functionalism are thus deeply anchored in a realistic ontology, positivist epistemology, deterministic human nature, and nomothetic methodology (Burrell & Morgan, 1979).

The purpose of the chosen paradigm is to expand the understanding of a social phenomenon and to create a broader knowledge about it. Functionalism is more often than not a problem-oriented way of doing research and is looking for practical solutions to a given problem. This is in accordance with what is desired of the thesis, namely to investigate a practical and widespread issue according to organizations' design of management control systems and explain how the individual systems influence each other. In addition to that, functionalism is also usually observable and reproducible (Burrell & Morgan, 1979). This means that the choice of paradigm, method and theory of this project enables others to observe the same as the research group and come to the same conclusions.

The functionalist paradigm can further be divided into three sub categories, namely objectivism, social systems theory and pluralism. Where in the Burrell and Morgan's figure each of those is located is shown below:

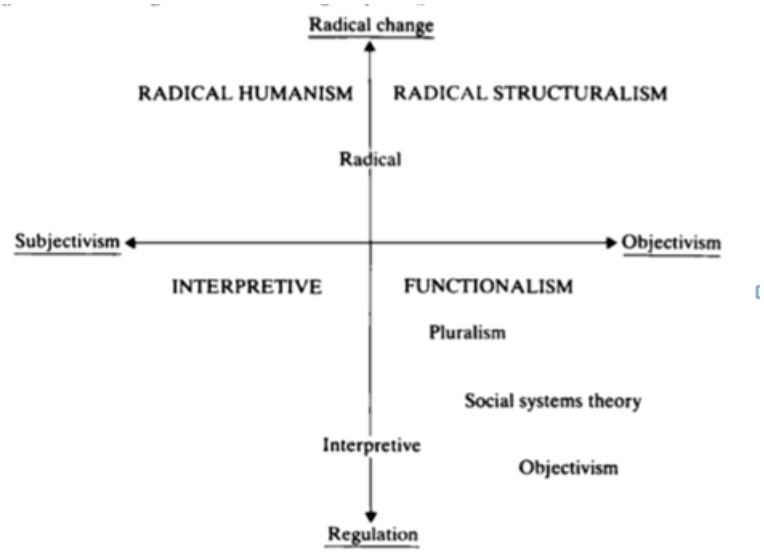

Figure 4 Burrell and Morgan's adapted research paradigms (Burrell & Morgan, 1979)

The functionalist paradigm is of the opinion that companies are social systems that evolve through regulation and that there is complementarity regardless of who examines it. Complementarity therefore exists regardless of whether we are aware of it or not. Although the research group is following the functionalistic paradigm and has an objective manner to complementarity, it will have a more subjective approach to the perception of how complementarity arises and how management takes this into account in decision-making. The research group is therefore not exclusively functionalistic in its approach but is inspired by a more interpretative perspective. In order to understand how the reality of the individual company influences complementarity, the method will be supplemented with the notions of system theory and pragmatic constructivism. A company can be seen as a system that consists of many parts. In the system theory, holistic thinking is important, and the individual parts cannot be understood separately, but must be viewed in relation to the whole. The relations between the elements must also be studied as it is in the relations, synergy effects or dysfunctions arise, which makes the sum of the whole deviate from the sum of the individual parts (Arbnor & Bjerke, 2009). Complementarity arises when companies are able to arrange the individual parts of the company to achieve a "fit" that generates greater value creation than the parts could generate in isolation. To understand complementarity, therefore, a holistic view is needed, where the elements of an MCS must be analysed not only in relation to each other, but also in relation to the outside world the company is a part of. By studying the relations between the systems and the systems' parts the research group anticipates understanding the harmonious fit between the two theories, as well as further explain how an integration of the two can add to the functional whole.

4.6. Methodical Procedures

With the help of this section, the research group will account for how the data has been collected, which methods and techniques were used for the acquisition of knowledge, as well as which choices have been made that have led to the final conclusion of the study. The selected theories and methods will be in accordance with the previous choice of a functionalistic paradigm. Finally, a design figure will be drawn, in order to give the reader an overview of the procedures in the thesis paper, where each of the individual steps in the figure will be described and argued for.

4.6.1. Choice of problem statement

The motivation behind the research group's choice of problem formulation was partially a result of the fact that one of the group members had insights into the topic of BB, not only by the studies at Aalborg University but also in regard to a rather practical matter. By previously having conducted a case study research examining possible benefits, pitfalls and change management techniques on the subject, a curiosity of further studying the possibility of improving the process of control was shaped. After numerous discussions, the research group arrived at the conclusion that the ideology of BB could perhaps be supplemented by an operational system, such as an ABC/M system, and that such a combination could have a "system effect" or simply reveal synergies. A research on the available literature followed, however there were not found any previous studies on the topic of complementarities between the two practices, signifying a "research gap" which further motivated the research group to study the possibility of such.

4.6.2. Contingency Theory Approach

This section will explain and criticise the concept of Contingency Theory and finish with an incorporation of the theory to the research group's problem statement. Hopper and Powell wrote an article called "*Making Sense of Research into the Organizational and Social Aspects of Management Accounting: A review of its underlying assumptions"* in (1985). As the title indicates, this is a paper that examines various aspects of management accounting systems. Summed up in one sentence, contingency theory states that any given company should find its own way of managing. Combined with open systems theory where external factors will affect any organization, it is crucial that organizations adapt to these factors. This also requires that internal management, such as structures, styles of leadership and decision-making, are adapted to external demands (Hopper & Powell, 1985). Hopper and Powell also mention that research on this area has led to encouragement of the approach as a response to otherwise contradictory observations in management research (Hopper & Powell, 1985). Furthermore, Hopper and Powell (1985) state that contingency theory is similar to open systems approach, as the key for an organization to survive is to understand its environment. In order to manage internally this also gives an organization an opportunity to use various necessary sub-systems. One can therefore argue that there is no best or

ultimately correct way for companies to be organized and led since what is assumed to be a good management practice within an organization does not necessarily mean that the same type of management will be successful in other situations; the optimal form of management is rather dependent on an organization's internal and external context (English, 2006). A company's optimal configuration is thus influenced by context variables such as surroundings, strategy and organizational size (Gerdin & Greve, 2004).

Based on the research group's previous theoretical and methodical assumptions, this paper will be structured on the premises of contingency theory, as the research group believes that any environment and internal prerequisites in and out of an organization will affect the final conclusions for choosing either or both theories. It also gives the research group a basis for analysing the concepts of BB and ABC/M from a theoretical point of view, while understanding that it is impossible to find a perfect solution for the design of a MCS as the two theories are not of a "one size fits all" nature.

4.6.3. Research design

The following section will include considerations about the overall structure of the research paper in regard to successfully answering the research question. Reflections on "What will be done and why?" are employed as well as considerations on what sources of data are intended to be used. In order to describe the importance of each and create a logical structure, the project group will apply the framework by Booth et al. (2008) that can be seen below:

Figure 5 The relationship between practical and research problems (Booth, et al., 2008)

As demonstrated in the figure, it is the study problem that encourages finding the research question, which then helps define the research problem. The research group will, in this regard, study the theories of BB and ABC out of a curiosity of whether it is theoretically possible for the two principles to be integrated in one system, and subsequently test whether there is a positive relationship between the two methods. With the help of "disciplined imagination" (Weick, 1989) and qualitative data, collected by various different methods, the research group will study the phenomena of the relationship between the two frameworks in order to establish different views on the phenomena as well as examine whether there is a "system fit" or what kind of significance the interaction may have and thus contribute to the existing management accounting literature.

A figure, illustrating how the project will be structured in order to provide a basis for answering the research question follows:

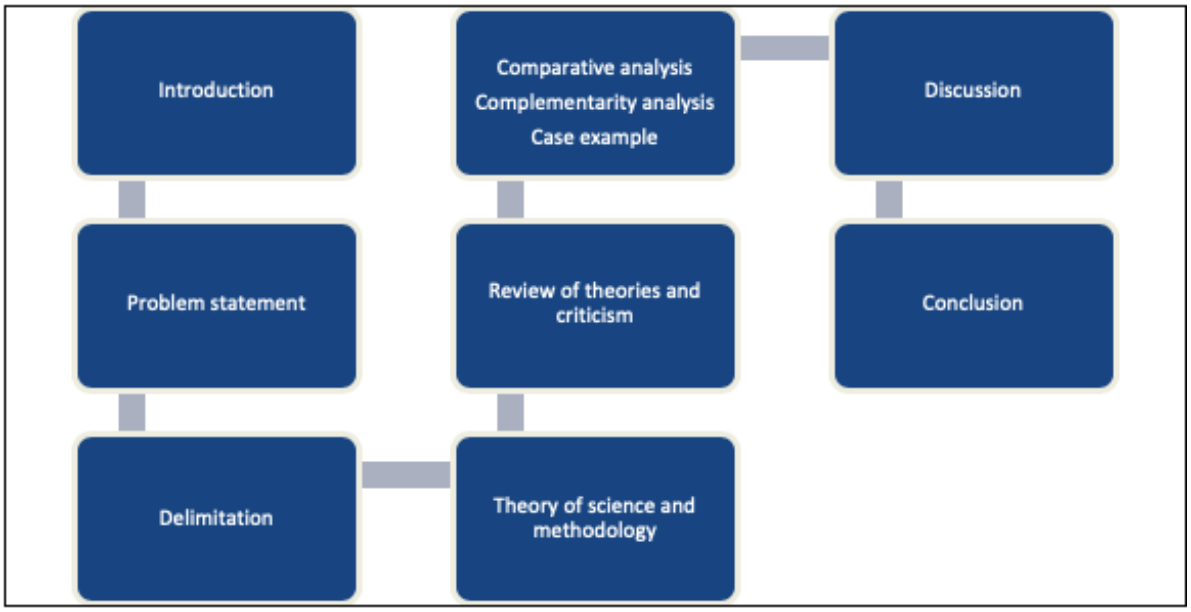

Figure 6 Project design, own production

In regard to the structure of the paper itself, this research will start with an introduction to the topic, followed by a brief outline of the problem area that will lead to the research question or this project's problem statement. The problem statement will be followed by a delimitation section, right after which there will be made considerations and selections in regard to theory of science and methodology.

Once the reader gets a better overview of how the researchers see the problem as well as the strategy for solving it, a comprehensive description of the available literature on the two frameworks will be presented. The two theory description sections will comprise not only the principles but also their corresponding criticism. Once the theories are examined, the analysis section of the project will be the section for new knowledge creation. Here, the research group will examine the factors that need to be existing in an organisation before an implementation of the systems is considered as well as the positive and negative effects an implementation of the system might result in. The research group will then analyse how an MCS is organized in a budgeting organization as opposed to a non-budgeting organization, as well as examine if there are complementarities between the tools used in the latter. In case that the research proves there is a complementary effect between BB and ABC in a non-budgeting organisation's MCS, an illustrative case study, elucidating where the complementarities may lie, will be prepared. This case study will be based on one of the exemplary cases in the literature of BB.

The case study of Svenska Handelsbanken, shortened SH, will be based on existing studies and supplemented with information from the interview with the Branch manager of one of the Aalborg branches, as well as data from the Group's annual report. The existing studies on the topic include previous case researches, as well as Internet sources, like SH's website, for example. The reason for basing the illustrative case on previous studies is to ease the reader's understanding of how an organization can function without budgets, together with the fact that it will ease the process of collecting data since the information necessary for illustrating the MCS in SH has already been made available in the literature (Lindsay & Libby, 2007).

Altogether, the theories, their criticism and the analysis will lead to the project's discussion, which will elaborate on the findings. This section, along with the analysis will contribute to answering the research question, the final answer to which is to be found in the paper's conclusion.

4.6.4. The purpose of the research

This research has both a descriptive and an explanatory purpose. The reason for this is that the researchers seek to develop an explanation of data and synthesize the knowledge in

order to "portray an accurate picture of persons, events or situations" (Robson, 2002) before studying causality and explaining the probable relationships between the two models. As a background for conducting the analysis and in connection with drawing conclusions, the research group will be collecting and applying multi-purpose qualitative data.

Why Flamholtz's framework?

Identifying the contributions of the use of contingency variables has proven that there is dependability between a system and it's constitutes. This paper claims that there is not a perfect way to structure a system, rather there needs to be a fit between the internal and external variables that influence and impact the framework of a MCS. The research group believes that the matter has to be analysed in a systematic, holistic way, and Flamholtz's framework has proven to be one considering external to the core control system variables such as organizational culture, structure and environment. The framework is presented as a way of operationalizing a MCS, where the elements are visualized, thus enabling a further study of the relationships between them. Moreover, Flamholtz's approach to the study of MCS offers a way of thinking about the system not as independent controls, but as a "package", a term later described by Malmi and Brown (2008). Together with the fact that this framework has been widely referred to in the literature and supplemented by Malmi and Browns considerations of other contingency variables, the research group believes that it will help reveal dependencies and complementarities between the system elements.

4.6.5. Credibility of research findings

The following section will include considerations about the validity and reliability of this research's findings and application.

Reliability

Reliability is defined as the extent to which the data collection procedures, application and analysis are going to help provide coherent results and conclusions. Easterby-Smith et al. (2002) provides a framework for assessing the reliability of project findings by asking the questions of: "Will the measures yield the same results on other occasions? Will similar

observations be reached by other observers? Is there transparency in how sense was made from the raw data? “

As mentioned earlier, in the Theory of Science section, this thesis will be based on a functionalistic paradigm that will help the researchers ensure that the conclusions in the paper are drawn on the basis of objective data collection principles, and encompass a minimum amount of researcher bias. Moreover, there will be made use of logical reasoning and argumentation in order to assure transparency of how comparisons and complementarities are viewed and studied.

Validity

Validity implies the extent to which the findings of the research are reliable and trustworthy. Due to the fact that this research is based on a theoretical analysis of two different frameworks, it is given that the sources should be found in the literature. In the following section, there will be made some considerations about the use of sources for the purpose of this project.

According to Flick (2009), a researcher is faced with two choices when it comes to investigating sources of literature – either to select a broadly representative section of the literature of a given subject, or to focus on the narrower purpose of his/her research. In this project there is more or less a combination of the two. The reasoning behind that is that the research group intends to describe existing theory by reviewing a wide range of literature works in the subject field, but on the other hand, the researchers are also restricted by time and scope for the project, so some limitations have to be made.

Before employing and, in this regard, applying information attained from different sources, a careful consideration and examination of the source material will be made. The sources for this project will mainly constitute the works of famous theorists, and data will primarily be derived from articles that are proved to have high validity. Moreover, due to the fact that some of the publications on the internet are not controlled, the research group will search for published documents related to the data, before using it, in order to help achieve better project validity.

The nature of the literature sources is also an important question prior to conducting the research. Flick (2009) makes a distinction between primary, secondary and tertiary sources, where primary sources are the original records of literature in the field, whereas secondary sources occur as a criticism/compliment to the primary literature, and tertiary sources are those of least interest as they are mainly used to create an overview of the primary literature. The sources of theory that will be used in this research will mainly be the original works of Cooper and Kaplan, and Hope and Fraser. Even though the researchers are aware that many of the findings were written by the authors of the ABC and the BB theory and possibly include bias, it is still considered valuable as it will help answer the research question. However, in order to avoid answering the problem statement merely by the original works of the above-mentioned theorists, the research group has decided to make use of data triangulation by applying critics to the models. This will increase the construct validity of the paper since different points will be taken into account before further examining for linkages and answering the problem statement. Relevant secondary literature will also be considered and referred to, as it will help elucidate some of the criticisms of BB and ABC; better support of the arguments; help illustrate the interaction between the models and last but not least increase the external validity of the findings. A discussion of the literature used will follow further below.

The project group will, as part of the analysis section, include criticism to the theories in order to illustrate the problem formulation from a more critical point of view, as well as be critical to the findings of the study. This is also one of the reasons why the research group decided to apply studies that illuminate the subject, with a period shift. That is, studies from 1991 and 2019 respectively. The examination of those will show whether there has been a change in relation to the assessment of the interaction of methods. By incorporating the period differences, as well as the criticism of the methods, as a critical study of the matter has not been possible, the research group will discuss some of the critical points that may affect the final outcome and conclusion of this paper.

What is more is that the project group will, in order to test the robustness of the findings, conduct a case study analysis, where the interaction between the two methods will be elucidated from a practical perspective, thus exposing the conclusions to a different setting.

By using the aforementioned types of sources, the research group believes that the quality is ensured. The research group is also aware of the fact that there might be other research, which is published in other journals or accessible by using other databases or in other languages. The research group has also been critical of the use of these sources and has described any contradicting claims. Therefore, the research group believes that the necessary measures have been taken in order to remain objective while ensure a high-quality research in order to answer the problem statement as well as possible.

Literature review

The following sections are a review of the literature that forms this project. In this section, the research approach, use of and quality of literature used to answer the problem statement are being explained and analysed.

A prerequisite for obtaining a satisfactory level of research is to be found in the literature and previous studies of the subjects that are to be researched. Firstly, the interest for the chosen topic came by a natural interest in budgeting and as a part of the research group's studies at Aalborg University. The means, that there was already some knowledge on the area of BB and ABC and the other and newer variants of the theory of ABC. By already having some knowledge on the theories, the research group was familiar with the original authors, Hope and Fraser and Cooper and Kaplan respectively. The figures below illustrate a timeline of the sources used for describing and analysing ABC and BB, respectively. As there are several authors, the research group has chosen to use one author to represent each year of the timeline, since all the sources are referred to in the text, as well as in the reference list. As far as the Beyond Budgeting Round Table (BBRT) website is concerned, it is listed in 2019, as that is the year the source was read by the research group. This led to a total of 28 different sources for the ABC theory and 15 sources for the BB theory.

As this is a theoretical project, the research group has found its literature by using a systematic desk research. In addition to the previous mentioned authors of the theories, the research group decided to use research articles in order to argue, explain, criticise and elaborate the research area. In order to ensure the project's quality, the research group used Aalborg University's online library and the databases ABI/Inform, ProQuest, and ScienceDirect. By using the search words *budgeting, beyond budgeting, activity based*

costing, activity based management and *management control systems* in ABI/Inform the research group found thousands of articles. The research group decided to use articles that were published in recognized journals as a minimum requirement. The second requirement was that the articles were peer reviewed, which means that there has been an academically based discussion before the articles were published. Thirdly, the research group focused on articles written in English. As the total number of articles that matched the search amassed to a total of 873,000 articles, the research group used already acquired knowledge on the subjects in order to have a starting point for the theoretical analysis. After conducting the theoretical analysis, the research group used articles of criticism on the same subjects, while combining them with previously acquired knowledge.

The figure below illustrates the search and the initial screening process.

ABI/Inform			
Search Word	**Total**	**Peer-reviewed**	**English**
Budgeting	268,390	31,986	31,447
Beyond Budgeting	70,358	12,282	12,198
Activity Based Costing	80,117	14,188	13,989
Activity Based Management	6,544,034	402,442	398,333
Management Control Systems	2,950,919	422,398	417,169

Figure 7 Literature search, own production

The research group did not reject non peer reviewed articles or reports, but only used those to further support a statement. The research group also used articles written in Danish to small a degree, as these articles were used during the studies at Aalborg University. As with the non-peer reviewed articles Danish articles were only used to back up statements.

While searching the aforementioned databases for articles, and reading those articles, the research group found other relevant articles. Some of these articles were also applied, as long as they matched the criteria mentioned earlier.

The last three types of sources used in the project are books, websites and an annual report. The books were found through studies at Aalborg University, the systematic research described earlier and by reading articles that refer to books on the subjects. The annual report used for the project, is SH's annual report for 2018, which is relevant for the case analysis in the project, as this is deemed to be valid information. Lastly, the research group has used three websites for explanatory purposes. The websites are used in order to explain the origin of the BBRT, the historical development of SH and to explain the number of banks currently on the Danish market.

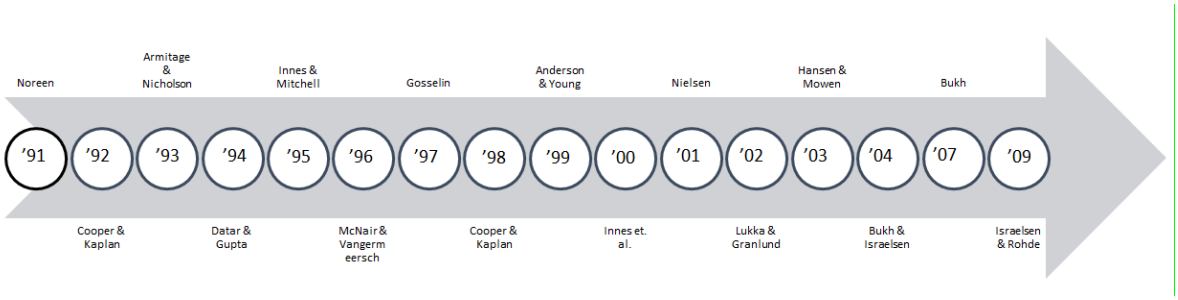

Figure 8 ABC timeline, own production

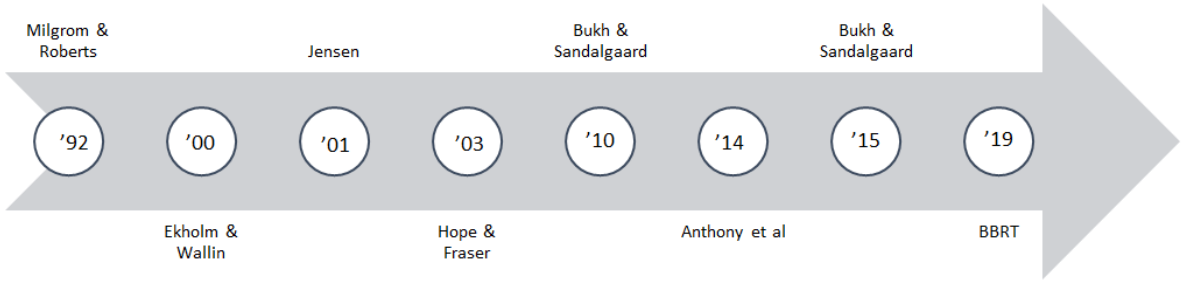

Figure 9 BB timeline, own production

The figure below shows an overview of the number of sources used.

Chapter	Articles		Books		Websites	Other	Total
	English	Danish	English	Danish			
ABC	12	3	7	4		2	28
BB	8	2	3	1	1		15
Rest of project	71	1	23	2	2	3	102
Total	91	6	33	7	3	5	145

Figure 10 Overview of literature, own production

Interview

In order to uncover and understand how a company works and handles its day to day business, the research group decided to contact a company. The research group decided on contacting SH, as it is recognized as one of the successful companies that manage without budgets. What is more, is the research group considered the banking industry as an industry with high overhead costs, and thus being eligible for an ABC/M costing system. Based on the purpose of the case, which is on an illustrative level, the research group interviewed the company's Branch Manager, Ole Dahl Nielsen, at SH's branch located at Østre Havnegade in Aalborg. The following sections are a description of the considerations and choices made in order to get as much as possible out of the interview. The interview is structured with inspiration from Kvale and Brinkmann's book from 2015: *Interview: Det kvalitative forskningsinterview som håndværk.*

The research group contacted the company by e-mail. In that email, the research group explained the reasons for choosing the company and asked for the mail to be sent to the relevant employee. Two days later, the Branch Manager replied and scheduled a meeting. The research group then prepared an interview guide, which was sent to the Branch Manager, in order for him to prepare for the interview itself. Being a Branch Manager and with the knowledge that branch managers usually have, the research group reckoned that he is a relevant and qualified employee to answer the relevant questions. By using the interview and comparing it to the theoretical descriptions, the research group considers it valid for an illustrative analysis. The email sent by the research group can be seen in the appendices. However, since the branch is Danish, the email sent to the branch, was written in Danish.

