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Strategic performance measurement systems in small and medium-sized enterprises

Master's Thesis in the Master's Programme Quality and Operations Management

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Abstract

Since the 1980s, financially focused performance measurement systems have been heavily criticised for leading to, among other things, short-termism and a lack of strategic focus. Companies are instead recommended to use a wider variety of performance measurements and to derive the measurements from strategy. This is mirrored in popular frameworks such as the balanced scorecard. This development has further spurred the concept of strategic performance measurement systems. Strategic performance measurement systems can be defined as a subset of performance measurement systems fulfilling the four following criteria:

1. Translation of long-term strategy into used performance measurements

2. Using performance measurements from multiple performance dimensions

3. For each dimension where measurements exist, having goals and plans for how the goals are to be reached

4. Having causal relationships between different performance measurements, for example the notion of how increased performance in one measurement drives increased performance in other measurements

There is a lack of research on the topic of to which extent and how small and medium-sized enterprises utilise these kinds of systems. The aim of this thesis was to study these questions. The study was conducted via semi-structured interviews with top management representatives from seven small and medium-sized enterprises from the greater Gothenburg region.

It was in the study found that none of the included companies fulfil all four of the above stated criteria. Criterion number one, possibly the most essential one, was found only to be fulfilled by one of the companies. Potential explanations as to why this was the case were found to be a lack of regard of the performance measurement system as a strategic tool and a lack of general knowledge on the topic. Furthermore, it was found that the majority of the included companies do not conduct formal reviews of the performance measurement system as a whole, indicating a lack of understanding on possible interrelationships between different measurements. Finally, it was found that most of the companies utilise reward systems based only on the performance of financial measurements. This may lead to a situation where the strong focus on financial performance measurements prevail even though other types of performance measurements are used as well. Overall this shows that there seems to be room for implementing more strategically focused performance measurement systems in small and medium-sized enterprises.

Keywords: performance measurement system, strategic performance measurement system, balanced scorecard, PMS, SPMS, BSC, SME

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Karl Lennartsson & Gustav Markström
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Abbreviations

BSC	Balanced Scorecard
PMS	Performance Measurement System
SME	Small and Medium-sized Enterprises
SPMS	Strategic Performance Measurement System

1. Introduction

An old classic Soviet cartoon depicts how a proud foreman of a nail factory demonstrates a gigantic nail held up by a crane (Roberts, 2002). The success indicator for the factory was set by the government and was expressed in tonnage produced. The simplest way for the factory to fulfil it was thus to produce one single, massive nail. This story is often used to ridicule the plan-based economy of communism Soviet, and it is most likely not based on real events. However, there are plenty of true similar stories from Soviet. These stories are about chandeliers so heavy they pulled down ceilings and roofing metal so thick it threatened to collapse the very buildings it was meant to protect (Roberts and LaFollette, 1990). And when the ministries tried to correct the problems by instead basing targets on quantity, the result was too small and brittle products. From an outside perspective it is painfully obvious that a combination of targets, and targets based on product quality could have improved the situation, but the stories still go to show the truth in well-known proverbs such as *"What you measure is what you get"*. Additionally, they show that there often are unintended consequences of setting targets based on specific measures.

1.1 Background and purpose

The combination of measures a company uses, the collection of the necessary data, as well as the interpretation and usage of the information from the measures make up a company's performance measurement system (PMS). Classical PMSs were mainly focused on financial measures, but since the 1980s this approach has increasingly been gaining more criticism. It has been claimed that an overreliance on financial measures leads to short-termism and lack of strategic focus (Neely, 1999). A turning point was the introduction of the balanced scorecard (BSC) in 1992 (Kaplan and Norton, 1992), which since then has become the by far most widely used framework for implementing PMSs (Neely and Bourne, 2000; Rigby, 2007). The BSC has two main characteristics, which are lacking in the older financial measurement systems. Firstly, it has a balance between different types or dimensions of measures. Besides financial figures, measures are also based on internal processes, customers and on innovation and learning. Secondly, the measures used are to be developed with the strategic orientation of the company as a starting point. If you put any merit to proverbs such as the above mentioned "*What you measure is what you get",* this becomes a logical starting point, as what you want to "*get"* in the long term is the fulfilment of the strategic vision.

The increased focus on the link between strategy and measurement system has spurred the notion of strategic performance measurement systems (SPMSs), a concept which includes the BSC. SPMSs can be defined as a subset of PMSs fulfilling the following four criteria (Gimbert et al., 2010):

1. Translation of long-term strategy into used performance measurements
2. Using performance measurements from multiple dimensions
3. For each dimension where measurements exist, having goals and plans for how the goals are to be reached

4. Having causal relationships between different performance measurements, for example the notion of how increased performance in one measurement drives increased performance in other measurement.

Most research on the usage of PMSs and SPMSs has been conducted on large companies, and there is a lack of empirical research on to which extent and how small and medium-sized enterprises (SMEs) use these kinds of systems (Chenhall, 2003; Garengo et al., 2005; Cocca and Alberti, 2010; Bäuml, 2014).

Even excluding micro sized companies there are over 30 times more SMEs than large companies in the European Union (Muller et al., 2016)[1]. Furthermore, SMEs are important for the region's economic growth, and research on how these companies, via tools and solutions, can sustain their performance in the long term is important (Cocca and Alberti, 2008; Ates et al., 2013). One such tool could be SPMSs.

Due to the lack of empirical research on the subject, and the importance of research on how the performance of SMEs can be sustained long-term, the purpose of this study is to explore the usage of SPMSs in SMEs.

1.2 Problem analysis and research question

SMEs differ from their larger counterparts in several ways, as expressed aptly by Marchini (1995): *"the small enterprise is different from the big company; you cannot simply look at the needs of SMEs by turning your binoculars upside down and making small what was big"*. Among the typical characteristics of SMEs are a lack of resources, both in terms of human resources and financial ditto, and an informal and often short-sighted view on strategy formulation (Garengo et al., 2005). These differences are most likely important in relation to SPMSs. Firstly, as the human resource function in large companies normally is heavily involved with developing and deploying these systems and secondly, if the business strategy of the company in focus is not explicitly expressed it is hard to translate it into specific measures. This leads to the first research question:

To which extent do SMEs use SPMSs?

Interesting dimensions to consider here are the four criteria suggested by Gimbert et al. (2010). Are performance measures derived from strategy and are multiple performance dimensions measured? Are goals and plans for how to the goals should be reached present for each dimension? Are causal relationships between measures defined?

Additionally, it is interesting to study the rationale for why SMEs use SPMSs to the extent that they do. Which potential benefits and drawbacks do they perceive from working this way? There might exist barriers preventing the companies from increasing their usage of these kinds of system. Such barriers could be of the kind discussed above: a lack of resources and a low degree of formalisation in the strategic process. It could also have to do with a lack of SPMS frameworks suitable for SMEs, or a general lack of knowledge. The second research question is hence:

[1] Micro sized companies are companies with less than 10 employees. If these were to be included, SMEs are about 500 times more prevalent than larger companies.

Why do SMEs use SPMSs to the extent that they do?

The final research question regards how the companies' SPMSs are used and maintained. How is the information from the systems used to aid the decision-making process? Are rewards based on the result of the measures? To maintain the fit between strategy and measures the system must be regularly reviewed – is this done? How are new measures added, and old ones removed? These dimensions are captured in the third research question stated below. This research question is of interest regardless of to which extent SMEs use SPMSs, why the S in SPMS is put in parentheses.

How are SMEs (S)PMSs used and maintained?

1.3 Delimitations

SME is quite a broad label, incorporating all companies with fewer than 250 employees and an annual turnover below 50 million euro (European Commission, 2015). It is unlikely that the smallest companies use SPMSs, as they tend to have a very low degree of formalised managerial practices (Garengo et al., 2005). For this reason, the study only includes companies with over 20 employees.

Furthermore, the study focuses on the perception of the topic from a top managerial point of view. This, as it is top management who make decisions regarding the implementation of SPMSs, and also use the information from these systems to steer the company. It would be interesting to also look at the issue with the focus on how employees are affected by what is measured. This could be done by for example studying how the usage of SPMSs affects the strategic alignment of the employees. Including both the managerial and the employee perspective would however most likely make the scope to wide for a master thesis, why this study is delimited to the former.

The study includes companies with at most around 75 employees. This upper limit was set in order to be able to get a comprehensive view on the PMS, from just one interview with one manager from the company. This low burden on the company, time and resource wise, was perceived as being of assistance in the process of trying to convince companies to take part in the study.

In larger companies PMSs tend to be hierarchically broken down through the organisation with different measures at each level (Ferreira and Otley, 2009). In line with the delimitations discussed in the two previous paragraphs, this study is further delimited to the uppermost layer of the PMSs - the set of measures which top management use to judge the performance of the company. To study if and how these measures further are broken down in various functions would require more interview subjects per company.

All included companies in the study designs and sells products. Most of them have their own manufacturing, but a few of the included companies have outsourced this function.

Finally, only companies from the greater Gothenburg region are included. This delimitation was made for reasons of convenience.

1.4 Structure of the thesis

Chapter two will provide a firm theoretical review on the subjects of PMSs and SPMSs, and the research regarding their usage in both larger companies and SMEs. The third chapter will treat methodological considerations, including research strategy and design, and give a detailed description of how the interview guide used in the study was developed. The thereafter following chapter presents the results from interviews with managers from seven SMEs. In chapter five the results are analysed, followed by a more general discussion in chapter six and the conclusions of the study in chapter seven.

2. Theoretical framework

The theoretical framework consists of three main parts, visualised in figure 1 below. The first part regards PMSs in general and starts with a subchapter deriving and defining central concepts of the study such as PMS and SPMS. This is followed by a historical outlook on the subject. Four main transitions in the PMS field, which have taken place during the last decades, are identified in this subchapter. Three of these are then expanded upon in the subsequent three subchapters, whereas the last transition is of a more general nature and is touched upon in multiple subchapters. The last subchapter of the first part is concerned with studies on the benefits and drawbacks of implementing PMSs and SPMSs. Most of the research described in this subchapter has been performed on large companies.

The second part of the theoretical framework provides a narrower focus on SMEs. In the first subchapter of this part the main characteristics of SMEs are described, followed by a subchapter concerning the usage of PMSs in SMEs.

The last part of the theoretical framework is focused on two types of frameworks. Firstly, a subchapter is dedicated to frameworks used for implementing PMSs and SPMSs, of which the BSC is the most notable example. Secondly, a subchapter is devoted to different research frameworks which are used for analysing a company's PMS.

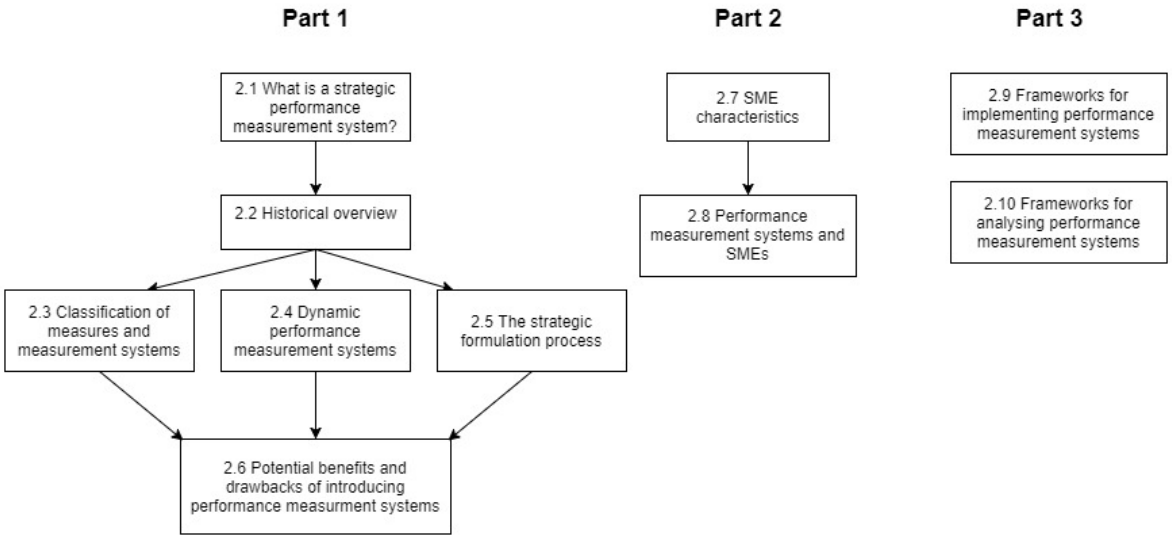

Figure 1. The general structure of the theoretical framework.

2.1 What is a strategic performance measurement system?

In order to define what a strategic performance measurement system constitutes, it is reasonable to first remove the prefix strategic and devote some attention to what a performance measurement system is.

2.1.1 Performance measurement systems

In a review article on the topic of PMSs, Neely et al. (1995) assert that although the subject is frequently discussed, it is rarely defined and when it is defined the definitions used lack uniformity. In a follow up review article, published ten years later, Neely emphasises how this is still a problem in the field (Neely, 2005). Additionally, he offers a plausible explanation, namely that the subject of PMSs is multidisciplinary, with contributions from a wide range of various disciplines such as operations management, strategy, information systems and accounting and that it is reasonable to assume that researchers from different disciplines tackle the field with different perspectives and using different theoretical bases.

Franco-Santos et al. (2007) in a systematic review compare different proposed PMS definitions and reach the same conclusion stated previously by Neely, namely that coherence is seriously lacking. Furthermore, based on frequency analysis of found definitions, they propose a minimal set of components which must be included in a PMS. These components are divided into the three following categories: features, roles and processes. The two features included in this set are some kind of measure(s), and a supporting structure for gathering data, where the latter ranges from simple manual methods to more complex information systems. The only role they found must be included in a PMS is the role of measuring performance. Finally, regarding the processes, they grouped the most common ones into five categories, where the first three are considered necessary components of a PMS. The categories are the following:

1. Selection and design of which measures to use
2. Collection and manipulation of the necessary data
3. Information management, including information provision and interpretation
4. Performance evaluation and rewards based on the collected data
5. A review of the performance measurement system

Both Neely (2005) and Franco-Santos et al. (2007), discuss how the lack of accepted definitions in the PMS field is problematic, and reduces comparability and generalisability. Micheli and Manzoni (2010, p. 469) emphasise that it is important that researchers in the field *"clarify what type of PMS they are considering, rather than examining 'generic' performance measurement systems"*.

2.1.2 Performance management systems

A concept closely related to performance measurement systems is performance management systems. Over time the focus in the field of performance measurement has drifted from being centred on the actual measurements, to increasingly taking into account what is done with the data, or in other words, how the company is managed with the use of measurements (Srimai et al., 2011). This development has led to some researchers preferring to talk about performance management systems rather than

performance measurement systems. For example, Ates et al. (2013, p. 30) discuss performance management systems as a way to use *"measures to manage the performance of the organisation".* Other researchers however still view performance management systems as something broader, which includes other ways of managing performance besides the usage of measures. For example, Ferreira and Otley (2009, p. 264) view performance management systems as "*the evolving formal and informal mechanisms, processes, systems, and networks used by organisations for conveying the key objectives and goals elicited by management, for assisting the strategic process and ongoing management through analysis, planning, measurement, control, rewarding, and broadly managing performance, and for supporting and facilitating organisational learning and change.*" The potential confusion between performance measurement systems and performance management systems is of course amplified by the fact that both concepts are shortened as PMS.

2.1.3 Strategic performance measurement systems

Srimai (2011) discusses how performance measurements translated from a company's strategy often are called strategic performance measurements. Gimbert et al. (2010), defines SPMSs as a subset of PMSs which fulfils the following four criteria:

1. Translation of long-term strategy into used measurements
2. Using measurements from multiple dimensions
3. For each dimension where measurements exist, having goals and plans for how the goals are to be reached
4. Having causal relationships between different performance measurements, for example the notion of how increased performance in one measurement drives increased performance in other measurements

Gimbert et al. (2010) furthermore discuss how it is still relatively common in research to just use the term PMS, even when systems fulfilling the criteria set up above are discussed.

2.1.4 Definitions used in this study

In this study when we discuss performance measurement systems we will discuss systems fulfilling the minimal set of requirements proposed by Franco-Santos et al. (2007). The notion of performance management systems is interesting, but there seems to be some ambiguity in the literature regarding the scope of this concept. The narrower perspective, focusing on how to manage what is measured, can be dealt with also under the performance measurement system concept, whereas the broader scope, characterised by the quote from Ferreira and Otley (2009) used above, is too broad for this study. Furthermore, to limit confusion, the abbreviation PMS will be used exclusively for performance measurement systems and not for performance management systems. Finally, as a definition for SPMSs the four criteria from Gimbert et al. (2010) will be used.

As discussed above, a general problem in the field is that the concepts of PMS and SPMS rarely are defined in research articles. This in turn makes it difficult to assess whether the *PMS* in a certain article is referring to should be classified as a PMS or a SPMS according to the definitions used in this study. For this reason, the notation used in a

referenced article will be kept when the article is discussed in this chapter (the theoretical framework). As the clear majority of the referenced articles just refer to PMSs in general, this term will most of time be used. In some cases, where it is clear that what is referred to is indeed a SPMS even though it is called a PMS, for example when the BSC is discussed, this will be pointed out in the text. In latter chapters the above stated definitions will however be used to full extent.

2.2 Historical overview

Since the 1980s the subject of PMSs has been given increasingly more attention (Garengo et al., 2005). It was during this time pointed out that basing decisions mainly on financial measures was problematic, and that there was a need for a more balanced approach where financial figures served as only a part of a more holistic system, in combination with other types of measures (Eccles, 1991; Kaplan and Norton, 1992; Neely and Bourne, 2000). Some of the problems stated were that financial measures tend to induce short-termism, lack of strategic focus (Neely, 1999) and risk aversion (Tuomela, 2005). Furthermore, it was noted that financial measures focus on past performance and decisions rather than determining future ditto (Eccles, 1991; Parker, 2000). Some researchers went as far as wanting to discard financial measures altogether, arguing that if targets were reached in measures relating to areas such as customer satisfaction and quality, then financial performance would automatically follow (Kaplan and Norton, 1992).

