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The Balanced Scorecard: Use and business performance of businesses in Møre and Romsdal

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Abstract

Although 'The Balanced Scorecard' (BSC) has been a popular tool amongst companies for some decades, its use and benefits have been little researched in Norway. This thesis focuses on companies in Møre and Romsdal. It investigates the extent of use of BSC, and whether or not it affects business performance.

The thesis was conducted through a survey, in which 347 companies were invited to take part. The managing directors of the companies were the preferred respondents.

The first research question of the thesis was: 'To what extent does companies use BSC?' The findings suggest that a large proportion (59.1%) use the management tool, while about ⅓ (30.9%) of the respondents have a high extent of use of the management tool. In addition, the financial sector has the highest extent of use when compared at an industry level. Large companies (200+ employees) have a higher extent of use than smaller companies.

The second research question was formulated as: 'Does use of BSC affect Business Performance?' In order to answer this, a performance measure was developed for testing the hypotheses. It turned out to be a very reliable measure with strong internal consistency. In addition, all four BSC perspectives were measured by four to five items each, and all four perspectives were measured in a reliable way. Initial data showed that the respondents perceived there to be a high extent of benefit and potential benefit of the use of the four perspectives and BSC as a whole. A statistically significant relationship between use of internal perspective and performance was found. Three additional hypotheses were created concerning the effect on performance by use of financial-, customer- and learning and growth perspectives. These were not supported by our data. Thus, the findings indicate that measurement of internal processes have the most to say to business performance. In the discussion part the findings are summed up, and managerial implications, limitations and implications for future research are discussed.

Preface

This thesis has been conducted as a part of the master program International Business and Marketing at Aalesund University College, and constitutes 30 credits.

Studying The Balanced Scorecard in Møre and Romsdal has been quite an interesting process. The thesis is based on companies operating in Møre and Romsdal, and includes both small and medium sized companies as well as large businesses. We want to thank all the respondents who took the time to answer our survey.

Finally, we want to thank our supervisor, Professor Øyvind Helgesen. His interest and knowledge in the field has been very helpful, with lots of advice and constructive feedback throughout the process.

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1. Introduction

1.1 Status of the field

Strategic management tools have gotten a lot of attention in the last years. Several different methods have been developed for both measuring and controlling. The Balanced Scorecard (BSC) is among the most adopted and written about. Since Kaplan and Norton introduced BSC, it has been a concept that has gotten a lot of attention from both the academia and in practice. The consultancy company Bain and Company has for several years performed studies to find the most used/popular management tools, whereas BSC has been among the top in their three last studies (Rigby and Bilodeau, 2009, 2011, 2013). The trend in the studies is that BSC is being used more and more in the EMEA (European, Middle-east and Africa) countries. Bain and Company's 2007 report indicates that 66% of the respondents use BSC, though according to their more recent studies the adaptation rate has decreased and is 'stable' at around 50% (Rigby and Bilodeau 2009, 2011, 2013). This indicates that BSC is an important management tool. Further support can also be found by the overwhelming amount of research, articles and books written about the concept BSC, and of course, also by the fact that a lot of companies actually use the tool.

BSC as a management tool is meant to increase business performance by helping and assisting with implementing corporate strategy. However, Ittner et al. (2003) have shown that it can be problematic to document a strong linkage between BSC use and performance. There can be many reasons for this. One possible explanation is that there are many intermediate variables that influences the linkage between the BSC and performance. In addition, the effect will depend on how companies understand and interpret BSC. If a company interprets and implements BSC as a measurement system the company will most likely get a different effect compared to a company that implements it as an overarching strategic management system (Braam and Nijssen, 2004).

1.2 Purpose of the paper and research questions

BSC has since the early 1990's been adopted by various organizations. It is a management tool that integrates both financial and non-financial measures into the organizational strategy. Originally the BSC was viewed as an improved performance measurement system. However, it became apparent that it could be used to implement strategy in all parts of an organization. The system has since its birth been further developed. Today it also commonly used as a tool

for designing, testing and communicating strategic linkages, which in turn is placed in a 'strategy map' (Kaplan and Norton, 2001).

The intention of this thesis is to supplement the extensive research that has been conducted on the BSC. We examined the use of BSC in both small and large companies located in the county of Møre and Romsdal (MR). The underlying assumption and model for the thesis is that the use of BSC affects business performance, as illustrated in figure 1.

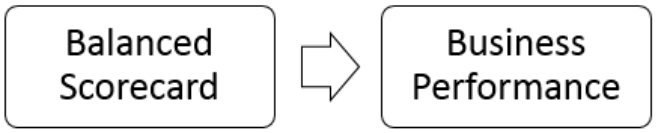

Figure 1 - Underlying model for the thesis.

The thesis uses a quantitative approach with data from a questionnaire. Our focus in the quantitative analysis is to what extent BSC is used in companies in MR, and if there is any differences in performance from those who use BSC and those who do not. Ideally, an attempt will be made to cluster firms into industries, because any performance differences will then most likely come from internal affairs, and in our case the use of BSC. Two main research questions and a couple of sub-questions have been developed. They are as following:

1. To what extent do companies use BSC?
    a. What is the usage of BSC in companies in the Møre and Romsdal?
    b. Are there any differences between size, industries and age, and their usage of BSC?

2. Does the use of BSC affect business performance?

Research is limited when it comes to the actual effects that BSC have, especially on performance (Bjørnenak, 2003). The impression is that in Scandinavia BSC is used more as a measurement tool, and the hypotheses are to a low degree tested and usually communicated explicitly (Bjørnenak, 2003). Based on this we want to contribute to the research on this area, in particular whether or not the BSC is used in MR and the effect BSC has on business performance.

1.3 Context

The thesis will revolve around businesses that are located in the county of MR. This county is chosen mostly because of the diversity of the businesses and their international-focus. It consists of many small and medium large private owned companies, but also several larger public companies. Some of the businesses are 'gathered' in clusters. The Maritime cluster is probably the most known and has received the highest level of recognition of clusters in Norway. It has been classified as 'Global Centre of Expertise', indicating that it is a cluster with a high level of experience, knowledge and capability, and is seen as world-leading in its field (Innovasjon Norge, 2014). The furniture cluster is included in the programme of Innovation Norway, and is classified as an 'Arena'. This is a classification that the cluster has the potential to develop further, and hopefully with close cooperation it can. The thesis is not limited to businesses within just these clusters, but also surrounding businesses. MR has a large proportion of businesses that are international, meaning that either their customers and/or suppliers are international (Dyrseth, 2013).

1.4 Structure

The thesis consists of six chapters. The introduction (chapter 1) highlights the structure, the purpose of the paper and presents the research questions. Chapter 2 presents the theoretical framework for the thesis, the model for the study and the hypotheses. Chapter 3 introduces the context of the paper, and why the research area has been chosen. Chapter 4 describes our choices and how the research, validity and reliability were designed. In chapter 5 the results of the quantitative analysis will be presented. And chapter 6 will end the thesis with a discussion, implication, further research, and a conclusion section.

2. Theoretical Framework

In this chapter the theoretical basis and framework for the study is presented. It will start with a definition of 'performance' and strategy used in this study, followed by a presentation of Strategic Management Accounting (SMA). SMA is defined as: *'A set of management tools whose purpose is to help management teams improve the company's financial performance'* (Blindheim, 2010, p. 170). Many of these management tools can complement and/or replace BSC. The management tools presented are theories and models of management that are relevant for businesses in this context. BSC is just one of many strategic management tools available.

2.1 Performance

The dependent variable of this study is 'performance'. Performance is a concept that can be measured in various ways. Performance measures can be divided into two categories, the first being direct economic measures and the second being a bit broader and is termed effectiveness or operational measures (Johnson et al. 2014).

Economic performance is direct measures of economic outcomes where the outcomes have three dimensions: (1) Performance in product markets such as sales growth or market share, (2) accounting measures of profitability such as profit margin or ROCE (return on capital employed), and (3) how economic performance can be reflected in financial market measures such as movements in share price. These measures must however be interpreted carefully since they can be conflicting, e.g. can sales growth be obtained by cutting prices and reducing profit margins (Johnson et al. 2014).

Effectiveness is a bit broader than economic performance; it includes measures of internal operational efficiency and measures relevant to stakeholders such as employees and external communities. This is where the BSC belongs; the BSC recognizes various perspectives that besides financial measures includes e.g. customer satisfaction, internal productivity, employee skills, motivation etc. The essential here is that the BSC addresses effectiveness not only on economic performance, but also on a range of factors that support long-term prosperity of the organization (Johnson et al. 2014).

Venkatraman and Ramanujam (1986) divides performance into three concepts. The first and narrowest conception of performance is the financial performance, which only involves financial indicators such as sales growth, return on investment, earnings per share etc. This concept reflects only the fulfilment of economic goals of the company. The second

conceptualization of performance is the business performance, which in addition to the indicators of financial performance also include indicators of operational performance, also known as nonfinancial performance. This conception goes beyond that of only financial indicators and in addition involves indicators such as market share, new product introduction, manufacturing value-added and other technological efficiencies. The last conceptualization of performance is the organizational effectiveness, which is a bit more complex as it includes both the previous conceptions of performance but also adds various stakeholder influences and conflicts (e.g. environmental initiatives).

Venkatraman and Ramanujam (1986) created a four-celled classificatory scheme cross-comparing financial indicators and operational indicators, and primary and secondary data. They discuss ten basic alternatives for measuring performance as shown in figure 2.

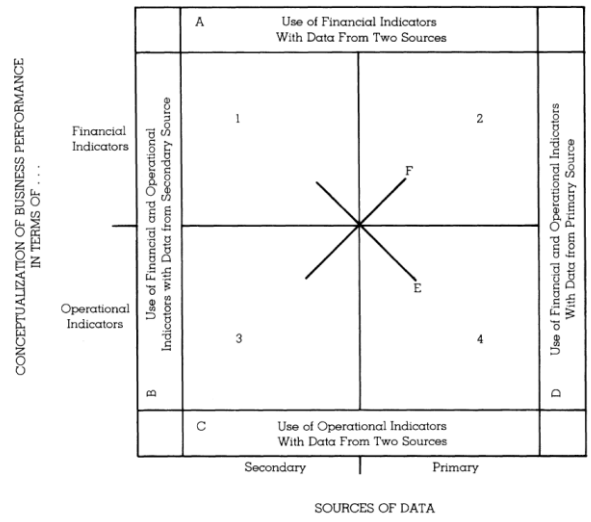

Figure 2 - Business performance scheme (Venkatraman and Ramanujam, 1986).

The approaches can be divided into within-cell approaches and across-cell approaches. The within cell approaches have the most narrow perspectives on business performance, respectively cell 1, 2, 3 and 4, and involves only one type measures and one type data (e.g. financial indicators and secondary data). The remaining six approaches represent a much broader perspective on business performance as they either (1) reflect a broader conceptualization of business performance, respectively B and D, or (2) address methodological concerns of convergence of operationalization across distinct methods, respectively A and C (Venkatraman and Ramanujam, 1986).

However, identifying variables that can explain variations in performance is not always straightforward. One way to deal with this constraint is to use subjective performance

measures based on the perception of performance by key executives. Most studies involving organizational performance are unable to identify the true relationship between performance and other correlated variables (March and Sutton, 1997). The reason is that the performance structure is much more complex than most researchers are able to describe. The complexity surrounding performance eventually divides organizational performance researchers in two groups: The first group speculates how to improve performance. While the second group are researchers that demand that all possible variables influencing performance must be included. Thus, they follow such strict rules that they are not able to find where the variance of performance originates (March and Sutton, 1997).

The interpretation of performance can vary depending on firm, division, branch and strategy. The 'simple' ways of measuring performance such as ROI (return on investment), EVA (economic value added), and EBITDA (earnings before interest, taxes, depreciation, and amortization) are methods that can be viewed as financial measures. These are indeed very useful, but says little about the strategic performance of the firm and are mainly about the financial perspective of a company. Indicators such as e.g. customer profitability, new revenue sources, cost per unit, and asset utilization represent a much more detailed view of the current performance situation of the firm as well as its strategic goals. Then you also have the non-financial performance indicators, these can be e.g. customer satisfaction, customer acquisition, customer retention, employee skills, employee motivation and so on. They represent a much broader concept of the business performance, and gives a much deeper insight in the business and its strategy than you otherwise would. Strategy and long-term business performance are closely linked together. This study looks at one of many strategic management accounting tools, in which strategy is crucial. Therefore, it is only natural to introduce the 'term' strategy and define what strategy is.

2.2 Strategy

According to Michael Porter, strategy is defined as: *'Competitive strategy is about being different. It means deliberately choosing a different set of activities to deliver a unique mix of value'* (Porter, 1996, p. 60). While Alfred Chandler defined strategy as *'the determination of the long-run goals and objectives of an enterprise and the adoption of courses of action and the allocation of resource necessary for carrying out these goals'* (Chandler, 1963, p. 13). Commonly the purpose of the strategy is to achieve a sustained competitive advantage, in turn to achieve long-term profitability. As noted by Porter it is important for companies to differentiate from its rivals, if there is no difference between the companies there is nothing

that provides a foundation for greater profits. Thus, when composing a strategy it is important for the business to use the core competences to emphasize the skills, activities and resources that deliver the customer value that differentiate a business from its competitors.

When trying to explain and identify what strategy is and how it should be described, researchers tend to focus on different aspects of the term. Johnson et al. (2011) defines strategy as: *'the long-term direction of an organization' (*p. 4). They choose to focus on three elements, the long term, direction and organization. These are chosen because strategy should be measured over years, depending on the organization maybe even decades and there is little doubt that having a long-term perspective on strategy is emphasized in big parts of the literature about strategy. While the strategic direction is based on the idea that over a long-term period strategies should follow a direction or trajectory, these trajectories should preferably be set in accordance with the company's long-term objectives. Organizations are not viewed as discrete, unified entities, organizations can have internal and external complex relationships. As there are often both internal and external stakeholders involved with organizations, such a view on organization is natural (Johnson et al., 2011). While according to Porter (1996) a company can achieve sustained competitive advantage through strategic positioning based on e.g. customer needs, customer accessibility or the variety of a company's products or services.

The strategic positioning of varieties, needs and access are connected with Porter's three generic business strategies. Porter (1980) stated that there are three generic business strategies that most businesses revolve their strategy around. These are (1) overall cost leadership, (2) differentiation and (3) focus. It is argued that companies are rarely able to combine these, because if the company tries to implement more than one at the time it is possible that the commitment supporting organizational arrangements are deluded (Porter, 1980). It is argued that some businesses these days are pursuing interactive strategies. These are strategies that consider interactions with competitors. The three interactive strategies that are suggested are (1) hypercompetitive strategy, (2) cooperation and (3) game theory (Johnson et al., 2011). Depending on which strategic positioning the company has, it has to tailor a unique set of activities, however the position alone is not enough to guarantee a sustainable advantage (Porter, 1996). The danger about a strategic position is that a valuable position is attractive for competitors and it can lead to incumbents trying to imitate the positions, whom are according to Porter (1996) likely to try to copy it in one of two ways.

The first way is when the competitors repositions itself to match the superior performer while the second way is called straddling. Porter (1996) defines a straddler as: *'straddler seeks to match the benefits of a successful position while maintaining its existing position. It grafts new features, services, or technologies onto the activities it already performs'* (Porter, 1996, p.68). The strategic positions that the company chooses is however not sustainable, when there is sustainable strategic positions there are also trade-offs with other positions, these occur when the activities of the companies are incompatible - this is explained by the fact that if the company wants to increase somewhere it has to decrease somewhere else. These trade-offs work as a defence against repositioners and straddlers. The trade-offs can occur from 3 sources (1) inconsistencies in image or reputation, (2) from the activities themselves and lastly (3) from limits on internal coordination and control. These trade-offs are essential to strategy, they help create the need to choice and gives a purposefully limit what a company offers (Porter, 1996).

The 'concluding' principle around strategy involves creating 'fit' among a company's activities. According to Porter (1996) *'Fit locks out imitators by creating a chain that is as strong as its strongest link'* (Porter, 1996, p. 70) Fit involves deepening the strategic positioning by strengthening the fit among the business' activities. Fit can be viewed as a driver for both competitive advantage and sustainability because it makes it more difficult for competitors to imitate what is being done.

Strategy is a vital part of several management tools, thus an important aspect of our thesis, the literature is vast, and there are several different definition about what strategy is, how it should be implemented and how it should be created. Influential theorists such as Porter and Chandler have made solid contributions towards the understanding and interpretation of strategy.

2.3 Strategic Management Accounting

The focus in this thesis is on the linkage between BSC and Business performance. However, as noted by both Blindheim (2010) and Rigby and Bilodeau (2013) there is a lot of different tools available for managers, and some of them will be presented in the following chapters.

2.3.1 Management Accounting Tools

Management accounting as we know it today came from the need of more accurate costing information. Companies such as DuPont and General Motors further developed cost

accounting into management planning and control, which gave managers information needed to coordinate and control multiple lines of businesses. Alfred DuPont Chandler said that this management accounting information was being used to empower and inform the visible hand of management to replace what Adam Smith called the invisible hand of market forces. Management accounting can be defined as: *'the process of supplying managers and employees in an organization with relevant information, both financial and nonfinancial, for making decisions, allocating resources, and monitoring, evaluating, and rewarding performance' (*Atkinson et al., 2012, p. 26). Management accounting information should have the following attributes; (1) give insights into past operations as well as future forecast, (2) meet the needs of decision-making employees and managers, and (3) has no default rules, the tools can be customized to meet user needs (Atkinson et al. 2012).

2.3.2 Management Accounting Application

Management accounting tools are viewed as tools that help an organization implement and develop its strategy. This does mean that the strategic objectives of a company needs to be linked to reporting on and improving operations (Atkinson et al., 2012).

There have been many different contributions to the research of management accounting. It would be close to impossible to set up a complete list of all the different routes within the field of management accounting, however there are three routes that have gained much attention by researchers (Bjørnenak, 2003). These are (1) strategic positioning, (2) strategic profitability analysis and (3) Strategic communication and scorecards. The tools within strategic positioning are tools that emphasize different strategic positions give different indications on which tool the business should use. For example if a company is a cost leader than traditional tools could be advisable, while a company which seeks to differentiate should choose tools that focus on customer and market profitability analysis (Bjørnenak, 2003). The tools within strategic profitability analysis have contributed with the ability for companies to further enhance their focus on profitable products, customer segments, focusing on properties in products that are sought by customers and the ability to give information about structural choices (Bjørnenak, 2003). The last 'route' is labelled strategic communication. Strategic profitability analysis have the ability to design and follow up strategies, however they lack the ability to communicate the strategies within the organization. Thus, tools such as BSC are central, whereas BSC are used as both a measurement tool of performance and as a communication medium for the organizational strategy (Bjørnenak, 2003).

Modern management accounting has focused on the strong linkages between business strategy and their design of management accounting tools. There are two sides to this 'argument', (1) the design and the choice of management (accounting) tools should be dependent by the business strategy, while the other view (2) argues that management (accounting) tools should be designed to support the strategic choices and the strategic positioning (Bjørnenak, 2003).

Table 1 presents the different tools that are discussed in the thesis. The table consists of the name of the tool, roughly the year/decade the terminology was first used, the focus area of the tools, and lastly an attempt to classify the different tools. The table is made by the authors of this thesis, and the classification of the tools are therefore an interpretation done by the authors.

Table 1 - Management Tools

Tool	**Origin**	**Keywords**	**Focus area(s)**	**Classification**
Strategic performance measurement approach	90s	Market share, unit costs, profits	Compare financial performance with rivals	Strategic positioning
Value Chain Analysis	1985	Activities, margins, costs, value added	Process execution	Strategic profitability analysis
Cost Driver analysis	1989	Cost drivers, value chain, activities	Cost management	Strategic profitability analysis
Target cost management approach	30s	Product attributes, product configuration, customer demands, cost gap	Product profitability	Strategic profitability analysis
The value creation approach	2000	Capabilities, resources, customer value proposition, customer value perception	Customer value	Strategic positioning
Outsourcing	70's-80's	Non-core activities, lower costs	Core competencies	Strategic positioning
Benchmarking	80's	Market leader, various business aspects, process, product, and strategic benchmarking	Comparisons	Strategic positioning
Total Quality Management	70's-80's	Efficiency, activities, processes, product and service quality	Customer satisfaction, Quality, continuous improvement and suppliers	Strategic positioning
Business Model Canvas	2008	Customer value proposition, value chain, differentiation	Product offering	Strategic positioning
Tableau De Bord	1929	Non-financial indicators, critical elements, defined targets, current performance	Performance Management	Strategic communication and scorecards
The Balanced Scorecard	90's	Strategy, Performance measurement, financial and non-financial indicators	Strategy Implementation	Strategic communication and scorecards

2.3.3 Strategic performance measurement approach

The strategic performance measurement approach involves comparing company performance with the performance of rival companies. The idea is to identify and intercept changes in customer preferences over time (Blindheim, 2010). Performance in this concept refers to market share, volume achievement, unit-cost, price, and in turn also profits. The idea is that by comparing performance amongst firms, the company in mind could evaluate its strengths in terms of market share, and in particular, experience effects such as e.g. higher market shares can result in lower costs due to a learning curve and therefore higher profits. Blindheim (2010) suggests that the strategic performance measurement approach can help management teams in two different ways. (1) It can support decision-making related to price and investments by giving insight into several course of action. (2) It can shed light on what direction needs more attention based on past performance, and function as navigation for future opportunities. This concept is closely tied and related to benchmarking.

2.3.4 Value Chain Analysis

The value chain was first introduced in 1985 by Michael Porter and has over time grown and influenced work in the field of strategy. Porter (1985) suggested that the structure of a firm is defined by the activities they perform rather than the resources at their disposal, and that it is the activities that add value to the product offering and consume costs. Therefore, what activities and how they are performed is the essential part of any company and is the source of superior performance. To make the concept easier to understand Porter illustrated it as a set of activities he called 'value chain'. The idea is that various activities and elements is inter-related and might affect one another, either vertically, horizontal, downstream or upstream (e.g. how supplier activities upstream might affect customer value downstream). These are the conceptual framework the basic principles of the value chain is built on (Blindheim, 2010).

2.3.5 Cost Driver Analysis

The cost driver analysis was first introduced by Shank and Govindarajan in the late 80's and was heavily influenced by Porter's value chain analysis as well as his work on low cost and product differentiation strategies. Shank and Govindarajan (1989) proposed strategic cost analysis back then as: (1) the process of defining a firm's value chain and assigning costs and assets to its value-creating activities, (2) investigating the cost drivers 'regulating' each activity, and (3) using cost behaviour information to analyze alternative means for achievement competitive advantage by either controlling cost drivers or reconfiguring the

value chain. Shank and Govindarajan (1989) also argued that that a strategic cost analysis framework to provide managers with information to use as a basis for evaluating strategic alternatives should replace the management accounting decision analytic framework that replaced traditional cost accounting in the 1950s and 1960s based on critical success factor measures.

2.3.6 Target cost management approach

Blindheim (2010) asserts that the target cost management approach is meant to help companies ensure product profitability before the product in mind reaches the manufacturing process. The idea of the approach is to (1) quantify a target/allowable cost for a product under planning and to (2) ensure this target cost is reached before the product is launched by frequently measuring the gap between the current cost level of providing this product and the target cost through the product planning and design process (Blindheim, 2010). With other words are the first step to determine a target price and a target profit, and in turn companies can determine the target cost. And the difference between this target cost and current cost of bringing the product to the market is called the cost gap. This cost gap must be 'closed' before the product can be launched. The second step starts with splitting the cost gap and assigning it to every major activity involved and then close the cost gap by designing a product that meets future customer needs in a cost efficient way. This means that the product-features or attributes needs to be ranked from a customer's perspective to identify what elements speaks the most to their key customers, and in turn how much customer value each function will create. Each function is compared to the costs to create a value index, the value index will tell the firm what function needs more attention/work and what function needs less attention/work and hence less costs occurred at these elements, which can be used to enhance the elements that speaks more to the customers. It is a strategic management tool that can help companies meet their customer demands in a profitable way by configure products at the research and development stage.

2.3.7 The value creation approach

A value creation approach, or customer value creation framework, involves pre-emptive configuring the company's value offering (also known as customer value proposition) to meet customer expectations and desires. From a customer perspective, customer value refers to the customer's perceptions of what they receive, in return for what they sacrifice. Customer value can in this context be divided into two parts, desired value and perceived value. Desired value is what the customer desire in a product or service. Perceived value is the benefit the

customer feels he or she has received from the product or service after it has been purchased (Shanker, 2012). The value offering is created by determining the current market offering and identifying what the customers want, and then develop or configure a value offering that meets the market demand.

The value creation approach has the potential to help management teams align the company's many resource-consuming activities with what target customers see as important in their relationship with the company (Blindheim, 2010). The value creation approach has two broad steps, the first being by identifying the set of product features in the value offering that the target customers deem of most importance, companies can rank the product features in terms of their relative importance. Then, the same target customers quantifies their satisfaction with the various product features. In turn the company can compare these rankings in relation to the product features relative importance. The price set by the market is then divided on the different product features through their percentage share of customer importance rankings, this determine the revenues created by each product feature as well as the customer value attached to each product feature. The second step starts by tracking the resources used by the relevant activities and in turn link the costs of these activities to each product feature identified previously. After allocating costs the company can identify something called cost-value gap, the difference between the customer importance rankings in termed in percentage share of the total value and the percentage share of total cost for that product feature. From this can companies also calculate realized profits, potential profits and revenue multiplier (how much revenue is created for each monetary unit of value added cost spent). All in all the approach give companies information about important product features and whether or not the right amount of money is being spent on these (value added activities), and also if too much money is being spent on not so important product features (not value added activities), and lastly if there is any wasteful activities.