The interview was conducted by using a semi-structured approach. This means that the research group adapted and adjusted its previously prepared questions as new information appeared. In order to get as much information as possible, the research group decided on open and wide questions. The research group kept an open mind and gave the respondent the opportunity to answer in a broad term, leading to follow-up questions of a narrower nature, whenever it was necessary (Kvale & Brinkmann, 2015). By using this approach, both the research group, as well as the respondent acquired more knowledge. The research

group gained a deeper insight to the company's operations and the respondent was able to understand what the research group's intentions with the project were. The initial interview guide and the recorded interview can be seen and heard in the appendices. The respondent was asked if the company, its products and his own name should be blurred, as well as the thesis was to be written in confidentiality, but the respondent refused both, and therefore all the information is based on the actual company, products and services.

The interview was conducted at the company's office by the research group and the respondent – a total of three people. The interview was recorded with the consent of the respondent. The recordings gave the research group the possibility to hear the interview again and, in that way, ensure that the respondent was cited correctly (Kvale & Brinkmann, 2015). As the company in question is based in Denmark, the interview was conducted in Danish, as it was considered, that any mistakes or unfortunate translation formulation would be minimized. Therefore, any citations from the interview will be translated in to English.

To make sure that the usage of the data collected is in order, and in that way contributes to the quality of the project, the project will be sent to the respondent to be read, which will add to the quality and validity of the project (Yin, 2014).

The research group believes that it took the necessary measures when evaluating the interview. The research group was unbiased towards the company, the respondent and the respondent's answers when conducting the interview in order to ensure objectivity. Even though the research group remained objective it cannot be sure that that the respondent was unbiased. The probability of this is considered to be low, as the respondent was well informed of the purpose of the interview and the research group will also use annual reports to either back up the respondent's claims or find possible contradictions.

5. Theory

Following the review of the thesis' scientific considerations and the chosen methodical procedures, this section will describe the two crucial theories for the study. Theory descriptions of BB and ABC/M will follow, together with a section discussing criticism of the two. The purpose of the theory descriptions will be to elucidate on how the two theories work when implemented as individual systems, as well as to create a common understanding of the subject and thus a better ground for further examining whether the systems substitute or complement each other.

5.1. Beyond Budgeting

As the traditional method of budgeting has been on the receiving end of criticism, it is necessary to elaborate on this criticism. As mentioned in the delimitation, a thorough theoretical analysis of traditional budgeting will not be conducted, as it is not the purpose of the project. Therefore, this section will explain the criticism that traditional budgeting has been exposed to, which simultaneously is the reason that the research group decided on BB. Basically, there are three points of criticism: *Budgeting Is Cumbersome and Too Expensive, Budgeting Is Out of Kilter with the Competitive Environment and No Longer Meets the Needs of Either Executives or Operating Managers* and *The Extent of "Gaming the Numbers" Has Risen to Unacceptable Levels* (Hope & Fraser, 2003).

Budgeting is Cumbersome and Too Expensive

This criticism can be rephrased to say that traditional budgets require too many resources and do not add enough value to the organization. Time consumption in traditional budgeting remains the main criticism, as Hope and Fraser (2003) state:

" The average time consumed is between four and five months. It also involves many people and absorbs up to 20-30 percent of senior executives' and financial managers time."

This criticism is backed by Neely et al (2003), who claim that budgeting consumes approximately 20 % of the management time. Additionally, Hope and Fraser (2003) research this further in the article *Who needs budgets* and their research states, that employees in the finance department of an organization spend 21 % of their time in analysing and

interpreting the budget. According to Hope and Fraser this means that too much time is spent on collecting and processing data – an activity they call "lower-value-added activities".

Budgeting Is Out of Kilter with the Competitive Environment and No Longer Meets the Needs of Either Executives or Operating Managers

A general criticism of the traditional budgeting is the fact that the external environment of an organisation is ever-changing and dynamic. As markets adapt to their environment fast, the traditional budgeting fails to do so. The budgeting process can take up to five months to prepare, and during that time several prerequisites can differ from when the preparation started. Additionally, a lot can happen during the budget period, which traditional budgeting does not adjust continuously to (Hope & Fraser, 2003).

Anthony et al (2014) supports this criticism and adds that having a budget with fixed targets can lead to wrong decisions and in a worst-case scenario counteract the value adding for the organization. Additionally, Anthony et al claim, that traditional budgets usually use historical data as basis for the forthcoming period. By doing so, it prevents innovative thinking and the possibility of seeking out new opportunities, as the organization keeps doing "business as usual".

Neely et al also question traditional budgeting's purpose as a management tool. In their article, they have listed three critical points, each of which has four sub points. Three of these 12 points agree with the criticism of traditional budgeting not being suitable for the external environment: *budgets concentrate on cost reduction and not on value creation, budgets are developed and updated too infrequently – usually annually* and *budgets constrain responsiveness and flexibility, and are often a barrier to change; and budgets add little value – they tend to be bureaucratic and discourage creative thinking* (Neely, et al., 2003). These quotes support the criticism of having fixed targets without any possibilities of creative thinking. Since a budget is most often based on historical data, internal expenditures become the focus points and cost reduction becomes a priority rather than focusing on value adding activities – such as continuously seeking out new business opportunities.

Libby and Lindsay (2003) have conducted a survey where they found out, that 78 % of the companies in the survey do not adjust their budget during the budget period. This supports the criticism that traditional budgeting is *out of kilter with the competitive environment*.

The Extent of "Gaming the Numbers" Has Risen to Unacceptable Levels

The third and final criticism of traditional budgeting revolves around the concept of gaming. Gaming, in this context, is a concept that is being used for evaluation of employees or departments, that are being measured on agreed upon targets, where the employees by dysfunctional behaviour can use fixed targets for their advantage. Since organizations differ, each organization has to decide if their employees should be rewarded/punished based on their financial targets. It is in this regard that the possibility for gaming arises (Hope & Fraser, 2003).

Libby and Lindsay's article (2003) focuses on the possible risks of gaming. The article criticizes several ways of gaming, and most of these critic points are supported by Anthony et al (2014). Since both publications are similar, but Libby and Lindsay are more thorough in their criticism, their article will be used to support the issues of gaming.

Traditional budgets typically have an objective or a target of how the sales should perform. Should the employee responsible for sales have any influence on the budget, then he or she would get an opportunity to set the target lower than achievable in order to reach the target more easily. The same is applicable to other departments of an organization, such as production (Libby & Lindsay, 2003). Anthony et al (2014) call this phenomenon "budget slack" in their criticism.

As mentioned, budgets are often based on historical data, and the resource allocation to each department is therefore also based on historical data. Libby and Lindsay (2003) argue that if an organization prepares its budgets like this, every department will make sure to spend every penny, regardless if the use is necessary or not, in order get the same amount next period. This phenomenon, along with holding back production, so it will affect the expectation of production for the next period, is also known as the *ratchet effect* (Bukh & Sandalgaard, 2010) (Milgrom & Roberts, 1992).

An organization's long-term objectives can also be affected by gaming. When allocating resources to the departments, allocation is also being done for departments that in the long run can be value adding. The most typical example is research and development and marketing costs. Libby and Lindsay (2003) argue that money that should be allocated to those departments is instead being allocated elsewhere in the organization in order for them to reach their short-term targets.

Whereas the previous gaming issues in traditional budgeting have been linked to the preparation of the budget, the following issues occur during the budget period.

As mentioned earlier a sales department can influence the budget in a way that it will be budgeted lower than achievable. Should the sales department realise that they may have difficulties reaching their target of number of products sold, it could lead to discounts which will help the department reach its target but not generate any profit (Libby & Lindsay, 2003).

The final point of criticisms stated by Libby and Lindsay is not selling a product on time. There are two reasons for doing so. When nearing the end of budget period and the sales department realizes, that the target for the period will be impossible to reach, it will postpone the sales so they will happen in the next period. That way, the sales department acknowledges the fact that it will not reach its target while creating an advantage for reaching its target for the next period. Should the opposite situation occur, and the sales department reaches its target before the period is over, they will lower their effort since the target is already met, and it is not necessary to perform better than budgeted (Libby & Lindsay, 2003). Jensen (2001) adds to the criticism, claiming that the risk of gaming the numbers, where managers will send products, which will increase the revenue to reach the fixed targets, that will be returned in the coming period. A phenomenon called "channel stuffing". Furthermore, Jensen (2001) adds to criticism of gaming the numbers by declaring that: "*But by shifting profits forward—by prepaying expenses, taking write-offs, or delaying the realization of revenues—she increases her chances of getting a large bonus the following year. This is a variation on the "big bath theory of corporate financial reporting: If you're going to take a loss, take as big a loss as possible".* A criticism that follows Libby and Lindsay's second point mentioned earlier, that if a manager is not going to reach his or hers

target, they might as well *take as big a loss as possible*, as long as it means that they will continue in their job, as it will make the targets for the next period easier to reach.
Overall, the criticism of gaming demotivates employees from performing as good as possible as they are constrained by fixed targets. From the management point of view this is undesirable which has led to gaming being the biggest criticism of traditional budgeting (Libby & Lindsay, 2003).

The final criticism of traditional budgeting is an argument, which Neely et al comment on in their article. As an organization is structured by departments, an organization will usually use sub-budgets for each department. Even though all the departments work for, and contribute to, the same organization, an internal battle for resources will occur. This battle will lead to a negative impact on value creation as well as departments will retain information from other departments. In the long run this will do more harm than good for the organization (Neely, et al., 2003).

5.1.1. Beyond Budgeting Theory

As the traditional form of budgeting has been exposed to criticism, it has led to other budgeting theories to be open for research and development. One of these theories is called Beyond Budgeting and this section will be an explanation of it. Although it could lead to the assumption that it is strictly a budgeting theory it should also be considered as a way of thinking, as far managing and financial planning should be conducted. The theory was developed in the 1990's by Hope and Fraser, and will be explained on the basis of their book *Beyond Budgeting: How Managers Can Break free from the Annual Performance Trap*. The section will be will start with the origin of the theory, followed by an explanation in aforementioned book and by using other renowned theorists who have contributed on the subject. The final section of this chapter will explain some of the criticism that BB has been exposed to.

5.1.1.1. Origin of Beyond Budgeting

Beyond Budgeting Round Table, shortened BBRT, is an organization that by thorough research and discussion was founded in 1998 (Beyond Budgeting Round Table, n.d.). The founders of the organization are Jeremy Hope and Robin Fraser, who also are the authors of the aforementioned book on BB, and Peter Bunce. BBRT was founded in Great Britain along

with the American organization Consortium for Advanced Management international (Hope & Fraser, 2003). The growing dissatisfaction and frustration in traditional budgeting was the reasoning behind the founding of BBRT. The organization wants to include other organizations who wish to obtain a competitive advantage by changing their form of management to BB. In addition to that they also want be leading as far as innovation is concerned (Beyond Budgeting Round Table, n.d.).

As mentioned earlier, BB is not solely a way of budgeting. It is also to be understood as a tool or philosophy on how to manage a company (Hope & Fraser, 2003). Given that it is more than a budgeting approach it is important to note that it is not a "one size fits all" way of doing BB. The theory, developed by Hope and Fraser (2003), should therefore be read as a guideline to how a company that operates in an ever-changing world and where decisions have to be made fast, is supposed to be managed. This also means that should a company or organization implement the principles of BB it should adjust these principles to its needs (Hope & Fraser, 2003). What these principles include will be explained later in the analysis of BB.

5.1.1.2. The challenges of traditional budgeting

One of the critic points to traditional budgeting is that *"budgeting is out of kilter with the competitive environment and no longer meets the needs of either executives or operating managers"* (Hope & Fraser, 2003). During the course of history, the environment has also changed drastically, especially since the 1980's has the development in a company's environment changed.

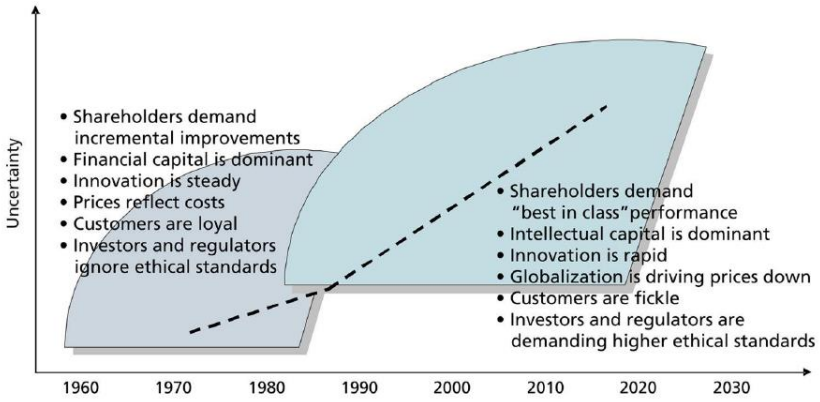

Figure 11 Development in business uncertainty (Hope & Fraser, 2003)

The figure above has an x-axis which is to be read as a timeline and y-axis which is to be read as level of uncertainty in a company's environment. As the figure illustrates the uncertainty level rises more rapidly towards the late 1980's. Before then the business environment was steady with continuous change. The shareholders demanded incremental improvements, financial capital was dominant, innovation was steady, prices reflected the costs, customers were loyal, and investors and regulators ignored ethical standards. After the late 1980's the changes resulted in the shareholders demanding "best in class" performance, intellectual capital became dominant, innovation became rapid, globalization started to drive prices downwards, customers became fickle and investors and regulators demanded higher ethical standards (Hope & Fraser, 2003). It is this change in the external environment that has led some of the critics of traditional budgeting to believe that that traditional budgeting cannot cope with the current environment. The reasoning is that traditional budgeting has fixed targets, continuous controlling, and the budget evaluation happens after the budget period, which makes it impossible to adjust during the budget period (Sandalgaard & Bukh, 2015).

5.1.1.3. Why Beyond Budgeting?

In order to fully implement BB, a two-step adaptation is necessary in a given organization. These steps are adaptive processes and decentralization (Hope & Fraser, 2003). A visual illustration of the two steps can be seen in the figure below.

Figure 12 The twin peaks of Beyond Budgeting (Hope & Fraser, 2003)

The aforementioned adaptations are supposed to be made by gradually changing existing processes in order to make the organization adaptable to the environment that influences the organization. Furthermore, the costs will be reduced and it will ensure the organization's congruency. As shown in the figure, the first step in this two-step adaptation is to implement principles in order to make the organization more adaptive. The second step is to decentralize with the purpose of changing the structure of the organization. Each of these two steps has six principles that have to be fulfilled in order for to fully implement BB (Hope & Fraser, 2003).

When talking about decentralization it is important to emphasize that Hope and Fraser do not mention a specific order in which these two steps and their six principles should be implemented, but that they are a necessity in order to fully implement BB. After these steps are implemented an organization can abolish the budget, allowing it to fully utilize its potential (Hope & Fraser, 2003).

5.1.1.4. Step one: Implementing the adaptive processes

Even though Hope and Fraser do not mention which order the principles should be implemented in, Figure 12 will be explained in the order it appears visually. The purpose of this section is to explain the first step which is implementing the adaptive processes in an organization.

Each of the two steps has six principles that have to be implemented in order to fully abolish the budget. The purpose of these six principles is to diminish some of the criticism of traditional budgeting, such as gaming. Furthermore, the principles wish to promote ethical behaviour, which is one of the main reasons BB was invented, reduce internal waste, implement more ambitious strategies and so on (Hope & Fraser, 2003). The figure below is a graphic illustration of how adaptive processes can be utilized. Hope and Fraser (2003) have set six principles as a framework for the adaptive processes: *Target Setting, Motivation and Rewards, Strategy Process, Resource Management, Coordination* and *Measurement and Control.* These will be explained in the same order.

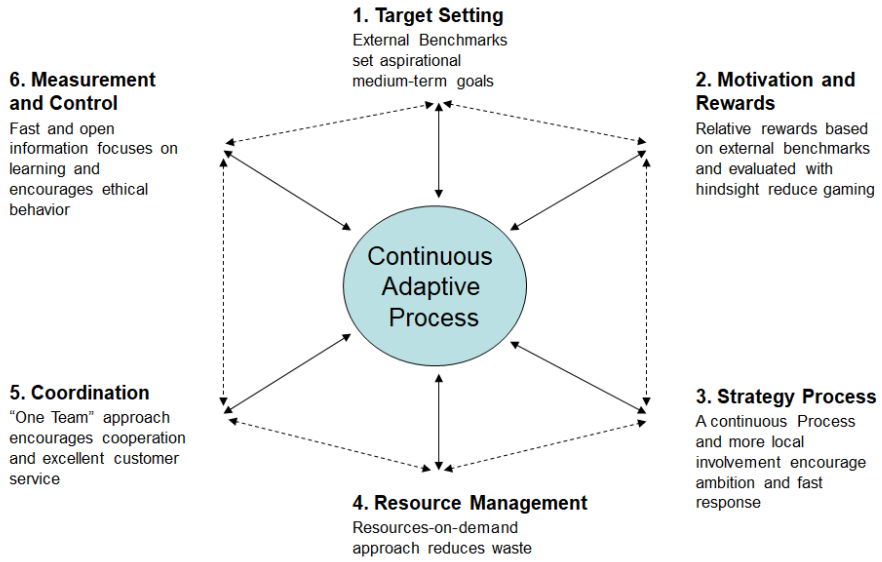

Figure 13 Continuous Adaptive Process (Hope & Fraser, 2003)

1. Target setting

The first principle of the continuous adaptive processes is target setting. Whereas traditional budgeting usually operates with fixed targets that are budgeted for a significant period of time, mostly a whole year, BB encourages setting the targets in a way which ensures both short- and long-term performance of the organization. A target is therefore not equivalent to the form of performance evaluation which is mentioned in traditional budgeting as BB uses *stretch goals* instead. Stretch goals are different from traditional target setting as it is a target which is higher than the incremental improvements. This means that they are harder to reach and will demand other aspects, such as an innovative way of thinking in every decision (Hope & Fraser, 2003). The setting of stretch goals is every department's responsibility and the purpose is to perform as well as possible. This encourages every leader to be innovative, take risks based on own assessment in order to reach a better result than expected.

Since the purpose of stretch goals is relative improvements, a comparison is necessary in order to measure the improvements. Comparisons can be made by using either internal or external measurement points – or in other words, *benchmarking.* Benchmarking is a tool that makes it is possible to measure performances based on other comparable performances. As far as external benchmarks are concerned, sectorial or the benchmarks of competitors would have been used. These benchmarks are both relevant and comparable as

far as the long-term targets for an organization are concerned. By using external benchmarking, the performances are continuously evaluated compared to the organization's performances. Should internal benchmarking be used, then fixed targets are not an option but relative improvements in performances compared to other divisions in the organization should have been used instead. The reasoning behind this form of target setting is to create a competitive environment in the organization in order for every division to strive to perform better. The targets are to be determined by the management of the organization in order to ensure that every division is working for a common strategic goal. By implementing this competitive culture in an organization, the incremental improvements in the organization will contribute to the strategic course that the management wants the company to move towards (Hope & Fraser, 2003).

2. Motivation and Rewards

The second principle in the adaptive processes is motivation and reward. Hope and Fraser (2003) mention different methods how these can be evaluated which will lead to some form of reward without these being directly linked to predetermined targets. Hope and Fraser mention three methods or levels in which BB can give a reward based on performance. The first method is how a unit or division performs compared another. The second is on group level where relative success is being measured. The third and final is on a multi-level point of view.

Bonus payment is the most common reward form in BB. This form of reward is meant to compensate a whole division in an organization. This means that a division gets a reward based on measurement points set by the management. The performances will be assessed and compared to other divisions as well as any possible challenges that might have occurred during the period. By using this form of reward all the divisions are being evaluated on the same basis. Since organizations vary it is important to note that the measurement points should be set by the individual needs of an organization. The benchmarking will be made by the management after the period is over in order to ensure that the divisions do not know whether or not they are to receive a bonus. According to Hope and Fraser it will contribute to the diminishing of inappropriate behaviour, as mentioned in the section on criticism of traditional budgeting. Hence the employees will be motivated to perform at highest possible

level even during times when the organization may not be performing well since it may qualify them for a bonus as long as their division performs on a satisfactory level (Hope & Fraser, 2003).

The second method is, as mentioned earlier, on a group level. Here the management wishes to reward the entire group if the result is satisfactory. This means that individual goals, such as individual employees or divisions, are not of importance as the group's overall objective is the basis for a potential reward. This form of reward is to ensure that no information is being withheld and everybody in the group strives to reach the common goal. This will also lead to greater cooperativeness across the different levels in the organizational hierarchy (Hope & Fraser, 2003).

The third and final method is on a multi-level performance-based reward system. The reward is individually given based on performances that can be seen on several levels in an organization. By using this form, an individual employee is being measured by his or her performance, how the division he or she works in performs and finally how organization has performed in the period. Afterwards the performances will be weighted, and the reward calculated based on the weights (Hope & Fraser, 2003).

3. Strategy Process

The third principle is how to implement the strategy and the process of the strategy. An element of BB is abolishing accruals. As far as external reporting is concerned accruals do have benefits. As internal control contains several periods and divisions of an organization as well as unforeseen circumstances may occur, Hope and Fraser (2003) do not think that accruals are as relevant internally as externally. This way of thinking is in line with the other principles of BB as it wishes to abolish fixed targets in order to work strategically and on a long-term basis. This gives managers more freedom as they are not limited by a periodic target. Although this might be understood as the management loses its authority, it is in no way the case. The management's role in the implementation is to formulate the long-term strategic goals of the organization. When an organization has a clearly defined long term goal all the different divisions have a common goal that they will strive to achieve. Working like this also ensures a connection between the organization's planning and the long-term

targets, which in most cases are defined in an organization mission and vision statement (Hope & Fraser, 2003).

4. Resource Management

The fourth principle is resource management. In order for this to work it requires that a manager with responsibility of performance and planning also has influence resources available. Hope and Fraser mention that a manager should be given the authority to decide how many resources an activity requires based on the revenue the activity can generate. Hope and Fraser (2003) call it a cost-to-income ratio.

Another form of resource management deals with how the resources are made available. BB argues that resources should be made available based on internal demand and value adding activities, and it is the managers' responsibility to share the resources. A typical example of this is when a sales division "purchases" the products made by the production division. The purpose of this is to create faster lines of reaction and communication which aids a quicker adaptation to an ever-changing external environment (Hope & Fraser, 2003).

In companies where larger projects are being made and these projects typically being approved once a year, the BB form of resource management can generate a faster decision making process in order for an organization not to miss out on value adding projects (Hope & Fraser, 2003). This means that investments can be approved continuously rather than being budgeted a year in advance.

5. Coordination

The fifth principle of implementation of adaptive processes is how the coordination is being done. Coordination, in this sense, is how an organization coordinates compared to the market demand. If there is a lack of demand it will lead to available capacity. This problem can be solved by reducing waste, reduction in storage costs and as the organization will be able to satisfy its customers faster, lead to higher customer satisfaction. This can also lead to an organization having a better opportunity to provide customized solutions, while remaining aware of each customer's/product's profitability (Hope & Fraser, 2003).

The coordination will be made continuously which will make capacity management more manageable. In other words, it will make it easier to adjust internal resources to the

external demand. This would be close to impossible in traditional budgeting as it typically has fixed targets and thus can make it hard to cooperate with other divisions in an organization (Hope & Fraser, 2003).

The final form of coordination that Hope and Fraser mention is based on information. As the knowledge on products and customers will be shared easily and faster it will ensure the organization can operate dynamically and adapt to current events (Hope & Fraser, 2003).