Srimai et al. (2011) describe four transitions which have taken place in the field of PMSs during the last decades. The first one is the transition from an operational view to a more strategic focus. Garengo et al. (2005) claim that the lack of a clear connection between business strategy and performance measures is one of the main culprits behind failed PMS implementations. It has also been shown that one major possible benefit from implementing PMSs is increased strategic alignment (De Geuser et al., 2009; Franco-Santos et al., 2012), which obviously will be hard to achieve if the measures used have not been derived from the company's strategy. This transition to a more strategic focus has in turn given rise to the concept of SPMSs.

The second transition discussed by Srimai et al. (2011) is the transition from measurement to management. Some researchers have observed the danger of focusing too much on measuring, without a clear plan on how the measures are to be used (Neely, 2005), or in other words *"how to manage what is measured"* (Srimai et al., 2011, p. 668). Similar to how the transition to a more strategic focus has given birth to the concept of SPMSs, has the transition of focus from measurement to management spurred the concept of performance management systems.

The third transition Srimai et al. (2011) discuss is that from static to dynamic systems. No company exists in a static environment, neither from an external nor an internal point of view. Due to changes in the company's conditions, the PMS will have to be regularly adapted and refined (Tuomela, 2005). Companies have historically tended to have relatively static PMSs, but more attention has begun to be put on how more dynamic systems can be created (Bititci et al., 2000; Garengo et al., 2005).

The final transition described by Srimai et al. (2011) consists of a change of focus from shareholder to stakeholder value. This transition is based on the view of a sustainable organisation, where emphasis is put on more than just financial results (Garengo, 2005).

These changes in how PMSs are viewed and studied have been driven by a number of factors such as increased competition, quality awards, quality certifications,

improvements in information technology and an increasingly more turbulent external environment (Simrai et al, 2011; Garengo et al, 2005).

2.3 Classification of measures and measurement systems

In subchapter 2.1, SPMSs were defined as a subset of PMSs fulfilling four criteria. One of these criteria was the presence of measures from more than one dimension of performance. This is easily associated with the BSC, where measures from four different dimensions are being used: customers, internal processes, innovation and learning as well as a purely financial dimension (Kaplan and Norton, 1992). In the balanced scorecard there is a balance between financial and non-financial measures as well as between internal, such as the dimensions internal processes and innovation and learning, and external measures, such as customers. There are however other ways to interpret the concept of balance. Garengo et al. (2005) describe how other researchers discuss the balance between different organisational levels or the balance between leading measures and lagging measures, where leading measures determine future performance in lagging measures. This latter interpretation is covered in another one of the four defining criteria of SPMSs used in this study, namely in criterion number four regarding causal relationships between the measures used.

There are also other ways of defining different kinds of measures. Srimai et al. (2011) emphasise the difference between short-term and long-term measures. The former measures concern the survival of the company in the short term whereas the latter measures concern the long-term growth and sustainability of the company. Clearly, this conceptualisation is similar to the notion of balance discussed above, as the short-term measures tend to be financial in nature and the long-term measures tend to be of other dimensions.

Artz et al. (2012) make the distinction between functionality specific measures and general measures, where the former can be for example inventory turnover in production. However, again, most of this difference is captured in the division between financial and non-financial measures, as the general measures mostly tend to be of financial nature, like for example company turnover (Artz et al., 2012).

A performance measurement system can be further classified in terms of its depth and breadth. The depth is defined by Garengo et al. (2005, p. 34) as *"the level of detail to which performance measures … are applied"* while the breadth refers to *"the scope of the activities included in the PMS"*. Also in this case, we can see that the concept of breadth is very similar to that of balance.

Regarding the number of different measures used, a maximum of 25 measures per manager is often stated as preferable (Kaplan and Norton, 2001a; Garengo et al. 2005; Ferreira and Otley, 2009). If the number of measures surpasses this level, it is difficult for managers to pay them all sufficient respect. Companies often use too many measures, implemented without enough consideration, making the PMSs hard to comprehend and use (Kaplan and Norton, 1992; Garengo et al. 2005).

2.4 Dynamic performance measurement systems

In subchapter 2.2 four recent transitions in the PMS literature were discussed. Among these was the transition from static to dynamic systems. Both the external and internal environments of a company are continuously changing (Srimai et al., 2011; Bititci et al. 2000; Tuomela, 2005). Externally customers' preferences and competitors' offers change over time, whereas internally new capabilities are developed and emergent strategies evolve. If the PMS is not regularly modified to accommodate for these changes, it can become outdated (Bititci et al., 2000). Tuomela (2005) states the lack of mechanisms for modifying the PMS as a major potential problem, whereas some researchers openly have cast doubts on whether PMSs actually benefit companies in dynamic environments (Bisbe and Malagueno, 2012). Other researchers instead focus on how the usage of PMSs rather can create adaptability (Srimai et al., 2011; Bisbe and Malagueno, 2012). This latter debate will be examined further in subchapter 2.5 concerning potential benefits and drawbacks of implementing PMSs.

According to Bititci et al. (2000) most companies have fairly static PMSs. Kennerley and Neely (2003, p. 215) argue along the same line by asserting that *"few organisations have systematic processes in place to manage the evolution of their performance measurement systems to ensure that they continue to reflect the organisation's context".* Bititci et al. (2000) state some potential barriers which can hinder companies from incorporating more dynamic PMSs. Among these are the lack of designed frameworks for this task as well as the lack of flexible information technology platforms and an inability of the organisation to map out how different measures in the system relates to each other.

Considering how to achieve a dynamic PMS, Bititci et al. (2000) suggest the following four necessary components:

1. An external monitoring system which continuously measure changes regarding customers and competitors
2. An internal monitoring system which continuously measure internal changes
3. A review system which uses the information from the external and internal monitoring systems as input and if necessary revises objectives, measures and targets
4. An internal deployment system which deploys the new objectives, measures and targets in the organisation

Garengo et al. (2005) assert a similar view stating that a dynamic PMS should include a review system for assessing the measures and the company's strategy in light of changes in the environment. Chenhall (2003) suggests that the more uncertain the company's environment is, the more focus should be put on monitoring external factors.

Kolehmainen (2010) carried out a case study on a large Finnish telecommunication company and suggests the importance of delegating responsibility of modifying the measuring system to managers throughout the whole organisation to make the PMS more dynamic. Furthermore, she proposes the usage of a fairly limited number of measures as this *"may prevent confusion and make it easier for individuals to reorientate to the changing sets of measures"* (Kolehmainen, 2010, p. 542).

2.5 The strategic formulation process

As stated by Ferreira and Otley (2009), a company's strategy is derived from its vision and mission. These three concepts are in this study described as the strategic formulation process, which generally is considered as the starting point when designing a SPMS (Bisbe and Malagueno, 2012).

2.5.1 Mission and vision

The relationship between vision and mission is described by Senge (1990) as vision being the answer to the question *"what do we seek to create?"* while the mission is answering *"why do we exist?".* He treats mission and purpose as synonyms, and also includes core values as a third component which together with the vision and the mission constitute the set of governing ideas for the company. Senge points out that the core values describe *"how do we act consistent with the mission to achieve the vision?"*, which means that the relationship or hierarchy between the three is that the process starts from the vision as a guiding star, continues by taking the mission into account, which then should be supported by the core values. However, Collins and Porras (1996) state that both the mission and the vision should reflect company core values, and therefore provides an alternative view on the hierarchy between vision, mission and core values. Johnson et al. (2005, p. 13) describe vision as the *"desired future state: the aspiration of the organisation"*. El-Namaki (1992) adds on this claiming that the vision is one part of the process of setting the direction for the company. The mission is described by Johnson et al. (2005, p. 13) as the *"overriding purpose of the organisation in line with the values or expectations of stakeholders".* Chenhall (2003, p. 136) further describes the goal of the mission statement as to *"identify the requirements to attract and maintain shareholders, employees, and customers and to do so in ways that are socially acceptable".* Vision together with mission should be a guide for deciding what parts of strategies and activities that need to be changed in the light of a changing, dynamic setting (Collins and Porras, 1996).

In this study, mission and vision will be defined in accordance to Johnson et al. (2005, p. 13). Mission is thus defined as the *"overriding purpose of the organisation in line with the values or expectations of stakeholders",* while vision is defined as the *"desired future state: the aspiration of the organisation".*

Benefits of having a mission statement have been identified, as well as the benefit of having a comprehensive one. These benefits seem to be increasing with company size since Pearce and David (1987) find that higher performance of large companies is correlated with the comprehensiveness of the mission statement. O'Gorman and Doran (1999) state that the mission statement allows for the vision to be spread to new employees and gives the company increased legitimacy with stakeholders. Ferreira and Otley (2009) on the other hand emphasise that companies may lack clearly stated vision and mission statements but still have a clear sense of these dimensions, since they also can be communicated less formally.

2.5.2 Strategy

Strategy can be defined as the direction the organisation chooses to pursue over the long term as the means of achieving organisational objectives (Johnson et al., 2005). The

mission and vision should be translated into strategy, but to achieve this it is valuable to first identify the key success factors (KSFs) which can be seen as a middle step between vision and mission on one hand and strategy on the other. The formulation of KSFs is described by Ferreira and Otley (2009, p. 269) as a "*codification of the vision and mission in more concrete terms and in a more compressed timeframe, recognising that control measures [on the KSFs] need to be reported on a routine basis*". If the vision is to achieve outstanding profitability, one KSF could be cost reductions. The same authors describe that the second step – to formulate a strategy from the KSF revolves around developing a strategy which gives the company strengths to achieve the KSF.

Models trying to categorise strategy are often called strategic typologies. According to Ferreira and Otley (2009) these can give insights about how an organisation sees itself which can create reflections about how strategy is translated into measures. Furthermore, they add that there are companies which have decided not to have an explicit formal strategy but instead have a flexible and adaptive approach to quickly respond to external changes.

The strategic typology by Miles et al. (1978) is one well known strategic typology which deals with alternative ways that organisations can define their strategy as well as the structures and processes needed to pursue these strategies. It divides organisations into the four types: defenders, prospectors, analysers and reactors, which are described further in table 1.

Table 1. Strategic typology, adapted from Miles et al. (1978).

Type	Strategy	Environment	Organisation focus
Prospector	**Aggressively identify opportunities and markets, innovate, grow**	**Dynamic, growing**	**Flexibility, innovation, decentralised, creative**
Defender	**Protect and hold current markets and customers**	**Stable**	**Efficiency, centralised, cost control, tight control**
Analyser	**Maintain current markets and customer satisfaction, selectively innovate and selectively identify opportunities**	**Moderately changing**	**Efficiency, cost control, creativity, tight control**
Reactor	**No clear strategy, reacts to the environment**	**Any**	**Any, depends on immediate situation, no specific approach**

These four categories are relevant since organisations typically develop relatively stable patterns of strategic behaviour in their environments (Miles et al., 1978). Gimenez (2000, p. 237) states that the typology's most prominent strength is that *"it specifies relationships among strategy, structure and process in a manner that allows the identification of organisations as integrated wholes in interaction with their environments".*

The classic model by Mintzberg and Waters (1985) provides understanding on how different types of strategy exists in a company and their interrelationship. The model in

figure 2 shows the following five types of strategy: intended, deliberate, unrealised, emergent and realised strategy.

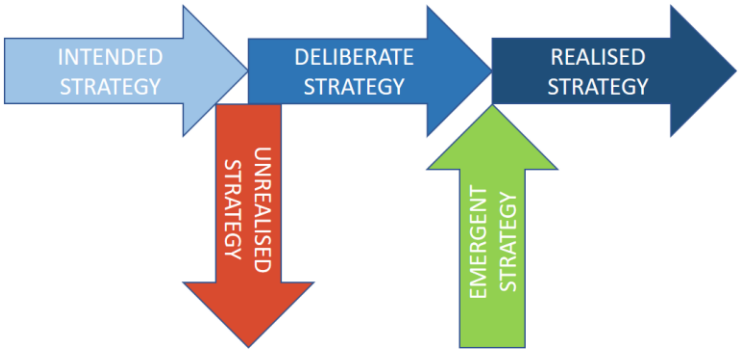

Figure 2. Types of different strategies, adapted from Mintzberg and Waters (1985).

Deliberate strategies are the intended strategies which were realised, in contrast to the intended strategies which were unrealised. In addition to deliberate strategies, there are emergent strategies which have been realised although there were no such explicit intentions. The main difference between deliberate and emergent strategy is according to Mintzberg and Waters (1985) that deliberate strategies focus on direction and control, and on how to achieve what is decided from top management, whereas emergent strategies give opportunities for strategic learning. They also point out that emergent strategies revolve around being open, flexible, responsive and willing to learn – which on the other hand does not mean that top management necessarily is detached from the process. This latter ability is especially important when the environment is unstable and complex, as it makes the company able to act before everything is crystal clear (Mintzberg and Waters, 1985).

Regnér (2003) builds on the topic of intended and emergent strategy, when he describes the differences between strategy making in the centre of the company (top management) compared to in the periphery (further down in the organisation). He found that strategy making in the centre was deductive, with activities such as planning, analysis, formal intelligence and the designing of standard routines. In contrast, strategy making in the periphery was rather characterised by inductive behaviour, including external and exploratory strategy activities such as trial and error, informal contacts and experiments. Strategy making in the centre is therefore similar to planned strategy whereas strategy making in the periphery is more similar to emergent strategy, when comparing Regner (2003) to Mintzberg and Waters (1985). The two types of strategy creation are further compared in table 2.

Table 2. Comparison of strategy making in the centre and periphery, adapted from Regnér (2003).

Inner context	Periphery: subsidiaries, projects, business and technology units	Centre: corporate and divisional management, board of directors
Strategy making	**Inductive**	**Deductive**
Actions	**Trial and error, testing ideas, exploring new resources, informal contacts, technology and market experiments**	**Planning, analysis, expertise use, exploitation of existing resources, formal reports, industry experience and routines**
Mindset	**Trying out, adjusting, generating new strategy interpretations**	**Using established interpretation pattern and structures**
Strategy content	**New combinations of old and new resources and industry factors: strategy creation**	**Refinement of existing resources and industry factors: perfection of prevailing strategy**

2.6 Potential benefits and drawbacks of introducing performance measurement systems

Micheli and Manzoni (2010) emphasise that a PMS has the potential to be both functional and dysfunctional for a company. They go on to state that no conclusive evidence exists regarding the benefits and drawbacks of implementing PMSs. Below, several studies conducted on the subject will however be considered. The clear majority of these have focused on the BSC, and hence can be said to regard SPMSs.

2.6.1 Does PMSs increase performance?

There have been some quantitative studies conducted on the issue of linking PMS introduction to company performance. In year 2000 a study was published based on a survey answered by 66 Australian manufacturing companies (Hoque and James, 2000). Usage of the BSC was seen to be positively linked to organisational performance, in dimensions such a return on investment, product quality and customer satisfaction.

Four years later Davis and Albright (2004) published a study comparing different bank branches within the same bank. Some of the branches introduced the BSC, whereas other chose not to, and the study showed how the former outperformed the latter in financial terms.

DeBusk and Crabtree have published two studies on the subject. The first one (DeBusk and Crabtree, 2006) employed a survey answered by 1025 companies. Of the included companies using the BSC, 88% believed it having increased the company's operating performance, whereas 66% of the same companies also reported increased profits following the implementation. The second study (DeBusk and Crabtree, 2008) used a matched pair research design, matching companies having introduced the BSC with similar companies not using the framework. This study showed how the stock prices of the BSC users outperformed the non-users.

Finally, a study by Ittner and Larcker (2003) shows some conflicting evidence. The study considered companies in the financial services industry and it showed no positive correlation between BSC usage and financial performance. However, a positive correlation was seen between financial performance and the usage of a balanced PMS.

The positive outcomes of implementing a PMS framework like the BSC generally takes time to emerge (Kaplan and Norton, 2001b), why the studies mentioned above measured performance about two to three years after the start of the implementation. Overall there seems to be a positive effect on performance from implementing the BSC, but there are some problems with the types of studies described above. Up to 70% of intended BSC implementations are reported to fail (Neely and Bourne, 2000; DeBusk and Crabtree, 2006) and there is a risk that surveys like the ones used in these studies mainly consider the successful implementations as BSC users, whereas the unsuccessful implementations are grouped together with companies who never have used the framework (DeBusk and Crabtree, 2008). Additionally, it is hard to assess if the users of the BSC framework use it in its intended way, or in some other fashion (Ittner and Larcker, 2008).

2.6.2 By which mechanism can a PMS increase performance?

To sum up the previous section, some evidence, however far from conclusive, exists pointing in the direction of PMSs having a positive effect on company performance. This still leaves the question of the actual mechanism – how can implementing a PMS increase performance?

The most thorough literature review on the subject was conducted by Franco-Santos et al. (2012) considering 76 previously published studies. The study considers contemporary performance measurement systems (CPMSs), a term defined as the newer type of PMSs which links the company's strategy to the performance measures. This concept is thus closely related to that of SPMSs. Franco-Santos et al. group the consequences of using CPMSs into three categories. The first category regards the effect on people's behaviour and encompasses issues such as motivation. The second category regards organisational capabilities and incorporates subjects such as strategic alignment and organisational learning. The third and final category, the performance category, refers to effects on financial and non-financial performance. The third category is thus clearly more related to what was discussed in the previous subchapter (2.6.1).

Micheli and Manzoni (2010) also sum up the potential benefits of implementing PMSs into three categories. The first one encompasses improvements in the formulation, implementation and review of the company's strategy. The second one includes an easier communication of results to the company's stakeholders and the third one refers to motivation and organisational learning.

De Geuser et al. (2009) in a similar fashion categorise the potential benefits of implementing the BSC into three points: (1) better translation of strategy into operational language, (2) making the strategy formulation process more continuous and (3) better strategic alignment of the company. All three categories revolve around strategic issues and are thus similar to the second category formulated by Franco-Santos et al. (2012) and the first one from Micheli and Manzoni (2010). The other area, addressed by more than one of the above-mentioned studies, is the effect on motivation and organisational learning which both Franco-Santos et al. as well as Micheli and Manzoni discuss.