2.3.8 Outsourcing

The survey by Bain & Company has since 1998 repeatedly featured outsourcing among the top 10 most used management tools. Rigby and Bilodeau (2013) defines outsourcing as: *'When outsourcing, a company uses third parties to perform non-core business activities. Contracting third parties enables a company to focus its efforts on its core competencies'* (Rigby and Bilodeau, 2013, p.46). And according to Michael Porter strategy is defined as: *'Competitive strategy is about being different. It means deliberately choosing a different set of activities to deliver a unique mix of value'* (Michael Porter, 1996, p. 60). Indicating that at

the very least outsourcing is a deliberate strategy where a company looks at which activities it should deliver and which it should not and it chooses to focus on those whom are able to give a unique mix of value to the customers, by focusing on their core competency.

In a survey done by Solli-Sæther and Gottschalk in 2007 on Norwegian businesses, several strategic drivers were highlighted as the most important. Among these were access to resources and competence, focus on own core competencies, lower production cost, flexible service production and improved service quality. There are three theories, which explain why a company chooses to outsource. (1) Core competencies theory, which indicates that all firms can outsource functions that are a part of the company's core, the core of the business the 'unique mix of value' that Porter (1996) mentions, everything that can be deemed to be 'in the way' or a disturbance for the core can be outsourced. (2) The classical economic theory is about the fact that businesses choose to outsource because it is cheaper to do these activities externally, in those instances cost is the driver for the decision and implementation of outsourcing. By outsourcing because of cost, the business hopes that activities that are under high competition can become more competitive and have better prices in the market. (3) A company can outsource activities that the company does not have the resources to perform, for example if an activity needs special competence, which only a few people have (Solli-Sæther and Gottschalk, 2007).

2.3.9 Benchmarking

Benchmarking also known as best practice benchmarking or process benchmarking is widely used in strategic management and have over the years become common practice. The concept is that organizations evaluate the various aspects of their business processes to the processes of other companies, preferably the leader of a pre-defined group of what organization is going to benchmark. In turn, the organization will obtain information needed to develop improvement plans to either stay ahead of competitors or to adapt to the current best practitioners. One of the objectives is to achieve a continuous process where the companies seek to continuously improve their practices, the ultimate objective however is process improvement that meets the attributes of customer expectations (Omachonu and Ross, 2004).

Benchmarking practices can also vary according to either the nature of the object being benchmarked and the partners with whom comparisons are being made. This results in three different types of benchmarking; (1) process benchmarking which concerns operations, work practices and business processes comparisons, (2) product/service benchmarking which

concerns product and/or service offerings, (3) strategic benchmarking which concerns organizational structure, management practices and business strategies (Drew, 2004).

2.3.10 Total Quality Management

Total quality management is a management system where managing the organization in such a way that the overall efficiency is as high as possible, the implicit goal of TQM is customer satisfaction and this is to be achieved through several aspects. Omachonu and Ross (2004) defines total quality management as: *'Total quality management (TQM) is the integration of all functions and processes within an organization in order to achieve continuous improvement of the quality of goods and services. The goal is customer satisfaction'* (Omachonu and Ross, 2004, p. 3). TQM is a start-to-finish process that looks at functions at all levels and integrates these in such a way that the overall effectiveness of the system is higher than the individual outputs from the subsystem. There are eight different critical factors that will help a business succeed with total quality management, whereas 'necessary management behavior' is deemed as the most important factor for a success. The reasoning for this is that clear leadership and vision is required and it is important that the management demonstrates a commitment to TQM is actively involved (Porter and Parker, 1993). The other critical factors are a strategy for TQM implementation, organization for TQM, communication for TQM, training and education, employee involvement, process management and system and quality technologies (Porter and Parker, 1993).

Total Quality management follows a 'simple' principle, quality should drive the company in its actions internally and externally the end goal should be to make sure the customers are satisfied by delivering high quality in all encounters with them. There is one factor that above all other factors that drive market share, and that is quality (Omachonu and Ross 2004). Over time superior quality should lead to higher market shares and this will mean that profitability is virtually guaranteed, as there is no doubt that perceived quality and profitability are strongly related. There are several positive, substantial and pervasive rewards of higher quality: (1) Greater customer loyalty, (2) Market share improvements, (3) Higher stock prices, (4) Reduced service calls, (5) Higher prices and greater productivity. However, there may be negative sides of the TQM as well. Following a TQM philosophy requires a lot from the managers it can be very time consuming both from the whole of the management and from the CEO. It is also not a system that gives immediate results, on a long term it can provide the positive effects however it is not likely on a short term (Omachonu and Ross, 2004).

2.3.11 Business Model Canvas

The Business Model Canvas is a strategic management 'tool', or rather template, for developing new or existing business models. The concept was originally introduced by Alexander Osterwalder in 2008 and has later on been refined. The idea is that a business model is nothing more than a representation of how a business intends to make money. Based on extensive literature research and real world experience Osterwalder proposed a business model. The model, as shown in figure 3, consists of 9 building blocks that constituted the business model canvas template that a business can use to easily describe their business model (Osterwalder, 2008).

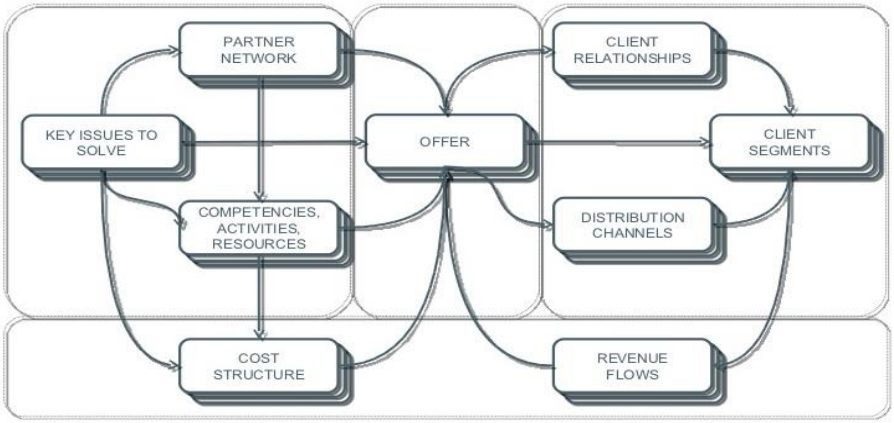

Figure 3 - Business model canvas

The building blocks is an interpretation of the various conceptualization on the many different business models that exists, and the single reference model is based on a wide range of similarities between these conceptualizations (Osterwalder, 2010).

One of the strengths of the Business Model Canvas is that it can be displayed on a large area so that groups of people can interact with it at the same time and discuss the various elements to promote creativity, understanding and different viewpoints. The model is also great to give insight into various what-if scenarios. The idea is that by filling in these 9 building blocks businesses will get a good overview and insights over strengths and weaknesses, what is working and what is not and should be improved (Osterwalder, 2010).

2.3.12 Tableau de Bord

French managers have for decades used non-financial key performance indicators similar to the BSC concept. Tableau de Bord is the most used management tool in France and its roots dates back to the great depression in 1929. It is a mandatory topic in most French universities, business schools and grandes ecoles (high schools). It is a decision-support instrument and

the concept has in fact increased in popularity and been further developed after the release and introduction of the BSC (Fernandez, 2003). The French word tableau means overview such as a table, panel or blackboard. Technically, it is an instrument panel or control panel similar to what you can find in an airplane dashboard. The idea is a future-oriented mindset where you want to reach key objectives in a certain amount of time. To do so the 'pilot' must concentrate on the major variables that he or she can change in order to reach the objective. The term 'pilotage' is often used in this context and refers to ambitious, result-oriented and targeted enterprise control.

The Tableau de Bord concept can be roughly translated to '*The Tableau de Bord is a management tool that is comprised of both a set of indicators that are related (not by deterministic, algebraic operations but) by causal relationships and links, and the process of selection, documentation, and interpretation of these indicators. Each one of these indicators is chosen to measure the status of a part of the business to be managed, so that all indicators, taken together, offer a model the general functioning of the business (system) in achieving its objective*' (Daum, 2005, p. 6). The idea is that managers can monitor and control the company based a few key parameters that are relevant for action and decision-making, a concentrated set of information (indicators). The assumption is that there is an underlying causal model that describes how adjustments to certain success factors can create the desired effect elsewhere, traditional cause and effect, similar to what a strategy map illustrates.

The strengths of the concept Tableau de Bord for defining and implementing strategy can be an excellent supplement for the BSC. In particular in instances where there is difficulties implementing BSC systems, such as using causal models/defining cause and effect relationships, embedding and linking with the operative process systems, and selecting the suitable indicators and dimensions (Daum, 2005).

Tableau de Bord is in many ways similar to the main topic of this thesis, the BSC. So one might wonder why the Tableau de Bord has not caught on in the same manner as BSC. The concept of Tableau de Bord had already been used for over 60 years at the time when Kaplan and Norton introduced their Balanced Scorecard. The BSC did however go further than what most both French and American companies were doing at the time (Epstein and Manzoni, 1998). The Tableau De Bord was developed to give senior managers a set of indicators that allowed to them to track and monitor the progress of the business according to the goals that the business had set themselves. However, this had some implications for the implementation

of the Tableau de Bord. The system was not summarized into one single document that applied to the whole of the firm, because each manager in each sub-unit had different objectives and responsibilities. Thus, each manager had to have their own Tableau de Bord. As shown in figure 4.

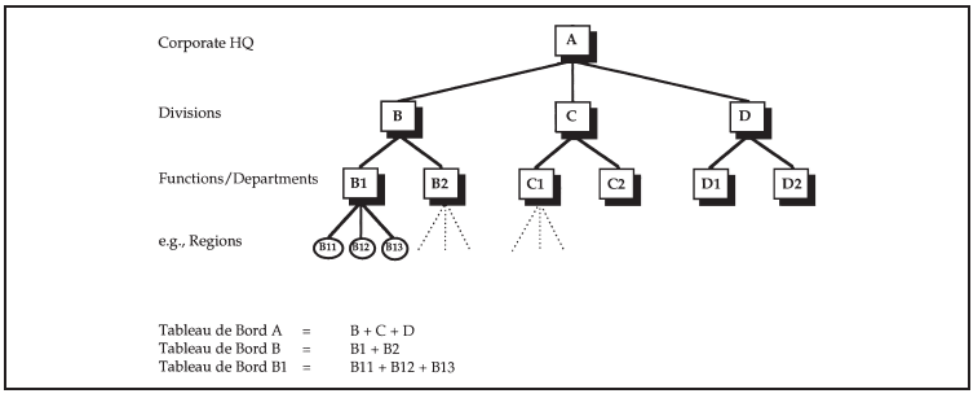

Figure 4 - Nested Tableaux de Bord (Epstein and Manzoni, 1998).

The overall Tableau de Bord was a series of documents supporting local decision-making. The second implication indicates that the various Tableau de Bord should not be solely limited to financial indicators. Operational measures often give much better information when looking at the impact of local decisions and actions, meaning that it better shows the cause-effect relationship than the financial indicators can do. While developing the Tableau de Bord the it is emphasizes that the Mission and vision of the company should be translated into a set of objectives, from these objectives, the company identifies key success factors and in the end these are translated into quantitative key performance indicators. The overwhelming danger with the Tableau de Bord is however the fact that the subunits are those who control the performance indicators and they need to collaborate, track and report these up towards the management and with large companies with several subunits this information can overload the managers. Despite this, the Tableau de Bord do have some benefits (Epstein and Manzoni, 1998).

Tools like BSC and Tableau de Bord have little impact if they ‘are just there’ and not used properly. A benefit of using such a tool is that it reinforces the traditional means of communication by interpreting the strategy into quantifiable indicators. A goal with the BSC should be to create understanding with the employees what is being done and why. The information in the literature indicates that Tableau de Bord is quite similar in many aspects to the BSC. Thus, one might wonder why we have chosen to write the thesis about BSC and not Tableau de Bord. From a conceptual point of view both systems are extremely close, however

there are five shortcomings of the Tableau de Bord compared to the BSC. (1) The French Tableau de Bord has the tendency to vastly over-emphasize the financial measures and not focus much on the non-financial measures. (2) Conceptually Tableau de Bord is meant to not be much bigger when reported than the BSC, however in practice the Tableau de Bord is much longer than the BSC-reports. Instead of starting from the vision and strategy to figure out which indicators are best suited to take - the tendency is to collect existing performance indicators and disseminate them. (3) Companies tend focus too much on internal comparisons to last year's performance or the current year's budget, opposed to comparing to best-in-class-performers. (4) Much of the literature on the Tableau de Bord is 50-60 years old, and this means that it does not highlight important aspects of today's economy as well as it would if it were more up-to-date. Much of the information for the literature is collected internally from firms, instead of externally from customers. (5) Several French managers tended to use the Tableau de Bord as a supporting management-from-a-distance and management-by-exception tool, instead of a tool that creates discussion and sets the agenda for meetings. Because of this, much of the power and usefulness of the tool has been lost (Epstein and Manzoni, 1998).

Based the five aspects, and the fact that BSC is much more widely used we have chosen to focus the research part of this thesis on the BSC. As shown previously in this chapter the literature and the magnitude of different management tools is big and there are several different tools that have different usefulness.

2.3.13 The Balanced Scorecard

Robert S. Kaplan and David P. Norton first introduced BSC in 1992. The premise was that the existing approaches of measuring performance in companies was about to be outdated. This was because the existing approaches primarily only based themselves on financial accounting measures. It was argued that financial performance indicators alone only showed the past, historical performance, and thus should not alone guide and evaluate the actions that a company does to create value. To create value for the future one should invest in the customers, suppliers, processes, employees, innovations, technology and so on. For that reason, companies should have both financial and non-financial indicators to complement each other. However, financial indicators is still important because they have a time-lag showing the impact of decisions (results): (1) It shows the impact of decisions in a common measurement unit (money), (2) it shows important trade-offs between resources and (3) it shows the cost of spare capacity.

BSC was created as a management tool for measuring performance based on both financial and non-financial performance indicators. Kaplan and Norton stated that the BSC, or any measurement system, should have four important perspectives linked together in a cause and effect relationship complementing the organization's strategic frame of reference. The perspectives were as following: (1) Financial, (2) customer, (3) internal, and (4) learning and growth. Together these can be looked upon as a framework for value creation in organizations (Kaplan and Norton, 2004). Other important characteristics of the BSC were that (1) the BSC is presented in a single document. (2) The document is meant to be short and connected to the company's information system. (3) The indicators are not listed in an ad hoc manner, and lastly (4) the performance indicators are chosen based on their linkage with the company's vision and strategy (Kaplan and Norton, 1992, 1993, 1996, 2004).

The BSC consists of several performance metrics, these are commonly grouped into two sets of indicators. One is referred to as 'lagging' while the other is referred to as 'leading'. However, these are complex and should be looked as a continuum. It is possible for the same indicator to be both leading and lagging, for example customer satisfaction can be a leading indicator of financial performance, however for businesses where on-time-delivery is an important factor for the customers then customer satisfaction is a lagging indicator of on-time-delivery. This makes on-time-delivery a leading indicator for customer satisfaction, while on-time-delivery will be decided and determined by the production cycle time and quality of the product and process and thus be a lagging indicator.

The BSC process starts with creating strategic objectives that describes what the company wants to achieve according to its strategy. These strategic objectives should represent the four perspectives, and each objective a selected measure. The measures themselves represents a quantitative indicator of how performance on a strategic objective will be assessed (Atkinson et al. 2012). With other words, measures represents how a strategic objective can be achieved. Followed by this procedure companies select targets for each measure, a target should represent top of line performance and if achieved such performance would be considered one of the best in the industry. By comparing this desired performance to the current performance, employees and managers throughout the company can determine how well they are doing, as well as display progress and improvements. Overall, you will get communication, clarification, motivation, feedback, and evaluation. The BSC framework

enables managers to select objectives and measures, derived from their strategy, that are linked together in a chain of cause-and-effect relationships (Atkinson et al. 2012).

The four perspectives

The BSC measures organizational performance across four different but linked perspectives that are derived from the organization's mission, vision and strategy (Atkinson et al., 2012). The perspectives are meant to show an entire chain of cause-and-effect relationships among performance measures to ultimately tell the story a company's strategy. The individual perspectives addresses some fundamental questions such as:

- Financial - How do our shareholders measure success?
- Customer - How do we create value for our customers?
- Internal - At which processes must we excel to meet our customer and shareholder expectations?
- Learning and growth - What employee capabilities, information systems, and organizational capabilities do we need to continually improve our processes and customer relationships.

These perspectives provides a common framework for describing and building strategies along with providing a powerful diagnostic tool capable of detecting flaws in organizations' BSC (Kaplan and Norton, 2001). Financial measures usually represents the financial impact of prior decisions made in the current and past period, the lagging indicators of the strategy. The remaining perspectives usually represents non-financial measures, the leading indicators. Changes in these should normally lead to changes in the financial performance down the line. Leading → Lagging. Atkinson et al. (2012) states that the two top perspectives, financial and customer, represents the '*what*' part of a strategy, what the company wants to achieve with its two most important external constituents, i.e. shareholders and customers. The internal perspective represents the *'how'* part of a strategy, how the strategy is going to be carried out. The idea here is to identify what processes have the most to say to ultimately meet the expectations of shareholders and customers, and do necessary changes in these processes that will ultimately lead to changes in the past two perspectives. The learning and growth perspective is also a piece of the *'how'* part of a strategy, but the idea here is to identify capabilities that can lead to changes in the internal perspective, and in turn lead to changes throughout the remaining perspectives. The relationship between the different perspectives is illustrated in figure 5.

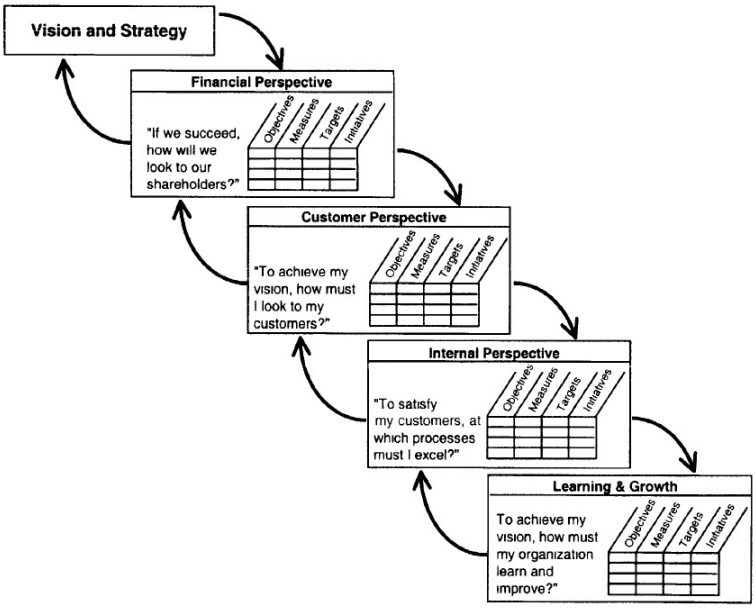

Figure 5 - BSC cause-and-effect relationships (Kaplan and Norton, 2001).

While the financial perspective focuses on the shareholders' interests the remaining three perspectives is meant to 'explain' why and how the company succeeds financially. This happens through creating value for the customers, thus there is a need to know how customers view the performance of the company. If the customer are extremely happy and delighted does not equals that the firm is doing well on internal dimensions. This can be exemplified by: A company can have a massive amount of employees servicing customer complaints/inquiries however it would be more efficient for the company to have a smaller amount for employees who supported by information technology provides efficiency and good service. The example is mean to show that customer value only equals shareholder value if it is based on efficient internal processes. As most businesses are interested in long-run results, customer value through efficient internal processes on a short term is not enough. To be able to have a sustainable result from the customer value businesses have to make sure that its organization and employees continuously learn and develop themselves, which it the reasoning for having a perspective for 'learning and growth' (Kaplan and Norton, 1996).

Financial Perspective

The financial perspective contains objectives and measures that represent the ultimate success measures for profit-seeking companies (Atkinson et al., 2012). The financial perspective describes the lagging aspect of the BSC and is usually viewed as growth, profitability and risk from a shareholder point of view. Financial performance measures typically involves operating income, return on investment, etc. The typical 'destination' is a significant increase in shareholder value through revenue growth or productivity. Revenue growth can come from (1) Additional sales to existing customers or (2) new products/services, new customers or new markets. Productivity can come from (1) reduced costs and at the same time maintaining the same quantity and quality, or (2) utilizing existing assets more efficiently. Together these two approaches signals whether or not the company's overall strategy contributes to bottom line improvements.

The objectives in the financial perspective differs from company to company, and can often depend on where the company is in the business life cycle. Kaplan and Norton (1996) identifies three stages of the life cycle; growth, sustain and harvest. Growth is of course at the beginning of the life cycle, and preferred objectives for companies in the growth-stage will be e.g. percentage growth rates in revenues, and sales growth rates in targeted markets, regions or customer groups. Those whom are in the sustain stage are in a position where they are still interesting for investment and reinvestment. However, the demand for high returns on what is invested are much higher at this stage. Companies at the sustain stage are more likely to make financial objectives based on profitability, e.g. operating income or gross margin. For some businesses the objectives may also focus on return on investment, return on capital or economic value-added. The last group, harvesters, are businesses that no longer succumb to significant investments, investments are only enough to maintain the equipment and capabilities. The main goal here is to maximize the cash flow back to the corporation, and examples of financial objectives would be operating cash flow (before depreciation) and reductions in working capital requirements (Kaplan and Norton, 1996).

The financial objectives for a firm should represent the long-term goal of the organization, which commonly is to give superior returns based on the capital invested in the unit. The BSC does not in any way conflict with this goal, assuming the company tailor the objectives in accordance stage it is in the life cycle. The drivers in the perspective should be customized

to the industry, the macroeconomic environment, competitive environment and the strategy of the business unit (Kaplan and Norton, 1996).

Customer Perspective

The customer perspective represents the strategy for creating value and differentiation from the perspective of the customer. Kaplan and Norton (2001) emphasizes the customer-value proposition, which describes the unique mix of product, price, service, relationships, and image that a company offers. It is how the company differentiate themselves from competitors to ultimately attract, retain and deepen relationships with targeted customers. The value proposition is also essential because it helps the company connect its internal processes to improve outcomes with its customers. The customer perspective is how the company is going to create and deliver value to its customers in order to reach its parent financial objectives. Within the customer perspective both customer and market segments are identified, these segments represents the sources that will deliver revenue and income for the company's financial objectives. In the past, companies would purely look at internal capabilities and focus mostly on product and technology innovation, however if these innovations are not in accordance with the customer needs then they are of no use. It is important to be able to focus on the actual customer need and deliver the actual customer experience they want. If a company wants to achieve long-run superior financial performance, they must do this through products, services, innovations and experiences that are valued by the customers (Kaplan and Norton, 1996). Managers should therefore transform their mission and strategy statements into specific relevant market and customer based objectives.

The customer outcomes is generic among most kinds of organizations, the core measurements in the customer perspective are: Market share, customer retention, customer acquisition, customer satisfaction and customer profitability (Kaplan and Norton, 1996). These may seem 'general', but for maximum impact, companies should customize them to better suit the customers of the business. Market share should reflect the proportion of business in a given market (terms of number of customers, dollars spent or volume sold) that a business unit sells. Customer acquisition is there to measure at which rate the company is able to gain new customers, which can be measured in both absolute and relative terms. Customer retention monitors the rate the business is able to maintain its relationship with customers, which also can be measured in absolute and relative terms. Customer satisfaction

uses specific performance criteria within the value proposition to assess the satisfaction of the current customers. Customer profitability is a measure of the profit of the customers or segment (Kaplan and Norton, 1996).

Internal Perspective

The internal perspective represents strategic priorities about what processes companies wants to excel to ultimately create customer and shareholder satisfaction. It is how the company plans to create and deliver the customer value proposition and how it plans to achieve the productivity improvements for the financial objectives (Kaplan and Norton, 2001). Atkinson et al. (2012) divides the internal/process perspective into four categories:

1) Operation management processes involves the basic day-to-day processes that produce and delivers products and services to customers. This includes (1) achieving superior supplier capabilities, (2) improving costs, quality, and cycle times, (3) improving asset utilization, and (4) delivering goods and services responsively to customers.

2) Customer management processes involves strengthening customer relationships with target customers to either (1) acquire new customers, (2) satisfy and retain existing customers, and (3) generate growth with customers. The latter involves activities such as additional features and services after sale.

3) Innovation processes involves developing new products, processes, and services which in turn can penetrate new markets and customer segments. Atkinson et al. (2012) also identifies two subcategories for innovation processes, (1) develop innovative products and services and (2) achieve excellence in research and development processes. The idea is that successful innovation drives customer acquisition, loyalty and growth, which in turn should yield improved operating margins.

4) Regulatory and social processes involves internal behaviour that exceeds the minimum standards for environment, employee health and safety, employment practices, and community investment. The idea is that by complying and exceeding these national and local regulations companies seeks to perform better in terms of increased reputation as both an employer and actor. Reasons being that the company could (1) attract and retain high quality employees, (2) reduce environmental incidents and increase employee safety, and (3) improve their image with customers and socially conscious investors.

Learning and Growth Perspective

The learning and growth perspective is the bottom tier and represents the priorities needed to create a climate that supports organizational change, innovation and growth. Here the company define capabilities, skills and climate needed to support their strategy, somewhat the foundation. It is how the company can align its human resources and intangible assets with the strategic objectives in the previous perspectives. Kaplan and Norton (2001) wrap-up the perspective by saying that companies will now have a complete strategy map with linkages across all four perspectives. Atkinson et al. (2012) proposes that this perspective consists of three major parts, the first being human resources in which the company's employees should have the appropriate mix of skills, talent and know how required to carry out the strategy. Secondly, the information technology part in the company should facilitate process improvements and create better linkages with suppliers and customers. Thirdly, organization and culture alignment should involve factors such as (1) employees should have awareness and understanding of the company's strategy, vision and cultural values, (2) employee goals and incentives should be aligned with the strategy, and (3) employees should share their best practices and other knowledge relevant to strategy execution.