6. Measurement and Control

The sixth and final principle is measurement and control. The measurement and control in BB is decentralized and will take place in several levels of the organization. This will influence the management in a way that it is to have all the relevant information but only interfere if the long-term strategic course is drastically deviated. The managers will therefore have the freedom to make decisions as long as it is within the long-term guidelines set by management (Hope & Fraser, 2003).

In order for the measurement and control to work to its full potential, all the necessary information has to be available for those who need it. When accessing such information, the relevant employee has the best possible basis for decision making as the situation in which the organization is in and its future direction is as clear as possible. As one of the main purposes of BB is to abolish the traditional budget, trend analysis can be used as a tool to for controlling and analysing the numbers. By updating the trend analysis continuously, so that the numbers are always 12 months old, the company can compare its current performances to same week/month last period, as well as the trend of the previous year. This ensures an implementation of backwards continuously adjusted measurement and control (Hope & Fraser, 2003).

As the traditional budget is an estimation of an upcoming period, BB has an answer for how this problem should be solved. As mentioned several times, BB does not want to operate with fixed targets. BB instead advocates the use of rolling forecasts. Rolling forecast is a tool, which is supposed to help predict the sales, costs, cash flows and other elements associated with financial planning. Similar to the backward working trend analysis, the forecasts will be adjusted continuously. This means that an organization has an expectation of how the future performances will be without them being bound to a specific target. The

intention of the rolling forecasts is for each division to make action plans from (Hope & Fraser, 2003).

In the section about motivation and rewards, measurement points were mentioned. Another word for measurement points is Key Performance Indicator, abbreviated KPI. KPI is a tool on how to measure performance. It is of great importance to understand that KPI's should be adjusted for each organization's individual needs and also to emphasize the necessity of not having too many KPI's as it would create confusion and hence have the reverse effect. By measuring KPI's performances can be quantified. Hope and Fraser (2003) mention an example where an organizations target is having a high customer satisfaction, which is not easily quantified otherwise. As well as acting as a quantification of performances, it can also act as way of setting boundaries. Bukh and Sandalgaard (2010) mention an example where an organization should not use more than a certain percentage of its revenue on retraining its employees.

5.1.1.5. Step two: Decentralization of the organization

As mentioned earlier, a full implementation of BB is a two-step procedure. The second step is decentralization or as Hope and Fraser call it, a radical decentralization. Innovation, faster response time and value creation are among the arguments for decentralization. As with the adaptive processes, decentralization is based on six principles and can be seen in the figure below. This section will explain the principles illustrated in the figure from one to six.

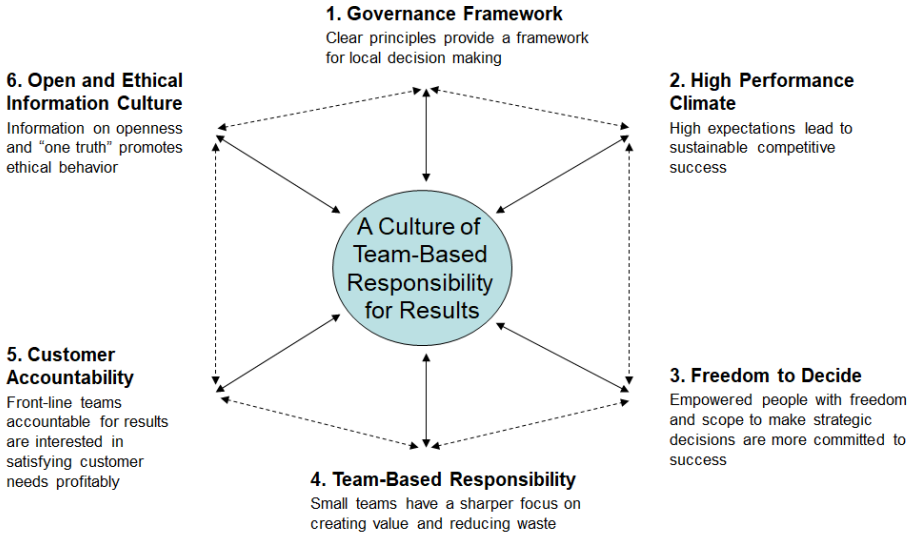

Figure 14 Decentralization of the organization (Hope & Fraser, 2003)

1. Governance Framework

The long-term strategical goal is an objective for any organization and also for the BB theory. In order to reach it, it is necessary for the organization to have guidelines on how to reach the objective. It is the management's responsibility to formulate these guidelines in a way that there is no doubt about the values of the organization. Guidelines are not to be confused with rules, as this is against the BB way of thinking. Instead, if and when mistakes are being made, the purpose is to learn from them, adjust and fix them in order to keep on working. When operating in this manner trust between management, sub-managers and employees becomes a key word. It is also necessary to take responsibility for solving problems as well as keeping focus on the organization's long-term objective (Hope & Fraser, 2003).

When clearly defined guidelines are implemented, all the employees in the organization will know how to act in accordance with the organization's values. This will lead to a culture where everyone will strive to reach a common goal (Hope & Fraser, 2003).

Should the above mentioned be implemented correctly, then the managers will become supportive and guiding for their subordinates. As the responsibility is delegated down in the hierarchy the senior management's role will be more supervisory. It is worth mentioning, though, that this approach is based on a high level of trust and takes time to implement (Hope & Fraser, 2003).

2. High Performance Climate

The second principle in the decentralization is about creating an environment where the organization strives for good performances. As mentioned in the implementation of the adaptive processes, relative improvements were explained. It is in the high-performance climate that these aforementioned improvements will be a key point. The management therefore needs to create an environment based on performances. The internal competition must not affect the cooperation across the organization, as that will compromise the idea of the entire organization working together towards a common goal (Hope & Fraser, 2003).

3. Freedom to decide

The focus of this principle is to give a sub-manager or division the authority to make its own decisions. Since a sub-manager or its division has the most knowledge regarding the internal

conditions that affect them, it is necessary that they themselves can make decisions that directly have an effect on their daily work. This will mean that the relative improvements will still be attainable, but since the freedom to decide is delegated to the place where the decision will affect, the decision will be made faster (Hope & Fraser, 2003).

This principle is also based on trust, as the sub-managers or division are being trusted to make the right decision at the right time. The senior management's role is to make sure that the risks taken are not too big and will not deviate from the long-term objective (Hope & Fraser, 2003).

4. Team-Based Responsibility

When decentralizing responsibility BB also encourages that responsibility is given to teams in the organization. By doing so, the organization ensures that solutions are being created that focus on value-creation for the customer. The argument for this is that the teams have a faster response time and thus can follow the way of thinking explained in the adaptive processes (Hope & Fraser, 2003).

The dynamics in the external environment is one of Hope and Fraser's main criticisms of the traditional budgeting. Giving responsibility to teams, which will lead to a faster response time, will eventually benefit the customers as the organization can provide a customer-oriented solution faster (Hope & Fraser, 2003).

A necessity in a team-based responsibility approach is that an organization has the right employees on the right position in the organization. Here, both educational qualifications as well as personal characteristics, such as a cooperative attitude, willingness to take responsibility and innovative way of thinking, to name a few, are considered important (Hope & Fraser, 2003). This will also require that new employees will be trained in the BB philosophy, when hired in an organization.

5. Customer Accountability

The fifth principle of decentralization in an organization involves accountability. In this principle the customer is the focus area. Since the satisfaction of customers is important for organizations in a dynamic environment, it becomes important that the responsibility for keeping customers satisfied is placed to employee or division that has the daily

communication with the customers. Information-sharing is also relevant in this principle. The more information is being shared across the organization, the more knowledge any given employee or division will have about a specific customer, and by using this information, will be better able to satisfy the customer's needs (Hope & Fraser, 2003).

6. Open and Ethical Information Culture

The sixth and final principle of the second peak of BB revolves around the culture an organization should have. As explained earlier, open and honest communication, as well as information sharing across the organization are key words. As far as information sharing is concerned, it is equally important to share negative information, as this will give knowledge and a possibility to correct something that has gone wrong (Hope & Fraser, 2003).

Information sharing is a general keyword in the BB philosophy. This is visible in several of the principles in the two peaks of BB. According to Hope and Fraser (2003), the reason for this is that the more information the employees have the better basis they have for making the right decisions. If a forecast indicates a negative period, which will create a negative result, it is important that this information is shared across the organization so the right decision can be made.

5.1.2. Criticism of Beyond Budgeting

As BB is a theory that revolves around a critical point in any given organization, namely financial planning, it has also been subject of criticism. The purpose of this section is to uncover the criticism of BB. The section will be divided into theoretical and practical criticism.

Every organization needs to develop its own form of management, culture and other relevant aspects of running the organization, as organizations differ from one another. This means, according to Chenhall (2003), that BB might not necessarily be the right way of managing all organizations – traditional budgeting may still be relevant for some. This criticism of BB is backed by Anthony et al (2014) who claim, that there are companies whose best management form is traditional budgeting. Anthony et al (2014) mention companies that are in a stable environment and they question if these companies would benefit from decentralizing and implementation of the adaptive processes.

Ekholm and Wallin added to the discussion on abolishing the traditional budget. Their research showed that there is not much willingness in companies to abolish the traditional budget. Furthermore Ekholm and Wallin (2000) state that changes in the external environment are not to be solved by budgets but rather by strategic means, which also means that that it is not the traditional budget itself that is to blame, but rather the use of the tool, and potentially other management tools, that need optimization.

The three main critiques of traditional budgeting: it is too expensive; it does not adapt to external environment and motivates gaming are explained earlier. A survey of companies in North America, conducted by Libby and Lindsay, concluded that Hope and Fraser's arguments are over generalized. They claim that the time spent on budgeting is not as much as Hope and Fraser claim and in the majority of the companies, the budgeting was directly linked to the long-term strategic objectives of the companies. Additionally, the survey also found that fixed targets and the bonuses these targets would trigger are not used as much as the advocates of BB claim. In fact, the survey found that only 5 % of companies in Canada and 9 % of companies in the US use this form of reward system (Libby & Lindsay, 2003).

BB reward form will also have its difficulties, as Frow et al (2010) claim, that finding other organizations that are comparable, and thus benchmark against is a challenge.

The Danish researchers, Niels Sandalgaard and Per Nikolaj Bukh, have added to the criticism. In their case study from 2014, they found that shareholders and creditors often demand to see a detailed budget, if they are to invest or do business with a company. Should a full implementation of BB be used, then this detailed budget would not be available (Sandalgaard & Bukh, 2014). Furthermore, and backing Frow's concern, Bukh and Sandalgaard (2016) also claim, that an organization has to have a certain size and structure in order to have useful benchmarking, especially organization that uses internal benchmarking. Bukh and Sandalgaard (2016) state, that companies that use BB also operate with fixed targets. As mentioned in the theoretical description, the use of fixed targets should be abolished and *stretch goals* implemented instead. This gives reason to believe that companies have not been ready to fully implement the BB approach.

5.2. Activity Based Costing

The following section will encompass an explanation of the theory of ABC. This section will contribute to a deeper understanding of the ABC system and its components that will later form the basis for the analysis and discussion section in this thesis.

The ABC system was introduced in the late 1980s by Robert Kaplan and Robin Cooper, as criticism of the traditional costing system. In 1987 the two Harvard professors published the book “Relevance lost: The rise and fall of management accounting”, where they highlighted the limitations of traditional accounting systems in regard to overhead allocations, especially in the face of companies having broader product mix, due to the fact that traditional cost allocations were doing fine for their time of mass production. However in the time of “fierce competition” and “rapid technological change” companies had exhibited a demand for more specific and timely information that can help improve product costing and performance evaluations (Cooper & Kaplan, 1998). The case examples of Siemens Electric Motors Works and John Deere were used by the two authors to demonstrate that it is namely the “management objectives” and the “diversity of product mix” that drives the need for more accurate accounting systems. The main disagreement with the old cost accounting process was that full-cost makes use of volume-based allocations, by assuming that indirect costs vary with the quantity produced, which leads to distorted image of the company’s costs. The ABC system was proposed as a solution due to the fact that the system is designed to solve the problem of arbitrary allocation of indirect costs by first tracing the cost to the activities performed and from there further assigning the activity costs down to the cost objects.

5.2.1. The Structure of the Activity Based Costing system

The ABC model starts by allocating a company’s resource costs to the activities carried out in the company via resource cost drivers. The resources are combined in Resource Cost Pools, that are most often defined based on the company's chart of accounts and can, for example, be building and staff costs. Activities include different tasks that the company's employees must perform, for example, planning, setup, purchase of raw materials or accounting. The same activity can be attributed to several different cost objects that can be products, customers or customer groups, for example. According to Kaplan and Cooper

(1998) direct costs like direct salary and materials, can, just as in the traditional cost accounting system, be directly allocated to the cost objects. An illustration of the structure of an ABC system is presented in the figure below.

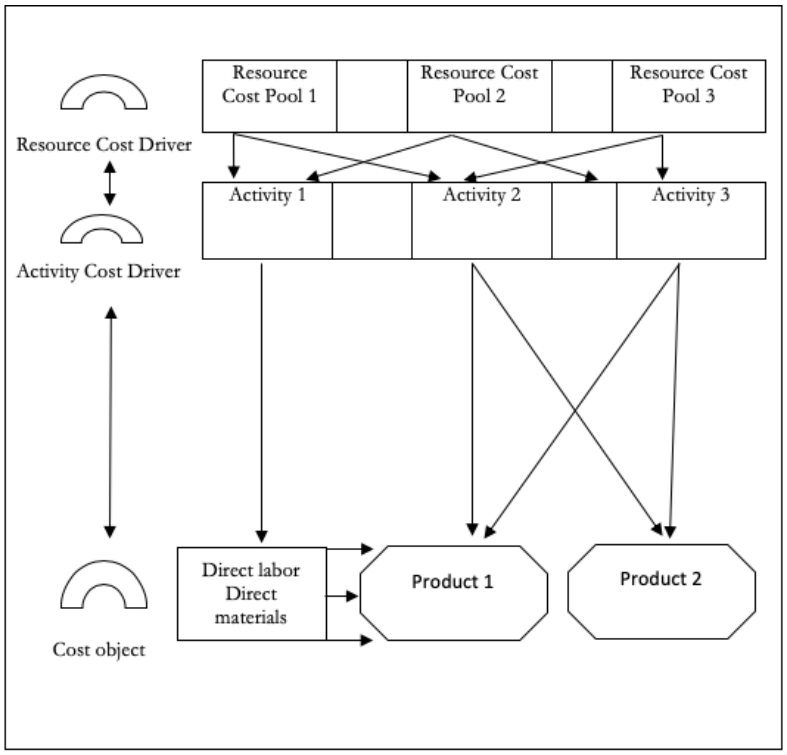

Figure 15 Structure of an Activity Based Costing system, own production

Assumptions of Activity Based Costing

Describing the assumptions for the design of the ABC system is an important aspect of explaining how the system works. The first assumption of the system is that a company's resources are consumed by the activities performed in the company, thus resource costs are allocated to the activities based on the amount consumed by each of these. The second assumption is that it is the company's cost objects that dictate the demand for the various activities in the company, meaning that activity costs are further assigned to the objects based on the relative consumption of the activities by each cost object. The third assumption is that the ABC model has more of a consumption rather than expenditure nature. The idea that there is more than one reason for resource consumption, and that a variety of activities can be detected and measured is respectively the fourth and fifth assumption. The last two assumptions uncover some of the main differences between ABC and Traditional Costing System and are namely the assumptions that all the costs in a

resource cost pool are variable, as well as that all costs are classified in pools by homogeneity. Thus, one can conclude that the ABC is an approach that is focused on measuring the behaviour and cost of resources, activities and cost objects based on cause-and-effect relationships.

Identification of Activities

For the purpose of developing an ABC system, it is important to, first of all, identify the activities that consume the indirect costs of the company. An activity can be described by its immediate purpose, for example, production planning, set up of machines, product development or relocation of materials. Originally, the idea of ABC was that all of the company's activities should be brought together in a so-called "activity catalogue", but rather quickly it was found that this process may turn to be resource-intensive and that several hundred activities could be identified. The more homogeneous the individual activities are, the more activities there will be included in the activity catalogue, the more expensive it will become to construct and maintain the system. From here it follows there may be more measurement errors (Datar & Gupta, 1994) in the form of mistakes in the cost allocations between the different activities. With the increased interest for the ABC system and due to the fact that a lot of companies and consultants have gained experience in developing and implementing ABC systems, standard activity catalogues were developed as templates, and at the same time a rule of thumb was made about ignoring activities that consume a minimum amount of resources , as well as limiting the activity catalogue to merely consist of between 10 and 30 activities.

In order to prepare an activity catalogue, a company is faced with two options. One possibility is to design the ABC system top down, where a project group decides which activities should be taken into the system; or bottom up, where the employees are involved in the process of designing the activity catalogue by explaining what activities they perform as well as elaborate on which ones are the most important to consider for the system. According to Bukh and Israelsen (2003) if the ABC model is to be used for benchmarking purposes, then it will be more practical to ensure unity by standardization of the activities across the organizational segments in the company, which will lead to a more of a top-down

controlled process. The choices in regard to the activity catalogue in an ABC system are thus dependent on the specific purpose of the system.

In the activity catalogue, one can distinguish between primary and secondary activities as well as value-adding and non-value-adding activities. The primary activities are characterized by the fact that a careful measurement of the resource consumption will be able to explain exactly which cost object consumes on it. The secondary activities must be perceived as activities that support the primary activities and are therefore not directly related to the cost objects. Kaplan and Cooper (1998) warn against classifying the activities in value- and non-value-adding due to the fact that the terms are hard to operationalize, as well as it should be an objective of the company that all processes and activities are done as efficiently as possible, and with as few mistakes as possible. A suggestion of Kaplan and Cooper on how an activity catalogue could be designed is to code "responsibility" in the catalogue. The two authors argue that by having a specific department or employee responsible for a specific activity can be relevant, especially in regard to process optimization where a target can be to bring down specific activity costs.

Aggregation of resources in Resource Cost Pools

The second step in designing the ABC system is to aggregate the resources into Resource Cost Pools. This is also one of the parts where ABC gets most of its criticism from Danish researchers (Andersen, 1992) (Bukh & Israelsen, 2004). The reason for this is that in the ABC theory one is to systematize costs into homogeneous cost pools, however that homogeneity is not determined by either variability or reversibility of the costs. Cooper and Kaplan (1998) argue that since ABC's primary objective is to handle the long-term product calculation there are no problems in regard to variability, as according to the American statement: "all costs are variable in the long term". However, if the ABC is used in regard to making short term decisions, like outsourcing for example, then the data generated from the system is automatically invalid. Another example can be in regard to dropping an unprofitable product, a consequence of which can be that a large proportion of the costs associated with the product not only don't fall but are now spread on less products, possibly identifying another product as unprofitable. This is part of the reason why it can be extremely

important for a company to take into considerations the variability and reversibility of the costs.

Assigning resources to activities

Once the Activities and Resource Cost Pools are determined, the distribution of activity related resource costs can begin. This is usually done ex ante, before the resources have been consumed by the activities, but can be supplemented with actual, ex post resource costs. However Cooper and Kaplan advice against continuous measurements of the resource cost drivers. The authors argue that it is enough to ask an employee to make an estimation of the time spent on an activity, for example, rather than continuously measure the time in order to minimize errors in the system.

Specification of cost objects

A cost object in terms of ABC costing terminology can be a lot of different things, be it products, customers, distribution channels, services, projects and so, all depending on what the desired goal with the ABC is. The determination of the cost objects is thus an important part of the design phase of an ABC system. Bukh and Israelsen (2004) mention that the number of the activities varies according to whether the purpose with the system is to analyse the profitability of a singular customer or more largely – for a specific geographic segment.

In regard to grouping the activities and in order to avoid cost allocations where a causal effect cannot be identified, Kaplan and Cooper proposed that the activities are divided into cost hierarchies where they, and implicitly the cost objects, are grouped in a hierarchy, showing how the activities are related to each other, so that the costs attributed to a higher level in the hierarchy can be perceived as common costs for the underlying cost objects (Bukh & Israelsen, 2004). Below is an example of how an ABC system with a hierarchical division of the activities may look like.

Figure 16 Activity hierarchy example (Cooper & Kaplan, 1998)

Figure 16 shows that activities and consequently also their costs can be defined as being either facility-related, product group-related, product-sustaining, batch level or unit level activities. However how the activities are defined, as well as where in the hierarchy they are placed, will again depend on the ABC model purpose and hence also the chosen cost objects. The basic principle behind the activity hierarchy is that costs from overlying levels in the hierarchy should not be divided down when they do not vary with changes at lower levels.

Selecting the activity cost driver

As previously mentioned in the section describing the basic principles of the ABC system, the costs from the "Activity Cost Pools" are to be further allocated to the cost objects using the so-called "Activity Cost Drivers". It is in this section that the research group will describe the three types of cost drivers found in the literature, as this is where the ABC system differs the most from Traditional Costing Systems by providing the management with more detailed information on how the cost objects draw on the cost pools. The three activity cost driver types are namely the transaction, duration and intensity driver. These will be reviewed here.

Transaction driver

The first and simplest of all activity cost drivers is the transaction driver. The transaction cost driver is simply a numerical measure of how many times a given activity is performed and is thus mainly used in cases where the costs objects draw rather similarly on the resources. The reason for this is that the driver does not distinguish between the resource consumption by the cost objects (Cooper & Kaplan, 1998). This is also why transaction cost drivers are most appropriate in cases where the cost objects draw on the resources in the same way, by the same amount (Bukh & Israelsen, 2004).

Transaction drivers are also the most popular ones, and most used, and a possible reason for that may be the fact that they are the cheapest to handle.

Duration driver

The second activity cost driver is the duration driver. It is characterized by giving better and more precise overview of the cost of conducting an activity, hence with the limitation that it is a rather expensive driver to use. An example of a duration driver can be the amount of time spent on any activity in the company, from time spent on procurement, to setup hours and processing time to time spent on handling complaints by customers and so on. Due to the nature of the driver, they give best information bases whenever the different cost objects place different demands on the capacity available, so the time spent on those processes differ from cost object to another. If we take cleaning time (of machines) then it can be easier and simpler to clean before/after a specific cost object, whereas cleaning after some other ones could take extra time. This is where duration activity cost drivers help objectively distribute the costs to the products by avoiding simply doing proportional allocations (Cooper & Kaplan, 1998).

Intensity driver/ Direct measurement

The third and last activity cost driver is the most accurate, as well as the most expensive one. The reason for this is that with the help of an intensity driver, in Danish literature called “Direkte måling”, a company is continuously measuring the resources and time spent on each and every process. Such a cost driver is thus most applicable in situations/ environments where the cost objects are rather customized and do not draw equally on the resources nor require the same amount of time spent in order to conduct them. The fact

that usage of intensity drivers is highly expensive makes them the least used driver (Cooper & Kaplan, 1998).

Choice of calculation basis for activity cost driver rates

The last step in the design of an ABC system is to determine whether activities and activity costs are to be calculated based on actual, historical accounting period (ex-post) or budgeted (ex-ante) costs and activities, as well as clarify what is meant with the " total number of driver units".

Normally, an ABC system will be based on historical data, as the information necessary for conducting the analysis will often already be available in the company's IT system and since it is related to costs and actions that have already been recognized, it is indisputable whether it is actually possible to realize these costs/actions. Despite the fact that using historical data is like a standard Kaplan & Cooper (1998) encourage the use of budgeted data as a basis for calculating. Usage of budget data allows more pro-active actions and measures in relation to how activities and cost levels should be estimated for future periods. This means that the management is automatically more flexible to considerations in regard to either increasing or decreasing the number of resources made available, for example, resulting in more efficient and profitable processes. Such managerial considerations will be discussed in detail in the ABM section.