An interesting issue regards whether it is the actual formal usage of the PMS that creates value for the company or if it is rather the informal process of discussions regarding the system design and implementation that contributes to the boost in company performance (De Geuser et al., 2009). Garengo et al. (2005) discuss how the introduction of a PMS forces the company to do comprehensive strategic planning and assert the differences between the current performance and the performance level deemed necessary for achieving the company's objectives, and how this process can be beneficial. Gimbert et al. (2010), along the same lines, state how it is often the discussion that the introduction of a PMS give rise to that mostly benefits the company, rather than the subsequent monitoring of measures.

Considering strategy, the common assessment is that a PMS mainly assists the implementation of a company's intended strategy, by translating it into measures which can be easily communicated and tracked (Bisbe and Malagueno, 2012). This view is

however starting to be challenged, as studies have begun focusing on how a PMS can aid and shape the strategy formulation process (Bisbe and Malagueno, 2012). Melnyk et al. (2014) describe how the PMS can detect changes in the internal and external environment of the company, how this can lead to a reformulation of strategy, and in turn an adaption of the PMS. Kaplan and Norton (2008) similarly discuss how the PMS can help the company to re-examine and fine-tune the strategy.

Both Gimbert et al. (2010) and Bisbe and Malagueno (2012) quantitatively test to which extent PMSs aid the strategy formulation process. Gimbert et al. (2010) make the distinction between SPMSs and other PMSs and find no difference in the strategy formulation process between companies using the latter type of PMSs and companies not using any kind of PMS. They could however show a positive correlation between the usage of SPMSs and the number of strategic issues discussed in each strategic reformulation session. However, no change was seen in the number of such sessions. The data was gathered via surveys and 349 medium and large-sized Spanish companies were included in the study.

Bisbe and Malagueno (2012) used surveys and public financial data from 267 Spanish medium and large-sized companies to show that a wider number of strategic issues discussed at each strategic reformulation session correlated with better financial performance. Additionally, they reproduced the results from Gimbert et al. (2010) regarding the correlation between SPMS usage and the variety of strategic topics assessed. It was however seen that the effect on financial results was smaller, the more dynamic the company's external environment was.

Considering the effects of PMSs on employee motivation, Franco-Santos et al. (2012) describe the lack of conclusive results in the literature. Certain case studies show how PMSs can increase employee motivation to reach strategic goals, whereas other case studies focus on potential negative effects on motivation, especially under circumstances where feedback and discussions are not encouraged or where targets are not perceived as reachable. Debusk and Crabtree (2006) recommend that employees should be involved in both defining measures and setting targets in order to raise motivation.

2.6.3 Potential drawback of introducing PMSs

As mentioned, about 70% of attempted BSC implementations fail (Neely and Bourne, 2000; DeBusk and Crabtree, 2006), which signals the existence of pitfalls in the implementation process. Neely and Bourne divide the main pitfalls into two categories. The first category regards what the company decides to measure. Instead of starting from the strategy, companies tend to start with brainstorming sessions trying to come up with possible measures, without taking into account how they relate to each other or to the strategic vision. The second category regards the implementation phase. One potential problem here is that the measuring data is stored in different system and inconsistent formats throughout the company. Another potential problem Neely and Bourne discuss in this category is that so much focus is put on measuring, so that no one actually has the time to analyse the data and use the information therein.

Even if the implementation of a PMS is successful, a drawback is the resources needed to introduce and use it. A case study by Papalexandris et al. (2004) analyses the implementation of the BSC in a large software company in Greece. While positive effects could be seen *"the cost and time of the process may well outweigh improvements in organisational performance"* (p. 364).

Another potential problem, also discussed in subchapter 2.3 on dynamic PMSs, is that a too pervasive and static PMS can prevent changes in the organisation (Micheli and Manzoni, 2010). This can be problematic in a highly dynamic environment, which may explain the previously discussed results from the study by Bisbe and Malaguen (2012), where it was seen that higher environmental dynamism reduced the positive relation between SPMS usage and financial performance. Additionally, in a turbulent environment the loop described above from Melnyk et al. (2014) (regarding how the PMS senses and informs management about changes, how this leads to a change in strategy and in turn an adaptation of the PMS) may become too slow. If new changes in the environment occur during the time it takes for this loop to complete a cycle, will then the perhaps outdated PMS be able to recognise them correctly?

If rewards are given in accordance with the achieved performance in the chosen measures there is a risk for gaming behaviour, where employees sacrifice other issues in order to increase performance in the measures that affect the rewards the most (Debusk and Crabtree, 2006). Debusk and Crabtree (2006) emphasise that this is mainly a risk when objective evaluations are used to decide compensation. In an objective evaluation a predefined formula weighing different performance measures together is used. An alternative is to use a subjective performance evaluation where all the measures are considered together without a predefined weighting. However, Debusk and Crabtree (2006) see some potential problems also with this approach. It may lead to more focus being put on the old well known financial measures, and it becomes harder for employees to understand how the rewards actually are determined which may affect motivation negatively.

Finally, some more general and conceptual criticism of the subject of performance measurement is offered by Micheli and Mari (2013). The researchers draw parallels to the subject of physical sciences where the concept of measurement has been heavily debated and the limitations of measurements have been acknowledged. They further argue that in the field of performance measurements the common view, although usually implicit, is that PMSs can determine the true value of a company's performance and that this is mirrored in quotes such as *"what gets measured gets done"* and *"you can only manage, what you can measure*". This becomes increasingly problematic as many of the objects measured in PMSs are socially constructed, like for example customer satisfaction. These socially constructed objects are challenging both to define and measure. Micheli and Mari (2013) argue that these kinds of measures are chosen partly based on how easy they are to collect and that for the same reason various important but complex activities tend not to be measured at all. The end result is that *"what is treated as important is what happens to be accessible to measurement"* (Micheli and Mari, 2013, p. 153). To ameliorate these problems, the researchers recommend frequent reviews of the PMSs and a change of focus from what is easily measurable to what the company really is interested in measuring.

2.7 SME characteristics

Except for the obvious smaller number of employees, there are also other characteristics that set SMEs apart from large companies. This is an important area to explore in the setting of this study, as these characteristics may affect how SMEs develop and use PMSs.

Löfving et al. (2008) focus on manufacturing SMEs and find that these companies tend to not put effort into developing their manufacturing systems, partly because of a lack of well-educated employees. Overall, Löfving et al. find that these companies have difficulties in recruiting the right people who possess the right skills. Grando and Belvedere (2006) support that SMEs in general have trouble with securing the right level of human resources whereas Achanga et al. (2006) claim that SMEs tend to suffer from financial constraints. Löfving et al. (2008) emphasise that these two characteristics makes it difficult for these smaller companies to implement manufacturing systems that were designed for larger companies.

Garengo et al. (2005) agree that a lack of human resources and limited financial resources is characteristic for SMEs, but also adds that so is a low managerial capacity - making these companies less equipped to take advantage of new emergent opportunities. Furthermore, Garengo et al. state that SMEs tend to have a reactive managerial approach characterised by informal decisions and communication. Löfving (2009) points out that the general lack of resources is frequently found in studies. More specifically, the *"lack of financial, human, informational and material resources"* (Löfving, 2009, p. 26). In addition to the lack of resources, Löfving summarises the following differences in characteristics between SMEs and larger companies: being more flexible and closer to their customers, being present on limited markets and having few customers, having high innovatory potential, being reactive with a fire fighting mentality and having a flat, flexible and informal organisation.

2.7.1 Strategic formulation characteristics in SMEs

O'Gorman and Doran (1999) claim that smaller SMEs, with strong entrepreneurial leadership, may find it less useful to have explicit mission and vision statements. The authors explain that in these companies the communication of the vision from the managers and the owner often is more direct, making the need for formal statements lower. Thus, the important point is that the employees have a clear sense of the direction in which the company is heading, whether this is achieved through an explicit statement or not. However, as the company grows the need for formal structures, systems, procedures and control increase. In this process, O'Gorman and Doran (1999) state that there are benefits of having explicit vision and mission statements.

Mintzberg and Waters (1985) call the type of strategy that is especially common in small firms, which are entrepreneurial and highly controlled by their owners, for entrepreneurial strategies. In relation to the model by Mintzberg and Waters (1985) in figure 2 on page 15, entrepreneurial strategies include intentions, but are one person's intentions which may or may not have been expressed or elaborated upon. The intentions are therefore more unclear and harder to identify compared to planned strategies (Mintzberg and Waters, 1985). Mintzberg and Waters continue by stating that

entrepreneurial strategies can have emergent characteristics as well since the key person in the company quickly can change or add to his vision and thoughts on how to deal with the surrounding environment. Finally, Mintzberg and Waters describe how entrepreneurial strategies tend to involve a high degree of flexibility, and fast feedback-loops and implementations processes, which further differentiates them from planned strategies.

2.8 Performance measurement systems and SMEs

As mentioned in the introduction, there is a lack of research on the usage of PMSs in SMEs. Some studies have however been conducted in the last 20 years, and the results from these will be discussed in this subchapter.

2.8.1 PMS characteristics in SMEs

Hudson et al. (2001) studied the usage of PMSs in eight SMEs. The main similarity they found among the included companies was the usage of an abundance of financial measures, whereas measures were lacking in other performance dimensions. Furthermore, the representatives from the companies acknowledged flaws in their PMSs, such as a lack of connection between measures and strategy, production of too much, too complex data and the lack of formal reviews of the system.

Garengo et al. (2005) in a review on the subject further confirm the findings from Hudson et al. (2001), stating that SMEs mainly use financial and operational measures, whereas areas such as research and development, innovation, human resources and other intangible aspects rarely are measured. In both papers the researchers discuss how SME usage of PMSs tend to be informal and reactive, and that new measures are implemented in the face of specific arising problems rather than as part of a strategic planning process. Garengo et al. (2005) additionally conclude that SMEs tend to not use any specific frameworks for implementing PMSs, or if they do, tend only to use specific parts of a general framework.

Both Sousa et al. (2006) and Cocca and Alberti (2008) have conducted survey-based studies on the subject. The former study included 48 English manufacturing SMEs whereas the latter included 86 Italian manufacturing SMEs. Both studies validated the lack of balance between measures discussed above, seeing a clear focus on financial and operational measures. Sousa et al. furthermore compared the measures the companies used to the criteria which the companies perceived as most important to win new orders and they found significant inconsistencies. Cocca and Alberti additionally classified the maturity of the included companies' PMSs along seven dimensions including balance of measures, data collection and target setting and found that the same company could be very mature in one regard, whereas being considerably less so in other dimensions. This could be seen as an indication of what was discussed above, namely that the systems grow spontaneously rather than through a formal process.

The lack of balance is further affirmed by Ates et al. (2013) and Bäuml (2014). Ates et al. state that the financial and operational emphasis in the choice of measured is made with a focus of on short-term financial gains. Bäuml additionally finds a focus on lagging metrics such as revenue and profits compared to leading measures such as order intake or customer visits.

2.8.2 Benefits and drawbacks of PMS usage in SMEs

In the subchapter on benefits and drawbacks of PMS usage it was shown that conclusive evidence on the issue is lacking. As the clear majority of the research discussed under that heading was conducted on large companies, this is even more true concerning

SMEs. Bäuml (2014) discusses how researchers tend to suggest possible positive effects of PMS implementation in SMEs but how the empirical evidence so far is lacking.

An interesting discussion regards whether an informal PMS can be said to already exist in SMEs. Hudson et al. (2001) discuss how processes and problems are more visible in a smaller organisation and how employees and managers therefore may gain adequate information without the need of a formalised PMS. Perera and Baker (2007) discuss the same issue and emphasise that there is conflicting evidence in the literature, where some studies stress a lack of management control in smaller companies, whereas others highlights the possibility to obtain information and control with informal means. Cocca and Alberti (2010) stress how the typical flat unbureaucratic organisational structure of an SME gives the company strengths in term of adaptability, flexibility and innovativeness. There are some concerns in the literature regarding whether implementing a formalised PMS may hamper these strengths, and make the company more bureaucratic (Bäuml, 2014). A quote from one manager of a Singaporean SME, interviewed in the study by Bäuml (2014, p. 1), is symptomatic for this view: *"Small firms that try to work in the same way as large firms die beautifully. Surviving in a mess is better than dying beautifully."*

Bäuml (2014) conducted a survey-based study, regarding the connection between PMS usage, strategic alignment and financial performance, on 90 Swiss and Singaporean SMEs. He found a positive correlation between increased use of measures and a balanced PMS on the one hand and the strategic alignment of employees on the other hand. In relation to increased financial performance, a positive correlation was also found, but this was only significant for companies with around 45-55 employees or more, which he proposes as a critical company size, beyond which the usage of PMSs becomes increasingly more important. The increased strategic alignment of employees was however found for companies of all included sizes.

2.8.3 Barriers to implementing PMSs in SMEs

As highlighted in the previous subchapter SMEs differ from their larger counterparts in several aspects, which can affect the ability of the smaller company to implement a PMS. Hudson et al. (2001) discuss the failure of a PMS implementation in a studied case company. They see two main reasons for the failure. First it was considered too resource demanding, which they connect to the general lack of resources SMEs tend to have. Secondly it was deemed too strategically oriented, which they in turn associate with the less formalised, more emergent strategy style often found in SMEs.

Garengo et al. (2005) list a number of possible obstacles affecting the ability of an SME to introduce PMSs. In line with Hudson et al. (2001), Garengo et al. also highlight a lack of resources, both in terms of human resources and capital ditto as well as a more reactive, less formalized approach to strategic planning. Additionally, Garengo et al. discusses an often-seen lack of managerial culture in SMEs, with little attention to managerial tools and techniques such as PMSs. Furthermore, they stress that some SMEs may have a negative image regarding PMSs and see them mainly as a source of unwanted bureaucratisation.

2.8.4 Contingency factors affecting PMS implementation in SMEs

The notion of contingency denotes that something is true only under specific conditions (Chenhall, 2003). In regard to the present subject this indicates the existence of certain contingency factors which can affect in what way, if at all, PMSs are implemented in SMEs. Based on a literature review and interviews with scholars and practitioner Garengo and Bititci (2007) present a list of the six most important such factors. Factors one to four were tested in four case studies presented in the same paper.

The first contingency factor on the list is in what way the management and the ownership of the company is related. The researchers suggest that if the owners manage the company themselves, PMSs are used to a smaller extent.

The second item on the list is the management information system. More investments in information systems and practices seem to generate a setting which favours the use of PMSs.

Thirdly it is suggested that the strategy of the firm can affect PMS implementation. However, the specific strategy was not found to be so much of a factor compared to an explicit change of strategy.

Fourthly organisational culture is mentioned as a contingency factor. The subsequent analysis however mainly discusses how the PMS affects organisational culture, which rather indicates that the PMS is a contingency factor for organisational culture.

The fifth and sixth elements on the list are the external environment and the firm size. These factors were not tested in the case studies, and no analysis on how they might affect PMS usage is given in the article.

All six elements were tested quantitatively in a survey-based study by Cocca and Alberti (2008). The fourth factor was in this study operationalised as to whether or not the company at question was quality certified, which was supposed to reflect a quality oriented organisational culture. Size-wise the companies were divided into the three categories micro, small and medium-sized companies. All factors except the change of strategy were seen to affect PMS usage. For factors one and two on the list by Garengo and Bititci (2007), the effects were pointing in the direction suggested by these researchers. Furthermore, quality certification and a larger firm size were seen to translate into increased PMS usage. External environment was operationalised as the geographical presence of the company, using the three categories international, national and local, and it was seen that the more widespread the company's presence was, the more it tended to rely on PMS usage. This is obviously only one possible way of operationalising this factor, another, perhaps more interesting, choice could have been the level of competitiveness on the market.

2.8.5 Recommendations in the literature regarding PMS implementation in SMEs

In order to circumvent the barriers discussed above, many researchers have provided recommendations regarding how an SME should implement a PMS. It should however

be noted that these recommendations in general are based on anecdotal evidence or a fewer number of case studies.

In the light of the resource scarcity SMEs tend to face, it is recommended that the development process is resource efficient (Hudson and Smith, 2007), which can be achieved using a simple framework (Garengo et al., 2005), and that measures are simple and easily collectable (Cocca and Alberti, 2010). Additionally, a fairly limited amount of measures should be used (Garengo et al., 2005). Cocca and Alberti (2010) discuss how it can be favourable for a smaller company to use a few vital measures, which the company has resources to graphically visualise, analyse, communicate and base informed decisions upon.

It is generally stated that SMEs should focus on breadth or balance rather than depth when choosing measures. This in order to get away from the narrow focus on financial and operational measures, to get a more holistic view, as well as a simpler measurement system without too many details (Garengo et al., 2005; Cocca and Alberti, 2010). Ates et al. (2013) emphasise the usefulness of having external measures on competitors and customers in order to identify changes which may affect the company.

Regarding strategic formalisation, Garengo et al. (2005) discuss the necessity of a more formalised strategic process in order to achieve alignment between strategy and PMS, whereas Hudson and Smith (2007) emphasise that the development process must take into account also informal strategies. In order to sustain enthusiasm during the development process, in the light of the lack of managerial culture and aversion to formalisation discussed above, Hudson and Smith (2007) stress the importance of clearly visible short-term benefits.

As has been stated SMEs tend to have general characteristics such as being flexible and existing in rapidly changing environments. Several researchers stress that in order not to induce inflexibility on the company, the PMS must be dynamic, rapidly changeable and regularly reviewed (Hudson et al., 2001; Garengo et al., 2005; Hudson and Smith, 2007; Cocca and Alberti, 2010). This is along the lines of what was discussed in subchapter 2.3 on dynamic PMS, but it is perhaps even more relevant for smaller companies due to their general characteristics.

2.9 Frameworks for designing performance measurement systems

This subchapter addresses frameworks which can be used for designing a PMS. More specific, these frameworks describe the steps needed to develop and implement a PMS. As Kaplan and Norton (2004) state, this helps management to discuss the direction and the priorities of their company.