Kaplan and Norton (1996) divides the learning and growth perspective into three different categories: (1) Employee capabilities, (2) information systems capabilities and (3) motivation, empowerment and alignment. When a company looks at employee capabilities, measures such as employee satisfaction, retention and productivity are frequent. Whereas employee satisfaction is seen as a driver for retention and productivity. The capabilities of the employees are central for any business. However, it is not likely that it is sufficient. Thus, a company also needs superior information system capabilities. Systems that give the employees accurate and concise information about customers, segments, competition and so on. Even highly capable employees who are suited with access to a good information system will not bring organizational success unless the employees are motivated to act in accordance with the best interests of the company (Kaplan and Norton, 1996).

Ultimately, the degree to which a company is able to reach its targets within the financial, customer and internal-businesses-process perspectives depends on the organizational capabilities and environment for learning and growth. Strategies that are built to give superior performance often require investments in people, systems and processes that enhance the organizational performance.

Strategy maps

Together the four perspectives of BSC constitutes a strategy map that illustrates the linkages amongst the strategic objectives across the perspectives. A strategy map specifies the critical elements and communicates them throughout the company and links different performance targets into mutual supportive chains supporting the strategic objectives. A generic strategic map example is shown in figure 6. These causal chains between the various targets underlines the need for balance between them, since each depends on the others to be successful. Therefore, strategy maps can help reduce the problem of inappropriate target levels and internal competition (Johnson et al., 2014). Atkinson et al. (2012) describes the process as following: '*First, identify the long-run financial objectives, the ultimate destination for the strategy. Then, in the customer perspective, select the targeted customers that will generate the revenues for the new strategy and the objectives for the value proposition offered to attract, retain and grow the business with these customers. In the process perspective, select objectives that create and deliver the customer value proposition and also improve productivity and efficiency to improve financial performance measures. Finally, identify the employee skills, information needs, and company culture and alignment that will drive improvement in the critical processes*' (Atkinson et al., 2012, p. 49).

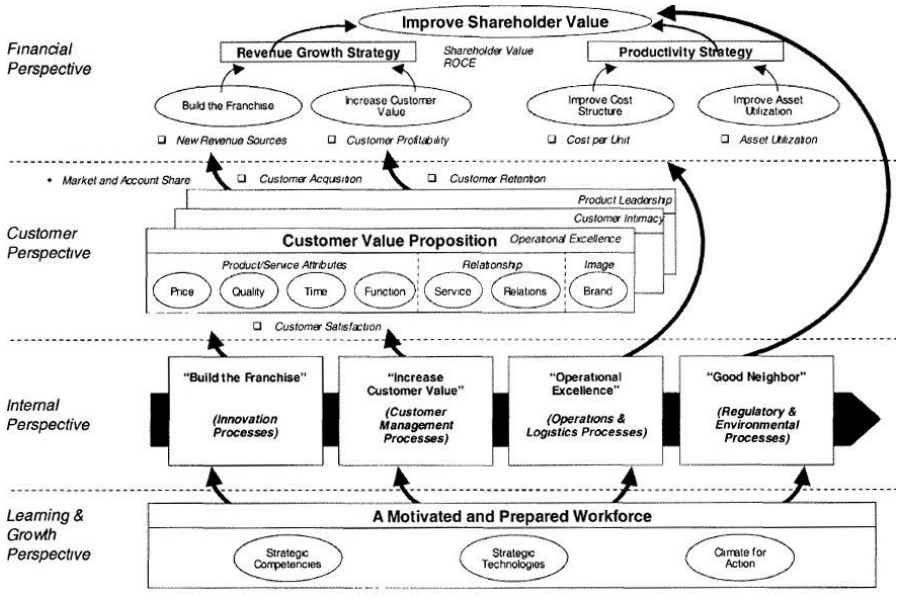

Figure 6 - The BSC Strategy Map (Kaplan and Norton, 2001).

2.3.14 Connection between Balanced Scorecard and performance.

The idea that implementation and use of BSC can lead to increased performance is based on the assumption that there is a connection between the financial and non-financial indicators. Philosophical speaking the BSC should give adequate understanding of the company and its direction, however inappropriate measures is quite common such as the focus on short term measures instead of measures that can indicate long term success (Johnson et al., 2014). Johnson et al. (2014) states that performance targets or key performance indicators is used to judge the company both internally and externally on its ability to meet these targets. As of such, the assumption is that there is a connection between intangible assets and tangible results, which can be translated to the utilization of the BSC and increased performance.

2.4 Previous research

Some researchers have focused purely on BSC and its effect on performance (e.g. Davis and Albright, 2004, and De Geuser et al. 2009), while others have focused more on the relationship between non-financial measurements (indicators) and financial performance targets (e.g. Ittner and Larcker, 2008).

Braam and Nijssen (2004) presents previous empirical research on performance effects of BSC and classifies them along two basic dimensions of use; the first being the level of use, and the second being the manner of the use. They state that this relates to the firm's quantity and quality of application of the instrument. Their research suggests that the level of BSC use affects performance, but that the quality or manner of BSC use is the critical key for a positive relationship to performance. Braam and Nijssen developed a model (figure 7) to test how BSC use affects the performance of companies. The model included the relationship between product-market dynamics, strategy and company performance. These relationships were affected by (1) Measurement-focused-BSC use and (2) Strategy-focused-BSC use. Braam and Nijssen (2004) argues that good measurement, information and high usage of this will lead to a positive effect for the business. Thus, having a direct effect towards the company performance. While strategy-focused-BSC use is assumed to have a moderating effect on the company strategy, thus affecting the performance through company strategy.

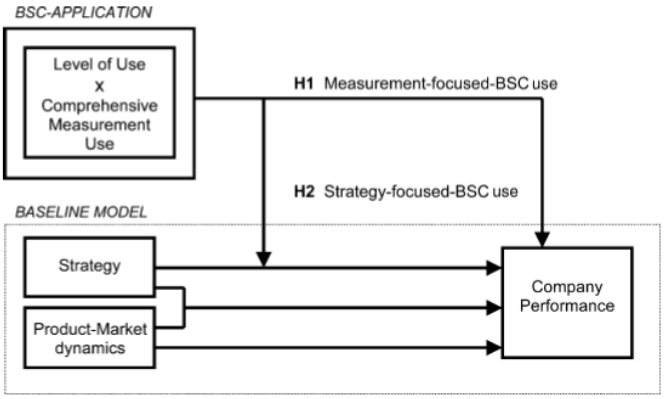

Figure 7 - BSC and company performance (Braam and Nijssen, 2004).

Furthermore the assumption is made, based on extensive prior research, that there is a positive relationship between strategy and financial performance whilst it is assumed that dynamics in the product-market can have a decaying effect, thus a negative effect on financial performance. Strategy is central in BSC as it is meant to implement, communicate, control, learn, adjust and help put strategy to work, this means that management can formulate a good strategy and apply it top down. Nevertheless, unless there is information from the bottom to optimize it will not necessarily have the desired effect. The hypothesis was *'Strategy-focused-BSC use, i.e. the moderator effect of measurement-focused-BSC use on strategy will be positively related to company performance.'* This study was done on a sample of 100 B2B companies in the Netherlands, whereas 41 responded. The result of the study supported that BSC can positively influence overall company performance, if it is aligned with the company's strategy. However, the study showed a negative effect between measurement-focused-BSC use and performance. Braam and Nijssen (2004) indicates that this may come from situations where measurement applications have become too instrumental, this means that the manager sees BSC use as an end instead of a means to a goal. This in turn can lead to over-bureaucratization and too much focus on details rather than focus on the overall strategy and picture. It is also highlighted that the use of BSC is a process, and overtime the effects may be better when the company, management and employees get a higher understanding of how to use the tool (Braam and Nijssen, 2004).

Hoque and James (2000) studied 66 Australian manufacture companies and tried to identify a relationship between the size, product life-cycle stage, market position, BSC usage and performance. The study indicated that the larger the company, the greater the benefits from the use of BSC. The main finding was that increased BSC usage was associated with improved performance. It did not depend on the size of the organization, the product life

cycle or the market position. However, larger firms had more to gain from using BSC compared to smaller firms (Hoque and James, 2000). The results of the study of Hoque and James (2000) indicated that the level of use of BSC had a positive effect on performance.

Davis and Albright (2004) did a quasi-experimental study in US banking organization and the purpose of their paper was to determine if implementation of BSC would lead to an improvement in financial performance. They compared this to a setting where only financial performance measures were used. This was done in a company where 14 different branches were identified, however five were removed from the sample for different reasons. This left four branches in the experimental group (BSC) and five in the control group. These nine branches were monitored for a 24-month period where key financial measures were statistically compared. The results of the study showed that the bank branches that used BSC outperformed the non-BSC-implementing branches on key financial measures (Davis and Albright, 2004).

Ittner et al. (2003) investigated 140 US financial services firms and the goal was to examine the relation between measurement system satisfaction, economic performance and two general approaches to strategic performance measurement (greater measurement diversity and improved alignment with firm strategy and value drivers). 'Measurement system satisfaction' means in this context the satisfaction the business has with the measurement. For example, the measurement system satisfaction is according to Ittner et al. (2003) reduced if the measurement is less extensive than predicted. While the satisfaction is enhanced when the measurement is more extensive than predicted. In their study, they found that BSC use is associated with higher measurement satisfaction, but not with improved accounting and stock market performance. Ittner et al. (2003) did not find a positive relationship between the use of BSC and company performance as the two other studies did. Firms in the study indicated that they used BSC, however did not rely on causal business models. While the cause and effect relationship in BSC is central, thus causal business models should be central. Furthermore, as Ittner et al (2003) noted, a link between ROA and firms using causal business models were found. This indicates that the interpretation on how Balanced Scorecard should be used, built and implemented causes troubles for both researchers and companies. It does however highlight that the research on the use of BSC and performance is inconclusive.

Lin, Yu and Zhang (2014) found that the application of BSC improved the personal and organizational performance when applied to Chinese hospitals. They used a nationwide

sample of China and studied the organizational performance and individual satisfaction in hospitals that had adopted BSC. The study had four concluding remarks (1) Hospitals that adopted BSC achieved better organizational performance and individual satisfaction, compared to those who did not. (2) Hospitals that utilize more performance measures in their BSC outperforms those that use less performance measures, this is evident in both organizational performance and individual satisfaction. (3) The more close the links of non-financial performance measures to the inventive rewards, the better the organization performance and individual satisfaction. (4) BSC should be applied as a strategy management control system, if the comprehensiveness of BSC application is increased in management control systems this can promote efficiency and effectiveness of other control functions, such as implementation, feedback, motivation, budgeting etc. (Lin et al., 2014).

Malina and Selto (2001) looked on what effect BSC had when it were particularly used as a strategy communication tool. Their findings suggested that managers responded positively to BSC measures by reorganizing their resources and activities to improve performance on those particular measures. However, for the managers to actual obtain positive effect the authors highlights several critical elements such as the BSC factors should be seen as causal links, measures should be aligned with strategy, and BSC benchmarks are appropriate for evaluation and useful for guiding changes. Their research also suggest that certain problems is related to factors such as inaccurate or subjective measures, the communication is one-way (i.e., top-down), and inappropriate benchmarks used for evaluation (Malina and Selto, 2001).

Lipe and Salterio (2002) did an experiment where they examined the context effect of organizing performance measures into the four BSC perspectives. They hoped to view if the balanced scorecard's organization resulted in performance (managerial) evaluation judgments consistent with a recognition of the potential relations of measures within a category. They found that the perspectives in BSC have a meaning to the management as they help him or her to notice the relationships between the measures within one category and to react to any perceived correlation (Lipe and Salterio, 2002).

Olson and Slater (2002) performed a survey on 208 US services and manufacturing firms where they wanted to see if there was any relationships between tailoring the BSC to the firm's strategic orientation and the performance of the company. This is a central point in BSC as different strategies have different requirements and indicators for success, thus the performance evaluation should be tailored to the strategic position and orientation of the firm.

They sent out 1000 questionnaires to senior managers in 1000 service and manufacturing firms, whereas 208 responded. The survey was designed to measure the competitive strategy type adopted by the firm, how much emphasis were placed in each of the different perspectives of the BSC and lastly the perceived performance of the firm. The findings suggested that the level of co-alignment of the BSC measures with strategy increases performance. This suggested that the performance measures of a company should be tailored to the strategic orientation of the company (Olson and Slater, 2002).

Table 2 summarizes the research discussed. The relationship between non-financial measurements and financial performance is not always as strong as one would want, in some cases the improvements in non-financial goals do not result in improved financial results (Ittner and Larcker, 2008). Research done by Davis and Albright (2004), De Geuser et al. (2009), Lin et al. (2014), and Braam and Nijssen (2004) all indicate that there is significant indications that the use of BSC helps the businesses to perform better even though this relationship can be quite complex. The research on BSC and its relationship to performance is either way not definite.

Table 2 - Summary of review articles

Authors	Purpose	Sample	Results	Strengths	Weaknesses	Dependent variable	Independent variable
Braam and Nijssen (2004)	• Explore the ways BSC is used to affect performance	• 100 B2B companies • 41 responses	• The use of BSC contributes significantly to a company's overall performance	• Aligned with today's theories • Well described sample	• Only B2B companies • Only companies from one country (Netherlands)	• (1) Overall company performance • (2) Financial company performance • (3) Perceived company performance	• (1) Baseline model effects (Product-market dynamics, Strategy) • (2) BSC usage effects (measurement focused BSC and strategy focused BSC)
Hoque and James (2000)	• Relationship between size, PLC, market position and BSC usage towards performance	• 66 Australian companies.	• Larger firms make use BSC more. • No relationship between BSC and Market position.	• Look at an interesting relationship (Size, PLC and market position) which has not been looked at much before.	• Only companies from one country (Australia)	• (1) Organizational performance • (2) Organizational characteristics	• (1) Organizational size • (2) Product-life cycle stage • (3) Market position • (4) BSC usage
Davis and Albright (2004)	• Relationship between BSC implementation and performance effects in banking.	• 'Field study' on US banking organization • 9 branches	• Branches implementing BSC outperformed the ones that did not, on Key financial measures.	• Field study showing results on in a real situation. • Effects was shown overtime.	• Ideally, more than one company could have been included. • Was not able to look at non-financial measures. • Study viewed over a 24-month timeframe. Longer time horizon could have given other results.	• (1) CKFM (composite key financial measure)	• (1) BSC use and non-BSC use
Ittner, Larcker and Randall (2003)	• Performance implications of strategic performance measurement	• Survey of 140 Us financial service firms	• BSC linked with higher measurement system satisfaction. • No link between BSC usage and accounting and/or market performance.	• Extensive research and analyses • Solid amount of citations	• Does not include technical and organizational factors that can play an important role in the perceived success of a system implementation. • Indication that several of the respondents did not interpret BSC according to theory of Kaplan and Norton.	• (1) Satisfaction • (2) ROA • (3) Sales growth • (4) 1-year stock return • (5) 3-year stock return	• (1) Various strategic performance measurement approaches
Lin, Yu and Zhang (2014)	• Performance outcomes of Balanced scorecard in Hospital administration in China	• 800 survey sent out • 593 respondents	• BSC application contributes to improvement of organizational and personal performance. • Positive impact of BSC application on hospital performance.	• High amount of respondents • Up-to-date research.	• Looks at 'only' one industry and one country.	• (1) Organizational performance • (2) Personal/ psychological performance	• (1) Adoption (vs no-adoption) of BSC • (2) Utilization of BSC performance • (3) Connection of BSC performance to incentives and rewards • (4) Comprehensiveness of BSC application
Malina and Selto (2001)	• Communication management-control attributes and effectiveness of BSC model process and impacts of non-financial performance measure management.	• Telephone interviews in addition to archival BSC data.	• Found that BSC may help organizational focus to perform towards strategic objectives. • Improves the quality of information about actions towards strategic objectives, thus more information for managerial decision-making.	• Thorough telephone interviews that went into the depth of the subject.	• The archival BSC data is, by now, 'old'.	• (1) Perception of positive outcomes	• (1) Various questions on each perspective
Olson and Slater (2002)	• Find a relation between BSC and performance	• 1000 companies 208 responses	• The use of BSC increases performance if used actively throughout the four perspectives	• High sample with moderate response rate • Compared the way BSC was used amongst low performers and high performers	• Only companies from one country (USA) • Not all aspects of the research is described in a clear manner	• (1) Performance compared to competitors	• (1) 2-5 questions on each perspective

2.5 Summary and theoretical framework (model)

It is clear that connections between BSC and performance can sometimes be hard and complex to find. Figure 8 introduces the model that will be used in this study. The model is based upon the previous research in 2.4 (Ittner and Larcker, 2003, Davis and Albright, 2004, Braam and Nijssen, 2004, Hoque and James, 2000) and the theory in chapter 2.3.

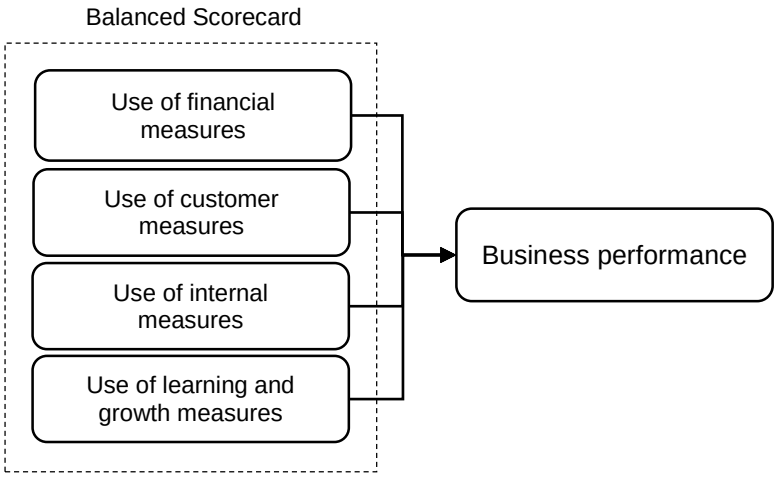

Figure 8 - The main model

Our assumption behind the model is that BSC helps the business focus the financial, customer, internal and learning and growth perspectives. This should be viewed as a process over time, where the business continuously improves, over time our assumption is that this will lead to business performance.

Based on figure 8 the following hypothesis have been constructed:

H1: Use of financial measures affects business performance positively

H2: Use of customer measures affects business performance positively

H3: Use of internal measures affects business performance positively

H4: Use of learning and growth measures affects business performance positively

3. Context

3.1 Why Møre and Romsdal

There are three main reasons to as why we chose Møre and Romsdal (MR). (1) The combination of the clusters and high 'value-creation' in MR. (2) The lack of other research on the use and manner of BSC within MR. (3) Geography, both in respect to time and the ability to gain respondents. Our assumption is that companies from MR are more willing to answer when they see that they are helping students from Aalesund University College. Thus, we assume that the chance of them answering 'quickly' is higher and the chance of them answering at all is higher.

MR consists of three districts where Sunnmøre is the largest with over 50% of the entire county's population followed by Nordmøre with 24% and Romsdal with 23%. The main population lives along the coastline and in the fjords, and a large part of the population lives on islands. The three largest towns are Ålesund, Molde and Kristiansund. 21% of the employment in MR is within health and social services, 17% within industry, 13% within retail, and 49% spread across various industries.

MR also have 17% of the total industry employment in the country, which makes it the largest industry county in Norway (Fylkesstatistikk, 2013). The maritime cluster in the county is also one of two clusters in Norway with the highest level of cluster classification, GCE (Global Centre of Expertise). A cluster of this magnitude is important when considering growth and value creation, it also strengthens the competitive power of the companies located within and around the cluster (Innovasjon Norge, 2014). A large portion of the industry is also dependent on export, whereas the recent changes in exchange rate and cost structure in Norway can be worrisome.

3.2 Industries

Møre and Romsdal is the largest fish county in Norway measured by catch volumes and value, even larger than the two next counties combined. A major reason is that ships located in MR have more licenses than other counties. In this context, fishing refers to sea and coastal fishing and does not include farming. Total revenue for fishing was in 2014 4.1 billion NOK (Temp, 2014). The fish industry in MR have also evolved over the years, it has given rise to raw material oriented industries such as fish oil, fish processing etc. and shipyards, engine factories and other related areas.

MR is also the fifth largest fish farming county in Norway measured by revenue. Total revenue was in 2014 1.8 billion NOK. More and more companies in this industry have headquarters elsewhere and not included in the statistics even though they operate in the county. Salmon, sea trout and halibut is the majority of the fish farming (Temp, 2014).

Historically speaking the county has had a large industry surrounding woodwork and handcrafts, which have evolved into the furniture industry we know today and of course, played a large part in the shipbuilding evolution. The furniture industry in MR constitutes 40% of the total industry in the country. This industry is today under heavy pressure, mainly due to low cost production abroad. In the years between 2007 and 2012, the furniture export decreased with 800 million while the import increased with 1.2 billion. In 2014 an inspiration and center of expertise was established in Sykkylven to strengthen the furniture industry (Fylkesstatistikk, 2014).

MR also has a great deal of agriculture related industry, 80% of the agricultural land in the county is used for roughage (animal food) production. The county also has the second largest amount of cows in relation to agricultural land in Norway, Rogaland has the most (Fylkesstatistikk, 2014).

3.3 Value creation

MR is the 6th largest value creation county in Norway, as seen in figure 9. This can be discussed is not a perfect representation since the figures is based on financial numbers of where company headquarters is located. In the same listing Oslo is at top with over the double as the second largest, which is because many headquarters are located there and thus not creating any value in the sense many would think when hearing the word 'value creation'.

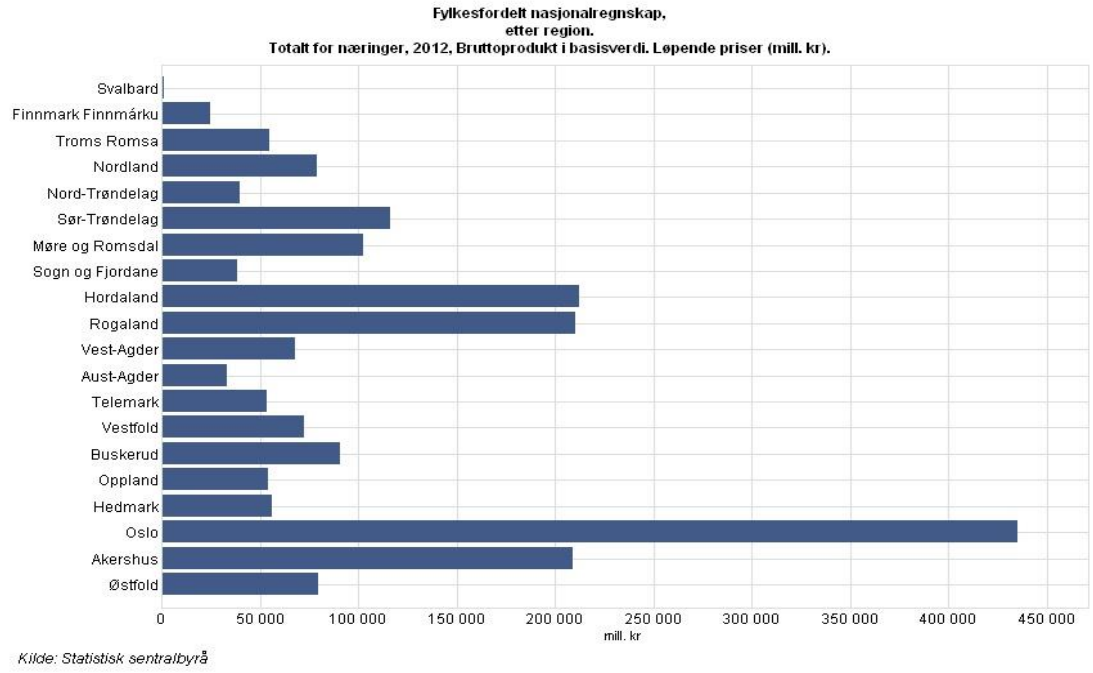

Figure 9 - Fylkesfordelt nasjonalregnskap.

The purpose of this paper is to figure out whether use of BSC affects business performance. To test this there is a need for data, thus the next chapter will describe the research design, sample, collection of data, and analysis techniques used in the study.

4. Method

4.1 Research design

Research design can be defined as the overall strategy that you choose to integrate the different components of the study in a coherent and logical way, and thereby ensuring you will effectively address the research problem (de Vaus, 2001). It should constitute the blueprint for the collection, measurement, and analysis of data. Deductive reasoning is used with some theory as a starting point and from there narrow it down to specific hypotheses that you can test. It ultimately makes us able to test these hypotheses with specific data to either support or discard the theory. Theory→ hypothesis→ observation→ confirmation (Trochim, 2006). Besides being quantitative or qualitative can research also be either exploratory, descriptive or causal. The purpose of the thesis is to describe and explain certain relationships, phenomenons and concepts in context to the use of BSC and its effect on performance.

4.2 Sample

The sample is companies operating in MR even though some might have headquarters elsewhere. The highest possible number of respondents is of course desirable, but due to practical limitations in the given time horizon we have set a limit at 400 companies. These are the 400 largest companies in the county MR based on revenue and employees. Although company revenue and such are public information in Norway through Brønnøysundregistrene there is no effective filtration options to use. For that reason we contacted the county headquarter and asked for aid to obtain the necessary information. We got information about 600 companies and in turn we made necessary adjustment and removed duplicates where e.g. one company was listed twice or more due to different departments and so on. From there we manually found phone numbers, and e-mail where available, for each company.

4.3 Collection of data

Data collection can be divided into either primary or secondary data, primary data is information that have been collected for the first time and is tailored for a particular research topic. Secondary data is mainly data that have been collected by others for other research topics than the one at hand. Since this kind of research has not been done in Møre and Romsdal before, primary data will be used.