The last design choice deals with what is defined as the total number of driver units. In this context, the ABC literature mentions several different possibilities. Those can be either the actual number of driver units carried out in the period, an average based on previous years' data (Bukh & Israelsen, 2004) or even the practical capacity. A closer discussion of those will follow later in this section.

The design choices that have been presented earlier have all been linked to the considerations made in regard to getting the costs calculated per activity and how these are distributed down to the cost objects via an activity cost driver. In this way, all the necessary information for calculating the activity cost driver rate is already presented in the model, thus one only needs to apply the formula below, and the "Activity Cost Driver Rate", or

ACDR, is calculated. According to Bukh and Israelsen (2004), an ACDR is that amount in kroner or cent, that the cost object is charged with.

$$Activity\ Cost\ Driver\ Rate = \frac{Costs\ in\ the\ Activity\ Cost\ Pool}{Total\ number\ of\ driver\ units}$$

Figure 17 Activity Cost Driver Rate formula (Cooper & Kaplan, 1992)

As previously discussed, the purpose of the ABC model is to measure the extent to which a cost object draws on the various activities in a company, and the subsequent resource consumption. However, due to the fact that the costs associated with providing the necessary capacity are almost always higher than what can be allocated to the cost objects, the two authors of the theory distinguished between used and unused capacity, and that can be seen in the formula below:

$$Cost\ of\ Activity\ Supplied = Cost\ of\ Activity\ Used + Cost\ of\ Unused\ Activity$$

Figure 18 Cost of Activity Supplied formula (Cooper & Kaplan, 1992)

From the formula it becomes clear that unused capacity arises as a result of the company not fully consuming the resources supplied. A reason for that is the fact that a big part of the resources in a company are namely its fixed costs (Cooper & Kaplan, 1998). Examples of such resources can be production facilities and employees on fixed wages that, irrespective of the future period's activity, cannot be removed in the short run. It can also be resources that would normally be perceived as variable with the activity level, but due to contract terms, are also not possible to abolish here and now. The variable resources are therefore the only resources whose costs disappear upon termination of an activity (Cooper & Kaplan, 1998). Due to the above mentioned, one can draw the conclusion that it is the fixed costs for which an available capacity can be defined, and it is therefore also these resources that an ABC system focuses on.

There are several elements that are important to consider in regard to choosing the best capacity basis for calculating the cost driver rate. The use of the theoretical capacity utilization is regarded as the least costly method as it is based on historical data that can be obtained relatively easily. However, if calculations are based on historical data, they might

not be necessarily true for the future periods, which is a clear disadvantage according to Kaplan and Cooper (1998). The argument being that it is very problematic to use the actual capacity utilization in situations where there is an activity decline and where the ABC model is used for pricing the cost objects. A decline in the activity level will, based on the cost driver rate formula, result in a higher cost rate for the activity. If the purpose of the ABC analysis was price setting of the cost objects, for example, a higher cost driver rate will further aggravate the problem. This is referred to in the ABC literature as the "death spiral" (Cooper & Kaplan, 1988).

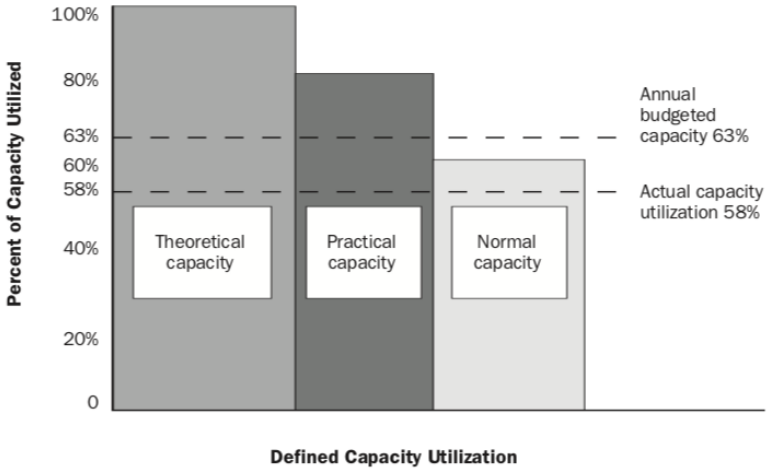

Figure 19 Utilization of capacity (McNair & Vangermeersch, 1996)

The use of practical capacity will however prevent that being the case as the use of practical capacity is independent of the activity level (Bukh & Israelsen, 2004). It is thus considered as the better design choice, as it ensures that the when pricing the cost drivers, they are not charged extra but are representative of the usage of the company's resources and its underlying efficiency. Typically, practical capacity is calculated as a percentage of the theoretical capacity. The theoretical capacity can be defined as a 100% utilization of the resources supplied within a given period. Take for example an employee, whose working day is 8 hours. It would be unrealistic to assume that he/she works efficiently every day, all year round, since in a normal working day there is time assigned for breaks, meetings and such. The same kind of argumentation can be used if we take, for example, machine capacity – a machine cannot be expected to produce constantly as there should be set time for maintenance and eventually repairs. Kaplan & Cooper (1998) state, that the practical

capacity, as a reference point, can be estimated between 80% and 85% of the theoretical capacity. Alternatively, it can be estimated based on the preceding periods, where you take the most productive period when the activity level was high, while there was no delays and quality problems, and when the employees have not been stressed.

Although the practical capacity seems to be the most reasonable to use, it is rarely used in practice (Bukh & Israelsen, 2003). The reasons for that are that there are problems associated with using the practical capacity. For example, it is difficult to identify the available capacity, since an ABC system measures the capacity at the activity level, but the capacity actually relates to the resources that carry out the activity.

5.2.2. Activity Based Management

With the help of the description of the ABC theory, it can be argued that an ABC system is not just a cost allocation system, which was Kaplan and Cooper's original idea, but rather a broader concept. Various studies suggest that once non-financial managers get involved in the process of establishing and using an ABC system, they do not only gain a lot of enthusiasm for the process (Friedman & Lyne, 1995) but also become more prone to taking decisions based on the outputs from the system (Innes & Mitchell, 1991). These findings strengthen and confirm the research group's belief that the ABC system provides the managers with a lot of relevant, easily accessible and comprehensible information that is essential for numerous decision-making processes. The term of Activity Based Management, in the latter called ABM, has occurred as a representation of any use of ABC information for managerial decision making. Therefore, the purpose of this section is to explain the part of ABC that the literature calls for ABM.

Generally speaking, an ABM system can be defined as a system-wide approach that emphasizes on the activities conducted in a company, in regard to give the management a better foundation for increasing profits by providing more value to customers and eliminating waste in processes. Kaplan & Cooper distinguish between Operational ABM – "Doing things right", and Strategic ABM "Doing the right things". Other authors call the two dimensions for cost and process dimensions, although the idea is the same. In this paper the research group will follow the original concepts of the ABC theory, namely the Operational

and Strategic ABM. The two dimensions of ABM will be illustrated and discussed below in order to elucidate how the ABC literature can assist in improving value creation.

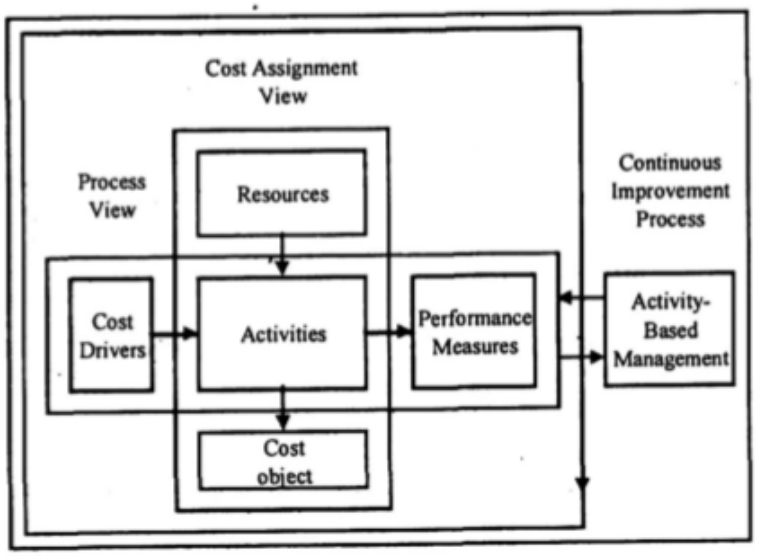

Figure 20 Integration of ABC and ABM (Tardivo & Cordero, 2009)

5.2.2.1. Operational ABM

As mentioned above, the Operational dimension of ABM is about executing the company's activities and processes correctly. The objective of this dimension is to improve process efficiency through a more accurate cost allocation and a better utilization of the resources available. As seen in Figure 20, the cost of "Resources" is traced to the "Activities" responsible for consuming those, and the cost of "Activities" is further allocated to the specific "Cost object". In this regard, the ABC system can be perceived as a supplier of huge amount of data necessary for further analysis and inspiration purposes. The framework of Operational ABM is most useful in situations where managerial decisions have to be made in regard to product costing, profitability, strategic cost management and inspirational analysis.

The ABC literature suggests that managers should focus on areas that are of great importance for the company and where there is some basis for efficiency improvements, for instance examine the activities that consume most of the resources (Cooper & Kaplan, 1998). Once the areas with potential for improvements have been identified, it will be necessary to conduct some form of cost-benefit analysis of the changes to be made. In some cases, it can be that the costs associated with the restructuring of the processes will be

higher than the potential savings, in which case the restructuring will not be attractive. If, however, there is a high probability of more win than loss and a decision to restructure is taken, Kaplan and Cooper (1998) recommend to continuously follow up on these restructurings via the ABC system.

5.2.2.2. Strategic ABM

Just as in the operational dimension, here it is also the case that the ABC system provides the data basis for the strategic ABM. According to Kaplan and Cooper (1998), the full benefit of an ABC system is only achieved when the strategic part of ABM is introduced. By this the two Harvard professors mean that an ABC system will often contain a lot of information, that can, if used properly give a better overview of the profitability of the cost objects. However this is not the only benefit a company can have from implementing such an extensive system. The data extracted from the ABC system is relevant for two purposes – first, one can see exactly how much a given activity costs and thus assign those to the cost object for profitability purposes. One can also, after being presented with the cost information, attempt to reduce or eliminate the unnecessary costs. The information generated by an ABC system can, as well, help managers distinguish between value-adding and non-value adding activities, thus making it easier for them to further examine the processes and study where continuous improvements can be made (Hansen & Mowen, 2003).

Due to the fact that the ABC's main focus is on a company's activities, it aids managers in taking strategic decisions in all the cost management processes. Take for example the profitability analysis of the cost objects. When such an analysis is made for the company's products or customers the result is often presented in the so called "Whale curve" (Cooper & Kaplan, 1998). From the curve it becomes obvious which products, or customers, are the most profitable ones and which ones are unprofitable. As the ABC system distributes the costs to the cost objects, based on relevant and representative cost drivers, it will sometimes surprise a company's management which products are the most profitable (Cooper & Kaplan, 1998). The information a whale curve provides should give management a wide range of considerations as to whether their product and customer mix and the way these are handled are the optimal ones. Moreover, it might seem obvious to remove the

unprofitable products and focus solely on the products that give the greatest profit, however, this will not always be the optimal solution. In relation to the decision whether a product is to be completely eliminated from the company's range, it is important to consider the subsequent consequences an elimination of a product will entail. In other words, the company has to consider whether eliminating a product from the product mix would result in better overall profitability, which will not be the case if the main part of the costs associated with a product are irreversible, for example. If the management makes such a decision, without taking that into consideration, there will be a high risk of making wrong decisions and, in most cases, the desired outcome would not be achieved.

Both the operational and the strategic part of ABM are part of a management concept and no matter how precise information an ABC system can provide, the actual results only occur on the basis of executing the actions performed by the company's management. Therefore, the ABM model places great demands on the company's management skills and resources, as its purpose is to influence the company's management to carry out the actions necessary for accommodating the interests of stakeholders in the best way possible (Nielsen, 2001).

5.2.3. Criticism of ABC/ ABM

This section will be an examination of the literature around the problem areas and critic features of ABC. It should be mentioned that the articles criticizing the ABC theory are far less than the ones propagating the system's ideas (Lukka & Granlund, 2002). The purpose of this section will, however, be to highlight aspects of ABC that do not add to value for companies and indicate areas where the ABC team should be more careful when designing the system. The section will start with an examination of the theoretical criticism and will be followed by practical criticism as well.

In 1988, Hiromoto, claimed that the use of ABC in Japan is rather low as it is difficult to collect the necessary data for the system and the cost of implementing it is high as well. Clarke (1995) and Innes and Mitchell (1995) also claimed that an ABC system requires a lot of resources and there might be implementation problems at a later point in time. An often-mentioned criticism of ABC is that the system requires a complex design, which can be a resource intensive process for a company, especially in the establishment, but also in the

maintenance phase. As previously mentioned, there are a number of problematic elements associated with building the "perfect" or just a good, value-creating ABC system. Firstly, it can be comprehensive to record and collect the data to be used as a basis for calculating cost drivers. Secondly, it is often necessary for the ABC model to be continuously updated with new data, which is both resource-intensive and can create conflicts between employees involved, thus it can lead to an organizational reluctance against the ABC concept, especially in cases when the implementation has not been successful.

The treatment of reversibility and variability is the area, that has received the most critique among researchers in Denmark. Rørsted (1991) and Andersen (1992), for example, were the first to criticize the system for distributing costs to products, without considering the variability and reversibility of those costs first. Kaplan and Cooper's argument to this criticism was that, as it is familiar from the American literature, "in the long-term all costs are variable", which is not exactly the same in Danish literature. In Denmark the following can be translated to "in the long term all costs are reversible". Nevertheless, this assumption signifies that the ABC system can only be used for making decisions in the long term, as the system clearly does not focus on the shorter term. Thus, basing decisions for the short run on the outcomes from the ABC system, if it does not explicitly consider the variability and reversibility of costs, may be problematic. In his article from 1991, Rørsted claims that there might even be problems connected to making decisions for the long run, as the ABC system overlooks synergy effects. As mentioned earlier, an outcome from the system can be that one or more products in the product mix are of negative value for the company, since their contribution margin is negative. However by eliminating those specific products one cannot guarantee that the bottom line will get better, since there might be a synergy effect, making the other products cheaper to produce; an example being if a fixed resource is already paid for and there is free capacity to produce more.

Horngren et al (2002) gave an example of how a cost can be considered common for two product lines, and how the same cost can be allocated in the same way as direct labour and direct material costs are allocated to the cost objects. Moreover, the author states that administration and joint costs should not be allocated down to the cost objects as "it is usually difficult to find good cause-and-effect relationships between these costs and a cost-

allocation base". Garrison et al (2001) argue that common costs should not be allocated to the cost objects as they are not avoidable once a product is eliminated from the mix. Hansen and Mowen (2003), on the other side, argue that since common costs are usually not that high in amount, they can be allocated further down as that will not completely distort the picture of product costs.

Moreover, there is criticism connected to the nature of the costs, and the use of average costs in particular. This is a problem, primarily when resources with different prices and efficiency levels are involved in the ABC (Israelsen & Rohde, 2009). An example can be estimating activity time, consumed by an old machine to produce a specific cost object, and the usage of a brand new, updated machine that is quicker to set up and change, but is also cheaper and more efficient. The costs for the company's products thus depend to a large extent on which machine they are produced on.

The use of average costs also presents problems in the context of an operational inspirational analysis (an examination of whether the activities are carried out in the most appropriate manner). In regard to the example above, it is not possible to assess whether the two machines perform optimally. This means that the company risks losing important information about the actual efficiency and the actual costs, in regard to a possible adjustment of the resources and activities (Israelsen & Rohde, 2009).

In the context of the strategic inspirational analysis (a study of whether the right activities are being carried out), there are some issues related to the application of average cost in the ABC system. Decisions at strategic level have, as mentioned, an extended time horizon, which means that short-term irreversible costs in the form of fixed capacity become reversible (Atkinson, et al., 2007). Furthermore, it is also at the strategic level that a decision is made on product mix and pricing. Thereby, depending on the demand and the competitive situation, decisions could be made regarding sales price, diversification, or an elimination of a product, all of which could create a positive bottom-line effect.

It is a common fact that not every company uses ABC. In a survey from 1997, Gosselin discovered that 30.4 % of strategic business units have applied an ABC system in Canada (Gosselin, 1997). In the United States the amount of companies that have already

implemented the model was even higher at 49% (Krumwiede, 1998). Surveys conducted in Europe, and the United Kingdom in particular had shown that ABC/ABM systems are implemented in some of the largest companies in the country, however the percentage implementation was rather low – only 18 % (Innes, et al., 2000). A survey conducted by Armitage and Nicholson (1993) in Canada, examined how many companies have already implemented the framework, how many were considering it and how many rejected it. It was no more than 14 percent that have actually implemented the system, and around the same proportion of companies (15%) were considering an implementation as well. Here is where another critique of the model can be highlighted – ABC is a static model, and this is especially true in the case when the system is based on ex-post data and does not complement proactivity, also when the model is not continuously updated to represent changes in the company structure or so. There are examples of companies that fail to update the system due to the high costs associated with such an update (Bukh, 2007). Furthermore, it has been uncovered that if the system becomes too complicated in regard to its design, then there is a higher probability of making errors and the basis for decision making thus becomes questionable (Bukh & Israelsen, 2004).

Most of the studies also research into reasons why the rest of the companies have not considered changing their cost accounting systems, as well as what is most difficult for companies in regard to the implementation of an ABC system. Cooper and Kaplan (1992) found that one of the reasons for the struggles with implementing the system was the lack of communication between accountants and employees. In 1995, Shields explained that the managerial behaviour is of great importance during the implementation phase as the employees often need guidance and support, in order to assure they are doing the right things (Shields, 1995). McGowan & Klammer (1997) found that by involving the employees in the process, the results from the system are considered more beneficial and the system in general is perceived as satisfactory.

6. Analysis

After the theoretical description is written the analysis of the theories can begin. The structure of this analysis is firstly a comparative one in order to find out how the two theories compare. After establishing how they compare by researching factors, positive and negative consequences of each of the theories, the research group can decide if the two theories are complementary or substitute each other. Based on the comparative analysis a complementarity analysis will be written, which will then lead to the case study and discussion of considerations should the two be implemented.

6.1. Comparative analysis

The purpose of making a comparative analysis is to find out if the two theories are compatible or substitutable. By compatible, the research group wishes to examine whether or not ABC/M can be used as a tool for companies that use the BB philosophy.

The structure of this section will be a description of the purposes and factors for implementation, followed by the positive and negative consequences of the theories. The three latter sections will have a sub-conclusion and the section will end with a conclusion of whether or not there is complementarity between the theories and if they, from a theoretical perspective, can be implemented together.

6.1.1. Purpose

The BB theory was developed as a criticism to the Traditional Budgets and even though the word budget is part of the theory, it is more than budgeting - it is a way of managing by radical decentralization and adaptive processes. The purpose is therefore to empower employees and divisions, as it will aid decision making for value adding purposes in an ever-changing environment.

The ABC theory was first developed as a tool to help managers estimate product costs, as the overhead costs are allocated based on the consumption of the cost objects and not on a percentage basis. Later the theory developed to be more than just a product costing tool, as it can be used for budgeting and management purposes, ABB and ABM, where the activity is the key component.

6.1.2. Factors

As the focus is on the theories of BB and ABC/M, the research group wishes to explain and elaborate on which factors should be considered before deciding for or against implementing the two theories. Therefore, the following sections will describe the necessary factors for successful implementation of BB and ABC, respectively.

6.1.2.1. Factors for Beyond Budgeting

As mentioned in the theoretical description the purpose of BB is to abolish the traditional budgets. Moreover, the use of fixed targets is being replaced by relative improvements, such as stretch goals. Furthermore, information sharing, and decentralization of the decision making are key points in order to fully implement and use the BB philosophy. In order for this to happen, a certain culture has to exist within the organization (Hope & Fraser, 2003). A list of the factors of BB can be seen below.

Beyond Budgeting
Culture:
- *Ambitious employees*
- *Employees need to take responsibility*
- *Honest communication*
- *Trust*
Companies preferable of a certain size
Changing environment

Figure 21 Factors for BB, own production

The first requirement worth mentioning is the ambition level among the employees. As BB looks to establish a competitive environment where divisions or branches compete internally, employees need to have a certain level of ambition in order to perform as well as possible. From the organization's point of view, the recruitment of staff would require a certain personality type, educational background, as well as level of ambition. Furthermore, it would require continuous development of current employees, should the organization implement BB, due to the fact that it differs so radically from traditional budgeting (Hope & Fraser, 2003).

Adding to the culture, and the level of ambition, it is necessary for the employees to take responsibility. As an integral part of the BB philosophy is to decentralize decision making,

the employees need to be able to make the right decisions at the right time. In order to delegate this form of responsibility down the organizational hierarchy, it requires that the company understands the necessity of having the right kind of employees at the right places in the organization. This adds to the previous mentioned requirements regarding education and personal attributes for hiring employees (Hope & Fraser, 2003) (Østergren & Stensaker, 2011) (O'Grady & Akroyd, 2016).

The third element in culture is based on communication and leads to trust, as these are closely linked. As described in the theoretical description information sharing, positive as well as negative, is a key factor in order for employees to make the right decisions. Withholding information is therefore not an option. When the level of ambition, willingness to take responsibility and honest communication become the standard for a company the foundation has been laid for a culture where the entire organization trusts that all the divisions and their employees strive to perform better and meet both short- and long-term organizational goals (Hope & Fraser, 2003) (Østergren & Stensaker, 2011) (O'Grady & Akroyd, 2016).

Another factor is the size of the company. As the literature on the subject shows, companies using BB are big and in several cases multinational, such as Borealis, Oilco, Mainfreight, as well as SH (Hope & Fraser, 2003). A logical explanation of why companies need to be of a certain size is that the communication lines in large companies are long and rigid which leads to the decision making being too long. By using BB this problem solves itself which is also in line with the theoretical purpose of BB as it wishes to decentralize responsibility and decision making. Furthermore, the larger the company, the easier it is to benchmark internally, as external data might be hard to benchmark on continuously.

Even though the research group has listed company size as a factor for implementing BB, Hope and Fraser do not specify company size or company type as a requirement. The research group considers company size as a factor, as the research on the topic has shown, that companies using BB are usually large with an employee number over 1,000 people (Pilkington & Crowther, 2007). Pilkington and Crowther (2007) also state, that small companies with 50-100 employees use strict budgets, as they have limitations in regards of retraining their employees in unfamiliar concepts.

When Hope and Fraser (2003) developed the BB philosophy, a major point of criticism of the traditional budgeting was the fact that it was not suitable for the modern competitive environment and should be abolished (Hope & Fraser, 2003). But as Chenhall (2003) and Anthony et al (2014) argued, this might not be applicable to all companies, as they need to find their own method of managing. It is therefore necessary for a company that there are one or several external factors that influence the decision. Examples of such are disloyal customers, high level of competition, changing oil prices and changes in laws to name a few. As far as research is concerned, the claim about the competitive environment is also evident in Østergren and Stensaker, O'Grady and Akroyd, as well as Hope & Fraser articles and books.

6.1.2.2. Factors for ABC/M

The factors, or motives, for implementing an ABC system, and ABM respectively, have been argued by several researchers to be dependent on the stages in which the implementation project is (Krumwiede, 1998). According to him, there are six different stages, namely initiation, adoption, adaptation, acceptance, routinization and infusion, which is also the ABM. The aforementioned stages are shown in the figure below, in relation to the effectiveness and goals of each.