There are many frameworks available in the literature for designing PMSs. Most of these have been developed based on research conducted on large companies, but some frameworks have been designed with SME characteristics in mind. Most of these frameworks derive performance measures from the company's specific strategy (Hudson et al., 2001), which at least to some extent makes them frameworks for implementing SPMSs. When implementing PMSs, managers often fall back on pre-packaged solutions which have not been designed with their company's specific context in mind (Neely et al., 2000). It is therefore critical that the framework is logical for the managers and provides for it to be implemented successfully. According to the literature review by Hudson et al. (2001) the performance measurement sheet, also sometimes referred to as the Cambridge PM process, is the most advantageable framework to use since it gives explicit guidance regarding how to develop and implement a PMS effectively. Hudson et al. (2001) however state that further research is needed to study whether or not it is suitable for SMEs. In the same article a case study is performed with the intention of implementing the framework at an SME. However, the implementation failed, as the process was found to be too resource intensive and strategically oriented.

2.9.1 Performance measurement sheet

Neely et al. (1997) developed the *performance measurement sheet* to give a structured approach to designing performance measurements. The process is revolved around 22 recommendations regarding what the design of performance measures should include, which were identified through a literature review. One such recommendation is that the measures should be derived from strategy. Through action research studies made by the same authors, the framework was found to be practical and effective since it facilitates the design of performance measures as well as includes behavioural aspects from the specific context. According to Neely et al. (1997), a good performance measure can give a sound answer to the details included in the performance measurement sheet, visualised as the bullet list below. *"Relates to"* is the link to strategy, meaning that the performance measure should relate to business objectives.

- Title
- Purpose
- Relates to
- Target
- Formula
- Frequency of measurement
- Frequency of review
- Who measures
- Source of data

- Who owns the measure?
- What do they do?
- Who acts on the data?

2.9.2 The balanced scorecard

Kaplan and Norton (1992) introduced the BSC, which was designed as a step away from PMSs relying only on financial measures. Neely and Bourne (2000) state that approximately 50 % of large firms in the US used the BSC in 2000. Rigby (2007) in a more recent study found that the number had increased to 66 %. The BSC consists of the four dimensions visualised in table 3. Kaplan and Norton (1992) describe that the BSC gives managers a fast overview of the business performance with financial measures showing the result of past actions, while the other three dimensions drives future financial performance.

Table 3. Descriptions of the four dimensions of the balanced scorecard, adapted from Kaplan and Norton (1992).

Dimension	Perspective answers	Example of measures
Customer	**How do customers see us?**	**Market share, customer satisfaction**
Internal operations	**What must we excel at?**	**Inventory levels, downtime**
Innovation and learning	**Can we continue to improve and create value?**	**Employee survey, attended trainings, innovation culture survey**
Financial	**How do we look to shareholders?**	**Net margin, volume growth**

Kaplan and Norton (1992) further state that one big advantage of the BSC is that it limits the number of measures used to the most critical ones regarding each of the four dimensions. The authors claim that it is more common that companies have too many than too few measures, as they tend to continuously add measures without removing old ones. Before the introduction of the BSC, performance measurement was mainly managed by finance, but as the starting point of the BSC implementation is strategy, it puts top management in the centre. Furthermore, Kaplan and Norton recommend that the strategy should be broken down into goals that the company has regarding the four dimensions, and then measures that supports these goals should be identified. Additionally, cause and effect relations should be identified between measures. Hudson et al. (2001) criticise the BSC for lacking a description on how to keep the BSC updated over time, but on the other hands approves the framework's good coverage of different dimensions of performance.

Kaplan and Norton (2004) further developed the applicability of the BSC by linking it to the concept of strategy maps. This gives a visual representation of the strategic objectives including cause-and-effect linkages among these, structured by the four dimensions of the BSC. Kaplan and Norton state that it can be used as a checklist, improving the chances of finding missing strategy elements and the missing connection between the four dimensions of the BSC.

2.9.3 Circular method of BSC

With the BSC as a starting point, Garengo and Biazzo (2012) explore what they state as the contradiction between commonly described SME characteristics, such as the lack of formalised strategy and the tendency to create strategy in an emergent fashion, and the way that PMSs often in the literature are suggested to be implemented in a top-down manner. The authors therefore propose another process, called the circular method, of implementing the BSC. This process starts from the current measures and adds to, reduces or adapts them to the current situation and strategy in a looping sequence. The four main steps of the circular method of BSC implementation are visualised in figure 3 and are described as:

1. Collection and analysis of all currently used performance measures.
2. Clarification of the factors which are controlled by the performance measures used today.
3. Definition of desired strategy map from comparing the desired strategy with the currently used controlled factors in step 2.
4. Translation of desired strategy map to a new PMS which supports strategy.

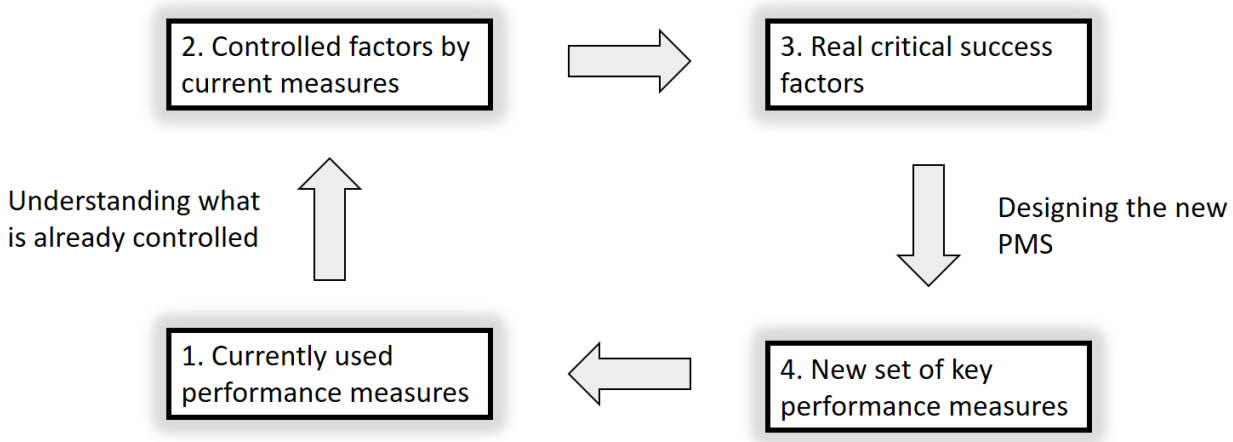

Figure 3. Circular method of BSC in SMEs, adapted from Garengo and Biazzo (2012).

2.10 Frameworks for analysing performance measurement systems

In the previous subchapter, frameworks developed for aiding the implementation of a PMS were discussed. There also exist frameworks, which intended use rather is to describe and analyse a company's PMS from the outside, thus frameworks mainly intended for the research setting. In this subchapter one such framework will be presented.

2.10.1 The performance management system framework

The performance management system framework was published by Ferreira and Otley in 2009, building on a previous, less comprehensive framework presented by Otley in 1999 (Ferreira and Otley, 2009; Otley, 1999). As can be deduced from the name, the framework is intended for the studying of performance management systems rather than performance measurement systems. However, as described in subchapter 2.1, the delimitation between these two concepts is rather blurry. Furthermore, the framework offers a logical way of envisioning the chain from company vision and mission statements to performance measures, which is relevant for studying strategic performance measurement systems. The framework's main focus consists of the twelve areas (1-12) seen in figure 4. Additionally, contextual factors and organisational culture are considered.

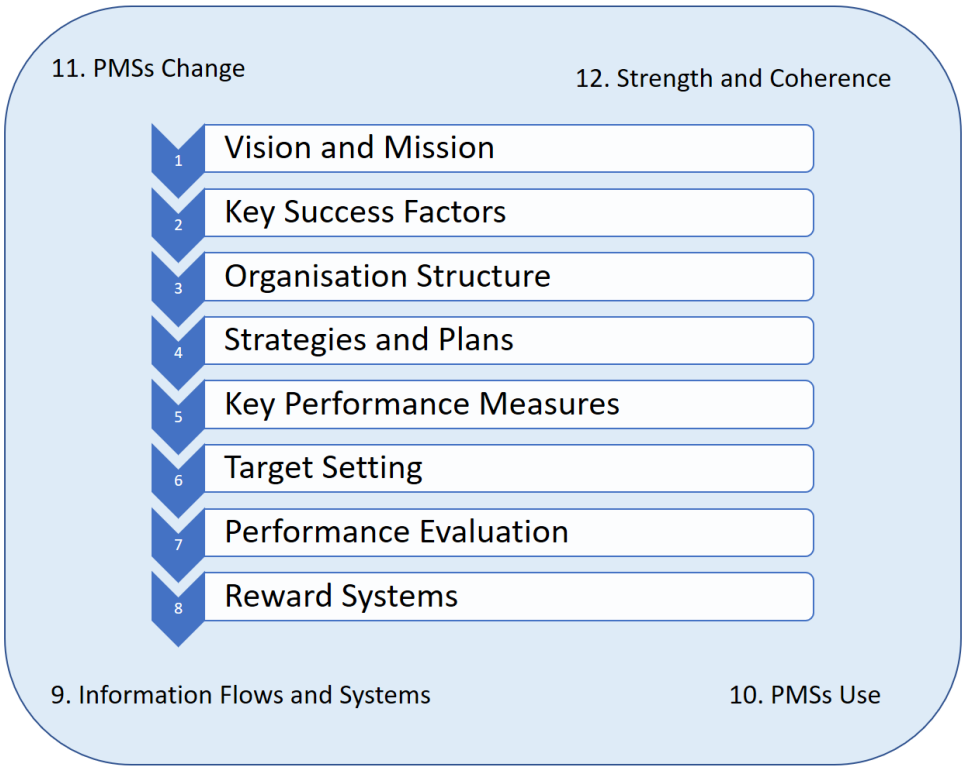

Figure 4. The performance management system framework, adapted from Ferreira and Otley (2009).

3. Method

This chapter treats the methodology of the study, including the underlying research strategy and choice of research design and methods. Furthermore, the question of how the quality of the study has been assured will be dealt with, along with some ethical considerations. Finally, some potential criticism of the methodological choices taken in the study, will be considered.

3.1 Research strategy

The interplay between theory and research can be interpreted via two main approaches (Bryman and Bell, 2015). The deductive approach defines the starting point in previously available research from which hypotheses are generated and tested through the collection of empirical evidence. The inductive approach on the other hand uses empirical observations as an outset and builds new theory from these.

The most commonly used separation between different types of research strategies is between quantitative and qualitative strategies (Bryman and Bell, 2015). The quantitative research strategy tends to be described as deductive and using observable hard data, whereas the qualitative strategy is described as inductive and giving more attention to interpretation. In this sense this study is to a large extent qualitative, as the research questions are of an exploratory nature and no hypotheses are made prior to the data collection. There are however elements of deduction in the study, as for example the development of the research questions and the interview guide was based on previous research. This is in line with what Bryman and Bell (2015) emphasise, when discussing how the inductive process normally includes features of deduction.

The distinction between quantitative and qualitative research strategy is however not unproblematic and has received a fair bit of criticism (Bryman and Bell, 2015; Allwood, 2012). Allwood (2012) explains how there is no clear divisive line between the two and how considerable overlaps exist. He goes on to claim that defining research using these two terms rather creates confusion and may restrict creativity. Allwood suggests spending less time on defining abstract stances on research strategy and instead spending more time on discussing the benefits and drawbacks of more tangible research methods in the light of specific research problems.

3.2 Research methodology

Yin (2003) states three conditions which determine how suitable a specific research methodology is. These three conditions are the following:

1. The type(s) of research questions asked
2. How much control the researcher has over behavioural events
3. The degree of focus which is put on contemporary versus historical events

Yin (2003) goes on to claim that the case study is an appropriate methodology when the research questions are of how and why type rather than what, where or how many, when the required control over behavioural events is low and when the focus mainly is

put on contemporary events. This study mainly focuses on contemporary events, has no interest in controlling the behaviour of the research subjects and two out of three research questions are of how or why nature. Thus, case study is a suitable methodology.

Furthermore Yin (2003) states that case studies focusing on a single case mainly are suggested under certain conditions, such as when a revelatory, unique or critical case is available. A revelatory case is described as when the researchers have the opportunity to study a phenomenon which previously has not been possible to access. As examples of unique cases, very rare physiological disorders are mentioned. Finally, a critical case is a case that very well fits all the theoretical propositions set up in the study. No such cases have been identified, why a multi-case study methodology has been used instead. Additionally, Bryman and Bell (2015) emphasise how the comparison between different cases can promote theoretical reflection on findings.

The multi-case study methodology has furthermore been used successfully on similar research topics in the field (Hudson et al. 2001, Garengo et al. 2005, Garengo et al. 2007; Ates et al. 2013). This further implies that it is a suitable methodology for this study.

3.3 Research design

The multi-case study was carried out using semi-structured interviews, utilising an interview guide. The semi-structured interview format offers a certain amount of structure which facilitates comparisons between cases, while still being loose enough to allow for detours and follow up questions when interesting themes appear during the interviews (Bryman and Bell, 2015). In addition, some empirical data have been gathered from other sources. The main examples of this are the gathering of potential vision and mission statements from the companies' webpages and the collecting of data on company turnover and profits from the database business retriever.

3.3.1 Selection of companies

In line with the delimitations of the study stated in subchapter 1.3, the study included companies which designs and sells products, although not necessarily with in-house manufacturing. Furthermore, they were from the greater Gothenburg region, with a number of employees approximately in the range of 20-75.

Suitable companies were identified with the database Retriever Business, using filters for geographical area, number of employees and branch of industry. An introductory telephone call was made to the identified companies followed by an email inviting them to participate in the study, outlining the purpose of the study as well as potential benefits for the participating companies. The contact was made with the chief executive of respective company, who however in a couple of instances referred to other managers in the organisation who he or she believed to be better suited to answer the questions. In qualitative research emphasis is generally not put on assuring that the included companies are representative for the general population, which is why no non-response analysis has been conducted (Bryman and Bell, 2015). Table 6 on page 37 provides a summarisation of some key characteristics of the included companies.

3.3.2 Development of interview guide

The interview guide, which is available in Swedish in appendix 1, consists of four main sections. The two first parts are roughly based on the framework developed by Ferreira and Otley (2009) which is described in further detail in subchapter 2.10.1.

The first part regards the company's strategy, by addressing vision and mission statements, key success factors and business strategy. The business strategy is charted using the typology by Miles et al. (1978), described in subchapter 2.5.2. This typology was, by Gimenez (2000), shown to be relevant also for small companies. The main aim of this first part of the interview guide is to get a fairly comprehensive view of the company's strategy in order to later be able to compare it with the specific measures which the company employs.

The second part of the interview guide revolves around these specific measures, addressing issues such as the measures used, how targets and possible rewards for these are set and how the PMS is maintained over time.

The third part regards the most important contingency factors found in the literature. In this part the competitive situation, the ownership structure of the company and possible quality program implementations and certifications are treated. Other identified contingency factors such as the company's strategy and the information system, are assessed in the two earlier parts.

The last part of the interview guide is meant to assess the interviewees' general knowledge of and view on PMSs. Questions here address knowledge of specific frameworks as well as perceived difficulties, benefits and drawbacks of working with PMSs.

The connection between the different parts of the interview guide and the research questions can be seen in table 4.

Table 4. Connection between research questions and interview guide.

Research question	Connected to these parts of the interview guide
To which extent do SMEs use SPMSs?	**1 and 2**
Why do SMEs use SPMSs to the extent that they do?	**1, 2, 3 and 4**
How are SMEs (S)PMSs used and maintained?	**2**

Overall, the focus in the interview guide has been put on introducing each area of interest with a more open question, allowing the interviewee to talk freely, and then have a list of possible follow up questions of more closed nature. This setup is recommended by Bryman and Bell (2015).

It is often recommended to do an initial pilot study to explicitly evaluate the appropriateness of the research instrument (Bryman and Bell, 2015). Due to time limitations this was not carried out in this study, but instead the interview guide was

evaluated after the two first interviews had been conducted. No major problems were identified, but a couple of questions were removed and/or rephrased.

3.3.3 Conduction of interviews

The interviews were conducted at the companies' facilities and lasted from 40 to 85 minutes. The majority of the interviews were held with the chief executive officer of the companies, but in a couple of cases other managers were interviewed, as explained in subchapter 3.3.1. The interviews were recorded after permission had been granted by the interviewee. The recordings were transcribed the same day as the interviews were held and if any ambiguities emerged the interviewees were contacted again via e-mail for clarifications.

All interviews were conducted by both master students. This decision was made in order to increase the consistency between the interviews as well as it allowed for one the students to focus more on making sure that the recording device was functioning and that an approximate time schedule was held, whereas the other one could focus more on the actual interview questions.

The interviews were initiated with a recap of the purpose of the study and why the contribution made by the interviewee was important. This was believed to increase the willingness of the interviewees to give thoughtful answers. In table 5 some information regarding the conducted interviews is visualised.

Table 5. Key information about the interviews.

Company	Duration of interview (minutes)	Position of Interviewee(s)
A	**40**	**CEO and production manager**
B	**53**	**SCM**
C	**40**	**CFO**
D	**85**	**CEO**
E	**50**	**CEO**
F	**56**	**CEO**
G	**46**	**CEO**

3.3.4 Analysis of data

The empirical data from the interviews was analysed using thematic analysis, which is one of the most common approaches to analysis of qualitative data (Bryman and Bell, 2015). Themes were identified both from previous literature and from the data itself.

3.4 Research Quality

When discussing the quality of quantitative research, the concepts of reliability and validity are often used (Bryman and Bell, 2015). Slightly modified versions of these can be used also for qualitative research, but there are also other tools. One such is the notion of trustworthiness, which has been used to assure the quality of this study.

Trustworthiness includes the concepts of credibility, transferability, dependability and confirmability (Bryman and Bell, 2015; Shenton, 2004). Credibility denotes how believable the results are. Credibility has in this study been achieved through the usage of practices, such as semi-structured interviews, that has been proven to be useful in research on similar topics. Transferability involves how applicable the results are for other contexts. In order to allow for other researchers to assess to which extent the results from this study are valid in other settings, rich descriptions of the contexts of the companies are given. Dependability is quite similar to reliability in quantitative research theory, but whereas repeated quantitative research should lead to similar results, this is hard to translate to the qualitative setting, "*due to the changing nature of the phenomena scrutinised*" (Shenton, 2004, p. 71). Shenton (2004) however advocates the usage of rich accounts of how the study was designed in order to allow for it to be replicated, if not necessary reaching the same conclusions. Confirmability touches on the subject of objectivity, which of course hardly is possible to achieve in a qualitative context, and the focus here should according to Shenton (2004) rather be on admitting one's own predispositions and possible drawbacks of the methods used. To achieve dependability and confirmability in this study the above stated guidelines from Shenton (2004) has been applied. Subchapter 3.6 addresses some potential critique of the methods used in this study.