4.3.1 Primary data

An online questionnaire was developed in Google Forms. Google Forms is a free tool made by Google to make the collection of data easy and simple. It was chosen because of the user-friendliness both for the people designing it and for the people answering it. It gave us all the options we needed to design the survey, as we wanted, distribute it and to transfer the data collected into SPSS.

In the questionnaire, the respondents were 'forced' to answer questions with predetermined answers. This was done to be able to analyse many respondents in an efficient way (Jacobsen, 2005). With a questionnaire, it is possible to get oversight of complex data in a simple way, and since the costs of these surveys are low and the time it takes to collect the data is also low. It means that we was able to collect the data from many respondents and where possible, draw conclusions and generalize (Jacobsen, 2005).

Questionnaires are however not without drawbacks, as they are hard to tailor to each individual respondents and have to be standardized. It is important to avoid asking leading questions or/and to ask questions that some may not have the knowledge to answer. As suggested by literature, we started the survey by having some general questions, then specific questions about the four perspectives and the survey finished with general information about the company. To make sure that the survey followed the recommendations in the literature it was tested by asking the adviser before being sent to the companies.

Before sending out the survey to potential respondents, we chose to call each of the members in the population. This was done to both try to encourage them to answer, but also to understand why they choose not to answer. If we were able to establish why some of them were not able to participate, it could help lower the threat of external validity.

4.3.2 Operationalization

Before the study was conducted, we made sure that the terms that we wanted to measure was being measured. This meant that we had to concretize and categorize (Jacobsen, 2005).

The term 'performance' is a complex term and it is impossible to measure performance with one question. A total of seven questions was made to help measure performance, both to be able to measure the performance of the individual business, but also to be able to validate their answers and to compare the company with other companies. We chose to measure performance through: growth in turnover, profit rate and return on assets to compare this with

other companies the respondents was asked to indicate their performance compared to their closest competitors on turnover, growth in turnover, RoA, profit rate and a total assessment of the firm's performance. The respondents was also asked to indicate how they have performed compared to their expectations in the three last years, compared to the industry average the three last years and how they have performed compared their closest competitor in the industry in the three last years.

Concretizing of the different perspectives in the BSC was done through four 'sets' of questions, one for each of the perspectives. Before each perspective, we explained what the perspective means and explained the terms used in the questions.

Table 3 - Questions on performance

Q.#	Questions on performance	Explanation
23	Please indicate how you perceive that your company has performed in relation to your nearest competitors over the last three years (2012-2014).	Determines the performance through asking for a comparison of the business' performance to that of the closest competitors
24	Please indicate how you perceive that your company has performed relative to your expectations over the last three years (2012-2014)	This question is included to create a stronger performance measure, as it adds a dimension of expectation concerning business performance.
25	Please indicate how you perceive that your company has performed compared to industry average for the past three years (2012-2014)	Helps create a stronger performance measure through adding the dimension of expectation concerning industry average.
26	Please indicate how you perceive that your company has performed in relation to the closest competitor / rival, the last 3 years. (2012-2014)	Helps create a stronger performance measure through adding the dimension of expectation with regards to their closest rival/competitor
27	Ca. % Average revenue growth over the last three years (2012-2014)	Determines the performance, constructs validity and convergent validity as the answer to this question should correlate with Q23
28	Ca. % Average profit rate (profit margin) in the last three years (2012-2014)	Determines the performance, constructs validity and convergent validity as the answer to this question should correlate with Q23
29	Ca. % Average Return on Assets over the last three years (2012-2014)	Determines the performance, constructs validity and convergent validity as the answer to this question should correlate with Q23

To be able to measure the effect BSC has on business performance it was important that we had a good measure of performance. The questions and the justification to include them can be seen in Table 3. All questions in the questionnaire were asked in Norwegian, for the

purpose of the thesis they have been translated to English (the Norwegian version can be seen in Appendix 1).

To be able to find the use and the manner of BSC, and whether this affected the performance of the companies. We needed data on the use of each of the perspectives in the BSC. The respondents was asked to answer several questions about the four perspectives, and BSC as a whole. These questions and the justification of them are all included in Table 4 and 5.

Table 4 - Questions on BSC

Q.#	Questions on BSC	Explanation
1	To what extent does the company use the following financial measures, related to the financial perspective of the BSC?(Profitability, liquidity, solidity and growth in revenue)	Included to determine the level of use of various financial perspective measurements. It should also give us an indication of the manner of use.
2	To what extent are key figures related to financial analysis of strategy used (Economic Value Added (EVA))?	Included to determine whether or not respondents uses more advanced analyses of their financial aspect
3	To what extent does the company use financial key figures?	Indicates the total level of use of the financial perspective, should correlate with the answers of Q1.
4	How much benefit does the financial key figures contribute with, today?	This should help us investigate the level of use of the financial perspective.
5	How big is the potential benefit of financial key figures?	By exploring the difference between potential benefit and the actual benefit, we get an estimate of how far the companies feel they are from their 'max'.
6	To what extent does the company measure the following aspects within the Customer Perspective? (Customer attitudes, Quality vs Price, Reputation/image and availability)	Included to determine the level of use of various customer perspective measures. It should also give us an indication of the manner of use.
7	To what extent does the company use indicators within the customer area/perspective.	Indicates the total level of use of the customer perspective, should correlate with the answers of Q6.
8	How much benefit does the indicators within the customer area give the company, today?	This should help us investigate the level of use of the customer perspective.
9	How big is the potential benefit of measurements within the customer area?	By exploring the difference between potential benefit and the actual benefit, we get an estimate of how far the companies feel they are from their 'max'.

Table 5 - Questions on BSC

10	To what extent does the company measure the following aspects within the Internal Perspective? (Daily operations, customer acquisition, perception of CSR and new solutions)	Included to determine the level of use of various internal process measures. It should also give us an indication of the manner of use.
11	To what extent does the company use indicators within the internal perspective.	Indicates the total level of use of the customer perspective, should correlate with the answers of Q10.
12	How much benefit does the indicators within the internal perspective give the company, today?	This should help us investigate the level of use of the financial perspective.
13	How big is the potential benefit of measurements within the internal perspective?	By exploring the difference between potential benefit and the actual benefit, we get an estimate of how far the companies feel they are from their 'max'.
14	To what extent does the company measure the following aspects within the learning and growth perspective? (Employee attitude, learning, cooperation, flow of information and corporate culture)	Included to determine the level of use of various learning and growth measures. It should also give us an indication of the manner of use.
15	To what extent does the company use indicators within the learning and growth perspective.	Indicates the total level of use of the customer perspective, should correlate with the answers of Q14.
16	How much benefit does the indicators within the learning and growth perspective give the company, today?	This should help us investigate the level of use of the financial perspective.
17	How big is the potential benefit of measurements within the learning and growth perspective?	By exploring the difference between potential benefit and the actual benefit, we get an estimate of how far the companies feel they are from their 'max'.
18	What would you say the degree of use of Balanced Scorecard overall is in your business?	Included to determine the level of use according to the respondent.
19	How much benefit does the use of BSC give your company, today?	This should help us investigate the overall level of use of BSC.
20	How great is the potential benefit of the use of BSC?	By exploring the difference between potential benefit and the actual benefit, we get an estimate of how far the companies feel they are from 'max'.
21	For how many years has BSC been used in your business?	Included to determine if implementation of BSC and its effect might be dependent on the time horizon.
22	To what extent would you recommend BSC to other businesses, if you were asked for advice.	Included as it would be interesting to see whether or not the respondents using BSC is satisfied with it.

Lastly, to get a description of the businesses and respondents in the sample, background questions were included. These questions and the justification for them are included in Table 6.

Table 6 - Questions on Background

Q.#	Questions on background	Explanation
30	What year was the company established?	Helps determine the age of the business, as the effects of BSC use is a process then a newly started business using BSC might not see the positive effects, yet.
31	Approximately how many employees does the company have?	Size can affect performance and affect the outcome of BSC use (Hoque and James, 2000). Thus, it is interesting to see if any conclusions can be drawn if big enough sample of the size.
32	Circa share of corporate sales that are export	Included as a control-variable, businesses with a high degree of export are more affected by macroeconomic conditions that may affect their performance.
33	What is your position? (CEO, Other, Financial Director, CFO, Marketing Manager, controller, Chief Accounting Officer)	Included to determine that the respondents were equipped to answer questions, as the questions were best suited for employees in the management.
34	What industry do you operate in? (Production, maritime, retail, financial, fishery, construction, energy, transport, other, private services, travel and information and communication)	Included to establish which industries are behind the result. Also to check if there are enough respondents to look for differences between the industries.
35	If you cannot find your industry in the dropdown menu, please enter your industry below	Included to establish which industries are behind the result. Also to check if there are enough respondents to look for differences between the industries.
36	Comments to the survey	This is included to provide feedback, especially with the regards to possible faults with the questionnaire.

4.3.3 Reliability of web-based surveys

To conduct the analysis in the thesis, collection of data was needed. For the study and the thesis to be valid, it is important that the answers are reliable. Thus, to achieve a good result in our study we needed to choose a method that gave us high reliability. Web panels display higher levels of data reliability than telephone surveys. It is argued that this comes from a lack of interviewers in web-panel administration, meaning that there is no bias from the interviewer and the respondents get privacy when answering (Braunsberger et al., 2007). A

strong reason for this increased reliability comes from the fact that in a web survey the respondents are granted more privacy. For the study in this thesis, we ask the administration of companies to give us information about several aspects of the company. Thus, the increased privacy they have when they are free to answer the web survey alone can be valuable. The strengths of web surveys are also that they have lower acquisition cost and time, and allow access to high number of potential respondents (Braunsberger et al., 2007).

4.4 Evaluation of data

A good survey should have four characteristics. (1) the survey needs to measure what it says it is going to measure (2) the survey should be externally valid (it should be possible to transfer it to other areas) and lastly (3) the results should have an internal validity (meaning that there is a causal relationship between internal areas) and (4) the survey should be reliable (Jacobsen 2005).

4.4.1 Validity

A central part of the study is to make sure that the operational terms that are used in the study measure the theoretical terms that we want to measure. A challenge with questionnaires that have locked answers (pre-determined answers for questions) is to be sure that the survey is measuring the phenomenons that is of interest (Jacobsen, 2005).

This means it is necessary to concretize and categorize, and to look at the 'construct validity'. Throughout the process of designing the questionnaire, it is important to establish whether the indicators that are chosen measure what we want or not. The 'goal' is to make the overlap between the theoretical phenomena and the operationalization as big as possible. The overlap shows how much the question covers of the theoretical phenomenon. A perfect operalization is not realistic, parts of the theoretical phenomenon will not be captured and the question(s) might, to some degree, measure other things that intended. However, the goal should be to achieve an as high construct validity as possible through a precise operalization (Jacobsen, 2005).

There are several ways to control the construct validity. First, one can examine if others with knowledge about the phenomenons experience the operalization as sensible. Secondly, it is possible to use several operational indicators to measure a theoretical phenomenon. This is done to see if the correlation between the indicators and the phenomenon is high enough for it to be 'safe' to say that they are connected. Thirdly, it is possible to if test the operational

definition is suitable to predict another independent variable, as one would assume from theory. Finally, it is possible to compare the operationalization done with other research and findings, to compare if what is done is solid (Jacobsen, 2005).
Validity is the strength of the conclusions or propositions, Cook and Campbell (1979) define it as the best available approximation of the truth or falsity of a given inference, proposition or conclusion. In other words, validity is the degree to which a measure accurately represents what it is supposed to, the accuracy of your measurement. Ensuring validity starts with a thorough understanding of what is to be measured and then making the measurement as 'correct' and accurate as possible (Hair et al., 2014). Validity and reliability is related to each other in a way that if you do not accurately measure what you are supposed to (validity), one can argue that there is no reason to use it even though the measures are consistent (reliability).

In our thesis we collect the data ourselves through a survey, validation is therefore dependent on how we designed the questionnaire to measure the element we wanted to be included to represent a picture as close as possible to the real world. Validity consists of internal and external validity (Jacobsen, 2005).

Internal validity involves if the results are perceived to be correct, and if a phenomenon is described correctly. Internal validation mostly consists of whether or not a phenomenon is described correctly and is thus more relevant in qualitative studies. As the goal of qualitative studies are to understand and deepen the understanding around terms and phenomenons (Jacobsen, 2005).

External validity is more relevant for a quantitative study. External validity looks at whether or not the results of a study can be generalized. According to Jacobsen (2005), one cannot generalize further than the population the selection was taken from. This indicates that for our study the furthest we can generalize is companies in MR. The actual population was 347 companies, and for a study to have a good external validity it is important that those who responded to the questioner can be seen as representative for population as a whole (Jacobsen, 2005). A threat to the external validity in studies is if there are large amounts of missing respondents this can damage the ability to generalize. It is natural to believe that is can be as a downside to our study. As the preferred respondents, Controllers, CFO, Managing directors etc.., are most likely very busy, we tried to make the questioner as little time consuming as we possibly could. The companies that did not answer could represent a special

category of companies and thus represent a systematic bias, and threaten the external validity (Jacobsen, 2005).

4.4.2 Reliability

Reliability is the internal consistency of the data and is estimated by grouping questions that measure the same concept together. A common method for testing the reliability is Cronbach's Alpha. In short do Cronbach's Alpha split up all the questions in every possible way and computes correlation values for each and every one. In addition, just as a correlation coefficient, the closer it is to 1, the higher the reliability.

In our thesis we use a quantitative method and data collected from a questionnaire. A challenge related to reliability will in this case be robustness. Would we get similar results if we did the survey again? A known problem is the respondent's subjective attitudes, which can change over time and therefore have an impact. Another problem is that we are measuring complex and difficult phenomenons that require several questions to capture all the elements.

4.5 Analysis Techniques

Certain errors can end up affecting your analyses in numerous ways, so spending some time checking for errors or mistakes in the start is usually worthwhile. Pallant (2013) describes the screening procedure as a three-step process, first check for errors, second find the errors, and lastly correct the errors in the data file. Our survey consisted mostly of answers limited to values between 1 and 7, and as such no errors were found at these variables. On the other hand, variables where the respondents answered percentage were encoded to a equal format, i.e. 10 were changed to 10%. In addition, variables where the respondents compared themselves to competitors with a scale from -3 to +3 were encoded to 1-7 identical to the majority of the data. This resulted in a dataset where most of the variables were data on a scale from 1 to 7. For the data collection we used Google Forms, and for the analyses we used SPSS version 22. In the next sections we will describe the main techniques used to analyze the data.

4.5.1 Descriptive statistics

Descriptive analysis is used to describe characteristics of the sample and helps check variables for any violation of several assumptions that underlie other statistical techniques (Pallant, 2013).

Descriptive statistics is suited for both continuous variables (e.g. age) and categorical variables. When using descriptive statistics on the variables we get a summary, number of respondents, the range of answers, mean of the respondents and the standard deviation. However, it will also be used to help indicate if tests as t-tests and analysis of variance is suited on the variables, as the Skewness and Kurtosis will help indicate if the distribution is normally distributed (Preferably it should be as close to 0 as possible) (Pallant, 2013). The skewness measures the symmetry of the distribution, commonly it is compared to a normal distribution. If the distribution is positively skewed it have relatively large values and tails of to the right, while a negatively skewed distribution have relatively few small values and tails off to the left. When the skewness values fall outside the ranges of +1/-1 they indicate a substantially skewed distribution (Hair et al., 2014). Kurtosis measures the peakedness or flatness of the distribution compared to normal distribution. A negative value indicates a relatively flat distribution and a positive value indicates a relatively peaked distribution (Hair et al., 2014).

When it comes to checking for assumptions that underlie other statistical techniques descriptive statistics is important is especially two areas, assessing normality and detecting outliers. Assessing the normality can be done through either the Kolmogorov-Smirnov or the Shapiro-Wilk, with above 50 samples the Kolmogorov-Smirnov test is best suited. Whereas a non-significant result is preferred (Sig. value above .05) as this indicates normality. When it comes to detecting outliers this will be done by investigating boxplot, outliers marked with '*' means that they extend more than three box-lengths from the edge of the box and those outliers should be investigated further (Pallant, 2013).

4.5.2 Correlation analysis

Correlation analysis is used to describe the strength and direction of the linear relationship between two variables (Pallant, 2013). In other words to strengthen the validity of the study correlation analysis is used to examine the correlation between answers to questions which should correlate. Despite the fact that correlation analysis is designed for interval and ratio data, correlation analysis is still very much useable for ordinal data if the data collected is treated as interval data.

The Pearson correlation coefficient have values between -1 and +1 whereas +1 indicates a perfect relationship between the variables, 0 indicates no relationship between the variables, and -1 indicates a perfect negative relationship i.e. if one variable increases the other one

decreases. Coefficients under .29 are seen as weak correlation, coefficients between .3 and .49 is considered moderate correlation, and everything above .5 is considered strong correlation (Pallant, 2013).

4.5.3 Factor analysis

Factor analysis examines the interrelationship between variables to identify potential common underlying dimensions, called factors. In other words, a data reduction technique analyses a set of variables simultaneously to ultimately group together the related variables. Factor analysis can be either exploratory or confirmatory. Exploratory factor analysis is often used to gather information about the interrelationship between a set of variables. Exploratory analysis is data driven and is used to discover the factor structure of a construct and examine its reliability. Confirmatory factor analysis is used to confirm specific hypotheses or theories concerning the structure underlying a set of variables. Confirmatory analysis is theory driven and is used to confirm the fit of a hypothesized factor structure of observed data (Pallant, 2013).

In our case, factor analysis will be used to reduce the variables in the various balance scorecard perspectives into a single variable representing its given perspective, resulting in one variable for each balanced scorecard perspective. The same technique will be used to reduce the performance variables into a single variable representing performance. A confirmatory analysis is appropriate for this study since we have the four specific perspectives and a performance construct to examine, the study will also use a principal component analysis (PCA) approach.

Assumptions and rules of thumb concerning factor analysis are that the sample size should consist of more observations than variables, and that there should a minimum of 50 observations. Usually more observations means more reliability. Second, the factorability of the correlation matrix should show at least correlations of .3 or greater, and that the Bartlett's test of sphericity should be statistically significant at $p<.05$. Multicollinearity, which is measured by Kaiser-Meyer-Olkin (KMO), should also have a value of .6 or above. Third, there should be a linear relationship between the variables, meaning that if there is not clear evidence of curvilinear relationship you can proceed (Pallant, 2013). Fourth, there should be as few outliers as possible since factor analysis is very sensitive to these. In addition, as a rule of thumb, the factor loadings should be .5 or higher, and that a variable must not have a factor loading of .3 higher than another variable.

4.5.4 Reliability analysis

Reliability analysis examines the internal consistency of the selected variables. The values of interest is the Cronbach's Alpha. Cronbach's Alpha measures each component separately to examine the factor's reliability. With other words, if the variables in the factor measures the same. The higher Cronbach's Alpha, the higher internal consistency. You normally want Cronbach's Alpha to be .7 or higher, even though .6 can be satisfactory in exploratory research. In the same analysis, information is provided about what the Cronbach's Alpha will be if one of the variables is removed from the group. This can be helpful if the Cronbach's Alpha value is low or unsatisfactory, then you can see what variable is the less consistent with the group as a whole.

4.5.5 Regression analysis

A simple linear regression analysis looks at a linear relationship to predict the value of a dependent variable, based on the value of an independent variable. With the multiple regression analysis there are two or more independent variables, these variables are either continuous or categorical. Based on these independent variables it is possible to predict new values for the dependent variable and to determine how much of the variance in the dependent variable that is explained by the independent variable (Hair et al., 2014).

There are a number of different types of multiple regression that can be used, depending on the nature of the question. The three most common analyses are (1) Standard or simultaneous, (2) Hierarchical or sequential and (3) Stepwise. In the standard multiple regression all independent variables are entered into the equation simultaneously. Each independent variable are then evaluated in terms of its ability to predict the dependent variable. This technique also indicates how much unique variance in the dependent variable that each of the independent variables are able to explain. In the second method, the hierarchical/sequential method the independent variables are entered into the equation in an order chosen by the researcher, this order has to been grounded in theory. This means that the variables are entered in blocks/steps. Each independent variable is assessed based on what it adds in the prediction of the dependent variable after previous variables have been controlled. The relative contribution of each block of variables is also indicated. In last method, stepwise multiple regression, a list of independent variables is provided and the program (SPSS) itself selects which variables will be entered and in which order they are entered. There are three different approaches of stepwise: forward selection, backward deletion and stepwise regression. All of the approaches have some problems affiliated with them, thus it is

important to understand how to choose the appropriate variables and how to interpret the output given from stepwise regression (Pallant, 2013).

Multiple regression have a number of assumptions of the data, and it is not forgiving if these assumptions are violated. The first of the assumptions is about the sample size, if violated it harms the generalizability. Meaning that if the sample size is too small then the results cannot be generalized. The most common way of deciding of the amount of respondents needed is to use the formula 'N > 50 + 8m', where m is the number of independent variables. More cases are however needed if the dependent variable is skewed (Pallant, 2013).

The second assumption is about multicollinearity, this assumption looks at the relationship among the independent variables. Multicollinearity can be detected through examining the Tolerance and the VIF. Tolerance is an indicator how much of the variability of an independent variable is not explained by the other independent variables in the model. If 'Tolerance' is small (less than .10) it indicates that the multiple correlation with other variability, while high VIF values (above 10) could indicate multicollinearity. (Pallant, 2013).

No significant outliers are the third assumption. As multiple regression is sensitive to outliers (very low or very high scores), it is important to check for extreme scores. This is normally done in the initial data screening process. Outliers are commonly defined as those with standardized residual values above about 3.3 or less than -3.3 (Pallant, 2013).

The last three assumptions, normality, linearity, homoscedasticity, all refer to different aspects of the distribution of scores and the nature of underlying relationship between the variables. These assumptions are tested by investigating the residuals (difference between obtained and predicted dependent variable scores). Normality indicates that the residuals should be normally distributed within the predicted dependent variable scores. Testing for normality is done through investigating the Kolmogorov-Smirnov significance, the Shapiro-Wilk test can also be used. However, the latter is best suited for samples with less than 50 respondents (Pallant, 2013). Linearity means that the residuals should have a linear relationship (straight line) with the predicted dependent variable scores. Homoscedastic means that the variance of the residuals about the predicted dependent variable should be the same for all predicted scores (Pallant, 2013).

With context and method explained, the next chapter will describe and present the necessary analyses.

5. Analysis and results

5.1 Respondents

The original intended population was set to be 400 companies. However, the actual population declined to 347. The exclusion of 53 companies was because of (1) 7 of the businesses no longer existed (bankruptcy), (2) 3 of the companies were non-profit companies, (3) 25 of the companies were sub-divisions of companies already asked (e.g. Company X department Ålesund and Company X department Kristiansund) and (4) 18 of the companies were single man enterprises, and these felt that they had little to add. Of the population of 347 a sample of 71 was achieved, which gives a response rate of 20 percent.

Figure 10 - Distribution of organizational position illustrates the distribution of respondents. The most frequent respondents were CEO's of the company with 46 respondents (64.8%), followed by 'Other' with 8 responses (11.3%), Financial director followed with 5 (7%), CFO 4 (5.6%), Marketing Manager 4 (5.6%), Controller 3 (4.2%) and lastly Chief Accounting Officer with 1 (1.4%). This indicates that 88.7% of the respondents perceive that they are part of the management, with 11.3% indicating that they have some other position that those enclosed by us. It is a possibility that the people that marked 'other' are part of the management team however in another position than we included. However, the results make it reasonable to assume that the respondents were well equipped to answer the questionnaire.

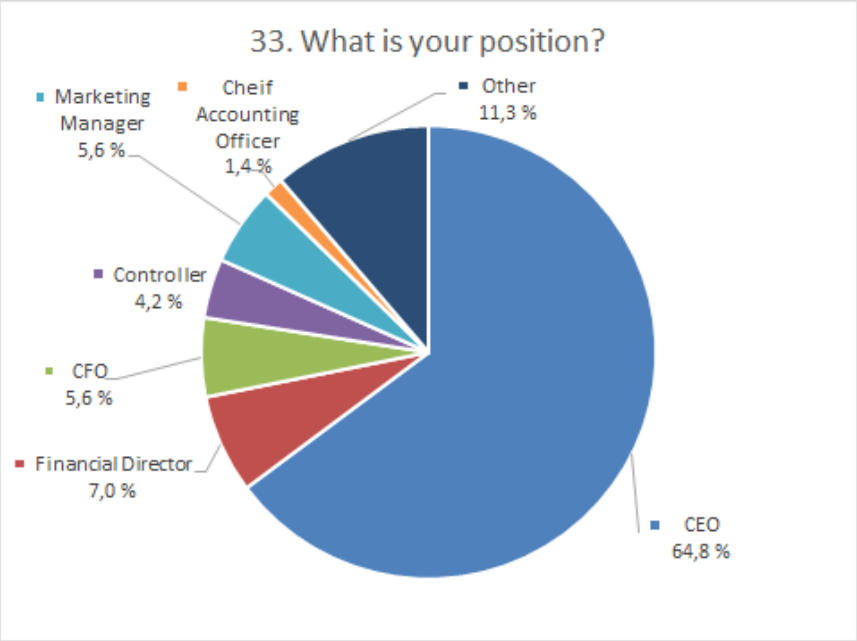

Figure 10 - Distribution of organizational position.

Of the 71 respondents all disclosed their industry. As seen in figure 11, the most common were Industry (production) with 20 respondents (28.2%), Maritime with 13 respondents (18.3%), both retail and financial with 7 respondents (9.9%), both fishery and construction with 5 respondents (7%), both energy and transport industry with 4 respondents (5.6%), both other and private services with 2 respondents (2.8%) and lastly travel and Information and communications industry with 1 respondent each (1.4%).