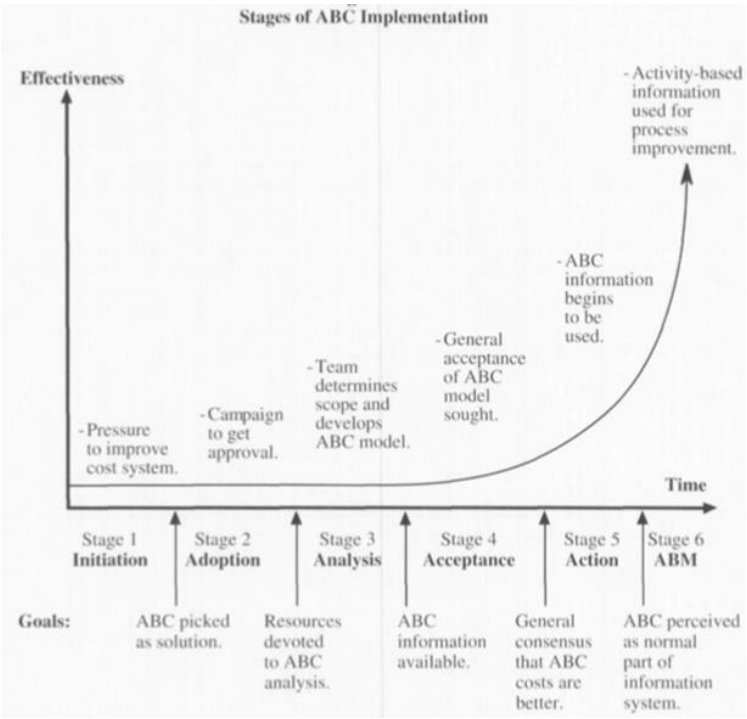

Figure 22 Stages of ABC Implementation (Krumwiede, 1998)

Mutual for all stages, and previously tested by various researchers, are the factors of diversity of costs objects and volume; linkage to competitive strategies, as well as performance evaluation and compensations, implementation training, top management support, certain size of a company, sufficient resources and non-accounting ownership (Shields, 1995)(McGowan & Klammer, 1997)(Foster & Swenson, 1997)(Krumwiede, 1998). All of which have proven to be positively correlated to the implementation and satisfaction with an ABC/M system. The factors are shown in the following table and will be explained further bellow, in the same order.

ABC
Diversity:
- *Cost objects*
- *Volume*
Linkage to competitive strategies
Linkage to perf. evaluation and compensation
Implementation training
Non-accounting ownership
Top management support
Companies need a certain size (turnover and employees)
Sufficient internal resources

Figure 23 Factors for ABC/M, own production

According to Hilton (1994) there are several indicators that can signal the need for a new accounting system, some of which are variety in cost objects, services, processes and product lines. Moreover, companies that have higher or increasing proportion of overhead costs can benefit from reconsidering the costs derived from traditional costs models, as those can be distorted in primarily the situations listed above (Anderson, 1995). Companies that exist within a competitive environment also need valid cost data in order to make strategic choices and cost reductions, wherever possible (Cooper & Zmud , 1990). Thus, diversity in the product assortment or volume is one of the factors that are associated with the adoption of an ABC system (Estrin, et al., 1994), (Anderson, 1995).

In the literature it is argued, that there is correlation between the information provided by an ABC/M system and a company's strategy, and the companies that have been made aware of the links have not only had a successful implementation but have also benefited

from ABC/M (Nair, 2000). A reason for that may be that the information provided by an ABC system can be especially useful in regard to speed and quality strategies, but also for the company's main strategy as the ABC/M information elucidates on the cause-and-effect relations between the company's costs, turnover and profit. Moreover, KPIs can easily be used and tracked within an ABC framework. Nair (2000) says "*Systems, and conceptual models of performance measurement embedded in systems, must manage and measure the pulse of the organization's strategic performance while adapting to these changes"* and that summarizes on how the two are interrelated and why this should be taken advantage of.

Numerous scientists have verified that there are positive effects of using the data generated in and ABC system for performance evaluation and incentive purposes (Shields & Young, 1989) (McGowan & Klammer, 1997). Kaplan (1991) investigated a company that has been using ABC for the purpose and found that once the employees were made aware of how their actions are connected to the processes' efficiency and the measures that they can influence, they not only eliminated the waste but also helped achieve the overall goals of the company.

In relation to the previous factor, the training of employees in regard to the design, implementation and usage of the system is considered a necessary factor for success. By informing the personnel of the importance of a new cost accounting system and how the information provided will be valuable for decision making purposes, a company can minimize the resistance in employees, as well as motivate them to, once they see the benefits, act on the new data provided by the system.

The literature review showed that most of the companies that have implemented ABC and didn't experience its benefits, or went back to the traditional way of accounting, have had their ABC/M projects run by a financing employee or the financing department, in general. Empirical research showed that when finance is in charge of an ABC, the system is mainly used for cost "cuts", whereas if the system is available to a wider range of employees, the data is used for "optimization" purposes (Nair, 2000). Allowing information sharing inside the whole company is thus an important prerequisite for the success of the project.

Moreover, research shows that whenever managers do not trust the product costs reported, they look for alternative ways of cost accounting. Managers get suspicious of the information provided in cases where the sales are increasing but profits are declining, or whenever a product is reported profitable but is, in the same time, not sold by the competition. Some of the times they get inspired by consultants to implement an ABC project, be it in the whole company or just one department in order to perceive the benefits of a different accounting system. In other cases, they themselves find an ABC system to be the solution for their problem, all of which have different influence on how convinced they are of the benefits provided by the system and how motivated they are for making the project work. Various studies show that there is correlation between top management support of the project and a successful implementation of an ABC/M system (Innes & Mitchell, 1995)(Innes, et al., 2000).

Innes and Mitchell (1995) found that firms of larger sizes are more prone to adopt an ABC system. Almost a decade after, Pierce and Brown (2004) found positive correlation between the company size, based on turnover or number of employees, and successful and permanent implementation of an ABC system.

As a continuation of the previous factor the successful implementation of an ABC has been argued to require a high amount of resources, which is associated with higher costs for the company (Levant & Villarmois, 2011). It is therefore recommended for any company considering the implementation of such a system, to conduct a Cost-Benefit analysis prior to the introduction of the new accounting tool, in order to examine whether it is affordable and value adding.

6.1.2.3. Sub-conclusion

By examining the literature on the factors for successful implementation and usage of the two systems the research group came to the conclusion that the decision to adopt and use BB and ABC/M is dictated by similar factors. Company size, in regard to turnover or number of employees, has proven to be a factor in both systems. Moreover, both BB and ABC/M require an open culture where information is freely shared among the employees and honest communication is a priority. Both BB and ABM can be linked to strategy and

performance evaluation initiatives as both stimulate employees to learn by their mistakes, cut on waste and be more efficient. The research group also acknowledges the fact that BB is more suitable in a changing environment, whereas ABC/M is applicable in both a changing and stable environment. To conclude, the research group finds the motives for implementation of the two systems, in regard to both internal and external environment, to be aligned and not conflicting.

6.1.3. Positive consequences of implementing the models

In the following part of the comparative analysis, the research group will compare the positive and negative consequences of implementing and using the two management tools. The reasoning behind comparing the positives and negatives of the two theoretical frameworks is that by examining the similarities/differences between the consequences of implementing ABC/M and BB, the research group will get a better understanding of the effects the frameworks have on companies, as well as examine whether the two complement or substitute each other in terms of application and usage. The analysis of the consequences will continue in the same way as previously, starting with the positive consequences of BB, then continuing with the same for ABC/M and ending with a sub-conclusion.

6.1.3.1. Positive consequences of Beyond Budgeting

The following section is an elaboration of the positive consequences of BB. In order to explain and elaborate the consequences as well as possible, the research group will look at the theoretical purposes of BB and use case studies to illustrate them. A list can be seen below.

Beyond Budgeting
Adjusting continuously
Frontline responsibility
Knowledge sharing
Encourages innovative thinking
Releases resources in management
Directly linked to long-term strategies

Figure 24 Positive consequences of BB, own production

As explained earlier, the purpose of BB is to abolish the traditional budgeting, as it is too expensive, motivates dysfunctional behaviour and is not up to date with today's modern and ever-changing environment. By decentralizing the organization and making it adaptive, BB advocates argue that it makes decision making faster and more correct. Additionally, information sharing adds knowledge to the frontline and by using stretch targets the possibility of gaming is minimized, as the employees are not measured on fixed targets (Hope & Fraser, 2003).

What is more, the purpose is creating an environment with a high standard of performance. The idea is that when an organization does not use fixed targets but instead benchmarks, either externally or internally, the employees are driven to perform better. A consequence of benchmarking is the qualification to a promotion, bonus salary or other perks, while, in extreme cases, a bad performance can lead to an employee losing his or her job (Hope & Fraser, 2003).

The most used positive example of BB is the Swedish bank, Svenska Handelsbanken that hired a CEO who implemented a managing style without budgets which led to a massive improvement in their performance (Hope & Fraser, 2003). Player (2003) mentions, that the bank outperformed its competitors *"…on just about every measure, including return on equity, total shareholder return, earnings per share, cost-to-income ratio, and customer satisfaction*. These measurements proved the value of BB to the company, its stakeholders and customers.

Other researchers have examined the consequences BB has had on companies in different industries as well. One of these articles is called *Management Control without Budgets: A Field Study of 'Beyond Budgeting' in Practice* by Østergren and Stensaker from 2011. The case company is Oilco, a multinational company, originally from Norway that decided to abolish budgets in 2005. The management had five issues that led to the decision to abolish budgets: the conflict between target setting and forecasting, the budget created gaming, was inflexible to the environment, gave managers reason to believe that the future could be managed, and was too time consuming (Østergren & Stensaker, 2011).

Østergren and Stensaker (2011) found, that the abolishment of budgets and allocating resources based on the value added by each project individually led to a better performance for Oilco. The company's managers also communicated more directly with one another as the resource allocation became more dynamic. Furthermore, it created a competitive environment internally as every division wanted to be the best in the organization. It also generated more responsibility and innovative way of thinking, as the sub-divisional leaders became continuously challenged in performing better and presenting as good results as possible.

The second case study the research group has decided to use in order to illustrate the positive consequences of going BB is an article called *The MCS package in a non-budgeting organisation: a case study of Mainfreight*, written by O'Grady and Akroyd in 2016. Although this article is not a research paper on BB specifically as it rather focuses on MCS in general, the company is deemed relevant as it has never used budgets in their control system.

Mainfreight is a global logistics company, originally from New Zealand. The company's culture is based on *Three Pillars of Mainfreight,* which are culture, family and philosophy. The three pillars can be summed in several of the BB approaches, such as tearing down bureaucracy, hierarchy and superiority, open and honest communication, margin (not revenue) targets and educating employees in order for them to fulfil their jobs as well as possible, to name a few. Overall the company's culture is based on a high level of trust and necessary information is shared on global basis and good performances are rewarded, for example it is possible for a new employee to start at the bottom of organizational hierarchy and work their way to the top. The reporting is done on a weekly basis and the forecasting is continuously adjusted in order for each branch in the company to strive for the best possible result. Every branch has a KPI chart and these are compared across the organization in order to establish how every branch is performing. In order to avoid the gaming issue, Mainfreight uses individual rewards, team rewards and discretionary bonus payments and all bonuses are evenly shared between the employees of the best performing branch (O'Grady & Akroyd, 2016).

Based on the theoretical descriptions and purposes, combined with the two case studies on the effects of BB, the research group can now analyse on the positive consequences when using the philosophy.

The case studies have shown that there are positive consequences of using BB. Oilco managed to drop their fixed targets and by re-evaluating their resource allocation to the projects that added the most value to the organization, they could continuously adjust their expectations and better their performances in a volatile environment (O'Grady & Akroyd, 2016). Mainfreight has developed a high-performance competitive culture, where all of the company's global branches work together in reaching their short as well long-term strategic goals (O'Grady & Akroyd, 2016). The positive consequences are therefore reached by using the BB philosophy of decentralized responsibility to the frontline, giving leaders more freedom to act, creating an open and honest culture and competing internally without compromising the strategical course of the organizations. The combinations of these also releases resources in the companies' top management and has resulted in acceptable financial results (Østergren & Stensaker, 2011) (O'Grady & Akroyd, 2016).

6.1.3.2. Positive consequences of ABC/M

A question that may arise in connection with the relevance of ABC implementation, and that has been frequently asked in the literature on the topic is namely: "Why is ABC important now when it was not important in the past?" (Latshaw & Cortese-Danile, 2002). There have been a lot of arguments on why the traditional cost accounting systems give distorted pictures on the real costs of a contemporary company's cost objects, two of the main reasons being the changing cost structures of today's businesses and the increasing diversity of cost objects that companies produce and sell. Cooper and Kaplan argue that the ABC system generates useful data, not only for the accounting department but to the entire organization. The figure below is a summary on the positive outcomes that can be acquired by implementing an ABC/M system in a company, argued for in the existing literature.

ABC
Useful data:
- Accurate cost of the cost objects
- Profitability of cost objects
- Identification of cost drivers
- Cost pools
- Flexible budgets
- Value Chain Flows
- Visible non-value added
- Supports BSC/Performance management
-Forecasting

Figure 25 Positive consequences of ABC, own production

The application and usage of an ABC system has shown to provide various benefits for the companies that have developed and implemented such a project. It has been argued, that one of the main benefits of replacing the traditional cost accounting system with an ABC is the improved overview and more accurate estimate on how much it costs to produce and sell the cost objects. Such information is key when making product mix and pricing decisions, especially in markets with changing environment and uncertainty. Moreover, having a better insight, in regard to product costing, is beneficial for different purposes within the company, be it for target costing purposes or product elimination considerations (Giuseppe & Cordero, 2009).

Another key insight that can be provided by an ABC system is in regard to profitability, be it product or customer, distribution channel, region and other types of profitability that can directly affect the overall profitability of a company. Such information can prove relevant especially in regard to altering the product-offering strategy where decisions as to whether and what product should be eliminated are taken (Pemberton, et al., 1996). A case example of a company that, with the help of an ABC/M framework, identified which processes to outsource is the company that invented the standard setting Code Divisional Multiplex Access. With the help of ABC analysis, the company found out that the manufacturing, testing and supporting their headsets were the processes consuming most of the company's resources, and once they outsourced them the profit margins immediately increased (Roberts, et al., 2000).

Moreover, needs to identify the cost drivers in regard to designing the ABC system, such information becomes already available in the company and can be shared with everyone using the system. The positive consequences of which is that the information shared can motivate product designers to make cost reductions by redesigning the products in such a way that they use more of the same parts, for example.

The pooling of costs by activities or activity areas provides information that may help managers to better plan and control costs and improves the ability of an analyst to estimate the cash flows. By separating costs into activity pools and identifying a cost driver into each pool, the analyst can accurately determine the levels of various costs that will be incurred.

Once a company has implemented an ABC system, a flexible budget may be developed on its basis. A flexible budget established on the premises of the data from ABC system is said to be more accurate than conventional budgets, due to the fact that the different cost drivers are already identified within the system, and can then be used to clarify the behaviour of overhead costs.

By implementing an ABC system, a company can more easily and with the use of fewer resources calculate the cost of conducting various processes, and thus make better estimates on the supply and value chain flows (Cokins & Capusneanu, 2011). What is more is that with the help of an ABC system a company can better evaluate the activities, making it easier to distinguish between value and non-value adding, as well as focus on improving the low-value adding ones.

The ABC system can also be used together with other tools and systems, providing continuous improvement (Giuseppe & Cordero, 2009). Moreover, the costing system provides necessary data for performance management purposes, like Balanced Scorecards, while it also enables benchmarking by assuring comparability (Cokins & Capusneanu, 2011)(Chenhall & Langfield-Smith, 1999).

The last but not least positive consequence of implementing an ABC system is that the system can be used for forecasting purposes as it produces data, that can be calculated upon (Mitchell, 2005).

6.1.3.3. Sub-conclusion

Summing up the positive consequences of ABC/M and BB, both theoretical approaches generate a culture of knowledge sharing and positive and honest communication. ABC/M as a tool delivers the data necessary for front line managers to make the right decisions at the right time, while simultaneously releasing resources, so that the top management can focus on long-term strategic decision making. Furthermore, ABC/M gives information that makes it easier for BB to forecast an upcoming period and rate the branches or employee performances by benchmarking them against each other, as ABC/M supports performance management tools. Additionally, BB encourages a competitive environment where reaching the long-term goal of the company is the main target. By decentralising responsibility BB is also motivating employees to continuously improve even in a volatile environment.

6.1.4. Negative consequences

The following section will deal with the negative consequences associated with the implementation and usage of the two models from a theoretical perspective. Nevertheless, empirical examples from practice will also be studied and referred to, as the research group believes they help in understanding the implications that theory can have in practice.

6.1.4.1. Negative consequences of Beyond Budgeting

An unfavourable consequence of BB is in regard to the external environment of the company that is potential new investors, capital lenders and so on, who might have an interest in the company. The external environment usually demands a detailed budget, as the budgets are easier to comprehend (Sandalgaard & Bukh, 2014). This means that should the company wish to use BB as well as remain interesting for new investors, for example, it would be necessary to have a budget, which is by definition against the BB philosophy. An alternative is to convince the external environment that other tools, such as a trend analysis and rolling forecasts are functional in regard to the financial planning.

As is the case with any implementation: it takes time. Being such a central element in any organization's form of management as the budgeting is; an implementation of this kind, given that the company fits the previously described factors, will take time to implement. This means that the change from traditional budgeting to BB is too radical or extreme and

differs from the implementation of other management tools, such as the Balanced Scorecard, where the implementation can be made while operating with the traditional budget (Becker, et al., 2010). This concern is also mentioned by Bukh and Sandalgaard (2016) who found companies using parts of the BB philosophy, but have refrained from a full implementation, and have continued using fixed target, to name an example. This gives reason to believe that companies are not ready or willing to fully implement BB as the change is too radical. Even though the general understanding of the theory is widespread, the risk of abolishing the traditional budgets completely is not something the companies are willing to do (Bukh & Sandalgaard, 2016).

The same authors also mention the fact that the performance-based payment presented in the BB might not be as problem solving, as Hope and Fraser claim it will be. They mention that companies might look to unfavourable markets, where they will beat the competition but not add as much value to the company as they would on another market. What is more is the gaming issue. Furthermore, they found that there might be an incentive for not sharing information across branches as it will lead to the other branch performing better, and thus increasing the risk of getting a smaller bonus (Sandalgaard & Bukh, 2008).

BB's requirement to the culture in communication is considered to be an extensive process. Building a culture of completely honest communication is not something done overnight, and as Sandalgaard and Bukh (2008) mention, gaming or withholding information can remain a problem even though BB is implemented. This is perhaps part of the reason why companies only adapt elements of BB and not the complete package.

6.1.4.2. Negative consequences of ABC/M

The design and implementation of an ABC/M system is an endeavour that usually demands a lot of resources in the face of time and money. What is more is that the system needs to be continuously updated in order to provide the right data at the right point in time. This makes the process of maintaining the system a complex and resource intense one as for updating purposes the company may need to re-estimate the cost drivers. In some cases it might be necessary to conduct new interviews with employees, especially whenever there is a change in the company's product mix or operations.

A negative consequence of the decision to implement a system like the ABC/M is that in most companies' managers have an already established way of doing things and are to a certain degree accustomed to use traditional cost accounting tools and systems that are proven to be less time consuming and easier to operate, as well as cheaper to maintain. Such a resistance from the management can affect the overall implementation project as it has been proven in the literature that lack of manager support results into resistance from employees and dropping off the project, even when other positive factors are present.

Another negative consequence that can occur from the implementation and usage of an ABC/M system is if the managers misinterpret the output given by the system. As previously argued for in the theory description, the data provided by the ABC system is not completely representative as there are a lot of costs that are allocated down to the cost objects, and whose variability and reversibility, may affect the final decision. This is why the ABC/M system's outputs are more useful for inspirational purposes and not so much for making decisions, as those should be taken with care and a better eye for detail.

Negative consequences can also occur any time an ABC system is using the wrong resource or activity cost drivers, in which case the cost allocations will be flawed and incorrect. Once such a mistake is made within the system, all the data gained becomes a matter of question, and can lead to making wrong decisions. Moreover, the time spent on implementing and calculating with the wrong drivers will be considered as a waste, and so will the resources spent, as the system will not provide the necessary data, and its value to the company will be considered as low.

Another drawback of an ABC system is that it is not a complete solution for a company, when it comes to internal and external reporting. This is also one of the reasons why a company using an ABC/M system normally have two cost systems – an internal, in the face of ABC, and an external that follows the principles of the generally accepted accounting principles. This might be confusing for the employees who don't understand the necessity of the two and might even trigger further resistance in them.

Employee resistance might be a cause of a lot of problems, especially in regard to implementation of a totally new system that craves the amount of resources an ABC/M

system typically does. The need to estimate, record, and identify cost drivers might be a difficult process for the company's employees and will most probably place further demand on the already established jobs that they have. Malmi (1997) concluded that most of the negatives connected to the ABC system were not the technical flaws of the system or the way the project was introduced and implemented but rather the resistance of the employees towards the change in the accounting system. All in all, the fact that the system is more detailed and complex than what the employees are used to work with, together with the change in deep-rooted practice and the probable fear or suspicion of losing their jobs might be a potential source of resistance, which can negatively affect the whole implementation and usage of the system.

Another negative consequence from an ABC/M system might be that companies who want to gain the most out of the system design it in such a way, with so much detail, that not only the implementation but the whole maintenance and update becomes relatively expensive and complex. As the article from Datar and Gupta (1994) shows, the bigger the detail the higher the complexity, the larger margin of error there might be.

Last but not least, a negative consequence of implementing and using an ABC/M system is considered to be the necessity to make re-estimations in regard to updating the system. Every change in the company's operations or the product mix, among others, need to be reflected on and further estimations to be made, in regard to assuring that the outcomes of the system are representative of the costs associated with the cost objects.

6.1.4.3. Sub-conclusion

To sum up, there are negative consequences companies should be aware of. Several of these are applicable to both theories, as they do not fit all types or sizes of companies. Both require substantial amounts of resources as far as time and money is concerned. While BB has some external considerations, in the likes of banks and shareholders, ABC/M's external consequences limit to the external reporting. As far as internal consequences, ABC has the bigger challenges, as it requires data, maintenance, implementation and re-estimations to name a few. BB, on the other hand, sets a high standard in regard to communication and ambition. As both theories are not based on a "one size fits all" way of thinking, each

company has to customize the systems for its own individual needs, and therefore cannot buy a final solution. Common for the two is the fact that both would require time to design and implement, as this form for change is radical and, given the fact that the company should be of a certain size, not done overnight.

6.1.5. Conclusion to the comparative analysis

As the comparative analysis describes, there are different purposes of the two theories - BB is a management philosophy and ABC/M is cost management tool. However, the factors for successful implementation and usage of the two are similar and do not counteract. Both the BB and ABC/M set a requirement for company size as the two systems function best in wide organizations with sufficient resources. ABC/M is the tool that demands most resources, while BB does not only require resources to implement but is also considered to release such resources on management level, especially in regard to companies who have previously used traditional budgeting processes. These resources can be spent on an ABC/M system. That will not have immediate effect, but when a company knows the full costs of each cost object, it will be better equipped to make decisions about non-value adding activities. What is more, is the fact that the literature explains that ABC/M cannot be used for short term purposes, as it has a more inspirational nature. Both BB and ABC/M, when used correctly, will lead to long-term value adding. By decentralizing responsibility, the released resources in management can be used for strategic purposes. The decisions, which are now delegated down the organizational hierarchy, should be made in congruence with the company's long-term strategy - meaning that the top management's role will be of a supervisory nature. An ABC/M system will in this regard generate the data necessary for the frontline managers to make the right decisions at the right time. Moreover, by using BB and ABC/M simultaneously, the company will have all the data necessary for internal benchmarking purposes and forecasting.