3.5 Ethical considerations

Ethical considerations in this study are mainly concerned with the interview situation and the data gathered during these. Potential respondents were given sufficient information via the introductory email to be able to make an informed decision regarding whether or not they wished to take part in the study. Additionally, the interviewees were explicitly given the right to decline to answer specific questions during the interviews. As mentioned above the interviews were recorded, but only after consent had been given by the interviewee.

The companies are anonymised in the report in order to avoid the publication of information that can be harmful to the companies for competitive reasons. To some extent there exists a trade-off between this anonymisation and the practice, discussed earlier, of giving rich contextual descriptions in order to increase transferability. This has been considered since for example intervals for turnover and number of employees has been specified instead of the exact numbers. This hardly affects the transferability of the study but makes it much more difficult to figure out the identity of the included companies. Along the same lines, the exact type of products the companies produce will not be discussed, instead the discussion will focus on issues such as how extensive the companies' product assortments are, weather the customers are businesses or private consumers, and which geographical markets the companies supply.

3.6 Method criticism

The first of the three research questions used in this study is not of the why or how type, which Yin (2003) describes as suitable for a case study methodology. This question is of a more descriptive kind which implies that it could have been answered using another methodology, for example a survey. The two other research questions, which are of the why and how type, would however be hard to study via a survey. The realistic

alternative would therefore have been to use a mixture of methodologies, with a survey to answer the first research questions and case studies to answer the second and third one. Due to the time limitations of the master thesis, this approach was however not conceived as feasible.

In the majority of the included cases only one manager has been interviewed. The credibility of the study could have been increased if more managers were interviewed per company. However, the companies are rather small which allows for the CEO to have a fairly comprehensive view of the organisation. We do not believe that the additional credibility would have been worth the higher workload per case and the increased difficulty in recruiting companies. Both these latter factors would most likely translate into fewer included cases in the study.

4. Results

In this chapter the results from the seven conducted interviews will be presented. Each case will be described separately. This allows for rich descriptions of the context of each included company, which increases the transferability of the study. Additionally, it provides a solid ground from which analysis can be made and conclusions can be drawn in subsequent chapters. Table 6 provides some of the main characteristics of the included companies.

Table 6. Main characteristics of the included companies.

Company	Age of company	Number of employees	Turnover (2016)	EBIT (2016)	Own manufacturing?	Family owned?	Quality certified?	Position of Interviewee(s)
A	30-40 yrs	50-75	50-100 MSEK	5-10 MSEK	Yes	Yes	No	CEO and production manager
B	<10 yrs	35-50	150-250 MSEK	20-30 MSEK	No	Yes	No	SCM
C	50-100 yrs	50-75	100-150 MSEK	10-20 MSEK	Yes	Yes	ISO 9001, ISO 14001	CFO
D	30-40 yrs	20-35	100-150 MSEK	- 5-10 MSEK	No	No	Yes[2]	CEO
E	30-40 yrs	35-50	50-100 MSEK	0-5 MSEK	Yes	No	ISO 9001	CEO
F	30-40 yrs	20-35	50-100 MSEK	0-5 MSEK	Yes	No	ISO 9001	CEO
G	20-30 yrs	50-75	150-250 MSEK	10-20 MSEK	Yes	No	Yes[2]	CEO

[2] Company D and G have quality certifications which are fairly specific to their businesses. In order to protect the anonymity of the companies, the certifications are not disclosed.

4.1 Company A

Company A designs and manufactures products which are subsequently sold all over Europe. The company sells directly to stores in Sweden and Finland, whereas in the rest of Europe, they sell to national distributors. The products are specialised, and the manufacturing process involves a lot of manual labour. The main characteristics of company A can be found in table 7.

Table 7. Main characteristics of company A.

Age of company	Number of employees	Turnover (2016)	EBIT (2016)	Own manufacturing?	Family owned?	Quality certified?	Position of Interviewee(s)
30-40 yrs	**50-75**	**50-100 MSEK**	**5-10 MSEK**	**Yes**	**Yes**	**No**	**CEO and production manager**

Strategy
In terms of important factors for the future success of the company, delivery dependability and quality are mentioned as the most prominent. Furthermore, the interviewees emphasise having close relations with the customers ordering, specifying and adapting the products for end users. In terms of the Miles et al. framework, the interviewees identify the company as a mixture of prospector and analyser, but more towards the analyser category. The market is fairly stable in terms of competitors and customers, but the underlying research field is moving forwards quickly, which put demands on the company in terms of innovativeness. The company has formalised vision and mission statements, which are geared towards the innovative aspect of the business. The interviewees stress that strategy mainly is formulated in a top-down fashion in the company.

Performance measurement system
Financially the company utilises measures for turnover and profits. The rest of the measures are related to production. These measures are: achieved production per day, the number of products needing reworking due to quality issues, the delivery dependability and a measure based on to which degree the company manages to fulfil the orders that need to be completed a certain day in order not to cause delivery delays.

The measures have not been derived explicitly from the company's strategy, but the interviewees see a connection between the strategic focus of improving delivery dependability and the measures used in production. They describe a cause and effect relation of how improved quality leads to improvements in delivery dependability, which in turn leads to higher profits. Additionally, they identify a potential trade-off between quality and delivery dependability, namely that quality may deteriorate if too much focus is put specifically on delivery dependability, but this has not been an issue yet.

The present CEO is the first external CEO appointed at the family owned company and has had this position at the company for two years. The production manager has only worked at the company for one year. During this time the company has become more formalised and most of the measures used in production have been developed and implemented during this time. The performance measurements the company uses have

not been derived in any formal way, but are rather based mainly on "*gut feeling*" and past experiences. Both the CEO and the production manager have experience from working in larger organisations, and these experiences in turn affect what they choose to measure at company A.

Furthermore, the company uses goals, set by top management, for most of the measures and has plans for how to reach the goals. Financial measures are evaluated each month, whereas production measures are evaluated weekly at a meeting with all personal. Rewards based on the measures are not used, except for the occasional celebratory party. The company has an ERP-system where most of the measures are collected automatically, but some require additional exporting to excel sheets.

No formal reviews of the complete performance measurement system are conducted. Instead the measures are reviewed either individually or in smaller groups, in different forums.

Since the two interviewees started at the company no measures have been removed. There are however plans on removing the production measure regarding orders that must be completed a certain day. This, as it is perceived as too hard to reach the targets for this measure, which in turn affects motivation negatively. The production manager discusses how good measures and targets should be challenging, but still always feel reachable in order to spur competitive spirit and motivation, and how achieving this is one of the biggest challenges of working with performance measures.

The interviewees are not previously aware of the term performance measurement systems, but the CEO has previous experience of working with the BSC. However, he feels that the framework is too resource demanding for a smaller company such as theirs. Additionally, he considers it difficult to pedagogically explain such a comprehensive tool to the employees.

The CEO describes how he himself runs half marathons and how he already after two kilometres accurately can predict his finishing time. He has a similar future vision for how the measurement system should work in the company. You should be able to walk into the production facilities and ask anyone:

"How are you coming along, there are two working hours left today, will you be able to reach today's targeted production volume or not?"

4.2 Company B

Company B develops and sells products to customers in the Nordic region. The production is outsourced to other European countries. The company has a wide and constantly expanding product portfolio. Its customers are retailers, and the end customers are private consumers. There is one owner of the company - the founder and CEO. The main characteristics of company B can be found in table 8.

Table 8. Main characteristics of company B.

Age of company	Number of employees	Turnover (2016)	EBIT (2016)	Own manufacturing?	Family owned?	Quality certified?	Position of Interviewee(s)
<10 yrs	**35-50**	**150-250 MSEK**	**20-30 MSEK**	**No**	**Yes**	**No**	**SCM**

Strategy
The company has formalised mission and vision statements, which both are focused on the effect of the products on the end users. The interviewee identifies some critical success factors needed in order to fulfil the mission and vision. The absolutely most important factor is product innovation – without this, competitors would soon take the lead. Other success factors are consumer confidence, brand strategy and positioning on the market. The company has developed a three-year strategy for innovation, supply chain and markets. The focus on the strategic process has increased during the last year because of the recruitment of persons with experience from larger companies. Regarding the Miles et al. framework, the interviewee puts company B in the prospector category – the company is constantly looking for new markets and new opportunities on current markets and the organisation is flexible with less emphasis on cost control. The company has grown a lot during the last couple of years and is planning for further European expansion, but the interviewee emphasises that the home market should not be forgotten, due to its high profitability. It is hard to distinguish between a clear top or bottom level in the company according to the interviewee, as the company is in the process of forming a full management team.

Performance measurement system
Company B are measuring contribution margin ratio, revenue, market share, earnings before interest and tax (ebit), service level (ordered quantity divided by delivered quantity in time), inventory level, the share of revenues stemming from innovations and numerical distribution (to which extent their products are present in stores). Furthermore, the company does a yearly consumer brand awareness study.

The company has had an ERP-system for one year, which according to the interviewee almost is a prerequisite for using performance measures. Some work in excel is sometimes however needed to get the final measures.

The interviewee considers the performance measurements to have good connection to the company's strategy. The contribution margin ratio and ebit are important since profit is needed in order to be able to do investments and grow. The company measures innovation which is a key part of their strategy. Furthermore, the service level is critical

for customer satisfaction. According to the interviewee the measures have been designed with the strategy in the back of the mind.

Cause and effect relations have been identified from new innovations to increased revenues as well as from contribution margin ratio to ebit. The interviewee also identifies a trade-off relation between service level and inventory level. Having too high inventory levels binds unnecessarily much capital and there is also a potential problem regarding the expiration dates on the products. On the other hand, too low of an inventory level negatively affects the service level, so a balance is needed.

The top management team sets quarterly goals for the measures, as well as plans for how the goals are to be reached. The interviewee asserts that she and her colleagues, who have experience from working at larger companies, have made the company better at setting targets and making plans. Managers are rewarded both on company and individual performance in regard to a combination of all the measures. The weighting of the measures is made subjectively by the CEO.

The interviewee states that the company considers the measures when revising strategy, regarding if they are off target and why- is it because the targets are impossible to reach or because of bad performance? They also take other types of analysis into account, like SWOT and risk analysis. The view is that that the strategy should be a living document, but it should not be too heavily modified. The company revises the strategy once a year, but no regular reviews of the PMS are conducted. No measure has been removed yet from the newly developed PMS. Regarding the introduction of new measures, such decisions are to a large degree made on the basis of experiences from past companies.

According to the interviewee Company B is a market leader, mainly thanks their strong focus on innovations - *"as long as we focus on developing new innovations, competition is less important"*. The company has done some competitor analysis but regards this as secondary as of today. Innovations are important to satisfy their customers - to be seen as an attractive supplier surrounded by news and buzz. This also reduces the risk of tough price discussions with customers.

The interviewee recognises the term performance measurement systems and sees it as performance indicators put together as a system. The company has no plans on implementing the BSC but are instead considering implementing what the interviewee calls a *"measure control reporting system"* from a consultancy firm. The interviewee however sees a risk with implementing such as system, namely that it could become too heavy administratively.

Regarding the four categories of the BSC, the interviewee acknowledges a relative lack of measures from the innovation and learning dimension. Specifically, the company wants to become much better at employer branding, in order to attract the right employees- which according to the interviewee is important for the future success of the company.

The interviewee thinks that they most of the time have enough information on which to base strategic decisions, but also stresses that they could become much better at basing

decisions on facts. Sometimes things go wrong because they don't do this enough. The measures are followed up upon every month, but at this point decisions have often already been taken. According to the interviewee they normally do not wait for the most recent measurement data to be available before decisions are taken, as the daily contact with colleagues makes problems quite transparent anyways. However, as the company grows this becomes more difficult, when *"one work assignment is divided into four parts, done by four different individuals"*. This development increases the need for measurements according to the interviewee.

The biggest benefits regarding performance measures is according to the interviewee that they allow for fact-based decision making and provides an understanding about if you are on or off target, which in order identifies areas in which you need to improve in order to reach long term strategic goals. The interviewee furthermore refers to the quote: *"If you do not measure, you cannot improve".* The hardest thing regarding performance measures is that since company B is growing so fast and the measures reflect the past, they sometimes become less relevant. The interviewee who works with supply chain management and customer orders states that:

"*I promote that we should try to make analyses about the future instead of looking in the rear-view mirror"*

4.3 Company C

Company C develops, manufactures and sells products to customers all over the world. The company has a big assortment of predefined products, but occasionally also manufactures products based on customer specifications. Among the customers are multinational companies as well as private consumers. The main characteristics of company C can be found in table 9.

Table 9. Main characteristics of company C.

Age of company	Number of employees	Turnover (2016)	EBIT (2016)	Own manufacturing?	Family owned?	Quality certified?	Position of Interviewee(s)
50-100 yrs	**50-75**	**100-150 MSEK**	**10-20 MSEK**	**Yes**	**Yes**	**ISO 9001, ISO 14001**	**CFO**

Strategy
The company has no formal vision or mission statements. According to the interviewee no clear strategy exists, and the strategic approach is rather reactive and spontaneous. The strategic formulation that does exist is generally approached in a top-down fashion. In terms of the Miles et al. framework the interviewee puts company C in the defender category. The company has well established and long-lasting relations with large key customers. The interviewee expresses how this brings obvious benefits, but also potential drawbacks. One such is a tendency of complacency, where perhaps not enough effort is put on developing new products and acquiring new customers and markets. These are two things the interviewee mentions as important factors for the future success of the company, however the main factors are quality and delivery dependability to established customers as well as productivity.

Performance measurement system
Productivity, absentee statistics, product quality and gross and net margins are reported monthly. Delivery dependability is reported weekly, and every week a liquidity analysis is conducted as well. These measures were developed as a result of a project conducted in order to introduce measures at the company. The interviewee emphasises the importance of focusing on a limited number of performance measures, which thoroughly are communicated and followed up upon, instead of trying to measure everything and concludes:

"*many companies use measures as shiny objects which are there just to look good, and if you ask employees about which measures the company uses, they have no idea*".

As the company lacks a clear strategy, the interviewee highlights that it was difficult to use strategy as a starting point for developing the PMS. Instead representatives from different functions in the organisation sat together and discussed the most relevant measures for driving the company forward. In this process a cause and effect relation was identified, namely that discontent employees leads to higher absenteeism, which is related to deteriorating quality, which affects delivery dependability negatively, which in turn has negative effect on the financial result. Some of the company's main customers demand certain quality certification, which in turn also has affected what company C measures.

The company is family owned and before the measure focused project was conducted most of the measuring was done by one of the owners, but the results of these measures were generally not shared with the rest of the organisation. The CEO is still one of the owners, but during recent years more external managers have been employed, among these the CFO (the interviewee) who has been at the company for three years and led the project discussed above. The CFO has previous experience of working with PMSs in larger organisations.

The monthly evaluation of performance is published in a report, which is shared with all managers. The vision of the interviewee is however to make more of this information visible for all employees, for example via digital screens in the production. The purpose of this is to make employees more motivated by visualising how they personally can affect the measures.

The goals for the measures are set by top management. Financial rewards are given yearly, but are at the present only based on financial measures. No clear plans exist for how the goals should be reached, but the interviewee stresses that this is something the company will focus more on in the future. No reviews of the whole measurement system are conducted.

The company uses an ERP system, which makes the measuring process fairly automatic. The interviewee sees such a system almost as a necessity for working efficiently with measures.

The interviewee recognises the term performance measurement systems, and sees it as the same thing as key performance indicators. He is also familiar with the BSC, but along the same lines sees the company's measurement system as a BSC, only less academic. The interviewee thinks that the most difficult aspect of using measures is the communication, to make employees understand what the measures constitute and why they are important. Regarding the benefits of using measures the interviewee mentions the motivational aspect, but also that a mixture of measures gives a more truthful representation of company performance, compared to the usage of just financial results. This as the financial result may vary due to factors outside of the company's control, such as the price of raw materials. Concerning potential drawbacks of using measures, the main problem the interviewee sees is related to the usage of too many measures or if the measurement system becomes more form than substance.

4.4 Company D

Company D designs products, which are subsequently mainly sold to retailers. The company has however lately done some experimentation with selling directly to consumers. The manufacturing is outsourced to other European countries as well as to some Asian countries. The main market is Scandinavia. Some characteristics of company D can be found in table 10.

Table 10. Main characteristics of company D.

Age of company	Number of employees	Turnover (2016)	EBIT (2016)	Own manufacturing?	Family owned?	Quality certified?	Position of Interviewee(s)
30-40 yrs	**20-35**	**100-150 MSEK**	**- 5-10 MSEK**	**No**	**No**	**Yes[3]**	**CEO**

Strategy
Company D has a fairly formalised strategy. The interviewee explains how top management regularly meet and discuss strategy. The starting point for these discussions is the company's formalised vision, which revolves around the company being a driving force in the niche in which it operates, by utilising and further developing the knowledge, competence and passion the company has for the end products as well as the raw materials involved in making the products. The strategic process is mostly driven top-down within the company, but the interviewee discusses how it in the future would be desirable with more contribution from the bottom of the organisation.

In terms of the Miles et al. framework the interviewee identifies company D as a mixture of the prospector and defender categories. The company has a fairly dominant market position in its main segment, and in order to consolidate this position and to compete in the other segments both innovation and efficiency are important. The interviewee identifies three main factors important for the future success of the company. The first revolves around strengthening the brand and the product assortment. The second is centred on becoming more efficient and removing waste, which does not add value for the customers, from the processes. The third focuses on the people in the company, their competences and on how a work place which attracts the right employees can be created.

Performance measurement system
Financially the company focuses on turnover and gross margin. Furthermore, the company measures stock turnover as well as staff satisfaction and competence. The final measure company D uses is the proportion of new products that becomes successful.