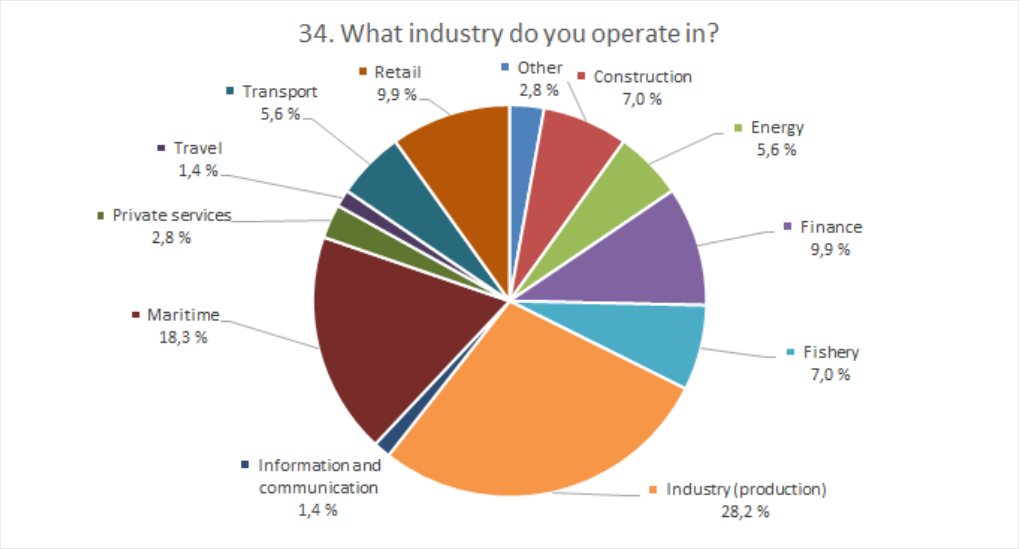

Figure 11 - Distribution of Industry.

Respondents and their perceived use of BSC

By examining the respondents further, it is possible to divide them into groups, based on Industry, the size of the company and the age of the business. As this thesis revolves around BSC it is of interest to investigate if there are any differences between these groups and their use of BSC. By using the data collected in question 18 in the survey (What would you say that the current use of BSC is overall in your business), it is possible to view the responses from different types of groups, as seen in table 7.

Table 7 - Extent of use, industry, size and age

	1	2	3	4	5	6	7	Mean	Std. Deviation
Other (n=31)	12.9 %	22.6 %	6.5 %	19.4 %	25.8 %	9.7 %	3.2 %	3.65	1.743
Financial (n=7)	0.0 %	0.0 %	0.0 %	28.6 %	42.9 %	0.0 %	28.6 %	5.29	1.254
Industry (n=20)	25.0 %	0.0 %	40.0 %	20.0 %	10.0 %	5.0 %	0.0 %	3.05	1.468
Maritime (n=13)	30.8 %	15.4 %	7.7 %	30.8 %	7.7 %	7.7 %	0.0 %	2.92	1.706
Small 1-49 (n=39)	25.6 %	15.4 %	15.4 %	20.5 %	17.9 %	2.6 %	2.6 %	3.08	1.676
Medium 50-199 (n=22)	9.1 %	13.6 %	18.2 %	27.3 %	22.7 %	9.1 %	0.0 %	3.68	1.460
Large 200+ (n=10)	10.0 %	0.0 %	10.0 %	20.0 %	20.0 %	20.0 %	20.0 %	4.80	1.874
0-19 years (n=20)	15.0 %	15.0 %	25.0 %	20.0 %	15.0 %	5.0 %	5.0 %	3.40	1.667
20-49 years (n=25)	32.0 %	20.0 %	4.0 %	20.0 %	20.0 %	0.0 %	4.0 %	2.92	1.801
50 years (n=26)	7.7 %	3.8 %	19.2 %	26.9 %	23.1 %	15.4 %	3.8 %	4.15	1.515

As table 7 indicates the financial industry have a lot higher mean than the others, 5.29 against the second largest (other companies) with 3.65. Even though it's only 7 respondents in the financial industry it gives some sort of indication that this is an industry that *seemly* rely more on the use of BSC.

Large companies have higher mean than the others, 4.80 against 3.68 and 3.08. Even though it's only 10 respondents in the large companies group we can clearly see a trend of rising use of BSC and size of the company.

Older companies have a higher mean than the younger companies, 4.15 against 3.40 and 2.92. In this case, the sample is divided quite equally so we can draw the conclusion that older companies have higher use of BSC.

5.2 Independent variables

5.2.1 Financial Perspective

The extent of use of the financial perspective is measured by five questions. In addition, three questions are included so the respondents can indicate the total use of financial measures, and the perceived current and potential benefit of the measures. The first five questions 'to what extent does the company use measures linked to (1) profitability, (2) liquidity, (3) solidity, (4) revenue growth, and (5) use of EVA' constitutes the concept financial perspective, thus the financial perspective concept is established based on the responses in the first five questions. The last three questions are 'to what extent does the company use (6) financial measures, and what is the (7) current and (8) potential benefit of these'. Table 8 includes the descriptive statistics for the responses on the financial perspective.

Table 8 reveals that profitability has the highest extent of use (5.41), followed by revenue growth (5.23), liquidity (4.51), solidity (4.39) and use of EVA (3.42).

Table 8 - Financial Perspective (n = 71)

(n=71)	1	2	3	4	5	6	7	Mean	Std. Deviation	Skewness	Kurtosis
Profitability	5.6 %	4.2 %	4.2 %	8.3 %	20.8 %	26.4 %	30.6 %	5.41	1.670	-1.228	.970
Liquidity	8.3 %	11.1 %	9.7 %	15.3 %	20.8 %	20.8 %	13.9 %	4.51	1.835	-.447	-.824
Solidity	13.9 %	11.1 %	6.9 %	12.5 %	20.8 %	18.1 %	16.7 %	4.39	2.025	-.411	-1.078
Revenue Growth	2.8 %	4.2 %	9.7 %	9.7 %	26.4 %	23.6 %	23.6 %	5.23	1.542	-.823	.217
Use of EVA	26.4 %	13.9 %	13.9 %	12.5 %	11.1 %	11.1 %	11.1 %	3.42	2.088	.354	-1.198
Financial Perspective	2.8%	5.6%	11.3%	25.4%	23.9%	14.1%	9.9%	4.59	1.420	-.381	-.178
Extent of Use	5.6 %	5.6 %	8.3 %	11.1 %	22.2 %	26.4 %	20.8 %	5.00	1.732	-.798	-.176
Current Benefit	5.6 %	5.6 %	4.2 %	13.9 %	27.8 %	23.6 %	19.4 %	5.00	1.665	-.860	.202
Potential Benefit	4.2 %	2.8 %	5.6 %	5.6 %	19.4 %	37.5 %	25.0 %	5.45	1.556	-1.356	1.454

A confirmatory factor analysis was run to investigate if the concept 'Financial Perspective' can be constructed. The analysis shows that one factor can be extracted, and that this factor explains 60% of the variance. However, the concept has to be reliable, thus the Cronbach's alpha was tested. In this case, the Cronbach's alpha is .829, which is higher than the recommended value. There are no questions that can be deleted to increase the value of the Cronbach's alpha.

The concept 'Financial Perspective' is created as a construct of questions 1a-d and question 2 in the survey, as a summated scale. The concept was created by adding the value of the respondents together and dividing by five (amount of questions). This creates a new variable, which we call 'Financial Perspective'. The syntax and the statistics regarding the factor analysis can be found in the appendix (Appendix 2, Appendix 3). Examining the financial

perspective concept closer is done through table 8 and figure 12. The concept indicates the total use the respondents have of the measurements. The mean of the concept is 4.59 and the skewness is -.381, thus it is clear that the majority of the respondents have a high use of the measurements consisting of the financial perspective.

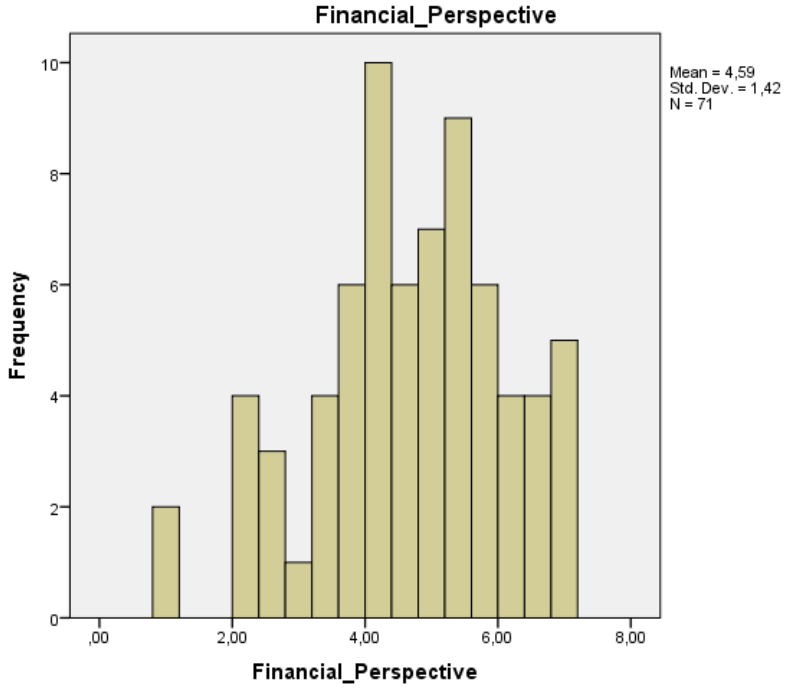

Figure 12 - Histogram (Financial)

Lastly, a correlation between 'Financial Perspective' and 'Extent of use' will help support the validity of the construct. In this case, the Pearson's correlation coefficient is positive and significant ($r = .713$, $p \leq .05$) indicating a strong correlation between the two. The conclusion is that the 'Financial Perspective' can be used as a variable further on in the analysis.

Current and Potential Benefit

Table 8 also shows that 70.4% of the respondents indicate that the perceived benefit of financial measures is high, while 19.7% indicate a low degree of benefit from using financial measures. This is assuming one interprets answers above 5 to be 'high', 4 'medium' and below 3 'low'. The current benefit of financial measures has a skewness of -.860 and a kurtosis of .202.

The potential benefits of financial measures are deemed to have a high extent of benefit, and higher than the current benefit. The potential benefit has a mean of 5.45, and as many as

81.9% of the respondents perceive the potential benefits of the financial measures to be high, while 12.6% indicate that the potential benefits are low. The potential benefit has a skewness of -1.356, which as mentioned in '4.7.1 Descriptive' indicates a substantially skewed distribution. The kurtosis is 1.454.

Drivers of current benefit

With 'current benefit' of financial measurements as the dependent variable and the five questions constituting the financial perspective as independent variables we get an adjusted $R^2 = 0.69$. Meaning that those five questions explains 69% of the variance in the current benefit of financial measurements. To assess the statistical significance of the results, we look at the F-value. In this case the F-value is 31.975 (p<.0005), making the regression model a very good fit for data (Pallant, 2013).

The variables that contribute the most to the prediction of current benefit of financial measurements is in this case 'profitability' and the 'use of EVA'. The other variables is not statistically significant at a p<.005 level, as seen in table 9.

Table 9 - Regression Coefficients current benefit (Financial)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.972	.450		2.160	.034		
	Profitability	.747	.091	.750	8.238	.000	.537	1.861
	Liquidity	.098	.101	.108	.974	.334	.359	2.785
	Solidity	-.128	.084	-.155	-1.522	.133	.427	2.344
	Growth in Revenue	-.149	.087	-.138	-1.711	.092	.683	1.464
	Use of EVA	.258	.067	.324	3.856	.000	.631	1.585

a. Dependent Variable: Current benefit financial measures

To conclude we can say that profitability, liquidity, solidity, revenue growth, and use of EVA explains 69% of the variance in the current benefits of financial measurements. Of these, profitability (B=.747) and use of EVA (B=.258) makes the largest unique contributions.

Drivers of potential benefit

With 'potential benefit' of financial measurements as the dependent variable and the five questions constituting the financial perspective as independent variables we get an adjusted $R^2 = 0.607$. The five questions explain 61% of the variance in the potential benefit

of financial measurements. The F-value is in this case 22.589 (p<.0005), making the regression model a very good fit for data (Pallant, 2013).

The variables that contributes the most to the prediction of potential benefit of financial measurements is in this case 'profitability'. The other variables is not statistically significant at a p<.005 level, as seen in table 10.

Table 10 - Regression Coefficients potential benefit (Financial)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.717	.473		3.628	.001		
	Profitability	.709	.095	.761	7.438	.000	.537	1.861
	Liquidity	.020	.106	.024	.190	.850	.359	2.785
	Solidity	-.023	.088	-.029	-.257	.798	.427	2.344
	Growth in Revenue	-.106	.092	-.105	-1.163	.249	.683	1.464
	Use of EVA	.136	.070	.182	1.928	.058	.631	1.585

a. Dependent Variable: Potential benefit financial measures

To conclude we can say that profitability, liquidity, solidity, revenue growth, and use of EVA explains 61% of the variance in the potential benefits of financial measurements. Of these, profitability (B=.709) makes the largest unique contribution.

Assumptions

The assumptions for both multiple regressions were tested in accordance with what was stated in 4.6.5. All the assumptions are met and the output can be viewed in Appendix 3.

5.2.2 Customer Perspective

The extent of use of the customer perspective is measured by four questions. In addition three questions are included let the respondents indicate the total use of customer measures, and the perceived current and potential benefit of the measures. The first four questions are 'to what extent does the company use measures linked to (1) customer attitude, (2) quality vs price, (3) reputation and (4) availability' constitutes the term/concept customer perspective. The last three questions 'to what extent does the company use (5) customer measures, and what is the (6) current and (7) potential benefit of these'. Table 11 includes the descriptive statistics for the responses on the customer perspective.

Table 11 reveals that customer attitude has the highest extent of use (4.62), followed by availability (4.59), reputation (4.52) and quality vs price (4.21).

Table 11 - Customer Perspective (n=71)

(n=71)	1	2	3	4	5	6	7	Mean	Std. Deviation	Skewness	Kurtosis
Customer attitude	5.6 %	14.1 %	11.3 %	14.1 %	12.7 %	21.1 %	21.1 %	4.62	1.930	-0.335	-1.169
Quality vs Price	5.6 %	16.9 %	15.5 %	14.1 %	19.7 %	16.9 %	11.3 %	4.21	1.796	-0.083	-1.117
Reputation	4.2 %	12.7 %	18.3 %	12.7 %	12.7 %	22.5 %	16.9 %	4.52	1.843	-0.204	-1.21
Availability	2.8 %	19.7 %	12.7 %	9.9 %	15.5 %	14.1 %	25.4 %	4.59	1.968	-0.181	-1.403
Customer Perspective	1.4 %	14.1 %	14.1 %	15.5 %	22.5 %	15.5 %	16.9 %	4.48	1.796	-0.188	-1.048
Extent of Use	5.6 %	16.9 %	9.9 %	11.3 %	26.8 %	16.9 %	12.7 %	4.38	1.808	-0.293	-1.03
Current Benefit	5.6 %	14.1 %	14.1 %	8.5 %	21.1 %	23.9 %	12.7 %	4.48	1.827	-0.356	-1.084
Potential Benefit	2.8 %	2.8 %	4.2 %	5.6 %	21.1 %	36.6 %	26.8 %	5.56	1.442	-1.426	2.009

A confirmatory factor analysis was run to investigate if the concept 'Customer Perspective' can be constructed. The analysis shows that one factor can be extracted, and that this factor explains 79% of the variance. However, the concept has to be reliable, thus the Cronbach's alpha was tested. In this case, the Cronbach's alpha is .914, which is higher than the recommended value. One question can be deleted to improve the Cronbach's alpha. The question about 'quality vs price' can be deleted to achieve a Cronbach's alpha of .915, however we chose to not delete as four questions for a concept is better than three, and the Cronbach's alpha is high enough already.

The concept 'Customer Perspective' is created as a construct of the questions 6a-d, as a summated scale. The concept was created by adding the value of the responses on the questions together and dividing by four (amount of questions). This creates a new variable, which we call 'Customer Perspective'. The syntax and the statistics regarding the factor analysis can be found in the appendix (Appendix 2, Appendix 4). Examining the customer

perspective concept is done through table 11 and figure 13. The concept indicates the total use the respondents have of the measurements. The mean of the concept is 4.48 and the skewness is -.118, thus it is clear that the majority of the respondents have a high use of the measurements consisting of the customer perspective. This is also visually clear by examining the histogram in figure 13.

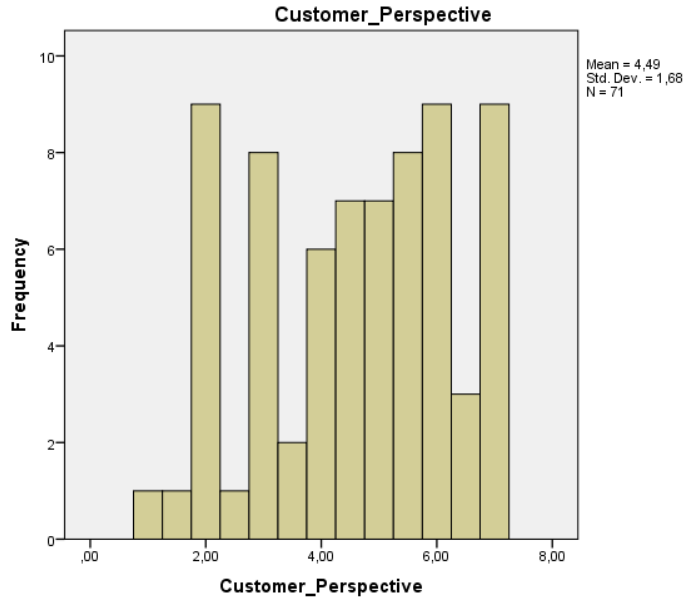

Figure 13 - Histogram (Customer)

Lastly, a correlation between 'Customer Perspective' and 'Extent of Use' will help support the validity of the construct. In this case, the Pearson's correlation coefficient is positive and significant ($r = .712$, $p \leq .05$) indicating a strong correlation between the two. The conclusion is that we can safely use 'Customer Perspective' as a variable further on in the analysis.

Current and Potential Benefit

By investigating table 11 further it is visible that 57.7% of the respondents indicate that the perceived benefit of customer measures are high, while 33.8% indicate a low degree of benefit from using customer measures. This is assuming one interprets answers above 5 to be 'high', 4 'medium' and below 3 'low'. The current benefit of customer measures has a skewness of -.860 and a kurtosis of .202.

The potential benefits of customer measures are deemed to have a high degree of benefit, and higher than the current benefit. The potential benefit has a mean of 5.45, and as many as 84.5% of the respondents perceive the potential benefits of the customer measures to be high, while 9.8% indicate that the potential benefits are low. The potential benefit has a skewness

of -1.426, which as mentioned in ‘4.7.1 Descriptive’ indicates a substantially skewed distribution. The kurtosis is 2.009, which is a lot higher than current benefit.

Drivers of current benefit

With ‘current benefit’ of customer measurements as the dependent variable and the four questions constituting the customer perspective as independent variables we get an adjusted $R^2 = 0.398$. The four questions explain 39.8% of the variance in the current benefit of customer measurements. The F-value is in this case 12.572 (p<.0005), making the regression model a good fit for data (Pallant, 2013).

The variables that contribute the most to the prediction of current benefit of customer measurements is in this case ‘customer attitude’. The other variables is not statistically significant at a p<.005 level, as seen in table 12.

Table 12 - Regression Coefficients current benefit (Customer)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.523	.486		3.134	.003		
	Customer attitude	.562	.156	.593	3.599	.001	.316	3.161
	Quality vs Price	.024	.138	.024	.177	.860	.466	2.144
	Reputation	.160	.177	.161	.904	.369	.270	3.710
	Availability	-.102	.166	-.109	-.613	.542	.270	3.710

a. Dependent Variable: Current benefit customer measures

To conclude we can say that customer attitude, quality vs price, reputation and availability explains 39.8% of the variance in the current benefits of customer measurements. Of these, customer attitude (B=.562) makes the largest unique contribution.

Drivers of potential benefit

With ‘potential benefit’ of customer measurements as the dependent variable and the four questions constituting the customer perspective as independent variables we get an adjusted $R^2 = 0.177$. Meaning that those four questions explains 17.7% of the variance in the potential benefit of customer measurements. The F-value is in this case 3.942 (p<.05), making the regression model an ok fit for data (Pallant, 2013).

The variables that contributes the most to the prediction of potential benefit of customer measurements is in this case ‘customer attitude’. The other variables is not statistically significant at a p<.05 level, as seen in table 13.

Table 13 - Regression Coefficients potential benefit (Customer)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.123	.457		9.017	.000		
	Customer attitude	.349	.147	.467	2.374	.020	.316	3.161
	Quality vs Price	.063	.130	.079	.485	.629	.466	2.144
	Reputation	-.131	.167	-.167	-.784	.436	.270	3.710
	Availability	.034	.156	.046	.215	.830	.270	3.710

a. Dependent Variable: Potential benefit customer measures

To conclude we can say that customer attitude, quality vs price, reputation and availability explains 17.7% of the variance in the potential benefits of customer measurements. Of these variables customer attitude (B=.349) makes the largest unique contribution. It should be mentioned that the dependent variable has been squared in order to achieve normality within the residuals, thus the relationship is non-linear (curved). This is the only regression in the thesis where this was necessary.

Assumptions

The assumptions for both multiple regressions were tested in accordance with what was stated in 4.6.5. One assumption was in this case violated. The residuals was not normally distributed. In attempt to resolve this issue, the variables were standardized. After standardizing, the residuals was normally distributed and we could go on with the analysis. Nevertheless, this means that there is not a linear relationship between the variables in the potential benefit analysis. The way this was done can be seen in appendix 4.

5.2.3 Internal Perspective

The extent of use of the Internal perspective is measured by four questions. In addition, three questions are included to let the respondents indicate the total use of internal measures, and the perceived current and potential benefit of the measure. The first four questions 'to what extent does the company use measures linked to (1) daily operations, (2) customer acquisition, (3) perception of CSR and (4) new solutions for the customers' constitutes the concept internal perspective. The last three questions are 'to what degree does the company (5) use internal measures, and what is the (6) current and (7) potential benefit of these'.

Table 14 shows that daily operations has the highest degree of use (4.24), followed by new solutions (3.87), customer acquisition (3.85) and perception of CSR (3.38).

Table 14 - Internal Perspective (n = 71)

(n=71)	1	2	3	4	5	6	7	Mean	Std. Deviation	Skewness	Kurtosis
Daily operations	12.7 %	7.0 %	14.1 %	22.5 %	14.1 %	12.7 %	16.9 %	4.24	1.931	-0.154	-0.974
Customer Aq.	18.3 %	12.7 %	12.7 %	16.9 %	14.1 %	12.7 %	12.7 %	3.85	2.026	0.047	-1.226
Perception CSR	25.4 %	14.1 %	11.3 %	19.7 %	11.3 %	12.7 %	5.6 %	3.38	1.937	0.241	-1.164
New solutions	16.9 %	14.1 %	9.9 %	18.3 %	16.9 %	12.7 %	11.3 %	3.87	1.978	-0.013	-1.187
Internal Perspective	8.5 %	12.7 %	21.1 %	23.9 %	16.9 %	9.9 %	7.0 %	3.83	1.663	0.083	-0.829
Extent of Use	9.9 %	14.1 %	14.1 %	14.1 %	26.8 %	14.1 %	7.0 %	4.40	1.760	-0.195	-0.975
Current Benefit	5.6 %	9.9 %	12.7 %	11.3 %	35.2 %	15.5 %	9.9 %	4.46	1.646	-0.470	-0.527
Potential Benefit	4.2 %	4.2 %	9.9 %	4.2 %	26.8 %	26.8 %	23.9 %	5.21	1.647	-0.981	0.291

A confirmatory factor analysis was run to investigate if the concept 'Internal Perspective' can be constructed. The analysis shows that one factor can be extracted, and that this factor explains 71% of the variance. However, the concept has to be reliable, thus the Cronbach's alpha was tested. In this case, the Cronbach's alpha is .866, which is higher than the recommended value. By deleting the question about 'Daily Operations' the Cronbach's alpha would increase to .870. The change is however marginal, the Cronbach's Alpha is high enough and it is better to have four questions defining the concept than three.

The concept 'Internal Perspective' is created as a construct of the questions 10a-d, as a summated scale. The concept was created by adding the value of the responses on the questions together and dividing by four (amount of questions). This creates a new variable, which we call 'Internal Perspective'. The syntax and the statistics regarding the factor analysis can be found in the appendix (Appendix 2, Appendix 5). Examining the internal perspective concept is done through table 14 and figure 14. The concept indicates the total use the respondents have of the measurements. The mean of the concept is 3.83 and the

skewness is 0.083, thus the distribution of the answers are (almost) normally distributed around the mean. This is also visually clear by examining the histogram in figure 14.