Given the fact, that all companies should compensate their employees, ABC/M system will provide the right data for bonus compensation, should this be applied. Where BB mentions bonuses based on performances, be it individual, divisional or organizational, ABC/M will allocate both financial and non-financial data to the right object. Whereas traditional full cost would use volume-based keys, it could lead to the "wrong" bonus payments. What is

more, is the relative bonuses mentioned in the BB theory, would be better justified when using ABC/M as a management tool.

The cultural aspect is also relevant, should the two theories be implemented. BB encourages a high level of ambition, as the employees should be motivated to strive for better results, willing to take responsibility and share all the necessary information, while being aware of the fact that they operate in a competitive environment, both internally and externally. Adding to the cultural aspect, ABC/M will also have certain demands. The top management has to understand and forward the message of the importance of the system. On the other hand, the employees have to be willing to change their processes, register their time correctly, and share information with their colleagues, for example.

The external environment is also a factor in both theories. Where the BB philosophy is a continuous adaptive process, with the likes of rolling forecasts, no fixed targets, to name a few, ABC/M would give a competitive advantage, as it would provide accurate costs to each of the company's cost objects, thus giving the information on how a company should price a product or service. By implementing the BB philosophy, the ABC/M system will also be updated on a regular basis, thus continuously provide the right data for the cost objects, should the underlying drivers, cost- or resource-pools or activities change during a period.

Another common trait of both theories is the need of an IT system, although ABC/M sets higher requirements to it, as it should collect, maintain and share different forms of data.

Summing up, the research group can conclude that the two theories are not substitutional, but rather complementary. Therefore, the research group will continue the analysis by examining for complementarities within a management control system.

6.2. Complementarity analysis

As the previous analysis shows, BB and ABC/M can be used simultaneously in a company, as BB is a management philosophy and ABC/M is a management tool. Based on that, the research group will use the following section to examine for complementarities between the two theories, in order to uncover what sort of problems they can solve, while still remain congruent as tools with the purpose of managing towards the company's strategic goals. Therefore, the research group will conduct an analysis of what a management control system is its purpose. Once that is defined, an analysis of the complementarities between BB and ABC/M will follow. This analysis will be made in order to verify the research group's previous statement that the two theories are complementary and can be used simultaneously while remaining goal congruent.

6.2.1. MCS in a traditional budgeting organisation

Numerous researchers have been studying management and costing innovations, both in theory and practice, although some of them have argued that the different systems or tools cannot be studied in isolation but should rather be studied as a "package". What is more is that studies that did not take into consideration the interrelationship between the different tools in a Management Control System, from now on shortened to MCS, have been a subject of discussions as they might have given skewed or even false outcomes (Fisher , 1998) (Malmi & Brown, 2008). One of the first propagators of the linkage and interdependency between MCS tools was Otley (1980), shortly followed by Flamholtz (1983), Simons (1995) and Abernethy (1996). A citation from an article in 1997 refers to the increasing demand of studying the phenomenon: "It is clear that organizations rely on combinations of control mechanisms in any given setting, yet virtually nothing is known about how the effects of any one control are governed by the level of simultaneous reliance on other forms" (Abernethy & Brownell, 1997). Chenhall (2003) discussed the difference between Management Accounting (MA), Management Accounting System (MAS) and Management Control System (MCS), defining them as "a collection of practices such as budgeting or product costing", the "systematic use of MA to achieve some goal and" a broader term that encompasses MAS and also includes other controls such as personal and clan controls", respectively. With the advance of time, the interest for studying relationships between different tools have seen an increase, and a growing number of articles studying

the interrelationship between tools such as the ABC, Balance Scorecard, Rolling Forecasts, and EVA have been published. Many researches have documented complementarities between the tools in a MCS, which motivated the research group to, once having concluded that BB and ABC/M are not substitutes, further examine where the complementarities lie, both in the tools themselves but also in the relationships between them. The following section will comprise an examination and reflection on the contingency variables for designing a MCS, as well as the design of the core control system, with BB and ABC/M being central part of it.

MCS are generally designed to help companies adjust to the environment they operate in; both internally and externally, and in this regard provide the desired value to stakeholders. Managers apply controls, or multiple control tools, in order to reduce tensions and conflicts that may arise between employees; assure the accomplishment of the goals set, and minimize the influence coming from external threats so that they are "in control", regardless of the objectives of the MCS (Cooper, et al., 1981), (Merchant & Otley , 2007). The earliest studies conducted on MCS argued that the systems were formal and cybernetic and that their focus was primarily based on cost accounting and budgeting information (Caplan, 1971) (Birnberg, et al., 1983). With time, the MCS developed to be more than just financial information system and involved motivational, psychological and cultural aspects as well (Carenys, 2012). Contemporary studies on the MCS suggest that budgeting is not the core of the control system but should rather be considered a tool that is complemented by cost accounting and other control management tools. Flamholtz (1983) argued that budgeting and accounting tools are not control systems in themselves and cannot function without one another, as the two are merely components of a more complex system and as such depend on the relationships between each other and the rest of the tools in the MCS. Thus, the framework developed by Flamholtz will be used in the following analysis as the research group believes it is a good representation of the matter and will help answer the problem statement in a structured manner.

In the more recent literature, there has been taken a contingency theory approach to the study and design of a MCS. The contingency approach is, as previously described, a simplification of systems theory as it follows the belief that there is no ideal, perfect design

of a MCS that can be used by all companies, in all situations (Chapman, 1997)(Chenhall, 2003)(Donaldson, 2001)(Fisher, 1995) (Gerdin & Greve, 2004). Some of the most important contingencies that have been determined in the theory have been the constantly changing environment, in terms of social, physical, technological and financial environment, as well as the specific company's environment, structure, culture and objectives (Lawler & Rhode, 1976). Apart from the above mentioned, other contingent variables include company's size, strategy and competition (Brownell & Dunk, 1991)(Otley, 1980). Special attention has been drawn to the organizational characteristics, namely the environment, culture and structure (Berry, et al., 1995). The research group will thus use the opportunity to dig deeper into each of the three contingencies before further examining the core of the control system. The analysis will start off with the organizational environment, culture and structure, following the schematic representation of an organizational control system by Flamholtz (1983).

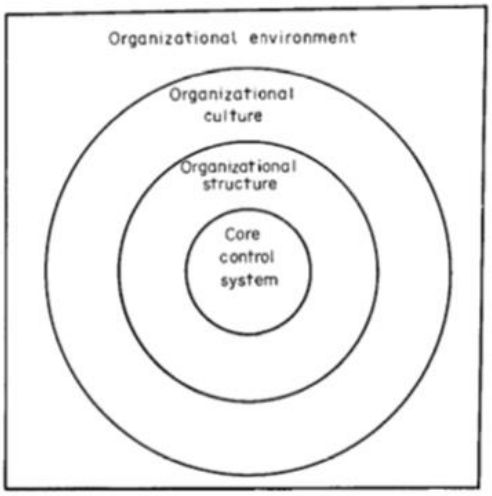

Figure 26 Flamholtz' illustration of MCS (Flamholtz, 1983)

The contingency variable that has gained the most attention is that of the organizational environment (Otley, 2014). There are different reasons for this fact, one of them being that whenever a company is faced with environmental uncertainty the need for flexible and relevant information rises. Moreover, the fact that more and more companies are nowadays using decentralization exposes the managers to more uncertainty than ever before. Despite the fact that companies meet different types and amounts of uncertainties, depending on the environment they are in, these are all elements of the macro variable, namely the

organizational environment (Fisher , 1998). In the literature, it has been recognized that even though the uncertainties are not necessarily of the same level, they are still faced by all companies (Otley, 2014). Thus, MCS need to be designed in such a way that the organizational environment is taken into consideration, not only when it comes to external but also to the internal one. The reason for this is that the relationships between the contingent variables in an MCS also have a word to say. A proof of this can be found in the paper by Fisher and Govindarajan (1993) that gives a specific example for correlation between the strategy selected by a business unit and the level of external environment uncertainty faced by the same unit.

The second element of Figure 27 is the organizational culture. As is the case with the structure, and in continuation of the contingency theory, organizational culture will differ from organization to organization. In an organizational context, Ouchi (1979) defines culture as the broader values and normative patterns that guide worker behaviour. Flamholtz (1983), on the other hand, defines organizational culture as "the set of values, beliefs and social norms which tend to be shared by its members and, in turn, tend to influence their thoughts and actions". Flamholtz (1983) argues that the organizational culture should be the dominant circle, as the culture of an organization ought to determine the nature of the other components. By this, Flamholtz means that an organization that requires individual flexibility and qualities of the individual employee would best benefit from a decentralized structure. On the other hand, where little to no qualification is required, for example in an assembly line in a mass production company, centralized structure would be a better fit since the employees at the assembly line do not have to make any crucial decisions (Flamholtz, 1983).

The following section will describe the organizational structure in regard to control. As explained earlier, each organization must find its own way of structuring. There are several contingencies worth considering before deciding on which structure fits an organization best. Otley and Berry (1980) described organizational structure as a control process when groups of people need to cooperate in order to achieve a purpose. Etzioni was more general in his observations, where he defined structure as "organizations are social units deliberately constructed to seek specific goals" (Flamholtz, 1983). As the above-mentioned

quote indicates, the key outcome is that the structure is necessary in order for an organization to reach its goals. As the goals become a key area for the reasoning behind having an organizational structure, it is also worth considering other elements that would influence the choice of structure. Whether a company has a high level of centralization or decentralization, vertical or horizontal integration are a few of the factors that will influence how the organization is structured. Whereas a centralized form of control would increase the predictability in behaviour, as the employees would have a certain set of rules to follow, a decentralized form of control would give employees the freedom to make decisions (Flamholtz, 1983). Overall it can be said about the structure of an organization, that it is a strategic decision made by the management. The considerations behind this choice is how the management can organize its company in a manner, so it will be better prepared for the requirements set by markets, technology and the environment. It is also worth noting that organizations competing on the same markets could choose different organizational structures, as the example with Ford and General Motors in the early 1920's (Flamholtz, 1983).

As Figure 27 illustrates, the centre of the figure is the core control system. The core control system is the set of tools used for planning, decision making and rewards. More specifically, the system, according to Flamholtz, is supposed to contain the following: planning, operations, measurement, evaluation/rewards and results. The figure is illustrated below and shows that there is room for feedback, both as far correction and evaluation are concerned. The figure will be described by using Flamholtz' definitions and analysed further by using theoretical and practical examples from other authors.

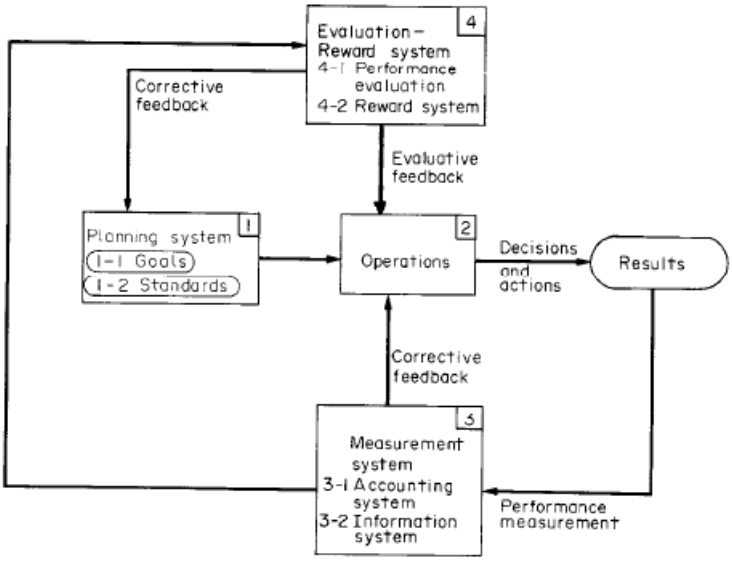

Figure 27 Flamholtz' illustration of Core Control system (Flamholtz, 1983)

Planning is the first step in the core control system. It is this element, that the company's goals, and in some cases the goals for the individual employees, are outlined. The planning system has two sub-elements, which are outlined in the form of goals and standards. Flamholtz defines goals in a broad term, as it can be compared with "performance area", such as markets, products, personnel, financial results and such. The second element in the planning phase, is the standards that any given company has set out. Whereas goals have an abstract nature, standards are definable. Flamholtz (1983) mentions that a company's goal can be reaching a satisfactory return on assets, while the standard of performance can be an 18 % pre-tax return on investments.

When looking at the purposes of a budget, as far as planning is concerned, the aforementioned two of the nine steps of Thisted can be used to illustrate what planning holds. The two steps are targets and planning. As these two steps are closely linked, they can be described simultaneously. Since it is nearly impossible to plan without having a target, it is also difficult having a target without formulating a plan on how to get there (Thisted, 2004). As budgeting is often a projection of earlier activities it does have its weaknesses, as it is basing its upcoming activities on previous events (Thisted, 2004). What is more companies do have costs that are irreversible any company can plan ahead as these costs are fixed for a certain amount of time. Therefore, planning and targets are linked

internally and externally, as the company as a minimum has to generate revenue in order to cover these fixed costs. As far as long-term is concerned, companies can plan on eliminating costs, which are irreversible in a short-term, should they not add value on a long-term level (Thisted, 2004).

The operational subsystem or operations in short, is designed to ensure that all the necessary day-to-day activities are performed in coherence with the objectives and strategy of the core control system (Ferdows & de Meyer , 1990)(Skinner, 1996). Companies design their operations in order to ensure that jobs are allocated to the right employees, as well as they are guided in how the tasks should be performed and what is being monitored (Malmi & Brown, 2008). Earlier literature has shown that by having satisfactory operations, companies can obtain a competitive advantage (Ferdows & de Meyer , 1990) (Wheelwright & Hayes, 1985). Moreover, it has become more common for companies to empower lower level employees to make decisions and in this regard be more involved not only when it comes to day-to-day activities but also for strategic initiatives (Otley, 1994) (Simons, 1995). Luft and Shields (2003) have made overviews of theory-consistent evidence of cause and effect with regard to financial management practice. The figure below illustrates how budget involvement results in commitment from the employees, which further leads to better performance.

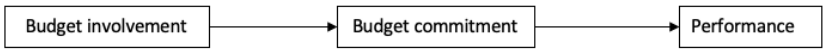

Figure 28 Cause and effect relationships, (Luft & Shields, 2003)

Total Quality Management and other operational management techniques, such as team-based problem solving, involvement and enabling of employees, as well as competitive benchmarking have been shown to help innovation and continuous improvement processes (Hopper & Powell, 1985). Some of those practices are linked to increased efficiency and more cost reductions, like Lean, where the focus is on waste reduction and thus non-value-added activities are reduced, making it possible to reduce the product costs as well (Kaynak, 2003). To sum up, one can look at the more recent literature that argues that through

operations a company can positively influence its overall performance (Hopper & Powell, 1985).

The measurement subsystem plays a dual function in the core control system of an organization (Flamholtz, 1983). One of its functions is to analyse and measure whether the company's goals and standards have been reached in order to provide information, in the form of corrective feedback to the operations. This function is in the literature termed as the "output" function of measurement and can be exemplified with the following quote "…objectives are set, outputs are measurable, outputs attained are compared with objectives set and, if necessary, appropriate corrective actions are taken" (Kloot, 1997). Corrective actions like training, motivation and discipline are, however, not evaluative and are taken if performance does not meet the targets set. The other function of the measurement system is not related to the outputs but rather refer to the phenomena of measurability itself. This is a result of the fact that the behaviour of people is undeniably influenced by acknowledging of the fact that their performance is being measured, thus making the measurement a stimulus in itself (Cammann, 1976) (Prakash & Rappaport, 1977) (Flamholtz, 1983).

The overall measurement system incorporates both the accounting and information systems (Flamholtz, 1983). The accounting system can be further divided into two: first is the financial system, whose purpose is to release information such as financial statements and annual reports to external stakeholders, banks and in general to people interested in the company. Second is the managerial performance system, that primarily deals with the production of periodic internal reports to support decision making and enable information sharing; as well as to provide additional information and inspiration to facilitate reaching strategic and tactical milestones (Horngren & Foster, 1991). The information system, on the other side, includes the non-financial measures of financial performance, such as cost driver rates, capacity utilization units, as well as product quality and customer satisfaction rates.

The evaluation and reward system deals with the consideration of how to evaluate and reward the employees. When Flamholtz mentions evaluation, it is understood to be the form of mechanisms behind the assessments of performances. Secondly, the rewards are based on personal desires, be it intrinsic or extrinsic (Flamholtz, 1983).

In a literature review article, Manzoni researched the topic of rewards. His research and observations over a 20-year period found that people wish to do their job as well as possible, given the right conditions. By involving employees in decision making, as the employees often know more about their particular job than someone telling them what to do, they will become more committed. Additionally, employees will learn more from own experiences rather than other people's explanations, and the level of commitment will be higher if they have a larger influence on the decisions (Manzoni, 2010). It may also be relevant to establish financial rewards. However, Manzoni (2010) found that these rewards should not be too easy to calculate and predict, not too large, should be linked to outcomes (especially group outcomes) and should be determined by informed, competent and trusted managers in order to ensure that hard-to-measure performance dimensions are taken into account – or in other words: be subjective. Manzoni (2010) also found that companies should not have too many targets as 3-7 are sufficient. As mentioned earlier, he also recommends that the responsibility is shared, and that sharing a part of a company's profit as bonuses seems to work.

When it comes to examining the results of the core control system package, companies rely on various performance measures in order to keep their personnel accountable. There are different measures, and there are no perfect contingency variables, but the measures should relate to the core control system's design. In the literature, there have been made various categorizations of performance measures, be it market, financial summary or disaggregated financial measures, as well as non-financial measures, such as market share, product quality or satisfaction. On the other hand, there have been a lot of propositions as to how to evaluate on the results while criteria, such as goal congruence, objectivity and timeliness have been among the most commonly used ones (Merchant & Otley , 2007). Even though there has not been achieved a consensus which ones are the best to measure the outcomes, congruence with a company's objectives seems to be commonly accepted as a good measure since it reflects on the progress towards the organizational goals and assures that employees are acting in the company's best interest (Feltham & Xie, 1994) (Banker & Datar, 1989).

6.2.2. MCS in a Beyond Budgeting organisation

This section will comprise a short analysis of the "perfect" MCS in a BB organization. In the following, the three organizational prerequisites, external to the core system, will be taken into consideration before the core control system is designed, in order to make all the necessary considerations.

It is generally accepted that since the 1980s the level of uncertainty that companies face has increased, which has led to increased pressure on corporate performance. In an environment where "the only certainty is uncertainty and change", investors and shareholders are demanding "best-class" performance on a set of measures (Hope & Fraser, 2003). Bunce et al. (1995) argued that traditional budgeting was a process developed for a different period of time, when the external environment was more stable and is due to this fact not adequate when operating in an unpredictable, ever-changing setting. The figure below illustrates how the level of uncertainty has grown throughout the years.

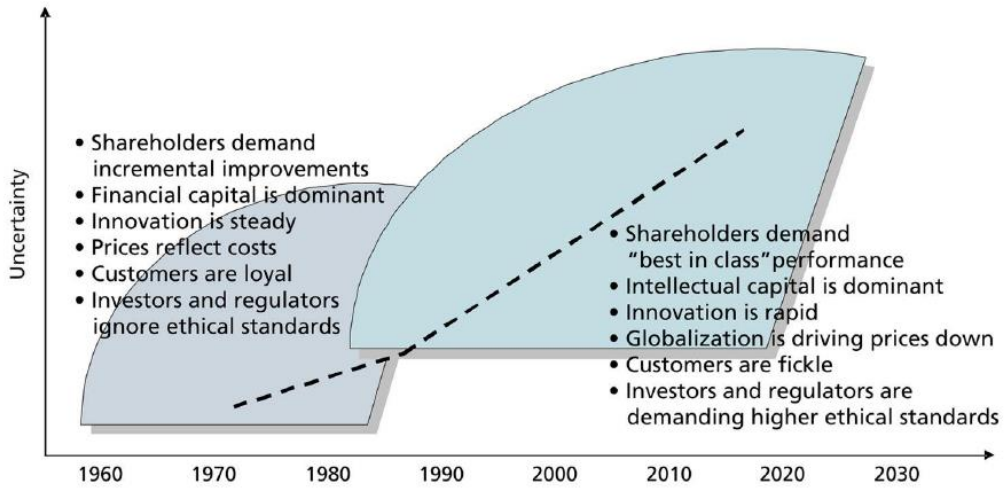

Figure 29 Development in business uncertainty (Hope & Fraser, 2003)

Galbraith (1995) claimed that, for companies facing a growing uncertainty, it is especially relevant to identify targets but also enable the lower level managers to make the decisions of how to reach those rather than set rules and control their behaviour. Hartmann (2000) emphasized on the idea that the budgeting literature often argues that external uncertainty makes it difficult to set goals, and when the results are subsequently evaluated, it makes it

difficult for the company's management to assess whether the good/bad results are due to luck, skill or incompetence. These principles have been adopted by the BB literature and have helped form the core control structure of an MCS in BB organizations. As previously mentioned, the level of competition that companies face in today's environment and its constantly changing substance highly affect the design of the control package that an organization employs. The organizational environment in BB organizations can be characterized as uncertain as these companies do not follow fixed targets, do not make use of variance analysis and should always consider the outside environment whenever evaluating the management or the employee's efforts so that any "noise" in the calculations is eliminated and the staff is not punished for matters they could not have influenced. Luft and Shields (2003) illustrated that the degree of external uncertainty faced by organisations lead to a decrease in the use of budgeting. Their framework also illustrates that company size affects the degree of usage of budgeting and more specifically big companies rely on budgeting to a greater extent.

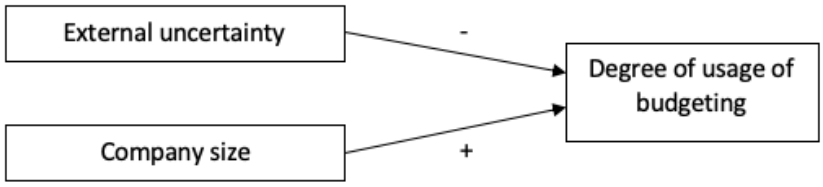

Figure 30Factors affecting the degree of usage of budget, (Luft & Shields, 2003)

When it comes to the principles of BB one can argue that even though BB has declared that in the current environment budgeting is "past" and should be abolished and replaced by a better system (Hope & Fraser, 2003) a majority of companies continue using budgetary systems, although supplemented with other control tools or more frequently updated information systems. What is evident, however, is that companies nowadays understand the influences of the contingency variables and design their MCS with respect to those. In the case of a company that has decided to eliminate budgets, or have never had a budget in this regard, the BB framework can be complemented by ABC/M, especially in an uncertain environment. The main reason for that can be found earlier in the discussion of environmental uncertainty, as it is a common trait for companies to obtain a decentralized

structure, which can increase the perceived uncertainty of frontline managers. Having relevant and up-to-date information, provided by the ABC system, can loosen the pressure put on managers in regard to making informed decisions, while also assuring that knowledge and information are shared within the whole organization. Implementing and using both tools at the same time will thus provide benefits for all levels in the organization, which will be especially relevant in a situation of environmental uncertainty; help stimulate motivation and information sharing among employees, and thus aid the realization of long-term goals.