The PMS has been developed with strategy as a starting point. The interviewee explains how the overall strategy is broken down into different strategic dimensions from which specific measures are defined. Clear goals, set by top management, are used for the

[3] Company D has quality certifications which are fairly specific to their business. In order to protect the anonymity of the company, the certifications are not disclosed.

financial measures and the stock turnover, whereas the goal for new successful products is vaguer and no goals yet exist for the staff measures. For the measures which have clear goals, plans have been developed for how the goals should be reached. The company utilises financial rewards based on the performance on the financial measures. These rewards are mainly of a collective nature.

Regarding cause and effect relations between the measures, the interviewee believes such relations exist, but it was not something which was considered when the measures were developed. No comprehensive reviews of the PMS are conducted, but as strategic reviews are conducted regularly, and the measures are derived from strategy, the measures are discussed during these. The interviewee can however not remember the removal of any previously used measures, but emphasises that it is important not to use too many measures, as this makes it less clear for employees where the company is heading.

Company D is owned by a private equity firm. In terms of performance measures, the owners mainly influence which financial measures the company uses. The financial results are published in a monthly report which is sent to the owners and to top management. The rest of the measures are communicated to all employees at a quarterly meeting. The company has an ERP system from which information is exported to excel sheets where most of the final measures are calculated. The exception is staff satisfaction and competence which is measured via surveys. The interviewee believes it would be much more difficult to work with performance measurements without the ERP-system.

Company D has implemented three quality certifications which require continuous monitoring. However, they have not affected the choice of performance measures. The competitive situation is according to the interviewee constantly changing, and the competition for space in retail stores is though. Neither this has however affected what the company measures at the moment. The interviewee would like to be able to measure aspects such as market share and total market size with greater precision, but emphasises that these measures cannot be implemented by a single company, but rather must be driven by a join trade association as this kind of data is not available today.

The interviewee is not familiar with the concept of PMS, but has previous experience with the BSC from larger organisations. The interviewee thinks that the lack of comprehensive processes and the lesser academic level in a smaller company makes it hard to use such tools.

The main benefits which the interviewee perceives from using performance measures, is that it communicates the vision and the strategy and tracks the progress towards fulfilling it. The perceived potential drawbacks instead revolve around putting too much focus on measures and not seeing the bigger picture:

“there is something else, something that is hard to define, but which causes certain companies to win the game and others to lose it”.

The hardest part of working with measures, the interviewee believes, is to define and develop measures for the softer dimensions of the organisation. Measuring turnover is fairly straightforward, whereas measuring something like staff satisfaction is more complicated.

4.5 Company E

Company E designs and manufactures products based on customer specifications. Most of the production is realised in Sweden but some of the simpler projects are conducted at a subsidiary plant in Eastern Europe. The main market is Sweden and Norway, where the company sees ample possibilities for further growth. The company was bought by the current CEO and a companion of his, more than 10 years ago. The main characteristics of company E can be found in table 11.

Table 11. Main characteristics of company E.

Age of company	Number of employees	Turnover (2016)	EBIT (2016)	Own manufacturing?	Family owned?	Quality certified?	Position of Interviewee(s)
30-40 yrs	**35-50**	**50-100 MSEK**	**0-5 MSEK**	**Yes**	**No**	**ISO 9001**	**CEO**

Strategy
The company has no vision or mission statements, but instead has a formalised business concept, which serves a similar purpose. This concept revolves around the company being the natural choice for customers in their niche, by mainly competing with technology content and level of service. The interviewee however adds that it is important to be competitive also in terms of price. Regarding the most important factors for the future success of the company the interviewee focuses on two issues. The first is to build competence in order to be able to achieve the level of technology content and service discussed above as well as being able to understand the customer's needs and design a solution that meets these. The second is to become more cost efficient, both in terms of purchasing and internal operations.

The company has a board, which includes external representatives who meet six times a year. During these meetings strategic issues are discussed. At the moment the strategy revolves around a balanced expansion in order to distribute the fixed costs over a larger produced volume.

Performance measurement system
Company E has a total of 18 performance measurements in the following six areas: quotations, orders, billing, financials, production and quality. In the quotations category the company measures the number of quotations sent out per week, average value of the quotations as well as hit rate - defined as the percentage of sent out quotations leading to orders. The interviewee sees the number of sent out quotations as an important early indicator of the future number of orders. In term of orders the company has two similar measures: number of orders and average order value.

Considering billing, the company measures number of bills, contribution margin and contribution margin ratio. The interviewee emphasises the importance of ensuring that the contribution margin ratio is high enough to cover overhead costs and give profit. In the financial category the company measures turnover, cost for direct and indirect materials, employee cost and result.

In the production category only one measure is used, the planned load for the upcoming seven weeks. Finally, regarding quality; design flaws, production flaws, faulty products

from subcontractors as well as the cost for warranty issues and complaints are measured.

The interviewee explains how the measures have not been derived from the company's strategy, but rather from that the company has tested different types of performance measures and reached the conclusion that the current set fits the company's needs well. The main purpose of the measurement system is to supply early signals regarding the company's performance and the market, which subsequently can be used to facilitate the steering of the organisation. Another focus when developing the measures has been to use measures where the data collecting requires as little manual labour as possible. Otherwise, the interviewee explains, the data tends not be collected at all during busy periods. Most of the measures the company uses are automatically computed via an ERP system. The interviewee emphasises that they want to keep the ERP-system fairly generic in order to avoid the consultant costs associated with modifying the system and updating a modified system.

The measures in the quality category are all a consequence of the ISO 9001 certification. The interviewee believes that quality would have been measured also without the certification, but probably in a less comprehensive manner. The data for the quality measures is not collected automatically but is instead registered by employees when errors are identified. The interviewee sees this as problematic for two reasons. Firstly because of the reasons discussed above: during busy periods this task may be neglected. Secondly as employees may choose not to register an error in order not to show that they have made a mistake, and instead just try to rectify the problem themselves. For these reasons the company is at the moment considering other possible ways of measuring quality.

The interviewee acknowledges that the company uses fairly many measures but thinks the situation is manageable as most of the measures are generated automatically. The interviewee however admits that some of the measures are less useful than others, for example the number of bills measure.

The company conducted a formal review of the measurement system as late as a couple of weeks before the interview was held, where the relevance of the measures was examined. Earlier the company measured turnover per week, but this measure was removed after the review. This, as the fairly long projects the company conducts, according to the interviewee makes such a short time frame irrelevant. The review of the measurement system was held due to some changes in top management and the system is otherwise not regularly reviewed.

The company has goals for some of the measures such as the quality related measures, direct costs and employee costs, turnover and result whereas other measures are used more as an indication of the market, such as the number of quotations written. For the measures where goals exist, there are also plans in place on how to reach the goals. Both the goals and the plans are developed by top management. The company has a financial bonus system where the bonuses are connected to the financial performance of the company.

The interviewee has no knowledge of the concept of performance measurement systems. The interviewee is however aware of the BSC, but has not considered implementing it in the company, due to the resources such an implementation would require. Spending too much time and resources on measurements instead of on actions is the main potential drawback the interviewee sees connected to performance measurements.

The interviewee thinks that the most difficult aspect of working with measures is to design measures that can predict the future number of incoming orders. The company has previous experiences of how the market condition can change rapidly, and in a matter of months the company can go from being busy to having close to no orders at all.

4.6 Company F

Company F manufactures and sells products, customised for the individual customer. The customers are companies and company F considers themselves to be a small player on a large market. The company additionally offers service on the products after the purchase, which provides an important revenue stream. Company F is present in a few European countries, in North America and in Asia. The main characteristics of company F can be found in table 12.

Table 12. Main characteristics of company F.

Age of company	Number of employees	Turnover (2016)	EBIT (2016)	Own manufacturing?	Family owned?	Quality certified?	Position of Interviewee(s)
30-40 yrs	**20-35**	**50-100 MSEK**	**0-5 MSEK**	**Yes**	**No**	**ISO 9001**	**CEO**

Strategy
The company does not have any mission or vision statements. The interviewee identifies three critical success factors for the company. Firstly, an effective organisation with the right number of employees (not too many). Secondly, a well-functioning supply chain which reduces costs, and thirdly, product innovation. The interviewee states that product development has been neglected in the recent history and that it is difficult for them as a small company to expand it again. The interviewee states that the company's strategy revolves around accomplishing the three factors mentioned. Regarding the Miles et al. framework, the interviewee categorises the company as being somewhere in between the prospector and defender categories. It is critical for the company to protect its home market regarding product sales and service contracts. It is however also important to attract new customers. The interviewee thinks that the company is fairly flexible and that they as a small company needs to be able to both adapt to the external environment, and to be cost focused.

Regarding the Regnér model, the strategy formulation is mainly done by the management team, which in this company makes up a large part of the office - 6 out of 10 persons. The company has formal strategy reviews with the board once a year which are followed up upon by the management team shortly thereafter and the strategy is then broken down into actions.

Performance measurement system
The company has a total of 16 performance measures. It measures revenue, EBITA, profit margin and overhead cost. Furthermore, the company measures the billability of the service technicians, the growth of the number of service contracts and the number of customer visits by sales personnel. Additional measures are carbon footprint, customer complaints regarding the sales process and product quality, delivery dependability, production utilisation and the number of development projects. Finally, the number of IT related and employee related incidents and the supplier delivery precision are measured.

The company is certified to ISO 9001 since just a few months. The carbon dioxide measurement was introduced because of this, as well as the measures connected to customer complaints.

The interviewee admits that the company has quite many measures, and states that it is important to not have too many measures:

"*At a small company like this, you need to create value during the work hours, rather than just spend time on measuring.*"

The interviewee states that a plan exists for the development of the measurement system and that no new measures are needed now, as the current set of measures fulfil the ISO certification requirements and the company's needs. A review of the whole PMS is conducted yearly, whereas a shorter discussion on the potential additions or removals of measures is held monthly.

The company is owned by a network of investors since about 5 years. These investors are also board members and some measures were initially designed with regards to what the board wanted to know about the company finances. The board is however not very involved in the development of the PMS at this time. Other measures have been introduced because of management team initiatives, such as the number of customer visits. This measure was chosen since it was perceived as important to increase the activity towards the market, in order to increase revenues.

The measures have not been formally derived from strategy, but the interviewee thinks that some of them reflect the company's success factors. For example, the measure on the number of development projects is in line with the strategic focus on product innovation. However, the interviewee adds that the number of projects does not paint the whole picture, as it says nothing about the successfulness of the projects.

The management team sets targets for all the measures and evaluates them each week, but no plans exist for how they should be fulfilled. A report on the performance measures is put together monthly. Additionally, meetings are held quarterly where the performance in regard to some of the measures which the employees easily can relate to is presented and discussed. For some managerial positions, bonuses exist but are based on individual goals and not directly linked to the PMS.

The company has an ERP system, in which many of the measures are calculated automatically, and the interviewee states that it would be nearly impossible to work efficiently with performance measurements without such a system. However, there are some measures for which the data is collected manually. The interviewee acknowledges the risk of becoming limited in regard to what the system can handle, but sees this as a greater risk for larger companies.

The competitive environment for the company is rather static, but political decisions and regulations can change the conditions on the market and product requirements. The company is currently shifting their focus from being a supplier of mechanical products to becoming more of a provider of solutions. The interviewee does however not experience that this has had any effect on the PMS.

The interviewee does not recognise the term performance measurement system. The interviewee is familiar with the BSC, but the company has not really considered

implementing such a framework – it has never been an issue. When presented with the dimensions of the BSC the interviewee recognises a lack of measures in the innovation and learning perspective and thinks that the company can improve in this regard. Regarding the customer perspective, they have previously sent out customer surveys but experienced that it was hard to get them answered.

The interviewee finds that the largest benefit regarding measuring performance is that you can receive early signals when performance is moving in the wrong direction in leading measures, before the effect is visible in the financial result.

4.7 Company G

Company G manufactures products based on customer specifications. The market is geographically fairly limited due to the weight of the products, which drives up transportation costs. The company has had the occasional minor project in Norway, but mostly sells to customers in the area between Gothenburg and Stockholm. The customers are companies and not private consumers. The company is owned by some of the founders, together with financiers and a foundation. The current CEO is the second external CEO the company has appointed, and had at the time for the interview only been at the company for about two months. The main characteristics of company G can be found in table 13.

Table 13. Main characteristics of company G.

Age of company	Number of employees	Turnover (2016)	EBIT (2016)	Own manufacturing?	Family owned?	Quality certified?	Position of Interviewee(s)
20-30 yrs	50-75	150-250 MSEK	10-20 MSEK	Yes	No	Yes[4]	CEO

Strategy
Strategically company G is in a transition period. During the previous handful of years, the strategic focus has been on company growth. During this period the company has had formal vision and mission statements with this focus. The company has however now no spare capacity of the current facilities, and considers new potential strategies. To keep focus on growth is however still an alternative, but this will require investments in new facilities.

Regarding the Miles et al. framework the interviewee puts the company in the analyser category, but would however like to see the company move more towards the prospector category, with more focus on seeking new customers and markets and new product innovations. The company is not the cheapest alternative on the market, but rather competes with quality and level of service. These are according to the interviewee important factors for the company to excel at in order to continue being successful on the market.

Performance measurement system
Financially the company measures turnover, profits, contribution margin, order backlog and number of new orders received. Regarding production capacity utilisation, quality defects, productivity and incidents are measured. Additionally, the company measures absence due to illness and regularly conducts employee surveys, which measures aspects such as job satisfaction.

The interviewee considers most of the measures to be fairly natural ones, and describes the development of a measuring system as an evolution, where you start with some initial measures and then gradually builds upon this. The interviewee however adds that a potential problem with this approach is that too much focus is put on adding new measures in relation to removing old measures. He suspects that this has been a problem at company G, but no measures have been added or removed during his time at

[4] Company G has quality certifications which are fairly specific to their business. In order to protect the anonymity of the company, the certifications are not disclosed.

the company. The company does not conduct any formal reviews of the PMS as a whole.

Productivity is as of today measured in square meters, and the interviewee discusses some potential problems with this. One issue is that there are differences in density of the products, which could make it more reasonable to measure the total weight produced. Another issue is that certain innovations and additional services do not get reflected in this measure. A third issue is that it does not take the inputs into account – you can easily increase output by adding shifts and employees. The interviewee suggests that in this perspective measuring output per man-hour might be more relevant. He however adds that the measure also needs to be easily communicated to the employees, which the current measure is. Finally, the interviewee reasons about the dangers of putting too much focus on a single measure, and that trade-off relations with other measures tend to exist. For example, if too much focus is put on increasing productivity, quality defects may increase.

Most of the measures are presented in graphs on the wall in the canteen, visible for all employees and the performance is updated monthly. Goals exist for all measures and are formulated by top management. Plans for how the goals should be reached exist for most of the measures. The company has a bonus system, which ties financial rewards to the financial results of the company.

Company G does not have an ERP-system, but instead uses a tailored excel program, which updates most of the performance measures automatically. Some however require manual data collection such as incidents and the employee survey.
The company has a quality certification, which is a legal requirement for their business. This certification has however not affected any of the performance measures employed. Regarding the market, the trend is moving towards total solutions, and towards more content in the products and more services surrounding the products. Neither this development has however affected the choice of measures according to the interviewee.

The interviewee is not familiar with the concept of performance measurements systems, but is aware of the BSC. Due to his short time at the company, and his previously relatively minor experience with the framework, he however finds it hard to discuss whether or not the BSC would suit company G.

The interviewee believes that the most important aspect of using measures is to actually do something with the data:

"It is easy to start measuring, but that is not enough. You also have to be able to detect signals and then change your actions accordingly – to have routines for how to get back on track if problems are identified".

But as long as this is done the interviewee considers a PMS to be an absolute necessity in order to keep track of the business and steer the company.

5. Analysis

The first part of this chapter consists of a separate analysis on each case company. In the second part of this chapter the three research questions will be analysed separately. This analysis will be based on the data from all the included cases.

5.1 Analysis of the individual cases

In this part interesting observations from the specific cases will be discussed, but the main focus will be to study the fit between the strategic focus areas of each company and the performance measurements it employs, as well as the balance of its PMSs. The balance of the PMS is here defined as the balance between measures belonging to the four dimensions of the BSC. A matrix of these dimensions can be seen to the right in figure 5. The fit between the PMSs and the strategic focus areas of the companies is visualised using radar charts. A template for these can be seen to the left in figure 5. It should be mentioned that these analyses represent our understanding, based on the interview data, and that this was not something which was filled in directly by the interviewees. Additionally, the numbers used in the radar plots should be seen as rough estimations giving a general indication of the fit, rather than an exact science.

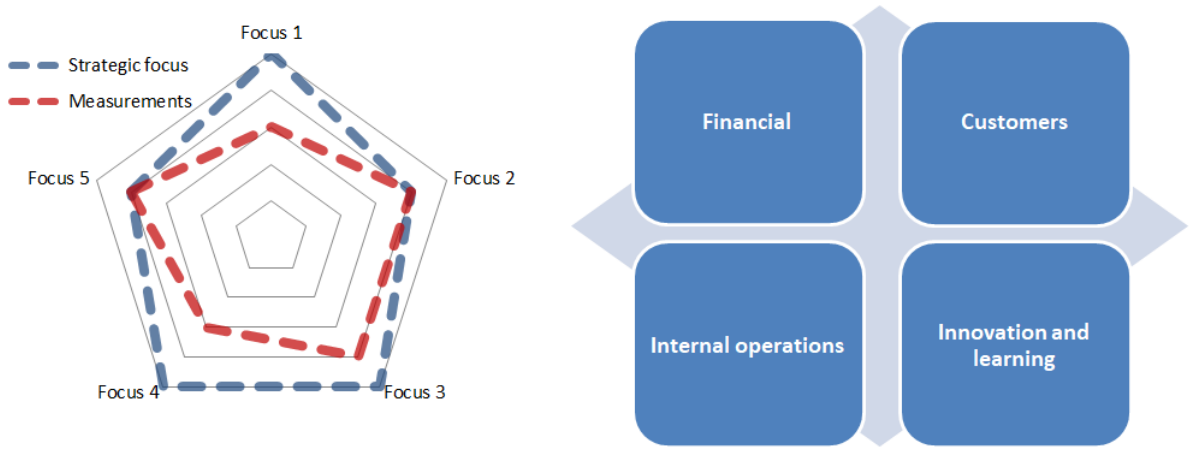

Figure 5. A template for how the analyses regarding the fit between strategic focus and PMS, and the balance of the PMSs are conducted.