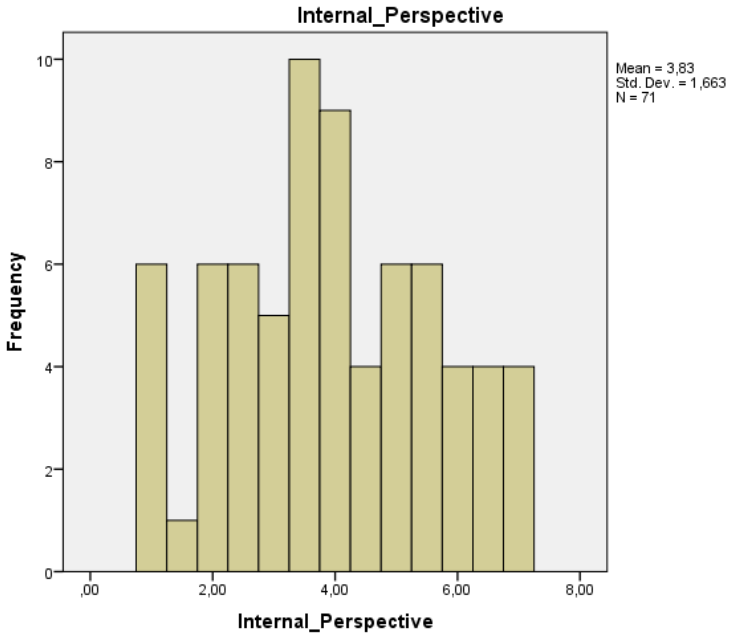

Figure 14 - Histogram (Internal)

A correlation analysis between 'Internal Perspective' and 'Extent of use' will help support the validity of the construct. . In this case, the Pearson's correlation coefficient is positive and significant ($r = .797$, $p \leq .05$), indicating a strong correlation between the two. The conclusion is that we can safely use 'Internal Perspective' as a variable further on in the analysis.

Current and Potential Benefit

Table 14 also indicates that 60.6% of the respondents perceived benefit of internal measures to be high, while 28.2% indicate a low degree of benefit from using internal measures. The current benefit of internal measures has a skewness of -.470 and a kurtosis of -.527.

The potential benefits of internal measures are deemed to have a high extent of benefit, and higher than the current benefit. The potential benefit has a mean of 5.45, and as many as 77.5% of the respondents perceive the potential benefits of the internal measures to be high, while 18.3% indicate that the potential benefits are low. The potential benefit has a skewness of -.981, which is close to being substantially skewed. The kurtosis is .291.

Drivers of current benefit

With 'current benefit' of internal measurements as the dependent variable and the four questions constituting the internal perspective as independent variables we get an adjusted $R^2 = 0.456$. Meaning that those four questions explains 45.6% of the variance in the current benefit of internal measurements. The F-value is in this case 15.652 (p<.0005), making the regression model a good fit for data (Pallant, 2013).

The variables that contributes the most to the prediction of current benefit of internal measurements is in this case 'daily operations' and 'perception CSR'. The other variables is not statistically significant at a p<.05 level, as seen in table 15.

Table 15 - Regression Coefficients current benefit (Internal)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.795	.377		4.762	.000		
	Daily operations	.310	.096	.364	3.228	.002	.612	1.634
	Customer acquisition	.158	.112	.195	1.413	.162	.410	2.439
	Perception CSR	.247	.112	.291	2.205	.031	.446	2.243
	New solutions	-.023	.121	-.028	-.192	.848	.370	2.703

a. Dependent Variable: Current benefit internal measures

To conclude we can say that daily operations, customer acquisition, perception CSR and new solutions explains 45.6% of the variance in the current benefits of internal measurements. Of these, customer attitude (B=.310) and perception CSR (B=.247) makes the largest unique contributions.

Drivers of potential benefit

With 'potential benefit' of internal measurements as the dependent variable and the four questions constituting the internal perspective as independent variables we get an adjusted $R^2 = 0.486$. Meaning that those four questions explains 48.6% of the variance in the potential benefit of internal measurements. The F-value is in this case 17.551 (p<.0005), making the regression model a good fit for data (Pallant, 2013).

The variables that contributes the most to the prediction of potential benefit of internal measurements is in this case 'daily operations' and 'perception CSR'. The other variables is not statistically significant at a p<.05 level, as seen in table 16.

Table 16 - Regression Coefficients potential benefit (internal)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.452	.366		6.693	.000		
	Daily operations	.344	.093	.404	3.685	.000	.612	1.634
	Customer acquisition	.130	.109	.160	1.195	.236	.410	2.439
	Perception CSR	.256	.109	.301	2.347	.022	.446	2.243
	New solutions	-.017	.117	-.020	-.144	.886	.370	2.703

a. Dependent Variable: Potential benefit internal measures

To conclude we can say that daily operations, customer acquisition, perception CSR and new solutions explains 48.6% of the variance in the potential benefits of internal measurements. Of these, customer attitude (B=.344) and perception CSR (B=.256) makes the largest unique contributions.

The assumptions for both multiple regressions were tested in accordance with what was stated in 4.6.5. No assumptions are breached and the output can be viewed in Appendix 5.

5.2.4 Learning and Growth Perspective

The extent of use of the learning and growth perspective is measured by five questions. In addition, three questions are included to let the respondents indicate the total use of financial measures, and the perceived current and potential benefit of the measures. The first five questions 'to what extent does the company use measures linked to (1) Employee attitude, (2) learning, (3) cooperation, (4) flow of information, and (5) corporate culture' constitutes the concept learning and growth perspective. The last three questions are 'to what degree do the company (6) use learning and growth measures, and what is the (7) current and (8) potential.

Table 17 indicates that employee attitude has the highest degree of use (3.97), followed by learning (3.87), cooperation (3.82), flow of information and corporate culture (3.72).

Table 17 - Learning and Growth Perspective (n=71)

(n=71)	1	2	3	4	5	6	7	Mean	Std. Deviation	Skewness	Kurtosis
Employee attitude	11.3 %	16.9 %	11.3 %	16.9 %	22.5 %	9.9 %	11.3 %	3.97	1.867	-0.026	-1.055
Learning	8.5 %	16.9 %	18.3 %	21.1 %	14.1 %	12.7 %	8.5 %	3.87	1.748	0.150	-0.902
Cooperation	11.3 %	18.3 %	14.1 %	19.7 %	15.5 %	12.7 %	8.5 %	3.82	1.823	0.105	-1.03
Flow of info.	9.9 %	19.7 %	12.7 %	18.3 %	21.1 %	14.1 %	4.2 %	3.80	1.721	-0.031	-1.071
Corporate culture	12.7 %	15.5 %	21.1 %	16.9 %	14.1 %	11.3 %	8.5 %	3.72	1.814	0.212	-0.933
Learning and Growth	7.0 %	19.7 %	15.5 %	23.9 %	15.5 %	12.7 %	5.6 %	3.84	1.683	0.081	-0.973
Extent of Use	11.3 %	11.3 %	15.5 %	23.9 %	18.3 %	11.3 %	8.5 %	3.94	1.748	-0.044	-0.786
Current Benefit	8.5 %	8.5 %	16.9 %	25.4 %	18.3 %	14.1 %	8.5 %	4.13	1.673	-0.131	-0.637
Potential Benefit	4.2 %	4.2 %	7.0 %	14.1 %	23.9 %	28.2 %	18.3 %	5.07	1.589	-0.867	0.265

A confirmatory factor analysis was run to investigate if the concept Learning and Growth Perspective' can be constructed. The analysis shows that one factor can be extracted, and that this factor explains 88% of the variance. However, the concept has to be reliable, thus the Cronbach's alpha was tested. In this case, the Cronbach's alpha is .966, which is higher than the recommended value. There are no questions that can be deleted to increase the value of the Cronbach's alpha.

The concept 'Learning and Growth Perspective' is created as a construct of the questions 14a-d, as a summated scale. The concept was created by adding the value of the responses on the questions together and dividing by four (amount of questions). This creates a new variable, which we call 'Learning and Growth Perspective'. The syntax and the statistics regarding the factor analysis can be found in the appendix (Appendix 2, Appendix 6). Examining the internal perspective concept is done through table 17 and figure 15. The concept indicates the total use the respondents have of the measurements. The mean of the

concept is 3.84 and the skewness is 0.081, thus the distribution of the answers are (almost) normally distributed around the mean. This is also visually clear by examining the histogram in figure 15.

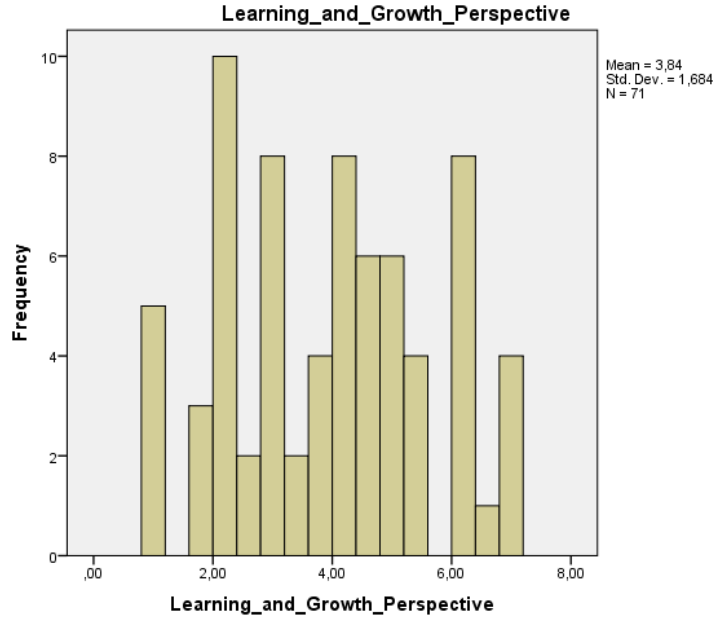

Figure 15 - Histogram (Learning and Growth)

Lastly, a correlation between 'Learning and Growth Perspective' and 'Extent of use' will help support the validity of the construct. . In this case, the Pearson's correlation coefficient is positive and significant ($r = .889$, $p \leq .05$), indicating a strong correlation between the two. The conclusion is that we can safely use Learning and Growth Perspective' as a variable further on in the analysis.

Current and Potential Benefit

Table 17 also shows that 40.9% of the respondents indicate that the perceived benefit of learning and growth measures are high, while 33.9% indicate a low degree of benefit from using learning and growth measures. The current benefit of learning and growth measures has a skewness of -.131 and a Kurtosis of -.637.

The potential benefits of learning and growth measures are deemed to have a high degree of benefit, and much higher than the current benefit. As many as 70.4% of the respondents perceive the potential benefits of the learning and growth measures to be high, while 15.4% indicate that the potential benefits are low. The potential benefit has a skewness of -.867, which is close to being substantially skewed, the Kurtosis is .265.

Drivers of current benefit

With 'current benefit' of learning and growth measurements as the dependent variable and the five questions constituting the learning and growth perspective as independent variables we get an adjusted $R^2 = 0.720$. Meaning that those five questions explains 72% of the variance in the current benefit of learning and growth measurements. The F-value is in this case 37.007 (p<.0005), making the regression model a very good fit for data (Pallant, 2013).

The variables that contributes the most to the prediction of current benefit of learning and growth measurements is in this case 'learning'. The other variables is not statistically significant at a p<.005 level, as seen in table 18.

Table 18 - Regression Coefficients current benefit (Learning and growth)

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	.814	.271		3.000	.004		
Employee attitude	.192	.128	.214	1.496	.139	.196	5.113
Learning	.410	.120	.428	3.416	.001	.255	3.927
Cooperation	-.121	.170	-.132	-.715	.477	.117	8.537
Flow of information	.141	.169	.145	.837	.406	.133	7.518
Corporate culture	.240	.161	.260	1.491	.141	.132	7.596

a. Dependent Variable: Current benefit learning and growth measures

To conclude we can say that employee attitude, learning, cooperation, flow of information and corporate culture explains 72% of the variance in the current benefits of learning and growth measurements. Of these, learning (B=.410) makes the largest unique contribution.

Drivers of potential benefit

With 'potential benefit' of learning and growth measurements as the dependent variable and the five questions constituting the learning and growth perspective as independent variables we get an adjusted $R^2 = 0.462$. Meaning that those four questions explains 46.2% of the variance in the potential benefit of learning and growth measurements. The F-value is in this case 13.031 (p<.05), making the regression model a good fit for data (Pallant, 2013).

The variables that contributes the most to the prediction of potential benefit of learning and growth measurements is in this case ‘learning’. The other variables is not statistically significant at a p<.05 level, as seen in table 19.

Table 19 - Regression Coefficients potential benefit (Learning and growth)

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	2.495	.357		6.991	.000		
Employee attitude	-.033	.169	-.039	-.196	.845	.196	5.113
Learning	.393	.158	.432	2.489	.015	.255	3.927
Cooperation	.297	.223	.341	1.331	.188	.117	8.537
Flow of information	.155	.222	.168	.699	.487	.133	7.518
Corporate culture	-.145	.212	-.166	-.686	.495	.132	7.596

a. Dependent Variable: Potential benefit learning and growth measures

To conclude we can say that employee attitude, learning, cooperation, flow of information and corporate culture explains 46.2% of the variance in the potential benefits of learning and growth measurements. Of these, learning (B=.393) makes the largest unique contribution.

Assumptions

The assumptions for both multiple regressions were tested in accordance with what was stated in 4.6.5. No assumptions are violated. These values can be seen in Appendix 6.

5.2.5 Balanced Scorecard

Extent of use

To investigate the four perspectives even further the summated scales computed in chapters 5.2.1 - 5.2.4 are included in table 20. Together with the summated scales are the responses in question 18 (What would you say that the current use of the Balanced Scorecard is, overall in your business), this is denoted 'Balanced Scorecard' in the table. Thus, the 'Balanced Scorecard' in table 20 is not a summated scale, it is simply the responses for Question 18.

Table 20 - Summary BSC perspectives

(n=71)	1	2	3	4	5	6	7	Mean	Std. Deviation	Skewness	Kurtosis
Financial Perspective	2.8 %	5.6 %	11.3 %	25.4 %	28.2 %	16.9 %	9.9 %	4.59	1.930	-0.381	-0.178
Customer Perspective	1.4 %	14.1 %	14.1 %	15.5 %	22.5 %	15.5 %	16.9 %	4.48	1.796	-0.188	-1.048
Internal Process	8.5 %	12.7 %	21.1 %	23.9 %	16.9 %	9.9 %	7.0 %	3.83	1.843	0.081	-0.973
Learning and Growth	7.0 %	19.7 %	15.5 %	23.9 %	15.5 %	12.7 %	5.6 %	3.83	1.968	0.083	-0.829
Use of Balanced Scorecard	18.3 %	12.7 %	15.5 %	22.5 %	19.7 %	7.0 %	4.2 %	3.51	1.808	0.048	-0.887
Q19: Current Benefit	18.3 %	8.5 %	11.3 %	22.5 %	23.9 %	11.3 %	4.2 %	3.76	1.827	-0.224	-0.966
Q20: Potential Benefit	7.0 %	5.6 %	5.6 %	9.9 %	23.9 %	33.8 %	14.1 %	4.96	1.442	-1.005	0.202

The mean of the extent of use of BSC is 3.51. Of the respondents 30.9% have a high use of BSC, 46.5% indicate a low use while 22.5% of the respondents have a medium use of BSC.

The summated scales of the perspectives indicate that the financial perspective has the highest use (4.59), followed by the customer perspective (4.48) and lastly a tie between learning (3.83) and growth and the internal perspective (3.83).

The amount of years the respondents have used BSC for were asked for in question 21 of the survey. The responses can be divided into two groups, the first group are those who answered 0 and the second group are those who answered above 0. Indicating that the first group does not use BSC while the second does. In addition, 29 of the respondents answered that they have used BSC for 0 years, while the remaining 42 has used it for more than 0 years.

Current and Potential Benefit

Table 20 presents the perceived benefits of Balanced Scorecard as indicated by the respondents. The potential benefit has a mean of 4.96 while the current benefit is at 3.76.

Table 20 shows that 39.4% of the respondents indicate that the perceived benefit of BSC are high, while 38.1% indicate a low degree of benefit from using BSC. The current benefit of financial measures has a skewness of -.224 and a kurtosis of -.966.

The potential benefits of BSC are deemed to have a high extent of benefit. 71.8% of the respondents perceive the potential benefits of the BSC measures to be high, while 18.2%% indicate that the potential benefits are low. The potential benefit has a skewness of -1.005, which as mentioned in ‘4.7.1 Descriptive’ indicates a substantially skewed distribution. The kurtosis is 0.202.

5.3 Performance - the dependent variable

Performance was measured and validated through seven questions, whereas the first question had 5 sub-questions. The five questions under Question 23 were 'Indicate how you perceive your company has performed in relation to your closest competitor over the three last years (2012-2014) with respect to (1) Revenue, (2) Revenue Growth, (3) Profit Margin, (4) Return on Assets, and (5) An overall assessment of the company's performance'. The next questions, question 23, 24 and 25 where 'Indicate how you perceive that your business has performed in comparison to (1) your expectations, (2) the industry average and (3) in comparison to your closest rival/competitor, over the last three years (2012-2014)'. Question 27, 28 and 29 were questions where the respondents themselves had to fill in the answer, these questions were optional however they were included to be able to validate the findings. The respondents were asked to indicate (1) Average revenue growth, (2) Average profit margin and (3) Average Return on Assets over the last three years (2012-2014). Questions 23'5, 24 25 and 26 will act as the summated scale and constitute the new term. While question 27, 28 and 29 acts as validation variables. Table 21 summarizes the questions that will denote the concept 'Business Performance'.

Table 21 - Descriptive - Business Performance (n = 71)

(n=71)	1	2	3	4	5	6	7	Mean	Std. Deviation	Skewness	Kurtosis
Q23'5	0.0 %	0.0 %	11.1 %	20.8 %	29.2 %	30.6 %	8.3 %	5.06	1.145	-0.230	-0.747
Q24	0.0 %	2.8 %	16.7 %	25.0 %	43.1 %	6.9 %	5.6 %	4.52	1.119	0.040	0.067
Q25	0.0 %	4.2 %	12.5 %	18.1 %	38.9 %	16.7 %	9.7 %	4.82	1.268	-0.250	-0.278
Q26	0.0 %	2.8 %	11.1 %	15.3 %	41.7 %	13.9 %	15.3 %	5.00	1.276	-0.212	-0.281
Business Performance								4.84	1.050	-0.497	-0.174

Q23'5. N= 71. Indicate how you perceive your company has performed in relation to your closest competitor over the three last years on an overall assessment of the company's performance.
Q24. N=71. Please indicate how you perceive that your company has performed relative to your expectations over the last three years.
Q25. N=71. Please indicate how you perceive that your company has performed compared to industry average for the past three years (2012-2014).
Q26. N=71. Please indicate how you perceive that your company has performed in relation to the closest competitor / rival the last 3 years. (2012-2014).

In the question regarding the overall assessment of the company's performance 68.1% of the respondents indicate that they were better than their closest competitor, 20.8% did about the same as their closest competitor and 11.1% was worse than their competitor. The skewness of -.230 and the kurtosis is negative -.747.

When asked about the performance compared to their expectations average 55.6% of the respondents perceive their performance to be better than their expectations, 25% as expected and 19.5% did worse than expected. The skewness is .040, which is very close to being normally distributed, the kurtosis of .067 also leans towards a normal distribution.

When the respondents were asked to indicate how they perceived the company had performed compared to the industry average 65.3% of the respondents indicated they performed better than the industry average. While 16.7% performed worse than expected and 18.1% did as expected. The skewness is -.250 and the kurtosis is -.278.

Lastly, the respondents were asked to indicate how they perceived the company had performed in relation to the closest competitor/rival. As many as 70.9% of the respondents indicated that they had performed better than their closest competitor, 13.9% has performed worse and 15.3% has performed equal to their closest competitor.

Creating and validating the variable

A confirmatory factor analysis is done to see if (1) perceived overall assessment of company performance, (2) performance relative to expectations the last 3 years, (3) performance relative to industry last 3 years, and (4) performance relative to closest rival last 3 years represents a single construct, termed 'Business Performance'. The analysis shows that one factor can be extracted, and that this factor explains 76% of the variance. However, the concept has to be reliable, thus the Cronbach's alpha is tested. In this case, the Cronbach's alpha is .895. There is one question that can marginal increase Cronbach's alpha if deleted, but the increase is small and four variables is better than three. Particular since we are already above the recommended value.

The concept 'Business Performance' is created as a construct of the questions 23'5, 24, 25 and 26 in the survey, as a summated scale. The concept was created by adding the value of the responses on the questions together and dividing by four (amount of questions). This creates a new variable, which we call 'Business Performance'. The syntax and the statistics regarding the factor analysis can be found in the appendix (Appendix 2, Appendix 7). Examining the business performance is done through table 21 and figure 16. The concept indicates the perceived performance the companies have, as estimated by the respondent of the company – the higher the number the higher the perceived performance. The mean of the concept is 4.84 and the skewness is 1.050.

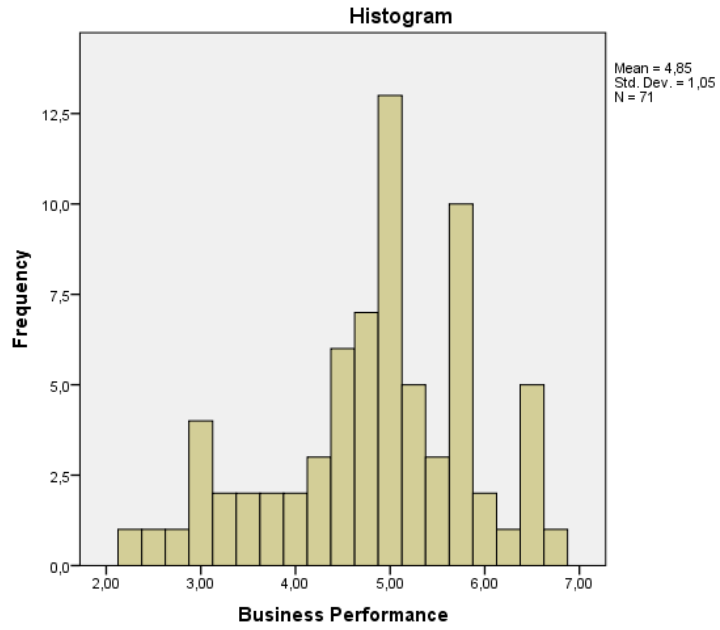

Figure 16 - Histogram (Business Performance)

Lastly we examine the validity, the questions average (1) revenue growth, (2) profit margin, (3) return on investments, and perceived (4) revenue growth, (5) revenue growth and (6) return on investments acts as control variables to the questions underlying business performance. The intention is that the same information is obtained only in a different manner. Therefore, a correlation between these will support the validity of the 'Business Performance'. Table 22 shows that there is general positive correlations between the variables, some stronger than others. All of the correlations is positive and .10 to .29 is considered a small correlation, .30 to .49 a medium correlation, and lastly .5 to 1 a large correlation (Pallant, 2013).

Table 22 - Correlations (Business Performance)

	Business performance	Avg. revenue growth	Avg. profit margin	Avg. return on investment	P. revenue growth	P. profit margin	P. return on investment
Business performance	1						
Avg. revenue growth	.480**	1					
Avg. profit margin	.457**	.326*	1				
Avg. return on investment	.414**	.383**	.560**	1			
P. revenue growth	.630**	.559**	.227	.344*	1		
P. profit margin	.820**	.378**	.382**	.419**	.516**	1	
P. return on investment	.709**	.316*	.283*	.371**	.414**	.777**	1

**Correlation is significant at the 0.01 level (2-tailed). N=71.
*Correlation is significant at the 0.05 level (2-tailed).

The conclusion is that 'Business Performance' is a reliable construct that can be used as a variable further on in the analysis.

5.4 Does the Use of BSC effect Business Performance?

The descriptive statistics of the independent and dependent variables are summarized in table 23 These are the summated scales constructed in chapter 5.2 and 5.3, not all values were 'whole numbers', however they have been rounded to the closest whole number to make comparison and interpretation possible.

Table 23 – The four BSC perspectives + Business Performance

(n=71)	1	2	3	4	5	6	7	Mean	Std. Deviation	Skewness	Kurtosis
Financial Perspective	2.8 %	5.6 %	11.3 %	25.4 %	28.2 %	16.9 %	9.9 %	4.59	1.930	-0.381	-0.178
Customer Perspective	1.4 %	14.1 %	14.1 %	15.5 %	22.5 %	15.5 %	16.9 %	4.48	1.796	-0.188	-1.048
Internal Process	8.5 %	12.7 %	21.1 %	23.9 %	16.9 %	9.9 %	7.0 %	3.83	1.843	0.083	-0.829
Learning and Growth	7.0 %	19.7 %	15.5 %	23.9 %	15.5 %	12.7 %	5.6 %	3.83	1.968	0.081	-0.973
Business Performance								4.84	1.050	-0.497	-0.174

The Financial Perspective has a mean of 4.59 with a skewness of -.381 and kurtosis of -.178. This indicates that the majority of the respondents have a high use of the financial perspective, the distribution is a bit left skewed with 55% of the respondents having a high use of the financial perspective, while 19.7% have a low use of the financial perspective and 25.4% have a medium use of the customer perspective.

For the Customer Perspective the mean is 4.48 with a skewness of -.188 and kurtosis of -1,048. This indicates that the majority of the respondents have a high use of the customer perspective, the distribution is left skewed with 54.9% of the respondents having a high use, 29.6% a low use and 22.5% have a medium use.

The internal perspective is the first perspective with a mean below medium at 3.83, it has a skewness of .083 and kurtosis of -.829. This is a sign that the majority of the respondents have a low use of the internal perspective. The distribution is quite close to being normally distributed. However, 33.8% of the respondents have a high use, 42.3% have a low and 23.9% have a medium use.

The learning and growth has a mean of 3.83 below medium use, the skewness is .081 and kurtosis -.973. 33.8% of the respondents have a high use of the learning and growth perspective while 42.2% have a low use of the perspective, 23.9% of the respondents have a medium use of the perspective.

For the Business performance variable the mean is 4.84 with a skewness of -.497 and kurtosis of -.174. This is an indication that the majority of the respondents are to the right of the mean, 54.9% of the respondents have indicated that they perceive their business performance to be high, while 29.5% indicate a low business performance and 15.4% has performed as expected.

Relationship between the independent variables and the dependent variable

First, the relationship between the independent and the dependent variable(s) were tested using a simultaneous regression. With 'business performance' as the dependent variable and the four BSC perspectives as the independent variables we get an adjusted $R^2 = 0.047$. Indicating that the perspectives explain 4.7% of the variance in business performance. The F-value is in this case 1.863 (Not significant), making the regression model a bad fit for data (Pallant, 2013).