Additionally, the organizational culture and structure are typically consistent with each other so that they complement the core control system in the best way possible and in this regard secure an easier execution of the company's strategy. The most cited type of culture in BB organizations is the one that promotes trust, honest communication and knowledge sharing between the employees, with long term goals being the core of it. The contrast between a BB and a traditional organization can be exemplified by the fact that the two systems are based on different types of control. While the traditional budgeting denotes the lack of trust and implements central controls, the BB literature employs the concept of trust by empowering employees and teams to undertake the activities they consider necessary, whereas the senior management's task is mostly to guide their ambitions and only interfere whenever necessary. The culture of enabling is argued to lead to the so-called "internal commitment", that is once the employees are defining their strategies on their own, they become more willing to take risks and accept responsibility for the outcomes (Littlewood, 2000). An example can be made whenever a company is employing a decentralized structure where the low-level managers are empowered to make decisions on their own, consistent with the long-term strategy of the company, without having to bargain with senior managers. The culture of empowering the employees and stimulating them to share their skills and knowledge is a great supplement, especially in a decentralized company, where the employees are provided with the same information in the right time, allowing them to constantly make qualified decisions for the company's long-term well-being. Distinguishing the system in such a way empowers the organization to respond faster to the unpredictable environment and customer needs, while creating continuous competitive

advantage namely by supporting and enabling capable and devoted people to make the right decisions.

Although ABC/M can be used in other cultural settings, it is also applicable in this type of culture. As ABC/M would require a certain amount of data registration, to name an example, it is important that employees register their activities correctly and on a regular basis, as several of the organization's strategical decisions would be based on the cost of a product or service. Moreover, as ABC/M will generate accurate costs of products or services, the results may inform that one division does a certain activity more efficient than another division. By sharing the knowledge on how it is done more efficiently, the division with the lower efficiency can optimize when given the information from the other division.

Adding to the cultural aspects, a certain level of ambition is a necessity along with the willingness to work in a competitive environment, as there are no fixed targets, but a desire to always strive for better performances, be it better than your own previous performance or beating the competitors performance.

When the aforementioned structural and cultural aspects are on a sufficient level, a full implementation of the BB philosophy is in place and the design and usage of an ABC/M system will generate the necessary information for the organization to be led in congruence with its long-term goals.

The most usual and standard organisational structure adopted by BB companies is a decentralized one. This would imply delegating decisions to the frontline managers, making the decision-making process faster end more efficient. The management's role in this respect is to outline strategic goals, which will help increase the total value added of the organization. The main consideration for every decision made by frontline managers will be: Will my decision add value to the company? ABC/M's contribution in such an organization would be an accurate cost to any given activity. The frontline managers would therefore be able to use the information generated by the ABC/M to continuously evaluate whether an activity adds value or not. This will enable them to cut the non-value adding costs without having to ask higher up the organizational hierarchy.

The core control system of a BB organization is essentially different from any other MCS, as the budget that is the main control element in most control systems is non-existent in a BB organization. The lack of budgets and any fixed targets on that matter, places greater demands on the employees and their relationships with each other (Hope & Fraser, 2003). Although fundamentally different, the budgeting and the BB model have one quality in common, the fact that both are coherent. In this regard, BB can be considered as a new management model that employs the principles of "effective governance, fast financial actuals, trend analysis, rolling forecasts, key performance indicators, performance rankings, and management by exception" (Hope & Fraser, 2003). The research group will, with inspiration from the core control system model by Flamholtz, design a core control system that illustrates the relationships between the control elements in a BB organization and in this way show some of the complementarities that can be found in such a MCS.

Planning

Since the purpose of BB is striving to achieve better results than its own previously, the competition or being the best performer in the organization, planning and target setting are just as relevant as for companies that use traditional budgeting. A major difference, however, is that while budgeting is typically done one year at a time, BB has a shorter time span. For planning purposes, the BB literature suggests the use of rolling forecasts that cover only the significant figures for a company, be it expected number of orders, profits or cash flows. What is more is that the literature advocates a quarterly update of the forecasts, with actuals, and forecasting for the at least next five quarters (Hope & Fraser, 2003). What distinguishes BB from traditional budgeting organizations is that not only are those forecasts made by "offline" staff, that is employees without any interest in the figures, but they are also detached from any type of evaluation/ reward system, making them significantly more accurate than it is ever the case whenever operating with budgets (Hope & Fraser, 2003).

In BB organizations, the rolling forecasts perform various of roles: they are sometimes used together with actual results, in order to make trend analysis of specific KPIs like profitability, visible to whoever may benefit from such information, but especially to senior executives thus enabling them to estimate monthly/annual performance; to plan on payments;

estimate and manage cash flows and capital expenditure initiatives, all depending on what the strategy and the goal of the MCS is.

As it is the case with the MCS in general, the planning cycle of a BB organization is company and situation dependent and there is no “one size fits all solution”. However, there is seen a difference in the literature studying the MCS in manufacturing and service organizations, as the former usually follows two cycles – a medium and a short-term cycle, that is strategic and operational respectively; whereas the latter enables the business units close to the customer to take on the initiatives that they consider the most important and continuously provide forecasts to the senior managers as to how they expect the situation to change in the next quarters.

As the purpose of planning in a BB company is to be adaptable to the changing external environment, ABC/M will provide the relevant information to an upcoming period. As ABC/M can be used ex post, the already realised numbers in the company’s trend analysis will be used for inspirational purposes and the calculations for an upcoming period’s forecasting. The data generated by the ABC/M system will therefore aid to decisions such as streamlining of activities, price considerations, cutting products or services or if there should be invested in a new asset if the current one is not performing well enough and hinders the company’s competitive advantage.

Operations

The BB is designed around the idea of more adaptive tools and practices. Instead of the fixed performance contracts, the BB advocates the benefits of using “relative improvement” contracts and thus enabling managers to independently evaluate and take on initiatives, plan operations and in general determine how to constantly do better. The function of senior managers is to provide those managers with guiding financial intervals, typically in the form of KPIs, within which they should operate so that there are some boundaries as to how much of a resource can be deployed in a period. However, in cases where a serious capital expenditure is necessary, for example whenever there is identified an anticipated customer demand for a new product or feature, there can be, on a constant basis, sent applications to the senior management so that the priorities can be rearranged (Hope & Fraser, 2003).

Aiding to the decision making in operations, ABC/M will be a useful tool. As BB typically operates with relative improvements contracts, ABC/M will provide accurate information in regard to whether or not the improvements have been acceptable. As the senior management uses KPIs in measuring the front-line managers, ABC/M will also be useful, as the data provided from the system will give more accurate KPIs than a traditional cost allocating model.

As the operations are the day-to-day activities of a company and ABC/M is the tool that will provide the data for decision making, it is also a helpful tool on a daily basis. As the activities need to be registered correctly, it is a necessity that all registrations are made on time and correct. This will aid the company in decision making in regard to streamline activities, as the registrations are being made while the activities take place, thus eliminating the risk of biased registration, should employees wish to register time consumption, for example, to other activities, and thereby making activities seem cheaper than they really are.

Measurement

As it is the case in a traditional budgeting organization, the measurement system can be divided into two sub categories, namely the accounting and information system. However, in BB organizations this difference is not clearly distinguished as the purpose of the measurement system is to provide data that is necessary to everyone, in and out of the company. The data provided by the system is used for both internal and external matters, making it a much more resource efficient system than it is the case with traditional budgets.

The design of the accounting system employed by a company is argued by Hope and Fraser (2003) to be a “key” in assuring that the measures can be benchmarked across the business units. Tools like the ABC/M can be especially beneficial in this regard, as well as for performance evaluation and reward purposes as the performance review team will be provided with the data necessary to compare and contrast employee performance based on efficiency and quality, for example. Moreover, by using ABC/M as a costing tool, companies will always know which assets are value-adding and which are not. Should the financial target be measured on the return on invested capital, ABC/M will quickly determine which assets are not performing and provide information necessary if the company can streamline the activities in order to perform better, or if the asset should be sold. Moreover, the

ABC/M can significantly ease the teams and managers who need easy access to accurate data, as such is already presented in the system. Information such as customer profitability, for example, is crucial whenever a solution is tailored to a specific customer. Companies that offer customized products or services can thus benefit from such a system as the data will allow them to better price the products and thus avoid losses that may be experienced if a volume-based distribution of the overhead costs takes place.

The fact that an ABC/M system can be both ex ante and ex post, makes it possible for BB companies to make use of variance analysis, thus allowing the decision makers to fast and easily observe the positive/negative variances and from there to take further actions. Variance analysis in this context is not to be confused with the traditional variance analysis used in budgeting but rather as a tool that can explain the differences between forecasted and actual values. In ABC/M terms it can be the expected profitability of a product compared to its actual, where the outputs of the system will signify where there was higher cost than expected that managers can use as motivation for further actions. In the BB literature, there is referred to another alternative to traditional budget variance, namely the "frozen forecast" that is a previous period's forecast, which can be used instead of a budget.

The idea that information should be available to all of the employees and at all times has its focus on the constant learning and growth. The open communication and easily accessible information system provide the business units/teams with all the necessary data to make efficient choices in regard to cost reduction, innovativeness, and sustaining customer relationships, among others, thus leading to competitive advantages and increased stockholder satisfaction (Hope & Fraser, 2003). All the employees in a company are provided with a financial report, typically on a monthly basis, where they can see the trends and change the plan of action if it turns out they are performing worse than expected. Some companies make use of the so-called moving average, measured in a percentage or for a twelve-month period, in order to replace the annual focus on costs and in the same time account for any seasonality that might skew the results. An example of such a report can be seen in the figure below.

Cost center	Current month	Same month last year	Current year-to-date	Twelve-month moving average	Percent change– moving average over last year

Figure 31 Financial report example (Hope & Fraser, 2003)

As seen in the figure, companies typically compare the actuals from the current month with the results from prior periods. The financial information, provided in this form, is up to date, easy to grasp and understand and it provides managers with enough information as to where they are in their relative performance.

Evaluation and rewards

As previously mentioned, BB companies base their control systems on strategy goals, that are used as background for deciding the action plans necessary to accomplish those goals. However, the evaluation and compensation initiatives are indifferent of those as the employees are rewarded not for achieving those targets but for their relative performance against benchmarks, previous periods, competition and even colleagues. There is a peer review group that is responsible to examine and evaluate the presentation of employees by comparing it to that of the competition, while also take into consideration the level of accomplishment of the relative targets of the group or individual employee. The review process is typically happening within an agreed frequency, for example each month, but can just as well be initiated by unforeseen events or whenever there is an occasion for it. And while the staff is aware of which KPIs will serve the basis for their performance evaluation, as well as what is the "acceptable performance" in regard to those, they still do not know how well they have performed against the competition, which is why they cannot estimate on whether they will receive a bonus, and if so how big the amount will be (Hope & Fraser, 2003). Even though this method helps motivate employees to continuously strive to do better and not just reach a predetermined target and slow down, it has the downside that it is immensely subjective due to the fact that the review group does not have any fixed targets to evaluate on.

Different companies implement different evaluation and reward initiatives, some base their rewards on individual performance and thus motivate every employee to do better, whereas other reward on the relative success of the team or the whole organization. An example by Hope & Fraser on how a review group weights the KPIs, as well as how an evaluation is given is presented in the figure below.

KPI	Weighting	Total Score	Weighted Score
Growth vs. previous year	20	50	10
Growth vs. competition	20	40	8
Profit vs. previous year	20	60	12
Profit vs. competition	20	50	10
Debt vs. previous year	10	80	8
Quality factors vs. previous year	10	60	6
Executive Committee Evaluation			54%

Figure 32 KPI evaluation example (Hope & Fraser, 2003)

As with the other points in the core control system, ABC/M can be used for data in order to aid to the decision-making process of evaluating and rewarding employees. Should employees be made aware of which KPIs they are being measured by, they can use the information from the ABC/M system for optimization purposes, which will aid them in improving their own performances, as well as, in the long term, benefit the company, as the goal of striving to do better is ensured. However, it would be beneficial, as far BB terminology is concerned, if they do not know how other comparable branches are performing during the period, as this goes against the motivational culture of BB.

Results

The different culture and structure of BB diminishes the previously discussed, strict idea of the different tools in an MCS. It can be argued, that in a BB perspective, all the processes within the MCS are not only interrelated but also complementary to each other. The fact that the company provides the management with the necessary information to make informed decisions, and allows them to do so, affects their behaviour, motivation and willingness to take risks, share their knowledge for the long-term benefit of the company

and continuously strive to improve and do better than the competition. One can thus conclude that BB is a coherent model encouraging decentralization, enabling and open communication, or said in other words, the use of various “soft” control mechanisms (Birkinshaw, et al., 2014).

Sub-conclusion

The importance of activity data is not to be underestimated, should a company implement BB. Thus, the management needs to prioritize that data is registered correctly, on time and accessible for those employees that need access to it in order for them to do their jobs.

As companies using the BB philosophy are operating in an ever-changing environment, the necessity of relevant data will play a significant role in a company’s management. The core system should therefore be user friendly, as far as maintenance, updates and data extraction is concerned, so the correct decisions can be made at the right time and. The resources for such a system will also require attention, as it is most relevant for larger companies to adopt BB and ABC/M, as explained earlier.

After the abovementioned factors are in place, the structure of the company can become more decentralized, as all the relevant information is at the right place. Furthermore, this will also give an opportunity for an open and honest communication, as well as building a platform of trust across an organization, since all the relevant data is available wherever it may be needed.

6.3. Case analysis

As mentioned earlier, the research group's intention to illustrate how BB and ABC/M could be used as complementary tools would be demonstrated with the help of an illustrative case. The following sections will be the aforementioned case analysis of the MCS in SH, where the current control system will be explained and supplemented with inputs from the research group on how the bank can enhance it with the cost accounting tool of ABC/M.

One of the examples used in Hope & Fraser's book on the subject of BB (2003) is Handelsbanken. Being one of the reasons that the BB philosophy was developed as well as it has proved to be successful for SH, the research group decided to use SH for the case illustration. What is more, is the fact that companies in the service industry, such as banking, have a cost structure, typically dominated by a large share of overhead costs, making cost allocations to the cost objects a necessity. The arguments mentioned above are the main reason for the choice of company, as well as it is the reasoning behind the search for complementarities between the two theories.

Handelsbanken

Founded in 1871 in Kornhamnstorg in Stockholm, Sweden, the bank is approaching its 150th birthday. Early in the twentieth century, the Swedish bank industry experienced several mergers and take-overs, and in 1919 Stockholms Handelsbank and Bank AB Södra Sverige merged and continued its business under the name Svenska Handelsbanken and is commonly referred to as Handelsbanken (Handelsbanken, n.d.).

In 1969, as the bank was approaching its 100th birthday, it was hit by a financial crisis. The crisis was so severe that the board decided to resign its positions. In order to save the bank, something radical needed to happen. SH hired Jan Wallander as the CEO and his vision was entirely different from how the bank was run in the past. Wallander wanted the decisions to be made as close to the customers as possible and by doing so, abolishing budgets. By the time Wallander took office, the bank was actually implementing a budget system that he stopped. Instead, SH developed a governance model based on decentralized organization (Cäker & Siversbo, 2014) and relative performance evaluation, which is also one of the key elements of Beyond Budgeting (Hope & Fraser, 2003)(Bogsnes, 2009). Thus, each branch

was to be led as an individual company and with full responsibility for all its activities (Handelsbanken, n.d.).

The decision to hire Wallander turned out to be a good one. SH currently has almost 800 branches and operates in Sweden, the United Kingdom, Denmark, Finland, Norway and Netherlands – these six countries are also referred to as the banks home markets (Handelsbanken, 2019). In the 49 years since the bank changed its structure and financial planning, it has reported a higher profitability than the average banks on the home markets for 47 of the years (Handelsbanken, 2019) (Nielsen, 2019). In addition to the home markets, SH also has international branch network offices in 16 countries worldwide, such as USA, Spain and Australia (Handelsbanken, 2019) (Nielsen, 2019).

Being one of the home markets, it is deemed relevant to mention the Danish branches of SH. SH has 56 branches in Denmark, spread geographically around the country. The Danish operations increased 2 % in income from 2017 to 18, while expenses rose by 16 %. This means that the profit before credit losses declined by 13 % in the same period, but after adjusting for credit losses and operating profit after profit allocation, the profit increased with 41 % (Handelsbanken, 2019). As far as customer satisfaction goes, SH was above the average on both private customers, scoring 77,8 with the sector average being 69,9, and the corporate segment, scoring 71,8 with the sector average being 69,8 (Handelsbanken, 2019).

In Aalborg, SH has two branches. The branch used in this illustrative case, is the central branch, located on Østre Havnegade 14. The branch currently has 18 employees, with five of them operating as private advisers, five operating with corporate banking, one advisor, one investment advisor, one pension advisor, one currency, interests and commodities advisor, one cash management and one in private banking. The last two employees are listed as manager and deputy manager (Handelsbanken, n.d.).

Above are the historical, structural, geographical and branch description, which the research groups find relevant in order to start the illustrative case. The description above is chosen in order to give the reader an overview over how the bank operates now, 50 years after it chose to restructure the organization and its financial planning. The case will be structured with inspiration from Flamholtz framework explained and illustrated in Figure 27. The case

will start with SH's core control system, then analysing the bank's structure and culture and finishing with the organizational environment.

Planning

In Flamholtz' original framework (1983) he mentions goals and standards, where goals are broad definition, such as a company wishes a satisfactory return on equity, and standards as a definable target, such as a 18 % return on equity.

SH has no clear definitions between goals and standards, if Flamholtz' terminology is to be used. SH measures on one financial key number, which is return on equity. Their goal is therefore to reach a satisfactory return on equity, while their standard is to be better than the competition (Nielsen, 2019). This is a direct link to the BB terminology, where relative improvements and stretch goals are keywords in measuring a company's performance (Hope & Fraser, 2003).

SH uses rolling forecasts together with KPI in order to plan on investments and capital requirements. The company makes forecasts every three months in order to keep track of future obligations, as well as make sure there is enough cash for sustaining the business. However, it is only the company's CEO, CFO and CCC that have access to these rolling forecasts (Lindsay & Libby, 2007). The separate branches plan their targets and spending on the basis of what is already allocated to them, however they have the total freedom to use the resources as they wish. What is more is that on a branch level, it is all staff that takes part in the planning process (Lindsay & Libby, 2007).

Compared to Thisted's terminology, SH has a clear way in planning their financial operations for an upcoming period. By looking how the company has performed during the last period, they assess on how the company is performing at the current moment in time (Nielsen, 2019).

In regard to planning, data from ABC/M is useful for cost allocation. As the amounts each branch has to spend each period are delegated from the group's headquarters down to regional offices and from there to branches (Lindsay & Libby, 2007), ABC/M will both provide necessary data and arguments to how the amounts could be allocated. Secondly, the branch will identify what kinds of resources are needed to generate a qualified forecast.

Thirdly, the ABC/M system can help identify what drives the costs, as the activity drivers will accurately allocate costs to each cost object, making it easier for the branch managers to price the products/services. Moreover, the data from the costing system will help optimize the activities, thus delivering a cheaper product without compromising on the quality.

Operations

As SH is a decentralized organization, where each branch is to be run as the manager's own private company, it is motivated to contribute to the overall result (Nielsen, 2019). Thus, it is each manager's responsibility to perform as well as possible and streamline the activities in order to make the contribution to the overall result a positive one. The communication between branches in each nation is open and should one branch struggle, it is encouraged that branch managers contact one another and, by doing so, learning by each other. The matter of internal competition may, however, be problematic in this regard as employees may not be willing to share information but rather compete for customers. SH solved the possibility of this happening by allocating customers to branches, thus setting clear boundaries between them. The general idea was that even though they are competing internally they are still united by the fact that they should help one another in order to create the best possible result (Nielsen, 2019).

As the operations are the day-to-day activities of a company, the main focus, as far as ABC/M terminology is concerned, are the activities. As the activities, in its simple form, represent the costs that a company needs to perform its operations, ABC/M will generate the sufficient data in order for these costs to be as accurate as possible. Furthermore, accurate activity costs will also make the cost of the cost objects more accurate, given that the cost drivers are correct.

Measurement

As part of the company's philosophy of being decentralized and the goals of performing better than the competition, measurement plays an integral part of SH's MCS. At the highest of a headquarter level, SH has a central control department that is responsible for "treasure, control and accounting (with risk control)" (Cäker & Siversbo, 2014). On a national level all the branches have access to how they, as well as the other branches are

performing. What is more is that the company makes use of the "system of handicapping" for control purposes. The idea with it is that financial resources are allocated to regions based on previous performance data, thus making it easier for the worst performing regions to obtain a better position in the forthcoming period and vice versa, since the regions are measured on a lending-to-capital ratio (Lindsay & Libby, 2007).

Furthermore, the managers have access to how other offices across nations are performing, but not on a branch level, as there are factors that vary from country to country the branch level information becomes irrelevant (Nielsen, 2019). The information used in the measurement system is to reach the target that "… all the branches should be performing above average..." (Nielsen, 2019). As this is mathematically impossible, it is in line with the BB philosophy of stretch goals and a continuous desire for improvement.

In measurement, ABC/M will provide sufficient data in order to benchmark, thus visualising how branches are performing. ABC/M can also be used in order to improve the performance, as the results are generated on a regular basis, meaning that if one branch is constantly underperforming, ABC/M and the open and honest communication will be used in order to streamline, which will lead to an overall better performance.

Evaluation and reward

As mentioned in the description of Flamholtz' framework (1983) evaluation and reward system assess how the company's employees have performed over a given period and whether or not they should be rewarded for the performance. Considering Manzoni's thoughts, specifically the fact that there should not be too many targets and that the reward system should not be too easy to calculate or predict and therefore adding the risk of gaming, SH has chosen a simple solution. SH measures on two points, one financial and one non-financial. The key numbers that are relevant for SH are return on equity and customer satisfaction. The reasoning behind these choices is also simple, as the purpose is the create value for the owners, and as Nielsen puts it: "… satisfied customers tend to do more business with you and talk "over the hedge" to their neighbour" (Nielsen, 2019).

As far as rewards are concerned SH's system is also simple. All of the employees are on a fixed income (Nielsen, 2019). In addition to the employees' income, they are also evaluated

on how they manage to generate return on equity on a yearly basis. As the company does not reward their employees by monetary bonuses on a yearly basis, questions could be asked in regard to how SH motivates the employees and, perhaps more importantly, motivates them to follow the long-term strategy. In this respect, the company uses a reward system that, in its essence, is relatively simple. SH's reward system is called the Oktogon (Handelsbanken, 2019). As SH wishes to motivate the employees to work for the long-term benefit of both themselves as well as the bank, SH has included the employees in the ownership of the bank. The bank pays dividends to the owners and the employees' share of the dividends will be paid to the Oktogon, as long as the goal of satisfactory return on equity has been met (Nielsen, 2019). The reasoning behind this choice is, according to the bank, to "Instead of short-term bonus systems, Oktogonen creates a long-term and similar incentive for all employees of the Bank, regardless of their position, form of employment or work duties" (Handelsbanken, 2019). This way, all the bank's employees are motivated to avoid the gaming issue, as all the employees in the hierarchy are treated equally, and not receiving any form for bonuses until they retire from their bank (Nielsen, 2019).

The ABC/M system can act as a complement to the measurement system at SH. The very fact that the ABC provides useful data for all the levels in the company, and makes it visible, can help the branch managers in avoiding mistakes, minimizing customer complaints as well as cut on costs, consequently making the product offerings cheaper for the end customer. The research group thus believes that by applying the information provided by an ABC/M system, the company will be better equipped to meet customer demands and hence assure higher satisfaction rates among its clients. Another complementarity, in regard to the evaluation and reward system, can be seen if the company decides to give bonuses to individual employees. The activity rates can, in this case, serve as a basis for incentives and help ensure that the whole team is equally motivated to achieve a better outcome.