5.1.1 Company A

In the literature it is clearly stated that family companies run by external CEOs rather than by family members tend to utilise more comprehensive PMSs (Garengo and Bititci, 2007; Cocca and Alberti, 2008; Durendez 2016). This is quite clearly illustrated in the case of company A, as more measures have been introduced since the company employed external managers, such as the CEO and the production manager, with experience from larger companies.

As highlighted by the interviewees in the case description there is a clear connection between the strategic focus on delivery dependability and quality, and the performance measures used. In this area a clear cause and effect relation is also identified, where quality improvements are seen as a stepping stone to better delivery dependability. However, other strategic aspects which the company stresses in their formalised vision and mission statements as well as in the discussion with the interviewees are not measured, such as having close relations with customers and also innovativeness. The match between strategy and PMS in company A is visualised in the radar chart in figure 6.

In terms of balance it is clearly pictured in the matrix below (figure 6) how company A only uses measures from the financial and internal operations dimensions, whereas measures from the customers and innovation and learning dimensions are lacking.

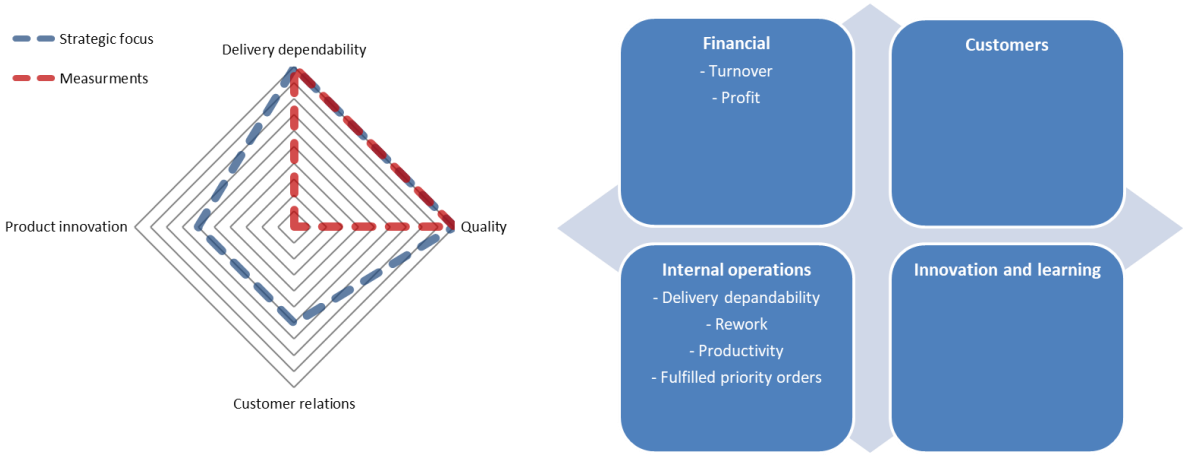

Figure 6. The left chart shows the match between strategic focus and PMS and the right chart shows the balance of the PMS for company A.

5.1.2 Company B

It is apparent in company B that even though the company still is owned by the founder, the addition of external managers with experience from larger companies is driving a transition towards a more comprehensive PMS. The interviewee however feels that the introduced measures to a large extent are of a lagging nature and that in the company's context with high growth, leading measures would be more beneficial. The interviewee describes how the company is likely to implement what she calls a *"measure control reporting system"*. There is however not any such term, which could imply a lack of insight. Most likely what is meant is a management control and reporting system and in fact, the balanced scorecard is one such technique (Otley, 1999). According to Siska (2015), the term management control system is a synonym to PMS. Because of this, the interpretation is made that the company is about to implement a more extensive PMS.

As can be seen in the matrix in figure 7 the PMS of company B is fairly well balanced, however with a slight underweight of measures from the innovation and learning dimension. As can be seen in the radar chart in figure 7 the PMS is to a large extent reflecting the company's strategic focus areas, especially regarding its aggressive growth mindset, with measures such as turnover and market share and an identified cause and effect relation between the share of revenue from innovations measure and turnover. However, there is a clear mismatch regarding employer branding which is also acknowledged by the interviewee, implying an awareness within the company regarding this. By introducing such measures, the balance of the PMS would become even better, since it would fall under the innovation and learning dimension.

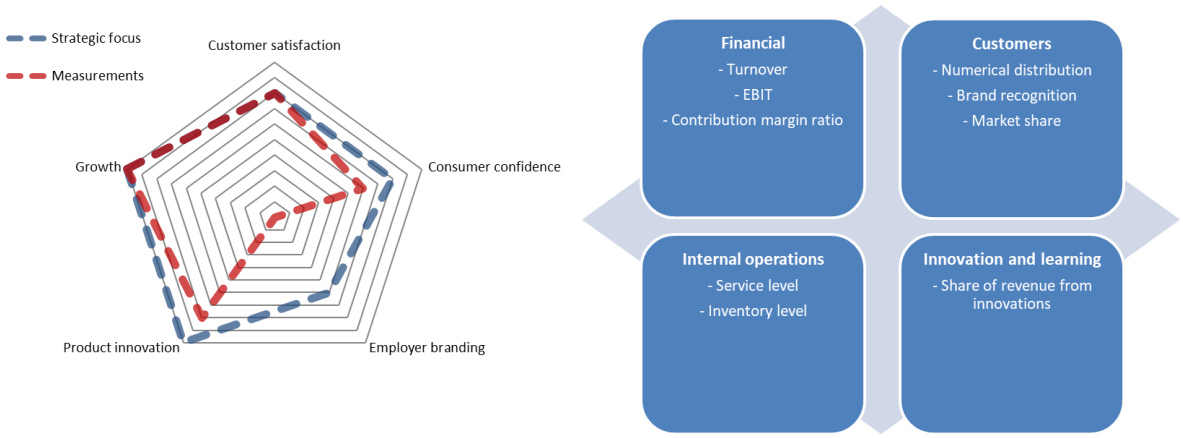

Figure 7. The left chart shows the match between strategic focus and PMS and the right chart shows the balance of the PMS for company B.

5.1.3 Company C

Likewise, as the two earlier discussed cases, company C provides a clear demonstration of how the transition to a more comprehensive PMS is driven by external managers with experience from larger companies. Furthermore, the interviewee's emphasis on focusing on a minor set of measures is supported in the literature. Both Garengo et al. (2005) and Cocca and Alberti (2010) recommends that SMEs with the resource scarcity they tend to suffer from, use a few vital measures.

In terms of internal operations there is strong connection between the strategic focus of the company and the PMS, which can be seen in the radar chart in figure 8 below. To sustain and improve quality, delivery dependability and productivity is strategically important for the company, and measures capturing these areas are employed. However, other, albeit smaller, strategic focus areas such as innovativeness and the pursuit of new customers are not covered by any measures.

Concerning the balance of the system the financial and internal operations dimensions are clearly dominant, even though one measure is used from the innovation and learning dimension. No measures are used from the customer dimension. This is visualised in in the matrix in figure 8.

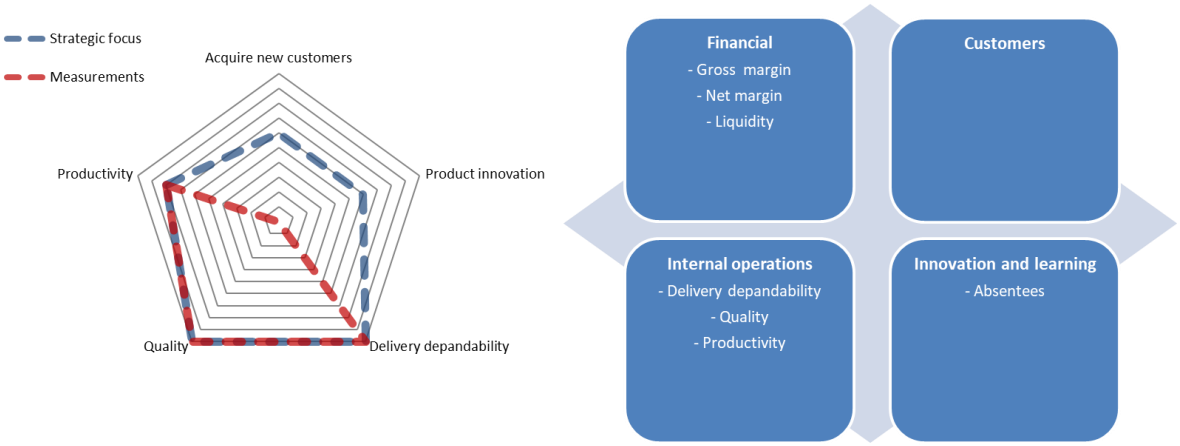

Figure 8. The left chart shows the match between strategic focus and PMS and the right chart shows the balance of the PMS for company C.

When designing their PMS company C identified a quite comprehensive cause and effect chain starting in discontent employees and ending in a lower financial result, via higher absenteeism, lower quality and lower delivery dependability. It is interesting to note that the company has chosen not to measure the main identified driver in this relationship, namely employee satisfaction.

5.1.4 Company D

Company D has external owners which may be one explanation as to why the company has a fairly comprehensive and formalised strategic process. In the literature on PMS it is stated that having external owners tend to be associated with a more extensive PMS (Durendez et al., 2016). In this case the owners have however only explicitly affected the choice of the financial performance measures, but it is possible that the formalised strategic process implicitly effects the PMS, especially since the company has a formal method for deriving measures from strategy.

Regarding the connection between the PMS and the strategy of company D, the main area in which a clear mismatch exists is the strength of the brand, which is not measured at the moment. This can be seen in the radar chart in figure 9 below. As mentioned in the case description the interviewee would like to be able to measure market share, which to a certain degree would reflect the strength of the brand. Another possibility would be to more directly measure brand awareness and perception among retailers and end customers. The other four identified strategic focus areas are to a varying degree all covered by measures. In terms of employee competence this is measured directly. Regarding attracting the right employees, the interviewee emphasises how this could be achieved by creating a favourable work environment. In this sense measures on staff satisfaction and staff competence can be seen as drivers for attracting the right employees. Finally, efficiency and innovativeness are covered by measures on stock turnover and percentage of new products becoming successful.

In terms of the balance of the measuring system it is interesting to note the dominance of measures from the innovation and learning dimension (figure 9). No measures are used from the customer dimension. If measures tracking the strength of the brand were to be used, they would most likely fall under this dimension. It is also interesting to notice the relative lack of operational measures; most likely a consequence of the company having outsourced the production.

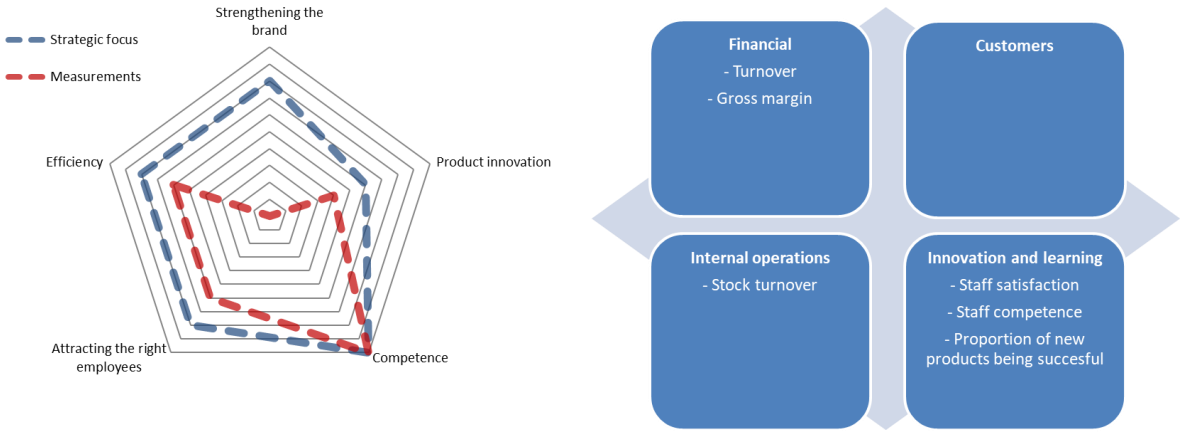

Figure 9. The left chart shows the match between strategic focus and PMS and the right chart shows the balance of the PMS for company D.

5.1.5 Company E

Company E has fairly many measures, but mainly measures belonging to the financial and internal operations dimensions. This can be seen in the matrix in figure 10 below. Regarding the fit between the PMS and the strategic focus of company E, a lack of measures regarding both customer service and technological competence can be seen (radar chart in figure 10). Customer service involves interactions with a customer before, during and after a potential purchase. In this sense the hit rate of quotations can be seen as a measure on the level of service before the purchase. However, no measures are employed regarding customer service during or after the purchase. Potential measures on technological competence would most likely fall under the learning and growth dimension, under which the company have no measures at the moment. Hence, such measures would make the PMS more balanced. The abundance of quality related measures in comparison to the strategic focus which the company has on these issues, can most likely be explained by the ISO 9001 certification which the company has implemented.

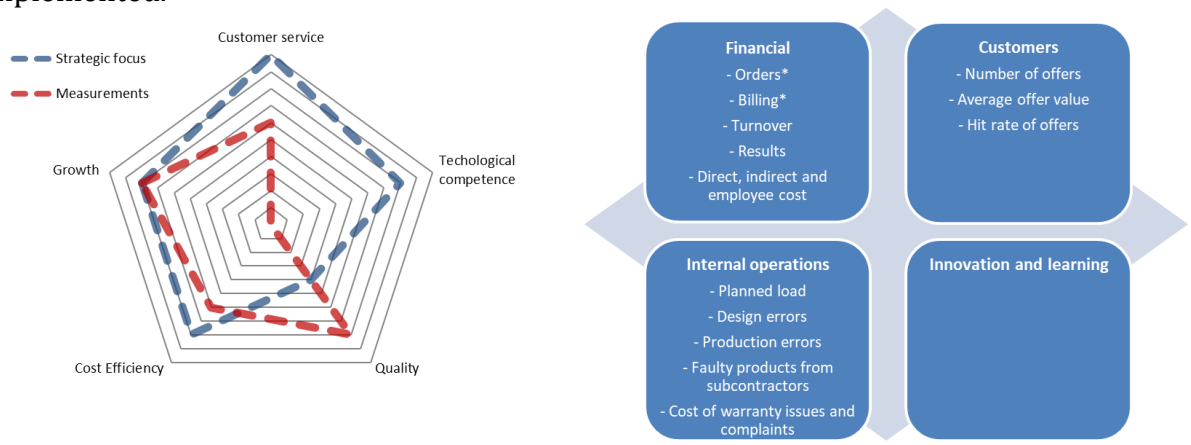

Figure 10. The left chart shows the match between strategic focus and PMS and the right chart shows the balance of the PMS for company E. The measures followed by an asterisk (*) symbol stands for a category of measures, where the specific measures can be found in the text.

5.1.6 Company F

Company F has this year further developed their PMS which has resulted in it being quite extensive with 16 measures. However, it does not support the strategic focus areas to a full extent, which can be seen in the radar chart in figure 11 below. The interviewee states that product innovation has been neglected at the company, and that it should be focused on from now on. It would therefore be positive and in line with the strategy to introduce measures which further supports this, especially since the current one, as the interviewee discusses, says nothing about the successfulness of the product development initiatives. Flexibility is not directly measured in the PMS, but it might be correlated to measures such as production utilisation and billability of service technicians. However, the PMS covers the two other areas of strategic focus well, having an efficient supply chain and a streamlined and cost-efficient organisation.

Regarding the balance of the PMS, there is a clear lack of measures regarding innovation and learning, which can be seen in the matrix in figure 11. This observation is also in line with the interviewee's own thoughts. The company has a dominance of financial and internal operations measures, which to a high extent supports the effective supply chain and effective organisation strategic focus areas.

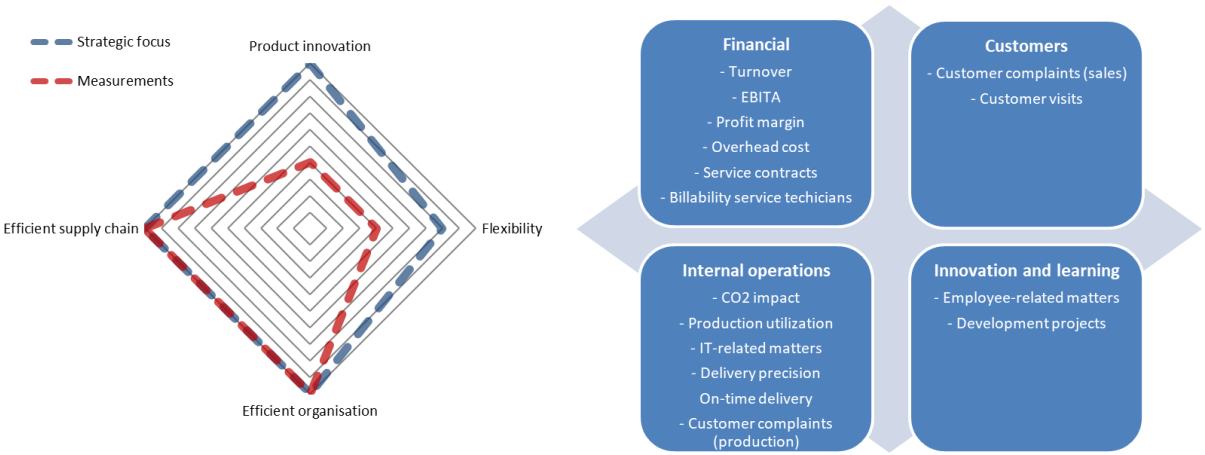

Figure 11. The left chart shows the match between strategic focus and PMS and the right chart shows the balance of the PMS for company F.