The variables that contributes the most to the prediction of business performance is in this case 'internal perspective' followed by 'financial perspective'. None of them are significant at a p<.05 level, as seen in table 24.

Table 24 - Regression Coefficients (Business Performance)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.948	.457		8.645	.000		
	Financial perspective	.075	.117	.101	.640	.524	.542	1.845
	Customer perspective	.020	.093	.032	.216	.830	.609	1.641
	Internal perspective	.183	.122	.289	1.501	.138	.366	2.730
	Learning and growth perspective	-.061	.107	-.098	-.572	.569	.466	2.146
	(Constant)	3.948	.457		8.645	.000		

a. Dependent Variable: Business performance

In an attempt to find a result, stepwise regression is used. With 'business performance' as the dependent variable and the four BSC perspectives as the independent variables we get an adjusted $R^2 = 0.080$. Meaning that the perspectives explains 8% of the variance in business performance. The F-value is in this case 7.102 (p<.05), making the regression model a better fit for data (Pallant, 2013).

The variables that contributes the most to the prediction of business performance is in this case ‘internal perspective’. In addition, compared to the simultaneous regression analysis, this B coefficient is in fact significant at a p<.05 level as seen in table 25. The remaining perspectives are excluded, meaning they do not significantly contribute to the explanation of business performance.

Table 25 - Stepwise Regression Coefficients (Business Performance)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	4.109	.302		13.598	.000		
	Internal perspective	.193	.072	.305	2.665	.010	1.000	1.000

a. Dependent Variable: Business performance

To conclude we can say that the four BSC perspectives explains 8% of the variance in the business performance. Of the four perspectives the internal perspective (B=.193) is the only perspective that makes a significant unique contribution.

Assumptions

The assumptions for both regression analysis were tested in accordance with what was stated in 4.6.5.All assumptions are meet, the outputs for the assumption testing can be viewed in Appendix 8.

5.5 Summary of analysis

Chapter 5.1 and chapter 5.2.4 show the analysis that are conducted to answer research question 1a and b (What is the usage of BSC in companies in Møre and Romsdal and are there any differences between, size, industry and age and their use of BSC?). Our findings indicate that 41 of the respondents (59.1%) have used BSC for more than 0 years, while 21 of the respondents do not use BSC (40.9%). Further for research question 1b there are industry differences, the financial industry have the largest extent of BSC use, followed by industry (production) with maritime the lowest extent of use (of the industries compared). The findings indicated that larger enterprises (200< employees) have a extent of use of 4.80, medium (50-199 employees) 3.68 and small companies (1-49 employees) the least extent of use with 3.08. Investigating the age of the business showed that the oldest businesses (50+ years) had the highest use of BSC, while businesses between 0-19 years had an extent of use of 3.4 and companies 20-49 years old had a use of 2.92.

Chapter 5.2, 5.3 and 5.4 include the analyses set to answer the second research questions (Does the extent of BSC use affect business performance?). The hypotheses of the study are linked to this research question. Table 26 shows a summary of the hypothesis testing.

Hypothesis H3 (Use of internal measures affects business performance positively) was supported at $p<0.05$ through a stepwise regression analysis. However, for hypothesis H1 (Use of financial measures affects business performance positively), H2 (Use of customer measures affects business performance positively) and H4 (Use of learning and growth measures affects business performance positively) were not supported, thus they are discarded.

Table 26 - Hypothesis testing

		Result
H1	Use of financial measures affects business performance positively	Discarded
H2	Use of customer measures affects business performance positively	Discarded
H3	Use of internal measures affects business performance positively	Supported*
H4	Use of learning and growth measures affects business performance positively	Discarded

*$p<0.05$

6. Discussion, implications and conclusion.

This chapter consists of four parts: The first section will discuss the findings (6.1), the second section will discuss limitations and implications (6.2), the third section will discuss managerial implications (6.3), and finally there will be a conclusion (6.4).

6.1 Findings

BSC has often been categorized as financial and non-financial, instead of into four perspectives (Ittner et al., 2003). There are few studies done in Norway exploring BSC, its use and its effect on performance. Previous findings have been inconclusive. There has been research which has failed to find a link between BSC and performance (Ittner et al. 2003), while other research has found links between BSC and performance (Braam and Nijssen, 2004, Davis and Albright, 2004, Lin et al., 2014). Our study is an attempt to find out what is the case for businesses in the county Møre and Romsdal, Norway. Our study also attempts to study the extent of use, benefit and current benefit perceived by the companies in the county.

6.1.1 To what extent does companies use BSC? (RQ1)

What is the usage of BSC in companies in the Møre and Romsdal? (RQ1a)

Our findings show that the average extent of use is above the midpoint of the scale '1-7' for three of the four perspectives (financial, customer and internal). The average extent of use (and use according to the summated scale) of financial perspective is 5 (4.59), for the customer perspective it is 4.38 (4.48), learning and growth perspective 3.94 (3.83) and for the internal perspective it is 4.40 (3.83). For the BSC as a whole, the average extent of use is 3.51.

By investigating the summated scales, as done in chapter 5.4, it is possible to view how many of the respondents have a high use of the four perspectives. Of the respondents 55% have a high use of the financial perspective, 54.9% of the customer perspective, 33.8% of the internal perspective and 33.8% of the learning and growth perspective, while 30.9% indicate that they have a high extent of use of BSC as a whole. It is natural that the customer and financial perspective have the highest degree of use, as companies tend to start the BSC work 'at the top' and work their way down to the core. In addition, since there are several companies that have not used BSC for long period of time, it is natural to believe that the extent of use of internal and learning and growth will increase. Of the respondents, 59.1% (42) indicate that they use BSC, whereas 30.9% of these have a high degree of use.

The findings of 59.1% are consistent with that of previous studies. In 2007 the usage was about 66% in EMEA countries (European, Middle-east and Africa), it had declined towards 50% in 2013 (Rigby and Bilodeau 2007, 2013). Those studies looked solely on the BSC as a whole, and not the four perspectives, individually. However, it is natural to believe that these follow each other to some degree.

Are there any differences between size or industries and their usage BSC? (RQ1b)

The findings in chapter 5.1 indicate that there are differences between who chooses to use BSC. The financial sector has the largest extent of use (5.29), while production (3.05) and Maritime (2.92) have the lowest. There can be several reasons for the difference. However, for production the comment 'hardly relevant for our business, standardized products and regular customers' was given by a respondent. This might help answer why the production industry has a low use of BSC, as they perceive the benefits of tools such as BSC to be low when the products and customers does not change.

Research indicates that large companies (200+ employees) have a higher use of BSC than medium (50-199) and small (1-49) companies. Large companies have an extent of use of 4.80, medium 3.86 and small 3.08. Previous studies have found that the larger the company, the greater the benefits from the use of BSC are (Hoque and James, 2000). This has not been tested in our study. However, it is apparent that the large companies have a higher extent of use than smaller companies.

6.1.2 Does use of BSC affect Business Performance? (RQ2)

Hypotheses have to be tested through statistical analysis. For the research question 'Does use of BSC affect Business Performance' four hypotheses were formulated. Through statistical analysis one out of four hypotheses was supported. (H3) The internal perspective statistically significant help explain the business performance of the respondents, while neither the (H1) financial, (H2) customer nor (H4) learning and growth perspectives were statistically significant in explaining business performance. Previous research have been divided on whether or not there is a link between use of BSC and BP, and our research seems to partial fall in each category (Ittner et al., 2003, Braam and Nijssen, 2004). Comparing to previous research is difficult because the four perspectives are often divided into 'financial' and 'non-financial' measures (Ittner et al., 2003). In other research, BSC is examined as a whole entity and not the perspectives (Lin et al., 2014). Existing theory indicates that improvements comes from leading measures resulting in lagging indicators, for example as shown by Ittner and

Larcker (1998), where a relationship between customer satisfaction measures were leading indicators of accounting performance (business-unit revenues, profit margins, and return on sales). Thus, for the internal perspective, which is a key leading measure, to be significant for the business performance of a company is natural (coherent with theory). However, this would mean the customer- and learning and growth perspective should be significant in our research as well, which is not the case. It is hard to determine to why this is the case.

As analyzed in chapter 5.2.5, the respondents were asked to indicate the potential benefit of the perspectives, and for BSC as a whole. It is natural to believe that the respondents that answered high potential benefit (on the scale 1-7), thought of benefits that could help affect Business Performance. 81.7% indicated a high potential benefit of financial, 84.5% a high potential benefit of customer, 70.4% a high potential benefit of learning and growth, 77.5% a high potential benefit of internal perspective and finally 71.8% indicated a high degree of potential benefit from using BSC. There is no doubt that the respondents perceive there to be a high potential benefit of using BSC and its perspectives. The current benefit is also quite high in several of the aspects, where 70.4% of the respondents have a high benefit from financial, 57.7% from customer, 60.9% from internal and 40.9% from learning and growth. However, in BSC as a whole 'only' 39.4% perceive the current benefits to be high. It is hard to estimate why there is such a drop towards BSC. A possible explanation could be that BSC takes time to implement and to gain the benefits. It is possible that the respondents see the benefits internally. However, the BSC as a whole is yet to be linked together to achieve higher business performance. Whatever the explanation is, it is clear that the respondents themselves perceive there to be both a current benefit and a potential benefit from the use of perspectives and from the BSC as a whole. This does support prior research that has found linkages between the use of BSC and business performance (Braam and Nijssen, 2004, Lin et al., 2014 and Olson and Slater, 2002).

In addition, a respondent commented in the survey *'Hardly relevant for our business, standardized products and regular customers'.* Similar comments came from others in the production industry, and since the production industry is a large proportion of our sample it is possible that the result is heavily influenced by their answers. If a company has regular customers and standardized products, the company is less likely to focus on such measures. This is supported by another respondent who commented: *'We are very close to the customers in their everyday lives. We are thus not so good at using this type of*

measurements'. It is possible that a large proportion of the sample have standardized products, regular customers and are close to their customers are still performing well without certain measurements, because that is simply what suits their industry best. This is why the initial thought was to separate the analysis into different industries, to both study and compare differences. However, the sample size restricted us from doing this.

Generalization of the results

The sample for both research questions is 71. The population for the thesis, which we could potentially generalize the findings to, is 347. This gives a response rate of 20.4%. Compared to other research on BSC Braam and Nijssen (2004) achieved 41%, Hoque and James (2000) got 35%, Olson and Slater (2002) got 20.8% and Lin et al. (2014) achieved a response rate of 74.1%. This is an indication that our study had a relative low response rate, compared to previous research. This can potentially hurt the external validity of the survey.

To further determine the external validity, we investigate if the industries that are represented in the sample are representative for the population. We have gotten responses from 11 different industries, whereas 4 industries consist of 66.3% of the responses. The actual number of industries in the population is unknown, and it is hard to get a precise number as the classifications that are used for classifying businesses are not consistent, and some companies may operate in several areas. However, after examining the population we feel it is safe say that there are around 15-20 different industries in the population. With 66.3% of the respondents from 4 of the industries we should be careful to say that the sample is representative for the population.

Moreover, the thesis gives a good indication of the extent of use and trends in what types of industry that uses BSC. We can safely say that the thesis measures what we want to measure. This is based on two things: (1) the majority of the respondents are a part of the management of the companies they represent, thus, they are likely to have the knowledge to answer the survey. (2) The performance measure and the perspectives are founded in theory and previous research, and they have a high internal validity according to our statistical tests.

To summarize, the response rate was somewhat low, and the study measures what it intended to measure. However, the responses are not evenly distributed. With 66.3% of the respondents consisting of four industries, the sample is likely too skewed to generalize.

6.2 Limitations and implications for future research

There are several limitation of this thesis, and these need to be acknowledged. First, we choose a quantitative research design, and when performing quantitative research the focus is on theory and/or hypothesis testing. This means that theory and/or hypothesis generalization may be lost. With a quantitative research, we were able to see that there was a big gap between current and potential benefits of the perspectives and BSC. However, why there is a big gap would probably not be possible to find out with a quantitative research. Furthermore, in our research we asked the respondents to rate the use of different measures, perspectives and the BSC as a whole on a scale of 1-7. However, it is likely that different businesses and different respondents interpret when a measure is used e.g. 4 (medium) differently, which can affect the validity and reliability of the results. Nevertheless, this is a 'common' limitation of all quantitative research.

A limitation of any study like this can be that the respondents interpret 'Financial Perspective/Customer Perspective/etc.' differently. Despite there being a theoretical definition of the terms used in the survey, some respondents may have interpreted them differently.

Moreover, missing respondents can weaken external validity in studies, and in turn diminish the ability to generalize. It is only natural to believe this also applies for this study. For this reason, we tried to make the questionnaire as little time consuming as we possibly could so that the preferred respondents, managing directors, controllers, CFO's etc. would have time to answer. Additionally, companies that did not answer the questionnaire could represent a special category of companies and thus represent a systematic bias, and threaten the external validity (Jacobsen, 2005). Thus, we chose to call each of the respondents to try to get an understanding of why some were not able to answer the questionnaire. Commonly there were three reasons to why they were not able to participate, (1) they simply did not have the time, (2) their company has policies that say that they do not give out information and/or participate in studies and (3) they felt that they had nothing to add. Neither reason (1) nor (2) shows a systematic bias, whereas (3) could indicate that certain industries have a bias against entering. However, businesses from the same industry as those who answered 'they felt they had nothing to add' answered the study and indicated that the use and benefit were high for their business, thus indicating that they this does not threaten the external validity. We failed to find any specific characteristic in the businesses that could not answer the survey. Thus,

we do not find a systematic bias and feel safe to say that the external validity is not threatened.

Ideally, more respondents would be preferred. With more respondents, the ability to cluster the respondents into different industries would be easier and analysis could have been done in more depth into the industries. However, 71 respondents is a decent amount of respondents when the time is limited and the preferred respondent is as close to the management of the company as possible.

In this study, a way of measuring performance was used for the dependent variable, the reliability testing and confirmatory factor analysis revealed that this was a very good and valid way of measuring the performance. Performance can sometimes be hard to measure in quantitative studies, thus using the same way to measure performance in future research can be a good idea. The same applies for the four perspectives. Earlier research on BSC has largely divined the perspectives into 'financial' and 'non-financial'. However, with good internal consistency, we have been able to find and factor all four perspectives and find measures that significantly have an effect on the benefit of the measures. The way we used to measure the perspectives could be used in the future in other research.

Suggestions for future research could be to focus solely on one industry, for example finance or maritime, as an impression from the work of getting respondents is that some respondents were hesitant when it was not 'specially tailored' for their industry. In addition, the comments received from respondents indicate that some industries feel they do not have the use for such tools. Thus, a series of studies, or a larger study that has the ability to compare different industries together would be of interest.

Lastly, for future research our study found there to be a big gap between the current benefit and the potential benefit for all the four perspectives and BSC. To conduct research to find out why this gap exists could be of great value for companies that utilize BSC but are not able to harvest the full effects of it. A qualitative study where 1-3 companies is investigated in case-style thesis/research to find out why the gap is would be a good addition to the existing literature concerning BSC.

6.3 Managerial implications

The managerial implications of the findings of this thesis is clear: Utilize the internal perspective of BSC. Our study showed that the internal perspective was the only perspective that influenced business performance, where new solutions were the measure that was most important in the internal perspective. Our study is also supported by Braam and Nijssen (2004), Lin et al. (2014), Olson and Slater (2002) and Davis and Albright (2004). For companies, this indicates that if suitable with the strategy of the firm, the internal perspective and its processes are valuable to look at for increased business performance.

The basis of the BSC is not to just have a high extent of use of financial, customer, internal and learning and growth measures just to have them, but there is a stressing importance of aligning the scorecard information with the business strategy (Kaplan and Norton, 1996). BSC should help put strategy to work. Management can formulate a strategy and implement it top down. However, without good bottom up information it will not be as good as it can be. This study shows a trend that a lot of businesses use Balanced Scorecard as a strategic management tool, and themselves indicate that the perceived benefits both current and potential use of BSC are high. There is little doubt that the key to BSC is to have a strategy focused BSC use, and not a Measurement focused BSC use (Braam and Nijssen, 2004). The measures and indicators in the BSC should be based on the company strategy.

This study indicates that larger companies (200+ employees) use BSC more, it was not statistically tested if large companies have higher benefits. However, a relationship between larger companies and increased performance has been found in previous research (Hoque and James, 2000). This indicates that larger companies should investigate if they could make use of BSC and align it with their strategy to achieve an increase business performance.

6.4 Conclusion

This study is one of the first in Norway to look at the extent of use of BSC, current and potential benefit of BSC, and whether or not there is a link between the extent of use and business performance. Research on BSC is however split, whereas some claim there is no link and some claim there is a strong link. The purpose of this thesis was to explore and widen the existing knowledge in this area. In the thesis, we found that 59.1% of the respondents use BSC, whereas 30.9% have a high degree of use. Large companies (200+ employees) have a higher extent of use of BSC than smaller companies. Due to lack of respondents industry differences was not possible when it comes to extent of use linked with

performance, however it was found that the financial sector have a higher extent of use of BSC. A statistically significant relationship between the internal perspective of BSC and business performance was found through a stepwise regression. This study contributed to the field of Balanced Scorecard by gathering data from companies from Møre and Romsdal, on their extent of use of BSC, their perceived benefits, their potential benefits and examining if there was a link between their use and their business performance. The thesis provided a reliable performance construct that is relatively easy to use and understand. In addition, a reliable way to factor each of the four perspectives was found.

Further research on this area is needed, especially to be able to separate the industries and to individual analysis on each industry would be of great value to the field. The internal perspective is a perspective that is a leading perspective for the other perspectives. Thus, we can conclude that this thesis has indications that use of BSC according to the theory stated by Kaplan and Norton can influence the Business performance. However, more studies are highly recommended both on the use of BSC towards business performance. Also studies that look at other strategic management tools and their effects on business performance.

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Appendices

Appendix 1 - Questionnaire

Spørreundersøkelse om bruk av Balansert Målstyring

Formålet med denne studien er å undersøke bruk av balansert målstyring i selskaper. Om din bedrift ikke bruker / anvender Balansert Målstyring så er fortsatt deres svar til stor nytte for oss.

Spørreundersøkelsen vil ta ca 5 - 10 min, er anonym og gjennomført i sammenheng med en mastergrad ved Høgskolen i Ålesund. Det vil ikke være mulig for noen å identifisere bedrifter som gjennomfører spørreundersøkelsen, verken i avhandlingen eller i datasettet. Skulle det være noen problemer eller spørsmål angående spørreskjemaet er dere velkommen til å ta kontakt.
Mvh.
Christoffer Wennersberg (95 76 17 75, chriswenn@gmail.com) og Andreas Engeskar (93 25 83 99, aengeskar@gmail.com)
* Required

Finansielle perspektivet

Finansielle mål er viktig for virksomheter i privat sektor. Perspektivet viser hvilke økonomiske mål som må nås for å tilfredsstille blant annet virksomhetens eiere. De økonomiske målene bør være tilpasset virksomhetens visjon og strategi. Sentralt i det dette perspektivene er finansielle nøkkeltall.

Begrepsforklaringer for spørsmål 1:

Lønnsomhet som for eksempel totalkapitalrentabilitet, egenkapitalrentabilitet, resultat grad osv.

Likviditet som for eksempel likviditetsgrad 1 og 2

Soliditet som for eksempel egenkapitalandel.

1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: *
(Se over for begrepsforklaring)
Mark only one oval per row.

	1 I liten grad	2	3	4	5	6	7 I Stor grad
Lønnsomhet	◯	◯	◯	◯	◯	◯	◯
Likviditet	◯	◯	◯	◯	◯	◯	◯
Soliditet	◯	◯	◯	◯	◯	◯	◯
Omsetningsvekst	◯	◯	◯	◯	◯	◯	◯

2. I hvilken grad bruker bedriften nøkkeltall knyttet til finansiell analyse av strategi.*
Som f.eks EVA (Economic Value added)
Mark only one oval.

	1	2	3	4	5	6	7	
I liten grad	◯	◯	◯	◯	◯	◯	◯	I stor grad

3. I hvilken grad bruker bedriften finansielle nøkkeltall? * Mark only one oval.

	1	2	3	4	5	6	7	
I liten grad	◯	◯	◯	◯	◯	◯	◯	I stor grad

4. Hvor stor nytte har bedriften av finansielle nøkkeltall i dag? * Mark only one oval.

	1	2	3	4	5	6	7	
I liten grad	◯	◯	◯	◯	◯	◯	◯	I stor grad

5. Hvor stor potensiell nytte mener du bedriften kan ha av å måle finansielle nøkkeltall? *
Mark only one oval.

	1	2	3	4	5	6	7	
I liten grad	◯	◯	◯	◯	◯	◯	◯	I stor grad

Kunde perspektivet

Kunde-perspektivet går ut på å identifisere kunder og kundesegment der bedriften har valgt å konkurrere. Her blir det gjerne definert hvordan bedriften skal skille seg fra konkurrenter for å kunne tiltrekke, fastholde og styrke forholdet til utvalgte kunder. Kunderelaterte nøkkeltall finner man ofte ved hjelp av markedsundersøkelser.

Begrepsforklaringer for spørsmål 6:

Kundeholdninger slik som kundelojalitet og kundetilfredshet m.m.

Kvalitet mot pris slik som kundenes oppfatning av at kvaliteten samsvarer med prisen på produkt / tjenester.

Omdømme og image slik som kundenes oppfatning av merkevaren til bedriften.

Tilgjengelighet for kundene som for eksempel teknisk support, generell support, hvor lett det er for kundene å oppnå kontakt osv.

6. I hvor stor grad måler bedriften følgende innen Kundeområdet: *
(Se over for begrepsforklaring)
Mark only one oval per row.

	1 I liten grad	2	3	4	5	6	7 I Stor grad
Kundeholdninger							
Kvalitet mot pris							
Omdømme/Image							
Tilgjengelighet for kundene							

7. I hvilken grad bruker bedriften mål / indikatorer innen kundeområdet? * Mark only one oval.

	1	2	3	4	5	6	7	
I liten grad								I stor grad

8. Hvor stor nytte har bedriften av mål / indikatorer innen kundeområdet i dag? * Mark only one oval.

	2	2	3	4	5	6	7	
I liten grad								I stor grad

9. Hvor stor potensiell nytte mener du bedriften kan ha av slike målinger innen kundeområdet?*

Mark only one oval.

	3	2	3	4	5	6	7	
I liten grad								I stor grad

Internt perspektiv

Det interne prosessperspektivet ser på aktiviteter som er kritiske for å nå finansielle og mål som omhandler kunder. Sentralt i dette perspektivet er elementer i verdikjeden til bedriften som har størst innvirkning på å tilfredsstille kundene og frembringe de økonomiske resultatene som virksomheten streber etter.

Begrepsforklaringer for spørsmål 10:

Dagligdagse leveranser slik som svartid, rettidig leveranser av produkt og tjenester m.m.

Kundeakvisisjon slik som antall nye kunder.

Oppfatning av CSR (Corporate Social Responsibility) slik som «grønn» profil, miljøprofil, bærekraftig utvikling m.m.

Utvikling av nye løsninger for kunder slik som nye produkt, tjenester eller noe nytt som gir kunder en forbedret kundeopplevelse.

10. I hvor stor grad måler bedriften indikatorer knyttet til *

Se over for begrepsforklaring
Mark only one oval per row.

	1 I liten	2 grad	3	4	5	6	7 I stor grad
Dagligdagse leveranser							
Kundeanskaffelser							
Oppfatning av CSR							
Utvikling av nye løsninger for kunder							

11. I hvilken grad bruker bedriften mål / indikatorer innen interne prosesser? * Mark only one oval.

	1	2	3	4	5	6	7	
I liten grad								I stor grad

12. Hvor stor nytte har bedriften av mål / indikatorer innen interne prosesser i dag? *
Mark only one oval.

	2	2	3	4	5	6	7	
I liten grad								I stor grad

13. Hvor stor potensiell nytte mener du bedriften kan ha av mål/nøkkeltall innen interne prosesser? * Mark only one oval.

	3	2	3	4	5	6	7	
I liten grad								I stor grad

Lærings- og vekstperspektivet

Lærings- og vekstperspektivet utgjør fundamentet for virksomhetens fremtidige suksess. Sentralt i dette perspektivet er infrastrukturen og rammebetingelsene for bedriften som fremmer innovasjon, fornyelse og læring. Innsikt i dette perspektivet er best oppnådd ved interne undersøkelser (som f.eks. medarbeiderundersøkelser og arbeidsmiljøkartlegging).

Begrepsforklaringer for spørsmål 14:

Medarbeiderholdninger slik som medarbeidertilfredshet, medarbeiderlojalitet m.m.

Læring i organisasjonen slik som nødvendige kunnskaper og ferdigheter.

Samarbeid i organisasjonen slik som teamwork, teambuilding m.m.

Informasjonsflyt slik som deling av nødvendig informasjon til å gjennomføre arbeidsoppgaver.

Bedriftskultur slik som ansattes kunnskap om bedriftens visjon, misjon m.m.

14. I hvor stor grad måler bedriften nøkkeltall knyttet til: *

Se over for begrepsforklaring
Mark only one oval per row.