Results

As explained earlier, SH's results over the last five decades have been satisfactory with the exception of two years, which is a proof of the fact that the way SH manages its operations has been successful. One of the keys for ensuring good results is that the bank motivates and has enabled the fast exchange of information, be it good or bad. SH's information

system is open and data is provided to all levels in the company, whenever it is necessary (Lindsay & Libby, 2007). What is more is that each branch is responsible for reporting its results to the region managers every month. The performance can thus easily be monitored, making it possible for the senior management to, with the help of "fast actuals" monitor how well the company is on achieving its strategic goals (Wallander, 1999).

The figure below is an illustration of how the Swedish bank is structured (Handelsbanken, 2019). As mentioned earlier, it is the Group's head office that allocates resources to the business areas and regional head offices in particular, that make further forecasts and plans together with the branches, so that decisions are made as close to the customer as possible. Once the regional managers are provided with the results of the branches, they share the so-called "League tables" where the branches are ranked in relation to various benchmarks (Lindsay & Libby, 2007). In those tables the branches can see their level of performance on financial measures as well as market share, volume and quality standards. This is where the information from an ABC/M system can come in handy, as it will present the employees with more data on why the Cost to Income ratio, for example, is as it is. Such information on a monthly basis will further enable the employees to be proactive, be more open and willing to share what they do better (in case they are leading in the league table) so that the main goal of the group is reached, namely, to increase the ROE to the shareholders.

Figure 33 Handelsbanken's structure (Handelsbanken, 2019)

Structure and culture

As mentioned previously, SH has a decentralized structure. By following Wallander's philosophy, that all the decisions should be made as close to customer as possible, SH has delegated responsibility to each branch manager to run his or her branch as it was their own company (Nielsen, 2019).

The culture is based on a high performance climate, thus encouraging internal competition, and open and honest communication, in order for each branch to be equipped as well as possible, in order to outperform the competition (Nielsen, 2019). An example of such a culture is the one employed by SH, where no matter whether a positive or negative event takes place the news gets shared across the organization so that help from others can be received or losses replaced by the senior management (Hope & Fraser, 2003).

Environment

As the external environment is concerned, there is a certain level of competition. As of 2016 there were 74 banks in Denmark (Finans Danmark, 2016). Additionally, the economy plays its fair share in the planning and expected results of the bank. Nielsen (2019) mentions an example that should a major company decide to move to a city, which would lead to more jobs in the local community, it would have its effects on the branch. On the other hand, should a major company decide to close its business locally, the damage control would also be worth considering. Therefore, SH does not operate with fixed targets, as it hinders the bank from reaching its full potential. The goal in the examples mentioned above will thus become to perform better than the competition or to limit the damages better than the competition.

Generally speaking, SH is affected by recessions and economic booms and will continuously adapt to the external environment. Such changes in the environment are always considered and evaluation of employees is not made without taking account for those. The employees of SH are never punished on matters they cannot influence or hinder, thus assuring that there is a fair assessment of their efforts.

If department leaders make decisions in response to the new threats and opportunities, most enlightened leaders will say that mistakes are needed to gain experience. While senior management repeatedly shows the subordinate departments that they have all the power and authority they will not dare make strategic decisions once they know they would have to suffer the consequences of making a wrong decision. The solution is, among other things, that the department managers involve everyone in the strategy planning. SH's branch managers have regular team meetings to review the strategic problems they face. It is a

win-win situation as by including the employees, it creates a sense of personal responsibility in them, thus making them feel like an important part of the process (Hope & Fraser, 2003).

Sub-conclusion

As the illustrative case shows, there are complementarities between BB and ABC/M. In order to adapt and continuously adjust to external factors, such as the economy, BB's principles of relative performances and stretch goals have proven to be successful. In order to manage the costs, optimizing performance and sharing information across the organization, ABC/M will provide relevant and necessary data, which will benefit the entire group's financial performance in addition to motivating employees, as their rewards are partially based on financial key numbers. Moreover, the usage of an ABC/M system does not interfere in any way with external matters of the core control system such as culture, structure and environment. On the contrary it facilitates information sharing, enabling and can be especially relevant whenever the external environment is uncertain since it is in such periods that the company needs accurate cost information in order to remain profitable, or survive.

While researching the area of ABC/M from a theoretical perspective, the research group found that companies with a high level of overhead costs could benefit more from ABC/M than companies where a large share of the costs are directly linked to the cost objects. This was also part of the reasoning behind the choice of SH for the project's illustrative case. As the biggest part of SH's costs are salaries and IT-costs, this also means that allocating costs to specific object will be complicated (Nielsen, 2019). Firstly, SH's employees have a basic knowledge on all of the company's activities, so an investment advisor is qualified for advising a private customer on occasion (Nielsen, 2019). Furthermore, the company purchased an IT system that has to handle all of the company's customers and allocating how much each customer uses of the total cost of the IT system is a challenge (Nielsen, 2019).

Even though the cost allocation model in SH has its challenges, as it is a difficult task to separate customers, and their belonging costs, it is not impossible. The challenge lies in the fact that several of the customers are both private as well as business customers and they

get advised by the same employee, even if the employee is listed as either private or business advisor (Nielsen, 2019). This practical challenge can be solved by treating the customers as cost objects, and dividing them in to segments of private, business and mixed, for example. By organising the customers in such a way, it would be possible to calculate how many resources each segment would require and make a precise allocation by using relevant drivers. The costs such as rent, IT and other costs that do not vary with the output could be allocated down to the relevant activities, but not to the cost object. That way SH would have the necessary financial information for decision making, which is highly relevant in both the internal, as well as the external competitive environment.

7. Discussion

The following sections are included in order to discuss the research group's findings and elaborate on some of them, as well as the possible risks that might occur in a BB organization. Furthermore, the purpose of the discussion is to reflect on the findings and illustrate the research group's awareness of other possibilities on the subject of budgeting, cost allocation and management. The discussion will be structured as follows: theoretical and practical implications of BB, contingency theory considerations, assessment of risks and ideas for future research.

As the problem statement forms the basis for the research of BB and ABC/M and how they can be used as a management philosophy and management tool, respectively, the research group's findings illustrated that ABC/M supplements the BB philosophy. As the findings of research proved complementarity between the two, it is not to be understood, as if the use of BB and ABC/M neither is the only method of managing nor are the two dependent of each other. As the project has explained, there are several criteria that have to be matched, in order to use them both. Individually both the BB and ABC/M can be used in a different context. Examples of these are if companies are in an ever-changing environment, but only selling one product or service, the need for ABC/M is not that relevant, due to the fact that all of the costs are allocated to one cost object. If the opposite situation is relevant and a company has several services and/or products, but operates in a stable environment, the need for BB is not that great, as the budget is a satisfactory tool, since no unexpected events will occur.

Other areas of research are the practical implications of using or implementing BB. Sandalgaard and Bukh wrote an article in 2015, in which they listed several of the implications relevant for BB. Some of the research areas are on the subject of target setting, as not all companies can set relative targets and other on the subject of whether BB best fits certain businesses. BB, as mentioned previously, has a limited spread in practice. Moreover, it is difficult to clarify exactly what is being implemented if a company claims to have implemented BB since the system is a philosophy of managing and" a coherent BB management model does not seem to exist" (Groot, 2007). Besides, answering which

companies are best suited for BB is complicated due to the fact that BB is not an explicit and unambiguous model, but can take on different forms. This makes it difficult to, on the basis of preceding studies, uncover whether BB works, as the system adopts relatively broad key measures such as financial results in terms of profit and growth but also targets such as employee satisfaction, quality and customer satisfaction.

Another question that one must consider is when BB is an alternative to a traditional budgeting process, as well as how is traditional budgeting expected to take place. Hope & Fraser (2003) warn against top-down planning, but also recommend the use of "stretch goals". However, both the process and the type of goals that Bourmistrov & Kaarbøe (2013) and Østergren & Stensaker (2011) describe remind more of what is usually recommended in financial management literature. For example, Anthony & Govindarajan (2006) do not write that budgeting is only conducted top-down, but that “an effective budget preparation process blends the two approaches. Budgetees prepare the first draft of the budget for their area of responsibility, which is 'bottom up'; but they do so within guidelines established at a higher level, which is ‘top down’”. Moreover, Østergren and Stensaker (2011) claim that plans should be prepared in the face of forecasts, for example, and that "[T] he focus in the planning process centers on how to reach these targets”. Despite the fact that this process is contrary to the BB principles, it has many similarities with the budget process described by Andersen & Rohde (2007), where the active phase of budgeting deals precisely with closing the gap between a passive forecast and the organization's goals for the coming period by following up on the progress towards achieving the goals. If one is not heading towards the goals, one has to make corrective actions, and in this connection, will typically try to quantify whether the effect of these measures can be judged to be sufficient to achieve the goals. This is the essence of governance and is described in textbook literature as a Plan-Do-Check-Act cycle (Atkinson, et al., 2012).

One of the two peaks in BB is the decentralization of the company. Arguments of this is to place responsibility to the frontline of the company, as the decisions should be made as close to the customers as possible. Even though this is a prerequisite in BB, it is not exclusively a BB element. Other forms of managing could also make use of decentralization. The main difference of BB and traditional budgeting in a decentralized company would

therefore be that a leader in a BB company will focus on value adding, while a leader in a company that uses traditional budgets will be focused on not exceeding his budget. As Bukh and Sandalgaard's (2016) research shows, there are companies that use element of traditional budgets, even if they claim that they are a BB company. The research also found that several companies make budgets on a more regular basis than annually with less detail and let the needs of budget be the determining factor rather than it being a "duty". This gives the research group reasons to believe, that other BB elements, such as rolling forecasts and trend analysis, could easily be implemented in the traditional budgeting, as a full implementation of BB might be a too radical change for a company used to handling their affairs in one way.

Lastly, there are two kinds of companies that have other implications of abolishing budgets: listed companies and companies in the public sector. Listed companies have an obligation in regard to their stakeholders to report expected performances for an upcoming period. As BB is not widespread in practical use, stakeholders can question the lack of a budget, as this is the traditional planning method. By using budgets these expectations will become easier and more trustworthy which affects the price per share. Public companies have some legal limitations, as they need to fit the budgets, as the budget is a central element in the allocation of funds from the government and to the companies.

It is also relevant to talk about the different contingency factors that may affect an organization, be it a budgeting or non-budgeting one, since there is proof in the literature that even though organizations design their control systems differently the outcomes can be the same. What is important in this regard is to consider the impacts of choosing to adopt a specific contingency. If we take environmental uncertainty, for example, one can argue that it is especially useful to adopt an accounting system that enables decision making in order to provide senior management with the right data at the right time. On the other side, one can argue that it is in the time of environmental uncertainty that the organization should be more agile and thus empower front-line and local managers to take the decisions they consider right, and therefore imply accounting controls on a much lower level. What is more is that it is not necessary for a company's existence to control with the help of budgets as they, in general, are too broad which can make it harder to define performance measures.

Having distinct financial and non-financial performance measures, like ROI and customer satisfaction, for example, can better guide the employees as to how well they are on the way to achieving the target. Control mechanisms such as “behavior control” can also be implemented and applied differently, depending on the culture and strategy of an organization. A form of behavior control can be the so-called Standard Operating Procedures that a company can use to get the employees to do what the company wants by specifying clear instructions on how to do the work, or it can just as well be guidelines on “best practices” that could inspire or help the process (Adler & Borys, 1996). Social and cultural control, on the other hand, could be influenced by a number of contingencies be it empowerment, peer pressure, training or rewards. This control mechanism could thus be used differently, and in the same way help assure that employees are continuously motivated rather than feel controlled. An example of this is the way two competitors in the US car market in 1920s ran their company, where even though they operated on the same market, chose two different approaches of managing the business.

It is also relevant to elaborate on the possibility of negative events occurring in a MCS in a BB organization, thus the research group will, in the following section, examine and elaborate on the risks and possibilities of a negative event occurring. As previously mentioned, the planning system ensures that the organization’s future business opportunities and risks are accounted for, and reconsidered whenever necessary as the purpose of the planning is to help improve the understanding of the individuals involved with the organization so that they are all equipped to respond to changes in the external environment (Merchant & Van der Stede, 2012). There are, however, various risks that can be associated with the planning control system in a BB organization. Since it is usually either operating teams or the senior management that conduct the actual planning process, it might imply the risk that the lower level employees do not feel involved in the course of planning. A possible risk can, in this regard, be that the employees are less likely to understand and respect the established plans, which can consequently lead to a risk of them not executing those plans correctly. Moreover, the theory of BB does not take into consideration the possibility of a financial crisis hitting the company (Østergren & Stensaker, 2011). The very fact that the planning in BB organizations is typically concerned with external goals, such as “beating the competition” makes such plans rather “helpless” as in

crisis periods cost reductions need to be made on the basis of internal processes. In a scenario of a crisis, such as the one that occurred in 2007-2008, the use of BB will be to be better at “damage control” than the competitors, which will not compromise the original target of beating them based on financial key number(s). In such an event, an effective ABC system will be particularly helpful.

Due to the fact that in a BB organization it is typically the employees themselves that decide on what activities to deploy, how to perform those in order to be better than previously, or than the competition, it is also their responsibility to plan on the amount of resources they will need to use in the following periods. This may, however, lead to another level of gaming (Østergren & Stensaker, 2011). One example could be a production team that rapidly increases its resource demand in order to accelerate on a new venture, making it a burden to another team, which suddenly loses its advantage and, in this way, gets outperformed.

As stated earlier, measurement or cybernetic controls, is a process in which measurements are identified in order to quantify underlying activities and actions (Malmi & Brown, 2008). A possible risk here can be associated with the choice of measures as the employees, in particular, will focus on these as “what you measure is what you get" (Merchant & Van der Stede, 2012). It is therefore highly important that the company is aware of the implications the measures might have on the employees, as they might motivate to inappropriate actions and thus result in decreased value in the long term. Another important consideration is that an organization can choose to use the measurement control as an enabling tool where the employees decide for themselves how to achieve the goals set in the best possible way. If the system is used in such a way, it would mean that the operational teams or the senior managers would not need to have a full understanding of exactly what actions would lead to the achievement of the goals (Merchant & Van der Stede, 2012). A possible risk in such a system would be that the employees, who are now enabled to make decisions, are not provided with accurate data, or they are provided with it just not at the point in time when it is especially necessary to have it in regard to making a decision. This can not only result in bad decisions but also have implications on the MCS and the organization as a whole.

Compensation primarily results in an increased focus of the individuals against some key areas to which the compensation is linked, which may cause the employees to work more persistently (Malmi & Brown, 2008). As mentioned earlier, in order to achieve the greatest possible effect, it is necessary that the selected rewards are valuable to the employees (Merchant & Van der Stede, 2012) (Flamholtz, et al., 1985). A company should thus be very careful when choosing on its incentive system. Giving financial rewards for accomplishing a relative target might not be motivation enough for an employee that would rather stick to routines and is not willing to change the way processes are done, or the very idea that the reward is based on "relative performance" might motivate him to dysfunctional or short-term thinking (Hartmann, 2000)(Otley, 1978). Because individuals often have widely different preferences, the most optimal will be to tailor the evaluation and reward control for each individual. This, however, requires too many financial means and a vast amount of time, therefore it is most common for companies to have just one single system, which is used for all individuals throughout the organization (Merchant & Van der Stede, 2012).

As previously mentioned, organizational culture is defined as a set of traditions, attitudes, values and social norms that are most often shared by the employees. Cultural control is not a direct control system as it has a rather unconscious influence on the individuals. The presence of cultural control in a BB organization can diminish the organization's own monitoring of the individuals and instead place some of that responsibility on colleagues who are encouraged to monitor and influence each other's behaviour (Merchant & Van der Stede, 2012). Possible risks connected with that is that peer groups are happy that the other groups are doing worse and are not guiding or challenging them since it guarantees them with the best performance, in relation to peer reviews, for example. There is, out of the same reason, a risk that the employees are not willing to share knowledge with their peers as that will make them competition. However, this type of risk can be handled with the help of the evaluation and rewards system, where knowledge sharing is praised. A point of criticism in the contingency theory research is namely the fact that it does not take into account that the leaders vary as persons. This means that a decision any given leader will take is based on his or her personal values and beliefs – another leader may have different values and beliefs and therefore make a different decision (Hopper & Powell, 1985). In

continuation of Hopper and Powell's last point, Nørreklit et al wrote an article called *US 'Fair Contract' Based Performance Management Models in a Danish Environment,* where they found that ideological persuasion could also be a suggestion for why implementing managing by objectives might not be universally applicable. According to them, the French accept hierarchies and a general willingness to obey as long it fits the social group in which they belong. In the United States, on the other hand, it is believed that an individual's freedom to act as it wishes is their ideological way of thinking. To simplify this, the US ideology is that everyone has the right to pursue his or her own fortune and working their way to the top. The third country mentioned in the article is Denmark. Although the article mentions the historical evolution of the Danish ideologies it does not conclude how the Danish practice should be implemented, as the research on this matter is not conclusive (Nørreklit, et al., 2006).

At times, culture may even go beyond the senior management's control as culture is difficult to change and remains relatively fixed over long periods of time despite changes in plans, vision and objectives (Merchant & Van der Stede, 2012). Acknowledging this risk, together with the threat of the culture between the organizational individuals becoming too strong, and thus hinder relevant and necessary changes and adjustments in the organization, may help organizations to take control of the matter in good time (Merchant & Van der Stede, 2012).

The research group acknowledges the fact that the thesis did not cover all areas of budgeting, cost accounting and MCS, as well as contingency theory. However, there are made some considerations on what could be studied in the future. By illustrating the complementarities between BB and ABC/M the next step in research could be in the matter of case studies of companies that use the two, operate with one and wish to implement the other or companies that wish to implement both theories in their approach to management and cost accounting. Another point of research, as far as targets are concerned, is to further study if relative targets motivate, as there is no empirical literature to support this claim.

Another interesting area of research could be if the change from traditional budgeting to BB is too radical, and if so, if there is a better way of managing somewhere between the two

poles of budgeting. Adding to the poles of budgeting, the literature has examples of companies that have been managing without budgets, but have returned to the budgets, as the need for cost management has risen – this has been especially relevant in the aftermath of financial crisis.

8. Conclusion

After reviewing the various sections that were considered important in order to answer the problem statement, the research group will, in this section, summarize on the findings and conclusively answer the problem statement.

In the comparative analysis the research group came to the conclusion that there are a number of similarities between BB and ABC/M in regard to factors for implementation and the organizational culture required, in particular. Where the BB philosophy is a continuous adaptive process, with the likes of rolling forecasts and no fixed targets, ABC/M would give a competitive advantage, as it would provide accurate costs to each of the company's cost objects, thus giving the information on how a company should price a product or service. Moreover, by implementing the BB philosophy, the ABC/M system will be updated on a regular basis, thus continuously provide the right data for the cost objects, should the underlying drivers, cost- or resource-pools or activities change during a period. In terms of the positive effects, both methods were highly adaptable to an organization's MCS and the positive effects of implementation outweigh the negative ones in both models. The research group came to the conclusion that both methods allow and recommend the use of KPIs in connection with performance evaluation as both stimulate employees to learn by their mistakes, cut on waste and be more efficient. Moreover, the use of KPIs allows the various managers to assess how their department is doing compared to other departments, as well as evaluate on how the company is doing in relation to the strategy. At the organizational level, there were also found similarities, as both methods allow the use of a decentralized organizational structure that emphasizes on working in teams. Where the methods differ from each other is that while BB encourages a competitive environment in order to reach a common goal, the purpose of ABC/M is that they have to help each other by providing trustworthy data for decision making. Another difference acknowledged by the research group was that BB is more suitable in a changing environment, whereas ABC/M is applicable in both changing and stable environments. A common drawback of both theories is that they do not help solve matters related to external reporting, as ABC/M is not capable of providing external data and BB does not operate with budgets that are usually demanded by stakeholders. Nonetheless, it was concluded that the two models are not substitutional, and the research group thus continued with the search for complementarities.

After examining the contingency theory and the literature available on MCS, the research group found that companies use five different control systems and these control systems work together to help the company achieve its overall goal. The control package generally used in traditional budgeting organisations was examined and compared to the one used by BB organisations. This gave rise to an examination of whether the tool of ABC/M can complement the control tools in a MCS of a BB organisation. The results of this study suggested that the ABC/M framework has a more positive relationship with the overall control system package than the individual tools. This indicated that the BB philosophy and its relationship with ABC/M should be studied as part of a wider control package, which is a claim supported by Malmi and Brown, and that the relationships between the two should be studied in the context of a company's MCS, as the use of an element may be linked with the rest of the control package.

There was examined a positive relationship between the BB and an ABC/M in a MCS, especially in regard to companies using the BB philosophy. One of the main reasons for this was that since BB organisations are operating in an ever-changing environment there is a necessity of relevant and correctly registered data that is delivered on time and is made accessible for the employees that need access to it in order for them to perform better. However, it also became clear from the analysis that the use of ABC/M should not be for control but for inspirational purposes instead, as such endeavours might result in employees losing their desire to be productive and creative, which will in the last end affect the company.

Another area where complementarities lie is when it comes to the organisational structure. The BB ideology suggests that companies are decentralized, however a successful decentralization can only happen whenever there is relevant information provided to the right employee at the right time. This is an area that could be improved with the help of an ABC/M system as its main purpose is to provide timely and more accurate data for inspiration purposes. By supplementing a MCS in a BB organisation with the ideology and principles of ABC/M, a further opportunity for an open and honest communication will be granted.

Cultural controls in a BB organisation and ABC/M also have a positive relationship. Since organisations use this control system to manage their employees' behaviour, BB companies focus on having policies and procedures that form central rules that employees are expected to work within. It is crucial for BB way of thinking not to use these in a controlling way but give the employees a freedom to act within these policies and procedures in their search for alternative solutions and new opportunities. Where an ABC/M system can complement the cultural control is in regard to ensuring ethical behaviour among the individuals and motivating them to share the information they have available. By assuring that the employees have the right values , a company will need a lesser degree of control and monitoring the tasks, which will free resources that can be used elsewhere in the organisation.

Moreover, the relationship between the BB and ABC/M in regard to financial reward and compensation control is also positive. This control system is closely linked to measurement control, as rewards and compensation often coincide with cybernetic controls, in which employee performance is assessed. While BB offers bonuses based on relative performance, be it individual, divisional or organizational, ABC/M will allocate both financial and non-financial data to the right object, thus making the reward system better justified. The ABC/M system, in the face of measurement control system, can help to direct employees' attention to selected areas where they can contribute their knowledge, and ensure effective use of human resources, and so help attain the overall goals of the company.

This study contributes to the management control literature by adding knowledge about the package approach and how it works within a BB context. As mentioned earlier, there is a limited literature on this matter, which is why this thesis can contribute with significant knowledge on the effects of using BB and ABC/M in a MCS. The very fact that the research group examined a real-life case and illustrated that the complementarities between the tools can also be found in practice, suggests that the usage of an ABC/M system does not interfere in any way with external matters of the core control system such as organizational culture, structure or environment. On the contrary it facilitates information sharing, enabling and can be especially relevant whenever a company is facing uncertainties.

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10. Appendixes

Appendix 1: E-mail correspondence with Handelsbanken's branch manager

Appendix 2: Interview guide

Appendix 3: Recording of interview with Ole Dahl Nielsen

Appendix 4: Handelsbanken's Annual Report for 2018