	1 I liten grad	2	3	4	5	6	7 I stor grad
Medarbeiderholdninger							
Læring							
Samarbeid							
Informasjonsflyt							
Bedriftskultur							

15. I hvilken grad bruker bedriften mål / indikatorer innen læring og vekst? * Mark only one oval.

	1	2	3	4	5	6	7	
I liten grad								I stor grad

16. Hvor stor nytte har bedriften av mål / indikatorer innen læring og vekst i dag? * Mark only one oval.

	1	2	3	4	5	6	7	
I liten grad								I stor grad

17. Hvor stor potensiell nytte mener du bedriften kan ha av mål/nøkkeltall innen læring og vekst? * Mark only one oval.

	1	2	3	4	5	6	7	
I liten grad								I stor grad

Totaltvurdering av Balansert Målstyring

Balansert Målstyring er et verktøy for å styre gjennomføring av virksomhetens strategi og måle resultatoppnåelse av strategiske mål. Verktøyet går ut på å bruke både finansielle og ikke-finansielle mål for å avdekke om virksomheten er på riktig vei med hensyn til oppnåelse av overordnende mål. Balansert målstyring består vanligvis av fire dimensjoner: (1) Finansiell, (2) Kunde, (3) Interne prosesser og (4) Læring og vekst.

18. Hva vil du si at bruksgraden av Balansert målstyring totalt sett er i din bedrift? * Mark only one oval.

1	2	3	4	5	6	7

I liten grad								I stor grad

19. Hvor stor nytte har bedriften totalt sett av balansert målstyring i dag? * Mark only one oval.

	1	2	3	4	5	6	7	
I liten grad								I stor grad

20. Hvor stor potensiell nytte mener du bedriften kan totalt sett ha av balansert målstyring? * Mark only one oval.

	1	2	3	4	5	6	7	
I liten grad								I stor grad

21. I hvor mange år har balansert målstyring blitt anvendt i din bedrift? *

.....

22. I hvilken grad ville du ha anbefalt Balansert målstyring til andre bedrifter, om du ble spurt om råd? * Mark only one oval.

	1	2	3	4	5	6	7	
I liten grad								I stor grad

Sammenligning

Hensikten med denne delen av spørreundersøkelsen er å sammenligne bedriften deres med andre bedrifter.

23. Vennligst indiker hvordan du oppfatter at din bedrift har prestert i forhold til deres nærmeste konkurrenter over de siste tre årene (2012-2014). * Mark only one oval per row.

	-3 Mye dårligere konkurrenter	-2	-1	Likt med enn	+1 konkurrenter	+2	+3 Mye bedre enn konkurrenter
Omsetning							
Vekst i omsetning (%)							
Overskuddsats (resultatgrad)							
Totalkapitalrentabilitet							
En samlet vurdering av foretakets prestasjon							

24. Vennligst indiker hvordan du oppfatter at din bedrift har prestert i forhold til deres forventninger de siste tre årene (2012-2014) * Mark only one oval per row.

	-3 Mye dårligere enn forventet	-2	-1	0 Som forventet	+1	+2	+3 Mye bedre enn forventet
	⬭	⬭	⬭	⬭	⬭	⬭	⬭

25. Vennligst indiker hvordan du oppfatter at din bedrift har prestert i forhold til industri gjennomsnittet de siste 3 årene (2012-2014) * Mark only one oval per row.

	-3 Mye dårligere	-2	-1	0 Som industri gjennomsnittet	+1	+2	+3 Mye bedre enn enn industri
	⬭	⬭	⬭	⬭	⬭	⬭	⬭

26. Vennligst indiker hvordan du oppfatter at din bedrift har prestert i forhold til den aller nærmeste konkurrenten/rival, de siste 3årene. (2012-2014) * Mark only one oval per row.

	-3 Mye dårligere enn	-2	-1	0 Likt som	+1	+2	+3 Mye bedre
	⬭	⬭	⬭	⬭	⬭	⬭	⬭

Vennligst oppgi følgende finansiell informasjon

Disse spørsmålene er tatt med for å kunne utføre vitenskapelige kontroller (validitet, reliabilitet, m.m). Hvis de derfor ikke ønsker å svare på spørsmålene, kan de utelates, men vi anmoder for undersøkelsens del at de likevel medvirker.

27. Ca. % gjennomsnittlig omsetningsvekst de siste tre årene (2012-2014)

.....

28. Ca. % gjennomsnittlig overskuddsats (resultatgrad) de siste tre årene (2012-2014)

.....

29. Ca. % gjennomsnittlig totalkapitalrentabilitet de siste tre årene (2012-2014)

.....

Info om bedrift

30. Hvilket år ble bedriften etablert? *

31. Ca hvor mange ansatte har bedriften?*

32. Ca andel av bedriftens salg som er av eksport
(Vennligst oppgi ca % eksportandel)

33. Hva er din stilling? * Mark only one oval.

Adm. Dir
Controller
CFO
Markedssjef
Regnskapssjef
Økonomisjef
Annet

34. Hvilken næring opererer dere i? * Mark only one oval.

Privat tjenesteyting
Finansnæringen
Informasjons- og kommunikasjonsnæringen (IKT)
Reiselivsnæringen
Maritim Næring
Transportnæringen
Varehandel
Bergverk (Bergverk og Olje- og gass)
Energinæringen
Bygg og anlegg
Industri
Fiske og fangst
Landbruk
Annen (Oppgi under)

35. Om du ikke finner din næring i nedtrekks menyen, vennligst angi din næring under.

36.Kommentarer til spørreundersøkelsen

Appendix 2 - Syntax Summated Scale

Summated Scale Business Performance
COMPUTE BusinessPerformance=(Ytelse05 + Ytelse06 + Ytelse07 + Ytelse08) / 4.

Summated Scale Financial Perspective
COMPUTE FinansielleNøkkeltall=(Fin01Lønnsomhet + Fin02Likviditet + Fin03Soliditet + Fin04Omsetningsvekst + Fin05EVA) / 5.

Summated Scale Customer Perspective
COMPUTE KundeNøkkeltall=(Kun01Kundeholdninger + Kun02Kvalitetmotpris + Kun03Omdømme + Kun04Tilgjenglighet) / 4.

Summated Scale Internal Perspective
COMPUTE InternNøkkeltall=(Int01Dagligleveranse + Int02Kundeanskaffelser + Int03CSR + Int04Nyeløsninger) / 4.

Summated Scale Learning and Growth
COMPUTE LoVNøkkeltall=(LoV01Medarbeiderholdninger + LoV02Læring + LoV03Samarbeid + LoV04Informasjonsflyt + LoV05Bedriftskultur) / 5.

Appendix 3 – Factor analysis (Financial Perspective)

Warnings

Only one component was extracted. Component plots cannot be produced.

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Lønnsomhet]	5,41	1,670	71
1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Likviditet]	4,51	1,835	71
1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Soliditet]	4,39	2,025	71
1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Omsetningsvekst]	5,23	1,542	71
2. I hvilken grad bruker bedriften nøkkeltall knyttet til finansiell analyse av strategi.	3,42	2,088	71

Communalities

	Initial	Extraction
1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Lønnsomhet]	1,000	,618
1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Likviditet]	1,000	,739
1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Soliditet]	1,000	,686
1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Omsetningsvekst]	1,000	,434
2. I hvilken grad bruker bedriften nøkkeltall knyttet til finansiell analyse av strategi.	1,000	,523

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,000	60,000	60,000	3,000	60,000	60,000
2	,771	15,426	75,427			
3	,600	11,990	87,417			
4	,390	7,794	95,211			
5	,239	4,789	100,000			

Extraction Method: Principal Component Analysis.

Appendix 4 – Factor analysis (Customer Perspective)

Warnings

Only one component was extracted. Component plots cannot be produced.

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Kundeholdninger]	4,62	1,930	71
6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Kvalitet mot pris]	4,21	1,796	71
6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Omdømme/Image]	4,52	1,843	71
6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Tilgjengelighet for kundene]	4,59	1,968	71

Communalities

	Initial	Extraction
6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Kundeholdninger]	1,000	,820
6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Kvalitet mot pris]	1,000	,696
6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Omdømme/Image]	1,000	,825
6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Tilgjengelighet for kundene]	1,000	,837

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,178	79,450	79,450	3,178	79,450	79,450
2	,406	10,144	89,595			
3	,246	6,159	95,754			
4	,170	4,246	100,000			

Extraction Method: Principal Component Analysis.

Appendix 5 – Factor analysis (Internal Perspective)

Warnings

Only one component was extracted. Component plots cannot be produced.

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
10. I hvor stor grad måler bedriften indikatorer knyttet til [Dagligdagse leveranser]	4,24	1,931	71
10. I hvor stor grad måler bedriften indikatorer knyttet til [Kundeanskaffelser]	3,85	2,026	71
10. I hvor stor grad måler bedriften indikatorer knyttet til [Oppfatning av CSR]	3,38	1,937	71
10. I hvor stor grad måler bedriften indikatorer knyttet til [Utvikling av nye løsninger for kunder]	3,87	1,978	71

Communalities

	Initial	Extraction
10. I hvor stor grad måler bedriften indikatorer knyttet til [Dagligdagse leveranser]	1,000	,585
10. I hvor stor grad måler bedriften indikatorer knyttet til [Kundeanskaffelser]	1,000	,770
10. I hvor stor grad måler bedriften indikatorer knyttet til [Oppfatning av CSR]	1,000	,719
10. I hvor stor grad måler bedriften indikatorer knyttet til [Utvikling av nye løsninger for kunder]	1,000	,787

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,861	71,513	71,513	2,861	71,513	71,513
2	,546	13,655	85,168			
3	,332	8,296	93,464			
4	,261	6,536	100,000			

Extraction Method: Principal Component Analysis.

Appendix 6 – Factor analysis (Learning and Growth Perspective)

Warnings

Only one component was extracted. Component plots cannot be produced.

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Medarbeiderholdninger]	3,97	1,867	71
14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Læring]	3,87	1,748	71
14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Samarbeid]	3,82	1,823	71
14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Informasjonsflyt]	3,80	1,721	71
14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Bedriftskultur]	3,72	1,814	71

Communalities

	Initial	Extraction
14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Medarbeiderholdninger]	1,000	,868
14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Læring]	1,000	,816
14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Samarbeid]	1,000	,921
14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Informasjonsflyt]	1,000	,893
14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Bedriftskultur]	1,000	,905

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,403	88,067	88,067	4,403	88,067	88,067
2	,261	5,228	93,296			
3	,154	3,086	96,381			
4	,095	1,894	98,276			
5	,086	1,724	100,000			

Extraction Method: Principal Component Analysis.

Appendix 7 – Factor analysis (Business Performance)

Warnings

Only one component was extracted. Component plots cannot be produced.

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
23. Vennligst indiker hvordan du oppfatter at din bedrift har prestert i forhold til deres nærmeste konkurrenter over de siste tre årene (2012-2014). [En samlet vurdering av foretakets prestasjon]	5,06	1,145	71
24. Vennligst indiker hvordan du oppfatter at din bedrift har prestert i forhold til deres forventninger de siste tre årene (2012-2014) []	4,52	1,119	71
25. Vennligst indiker hvordan du oppfatter at din bedrift har prestert i forhold til industri gjennomsnittet de siste 3 årene (2012-2014) []	4,82	1,268	71
26. Vennligst indiker hvordan du oppfatter at din bedrift har prestert i forhold til den aller nærmeste konkurrenten/rival, de siste 3årene. (2012-2014) []	5,00	1,276	71

Communalities

	Initial	Extraction
23. Vennligst indiker hvordan du oppfatter at din bedrift har prestert i forhold til deres nærmeste konkurrenter over de siste tre årene (2012-2014). [En samlet vurdering av foretakets prestasjon]	1,000	,696
24. Vennligst indiker hvordan du oppfatter at din bedrift har prestert i forhold til deres forventninger de siste tre årene (2012-2014) []	1,000	,626
25. Vennligst indiker hvordan du oppfatter at din bedrift har prestert i forhold til industri gjennomsnittet de siste 3 årene (2012-2014) []	1,000	,863
26. Vennligst indiker hvordan du oppfatter at din bedrift har prestert i forhold til den aller nærmeste konkurrenten/rival, de siste 3årene. (2012-2014) []	1,000	,856

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,041	76,034	76,034	3,041	76,034	76,034
2	,532	13,309	89,343			
3	,270	6,756	96,098			
4	,156	3,902	100,000			

Extraction Method: Principal Component Analysis.

Appendix 8 - Regression assumptions (Financial Perspective)

Current Benefit

Independence of the Residuals (Durbin-Watson 1.716)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,843[a]	,711	,689	,929	,711	31,975	5	65	,000	1,716

a. Predictors: (Constant), 2. I hvilken grad bruker bedriften nøkkeltall knyttet til finansiell analyse av strategi. , 1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Lønnsomhet], 1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Omsetningsvekst], 1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Soliditet], 1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Likviditet]

b. Dependent Variable: 4. Hvor stor nytte har bedriften av finansielle nøkkeltall idag?

Normality (Kolmogorov-Smirnov >.200)

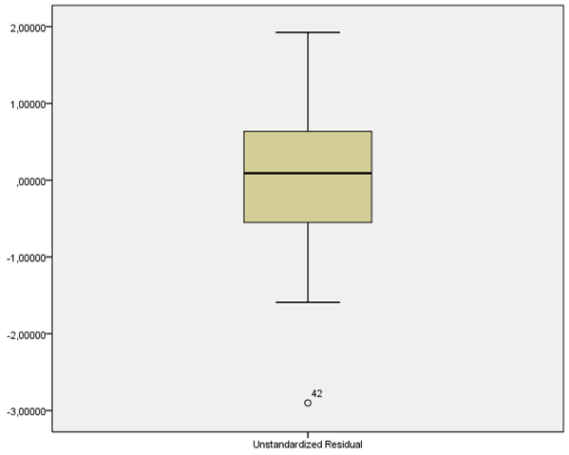
Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,065	71	,200*	,984	71	,512

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Outlier(s)



Potential Benefit

Independence of the Residuals (Durbin-Watson 1.839)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,797[a]	,635	,607	,976	,635	22,589	5	65	,000	1,839

a. Predictors: (Constant), 2. I hvilken grad bruker bedriften nøkkeltall knyttet til finansiell analyse av strategi. , 1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Lønnsomhet], 1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Omsetningsvekst], 1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Soliditet], 1. I hvor stor grad bruker bedriften finansielle nøkkeltall knyttet til: [Likviditet]

b. Dependent Variable: 5. Hvor stor potensiell nytte mener du bedriften kan ha av å måle finansielle nøkkeltall?

Normality (Kolmogorov-Smirnov >.200)

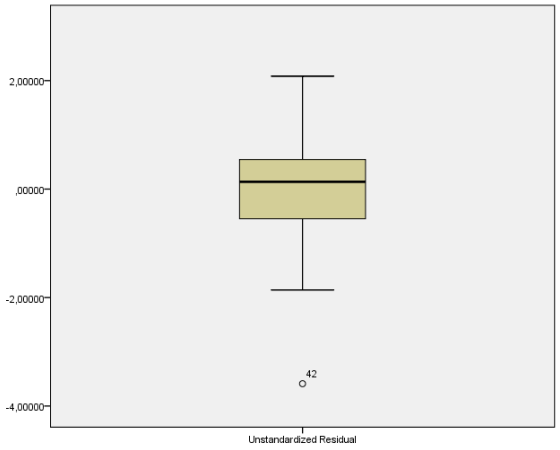
Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,091	71	,200*	,965	71	,043

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Outlier(s)



Appendix 9 - Regression assumptions (Customer Perspective)

Current Benefit

Independence of the Residuals (Durbin-Watson 2.132)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,658[a]	,432	,398	1,418	,432	12,572	4	66	,000	2,132

a. Predictors: (Constant), 6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Tilgjengelighet for kundene], 6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Kvalitet mot pris], 6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Kundeholdninger], 6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Omdømme/Image]

b. Dependent Variable: 8. Hvor stor nytte har bedriften av mål / indikatorer innen kundeområdet i dag?

Normality (Kolmogorov-Smirnov >.200)

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,089	71	,200*	,960	71	,024

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Outlier(s)

Potential Benefit

Independence of the Residuals (Durbin-Watson 2.245)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,439[a]	,193	,144	1,334	,193	3,942	4	66	,006	2,245

a. Predictors: (Constant), 6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Tilgjengelighet for kundene], 6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Kvalitet mot pris], 6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Kundeholdninger], 6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Omdømme/Image]

b. Dependent Variable: 9. Hvor stor potensiell nytte mener du bedriften kan ha av slike målinger innen kundeområdet?

Normality (Kolmogorov-Smirnov <.200)

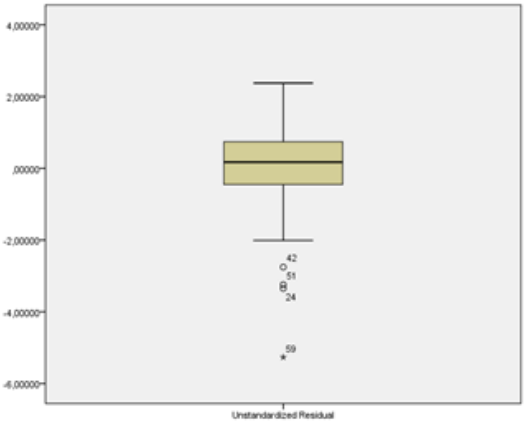
Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,083	71	,200*	,972	71	,113

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Outlier(s)



Potential Benefit (Squared)

Independence of the Residuals (Durbin-Watson 2.198)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,474[a]	,224	,177	12,20370	,224	4,772	4	66	,002	2,198

a. Predictors: (Constant), 6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Tilgjengelighet for kundene], 6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Kvalitet mot pris], 6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Kundeholdninger], 6. I hvor stor grad måler bedriften følgende innen Kundeområdet: [Omdømme/Image]

b. Dependent Variable: KVADKun07Kontroll3

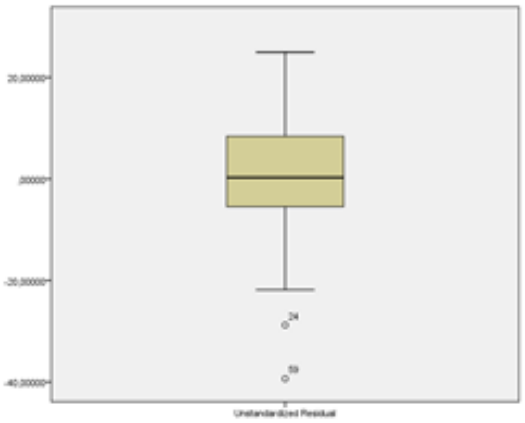
Normality (Kolmogorov-Smirnov >.200)

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,126	71	,007	,901	71	,000

a. Lilliefors Significance Correction

Outlier(s)



Appendix 10 - Regression assumptions (Internal Perspective)

Current Benefit

Independence of Residuals (Durbin-Watson 2.292)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,698[a]	,487	,456	1,214	,487	15,652	4	66	,000	2,292

a. Predictors: (Constant), 10. I hvor stor grad måler bedriften indikatorer knyttet til [Utvikling av nye løsninger for kunder], 10. I hvor stor grad måler bedriften indikatorer knyttet til [Dagligdagse leveranser], 10. I hvor stor grad måler bedriften indikatorer knyttet til [Oppfatning av CSR], 10. I hvor stor grad måler bedriften indikatorer knyttet til [Kundeanskaffelser]

b. Dependent Variable: 12. Hvor stor nytte har bedriften av mål / indikatorer innen interne prosesser i dag?

Normality (Kolmogorov-Smirnov >.200)

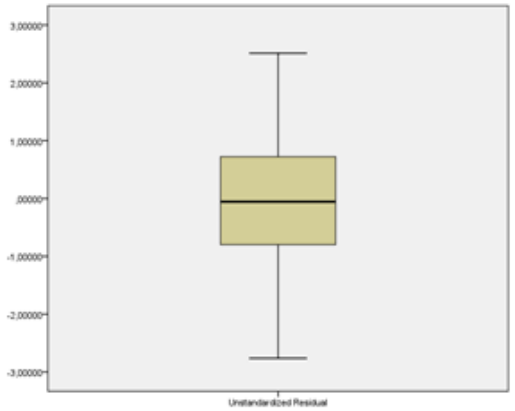
Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,050	71	,200*	,985	71	,580

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Outlier(s)



Potential Benefit

Independence of Residuals (Durbin-Watson 2.281)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,718[a]	,515	,486	1,181	,515	17,551	4	66	,000	2,281

a. Predictors: (Constant), 10. I hvor stor grad måler bedriften indikatorer knyttet til [Utvikling av nye løsninger for kunder], 10. I hvor stor grad måler bedriften indikatorer knyttet til [Dagligdagse leveranser], 10. I hvor stor grad måler bedriften indikatorer knyttet til [Oppfatning av CSR], 10. I hvor stor grad måler bedriften indikatorer knyttet til [Kundeanskaffelser]

b. Dependent Variable: 13. Hvor stor potensiell nytte mener du bedriften kan ha av mål/nøkkeltall innen interne prosesser?

Normality (Kolmogorov-Smirnov >.200)

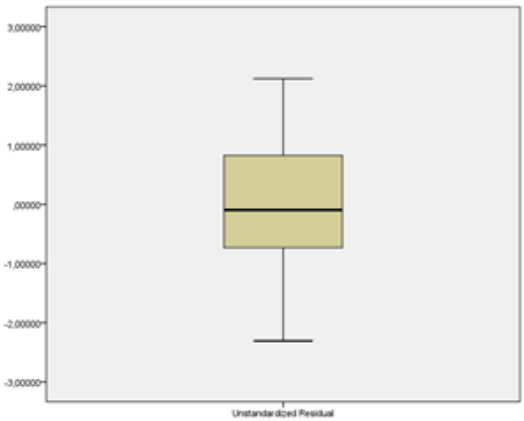
Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,053	71	,200*	,976	71	,201

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Outlier(s)



Appendix 11 - Regression assumptions (Learning and Growth Perspective)

Current Benefit

Independence of the Residuals (Durbin-Watson 2.198)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,860[a]	,740	,720	,885	,740	37,007	5	65	,000	2,198

a. Predictors: (Constant), 14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Bedriftskultur], 14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Læring], 14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Medarbeiderholdninger], 14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Informasjonsflyt], 14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Samarbeid]

b. Dependent Variable: 16. Hvor stor nytte har bedriften av mål / indikatorer innen læring og vekst i dag?

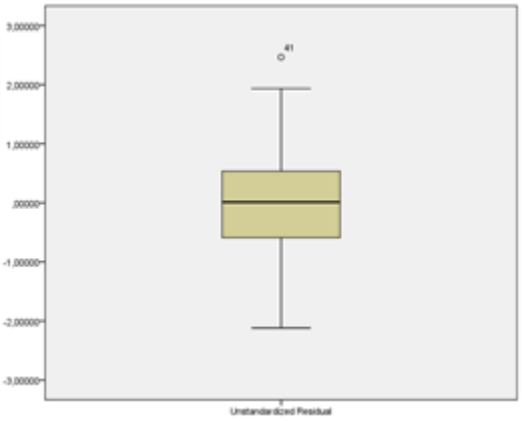
Normality (Kolmogorov-Smirnov >.200) Outlier(s)

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,062	71	,200*	,982	71	,406

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction



Potential Benefit

Independence of the Residuals (Durbin-Watson 2.296)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,708[a]	,501	,462	1,165	,501	13,031	5	65	,000	2,296

a. Predictors: (Constant), 14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Bedriftskultur], 14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Læring], 14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Medarbeiderholdninger], 14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Informasjonsflyt], 14. I hvor stor grad måler bedriften nøkkeltall knyttet til: [Samarbeid]

b. Dependent Variable: 17. Hvor stor potensiell nytte mener du bedriften kan ha av mål/nøkkeltall innen læring og vekst?

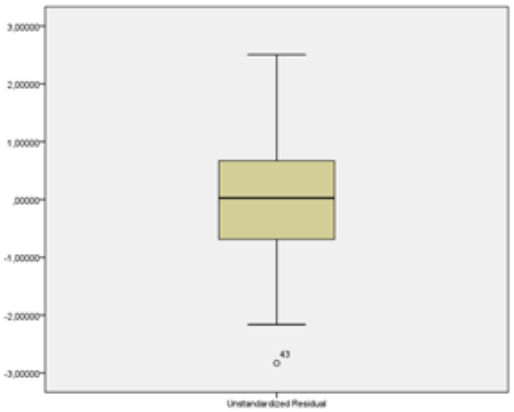
Normality (Kolmogorov-Smirnov >.200) Outlier(s)

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,057	71	,200*	,988	71	,751

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction



Appendix 12 - Regression assumptions (Testing the model)

Simultaneous regression

Independence of the Residuals (Durbin-Watson 2.207)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,319[a]	,101	,047	1,02510	,101	1,863	4	66	,127	2,207

a. Predictors: (Constant), Læring og Vekst Nøkkeltall (LoV Perspektiv), Kunde Nøkkeltall (Kunde Perspektiv), Finansielle Nøkkeltall (Finansiell Perspektiv), Interne Nøkkeltall (Intern Perspektiv)

b. Dependent Variable: Business Performance

Normality (Kolmogorov-Smirnov >.200)

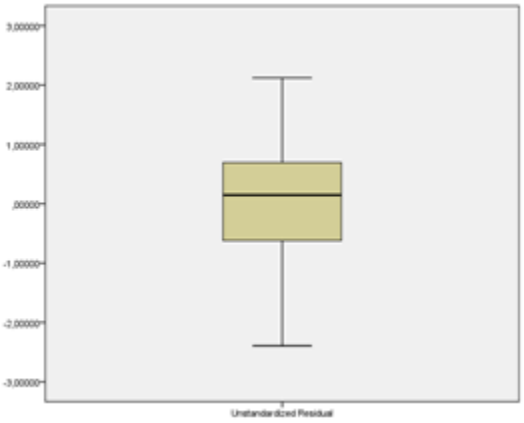
Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,079	71	,200*	,980	71	,324

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Outlier(s)



Stepwise regression

Independence of the Residuals (Durbin-Watson 2.223)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,305[a]	,093	,080	1,00709	,093	7,102	1	69	,010	2,223

a. Predictors: (Constant), Interne Nøkkeltall (Intern Perspektiv)

b. Dependent Variable: Business Performance

Normality (Kolmogorov-Smirnov >.200)

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,083	71	,200*	,985	71	,582

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Outlier(s)