5.1.7 Company G

Company G is fairly difficult to analyse, since they are in a period of strategic transition. Considering the previous strategic focus of growth, the PMS is fairly well equipped to handle this with measures such as turnover, productivity and capacity utilisation. The system could perhaps be said to lack measures regarding drivers for growth from the customer side of view, such as for example quotations or other kinds of customer processing. This is also something the CEO emphasises that the company should improve upon. It should however be stated that this makes less sense at this moment in time, as the company has reached their current production capacity. Regarding other strategic focus areas, quality is covered by a measure on quality defects, whereas no measures are used for the level of service. Product innovation is another area where the CEO sees potential for a greater strategic focus in the future. At the moment no measures regarding innovation are employed. The radar chart in figure 12 shows the match between strategy and PMS in company G.

Regarding the balance of the PMS a clear dominance of measures from the financial and internal operations dimensions is found (figure 12). New measures in the areas of finding new customers and product innovation (where mismatches exist in the radar plot) would fall under the two categories of customers and innovation and learning and thus make the PMS more balanced.

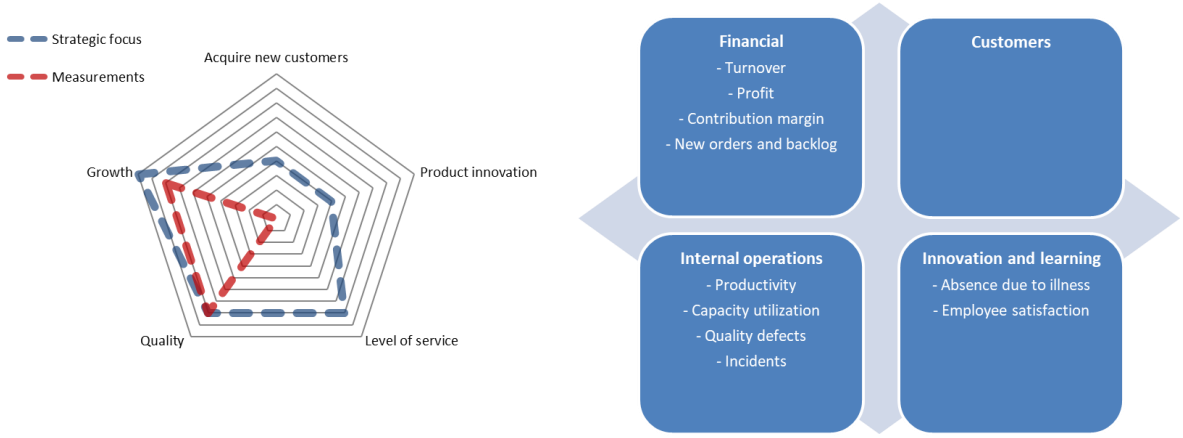

Figure 12. The left chart shows the match between strategic focus and PMS and the right chart shows the balance of the PMS for company G.

5.2 Analysis of the research questions

In the following subchapters the three research questions of the study will be analysed. This analysis will take all the included cases into account.

5.2.1 Research question 1

In this subchapter the first of the three research questions of this study will be analysed and answered. The first research question is the following:

To which extent do SMEs use SPMSs?

SPMSs are in this study defined as a subset of regular PMSs. This implies that in order for a company to be classified as a user of SPMSs it must first fulfil the definition of being a PMS user. However, the definition used in this study regarding what a PMS constitutes, namely the usage of one or more measure(s) related to performance, some supporting structure for gathering the data and some management of the data, is fairly loose and all the included companies fulfil it. SPMSs are in this study furthermore defined in accordance with the four criteria set up by Gimbert et al. (2010). The extent to which the included companies use SPMSs will be assessed in relation to, to which extent they fulfil these four criteria. Each criterion is treated separately below.

1. Translation of long-term strategy into used measurements

The first criterion can be interpreted in two possible ways. The first way is that the company must have an explicit method for breaking down strategy into measures. The second way is that it is enough that strategy is mirrored in the measures, regardless of how the measures have been designed. One could however perhaps claim that it is unlikely that the fit between PMS and strategy would remain strong over time if no method is used for deriving measures from strategy.

Regarding methods for breaking down strategy into measures, only company D employs something that could be classified as such. The company breaks down the overall strategy into what they call strategic dimensions, from which measures are defined. The rest of the included companies are divided between companies such as company B which claims to have strategy *"in the back of the mind"* when measures are developed to companies such as company C and company E which explicitly do not consider strategy during this process.

Regarding the general fit between long-term strategy and PMSs, it was shown in subchapter 5.1, that mismatches exist for all the studied companies. This was thus also true for company D, even though the company uses a formal method for deriving measures from strategy. Furthermore, the companies are generally good at employing measures covering strategic focus areas in connection to the financial and internal operations dimensions. Most mismatches instead exit in the customers and innovation and learning dimensions.

2. Using measurements from multiple dimensions

This criterion is fulfilled by all included companies, as all companies have measures from more than one dimension. In terms of the general balance of the PMSs the companies with an internal manufacturing function tend to have an overweight of measures from the financial and internal operations dimensions. This tendency is not apparent for the two companies with outsourced production (company B and company D). Criterion number two is however fairly loose and does not require the PMSs to be balanced.

3. For each dimension where measurements exist, having goals and plans for how the goals are to be reached

This criterion is fulfilled by about half of the companies. Most of the companies have goals for all of their measures. The exceptions are company D, which does not have goals for their measures belonging to the innovation and learning category and company E which chooses to see some measures, like the number of sent out quotations, as indications of the market rather than a measure of company performance. It could perhaps be discussed whether or not such measures are a part of a performance measurement system, but in the literature, it is clearly advised that SMEs use the PMS for scanning the external environment. It should also be noted that a measure like the number of sent out quotations, even though the company mainly sees it as an indication of the market, still holds some reflection of company performance. Furthermore, it should also be noted that company E has goals and plans for at least some measures in each dimension in which it has measures and thus it still fulfils this criterion. All companies except company C and company F have plans for how the goals should be reached.

4. Having causal relationships between different performance measurements, for example the notion of how increased performance in one measure drives increased performance in other measures

Similar to criterion one, this criterion can be interpreted in two different ways. Either it is enough that causal relationships exist between the different measures in the PMS, or causal relationships have to have been defined during the process of developing the PMS and used for guiding this process. Interpreted in the former way, it is probably hard to find a PMS where such relationships cannot be found, as the goal of increased performance in areas such as internal operations, innovativeness or customer preferences, generally is increased financial performance. However, even interpreted in the later way, all companies except company D have identified such relations, in the form of cause and effect and/or trade off relations, during the development of their PMSs.

A visualisation of which of the four above discussed criteria each company fulfils can be seen in table 14 below. In this table criterion one and four have been interpreted in such a fashion that a company in order to fulfil these criteria need to have had considered these factors during the development of the PMS. This interpretation has been chosen as these considerations are taken in frameworks like the BSC, which is a SPMS framework. It is from the table clear that none of the companies fulfil all four criteria, and thus that

none of the companies can be said to use SPMSs to a full extent. Furthermore, all companies fulfil at least two criteria, thus all studied companies can be said to use SPMSs to some extent. Only one company fulfils the first criterion, this company, company D, however misses out on criterion three and four.

Table 14. The table shows which of the four criteria (1-4) for SPMSs each included company (A-G) in the study fulfils.

	A	B	C	D	E	F	G
1				X			
2	X	X	X	X	X	X	X
3	X	X			X		X
4	X	X	X		X	X	X

5.2.2 Research question 2

This subchapter will treat the second research question of the study, which is the following:

Why do SMEs use SPMSs to the extent that they do?

The subchapter is divided into a number of sections, based on previous literature and emerging themes from the empirical data. As shown in the previous subchapter regarding the first research question, the criterion which most of the included companies fails to fulfil is the first one relating to deriving performance measures from strategy. Because of this, this criterion will be in focus in this subchapter. Furthermore, as this subchapter is fairly long, the last section provides a shorter summary.

5.2.2.1 Main motivation for measuring performance

One interesting aspect to consider in order to shed light on this research question is why the companies choose to measure performance at all. Table 15 shows the main benefits the companies perceive in regard to performance measurements.

Table 15. The main benefits the companies perceive regarding performance measurements.

Company	Motivation
A	Spur competitive spirit and motivation; To have control over operations
B	Fact based decision making; Identifying areas for improvements; ***"If you do not measure, you cannot improve"***
C	Motivation of employees; Other targets than just financials give a more truthful representation of a company's performance
D	Communicates vision and strategy and tracks the progress towards fulfilling them
E	Supply early signals regarding the company and the market
F	Identify problems
G	Identify problems before they affect the financial result

It is clear from the table that only one of the included companies, company D, sees the PMS first and foremost as a strategic tool. It is therefore not surprising that this is the only one of the companies which has a formal way of translating strategy into performance measurements. Company E, company F and company G rather see the PMS as a system which gives signals when the performance is moving in the wrong direction. Company B is somewhere in between company D on one side and company E, company F and company G on the other, while not discussing the system in strategic term still acknowledging the need to measure something in order to improve it. The difference between measuring something in order to improve it compared to measuring it in order to identify when performance is falling could perhaps be seen as fine. It could however possibly be argued that the most important areas to improve for a company are tightly connected to its key success factors, whereas the most important areas in which to identify problems can be more connected to for example areas in which the company

previously has experienced problems. Company B also overall has a better fit between strategic focus areas and the PMS, compared to company E, company F and company G.

An interesting aspect to take into account here is that both company B and company D have outsourced their manufacturing. SMEs tend to have a fire fighting mentality (Löfving, 2009), and it is possible that this mentality is stronger with an in-house manufacturing function where problems regularly arise. In this sense it could be seen as natural that SMEs with their own manufacturing function sees the PMS primarily as a system for detection of *"fires"* or problems in this function. Companies which have outsourced the manufacturing function can perhaps easier see other benefits of a PMS.

Company A and company C sees the main benefits of PMSs in terms of the motivational effect they have on the employees. Both these companies have their own manufacturing and have most of their employees in this function. In this light it becomes logical that both companies, besides the financial measures, mostly have measures belonging to the internal operations dimension. If the company sees the PMS as mainly a motivational tool it makes sense to focus on measures which are relevant to the majority of the employees.

5.2.2.2 Strategic formalisation and formulation approach

In the literature one commonly used explanation as to why SMEs may find it hard to implement more strategically focused PMSs is a low degree of strategic formalisation. Among the companies included in this study only one, company C, claims that the lack of formalised strategy is the reason why the company finds it hard to derive measures from strategy. Regarding the rest of the companies, most of them have formalised mission and vision statements, have recurrent board and/or top management meeting where strategic issues are discussed, and can easily state their key success factors.

Furthermore, it is in the literature stated that strategy to a large degree is created in an emergent bottom-up fashion in SMEs, which may be incompatible with the top-down approach used in the majority of the published SPMS frameworks. However, all of the managers interviewed in this study claim that strategy, in their companies, mainly is formulated from the top. This can be exemplified with the following quote from the CEO from company A:

"I am hired to make changes, some people like, some they don't, but we go forward anyway"

As bottom-up strategic formulation in some sense can be said to take place in the periphery of top management's control, it could perhaps be argued that such initiatives may exist without top management being aware of them. On the other hand, multiple of the interviewees explicitly state that they want their companies to become better at creating strategic initiatives in the periphery of the organisation and move away from the strong focus on top-down strategic formulation.

5.2.2.3 Knowledge and resources

In general, the interviewees are not previously aware of the concept of PMSs. Only the interviewees from company B and company C recognise it, where the interviewee from

company B fairly accurately defines it as a number of performance indicators put together in a system, whereas the interviewee from company C sees it as a synonym for key performance indicators.

All interviewees recognise the BSC framework, and several of them have previous experience using it. None of them, however, intends to implement the framework at their company. Company B are in the process of implementing a similar system, tailor made by a consulting firm, although the interviewee from this company articulates some concerns regarding whether the system may become too heavy administratively. Company C sees their own PMS as a balanced scorecard, only less academic, but it is clear from the analysis in subchapter 5.2 that the company's PMS lacks multiple of the strategic dimensions incorporated in a SPMS like the BSC. The justification from the rest of the companies regarding why they do not intend to implement the BSC are fairly similar. The CEO from company A discusses how the framework is too comprehensive, bureaucratic and resource demanding, and in addition discusses the pedagogical task of explaining such a tool to the employees. The interviewee from company D talks about how the lack of comprehensive processes and the lesser academic level at a smaller company is a barrier, whereas the interviewees from both company E and company G discuss the resource requirements, and the dangers of spending too much time on measuring instead of *"creating value".*

As an interesting side note it can be mentioned that the interviewees from company A, company E and company G, when presented with the four dimensions of the BSC recognised a lack of measures from the innovation and learning dimensions which they previously were unaware of.

5.2.2.4 Various contingency factors

In this subchapter various, in the literature identified, contingency factors affecting the way in which PMSs are developed in SMEs will be regarded.

Ownership of the company

In the literature it is stated that owners who themselves manage the company tend to be associated with less comprehensive PMSs. This tendency is quite clearly visible in company A, company B and company C where the hiring of external managers with experience from larger companies has accompanied more formal, comprehensive and strategically aligned PMSs. However, only in company A has an external CEO been brought in, indicating that it is external managers overall rather than an external CEO that is most important in this regard.

Company D and company G are owned by what could be said to be professional owners (a private equity firm and a network of investors), who make up the companies' boards. In both cases these owners have mainly been interested in the choice of financial measures. However, it is possible that owners like these want a more formal strategic process, which in turn could create a context in which it is easier to implement SPMS. This connection was however not explored in the interviews.

Competitors

According to the interviewees the competitive situation has not directly affected the PMSs. However, it tends to affect the strategy of the companies, which then, depending

on how good the fit between strategic focus areas and performance measures is, can affect the PMS. For example, company B sees innovations as strategically important for fending off competitors, and as the company has a fairly good fit between strategy and PMS, a measure on the innovative capabilities of the company is employed.

Quality certifications
Company D and company F have implemented quality certifications specific to their businesses. These have however not affected what the companies measure or how they work with performance measurements. Company C, company E and company G are ISO 9001 and/or 14001 qualified. As a result of this the companies have implemented certain measures regarding quality and in the case of company G a measure on carbon footprint. These measures all fall under the internal operations dimension where these three companies all have additional measures besides the ones required by the certifications. In this sense the certifications do not really affect the balance of the PMS nor affect to which extent SPMSs are used.

ERP system
All companies have ERP systems except company G, which uses a tailor-made Excel solution. The interviewees fairly unanimously claim that it would be much harder to work with performance measures without such systems – for example the interviewees from company A, company B and company C call it a prerequisite or a necessity and the interviewee from company G claims that it would be almost impossible to use performance measures without it. In this sense, if an ERP system is seen as a prerequisite for a PMS, it obviously also becomes an important starting point for a SPMS.

Most of the interviewees acknowledge the risk of getting slightly "*locked in"* by the ERP system regarding the design of measures, but do not see it as a big problem as of yet. Most of the companies also have at least one measure where the data is gathered outside of the ERP system, which could imply that the risk of the ERP system limiting the PMS is fairly small. On the other hand, these measures often belong to the customers and innovation and learning dimensions, where the companies generally are less able to match strategic focus areas and measurements. This could indicate that the difficulty of defining such measures in the ERP system is one reason as to why the fit between strategy and measurements in these areas is less precise.

5.2.2.5 Summary of analysis on research question 2
It seems probable that companies, which see the main benefits of a PMS to be along the lines of spreading and communicating the strategy or driving improvements, are more likely to opt for a SPMS. This in comparisons with companies which sees the benefits in terms of motivating employees or identifying problems.

The included companies tend to have fairly formalised strategies, with vision and mission statements and a good understanding of their key success factors. This indicates that a lack of formalised strategy is not acting as a barrier for SPMS implementation in these companies. Furthermore, the interviewees from the companies claim that the strategy mainly is formulated via a top-down approach which is in line with the majority of the available SPMS frameworks. However, the interviewees discuss

the resource requirements and the bureaucratic nature of frameworks like the BSC as problematic, indicating that this might act as more of a barrier.

The interviewees are in general not familiar with the concept of PMS, and as SPMS is a subset of PMS this clearly indicate that a lack of knowledge might be a barrier for SPMS implementation. This might be connected to the perceived benefits of measuring performance. In the literature, the usage of measures in order to communicate strategy and to drive improvements is often mentioned. However, if managers are unaware of this, it might explain why they do not see PMSs as strategic tools.

The hiring of external managers in a family owned company seems to be associated with a more comprehensive PMS, not necessarily driving the implementation of a SPMS, but at least creating better conditions for it. The same can be said about the usage of ERP systems, but with the minor caveat that the difficulty of defining measures for certain areas in the ERP systems may increase the risk of what Micheli and Mari (2013, p. 153) refers to when they caution that *"what is treated as important is what happens to be accessible to measurement".*

5.2.3 Research question 3

In this subchapter the last of the three research questions of the study will be analysed. The third research question is the following:

How are SMEs (S)PMSs used and maintained?

This subchapter will be divided into two sections, the first taking into account the maintenance of the (S)PMS over time followed by the second section about the usage of the (S)PMS. To increase readability and as a SPMS also is a PMS, the (S) in (S)PMS will be dropped below.

5.2.3.1 The maintenance of the PMS over time

The only company which regularly reviews its PMS is company F, which conducts such a review once a year. Company E recently reviewed their system following some changes in top management but does not conduct these types of reviews regularly. Company D does not explicitly review the PMS, but as the company has a formal way of linking the system to strategy and has formal strategy reviews, the PMS is discussed during these. The rest of the companies have no reviews of the PMS as a whole. The interviewees from company A and company B explain how different measures are discussed in different forums and the interviewee from company G believes that issues regarding the PMS tend to be resolved automatically over time – if no one is interested in a certain measure it will eventually be removed. In company C the PMS was developed by a project group which was thereafter dissolved, and since then the system has not been discussed in its entirety.

If a company has no formal reviews of the PMS as a whole, this could indicate that its managers consider it more as merely as a collection of measures rather than a system in which the measures relate to each other. It is for example hard to identify cause and effect relations between different measures from different dimensions if the measures from different dimensions are treated in different forums. This is in line with what was discussed in the previous subchapter where it was shown that the majority of the companies view the PMS as a system for identifying problems or for increasing motivation rather than a strategic system. Linking the PMS to strategy could furthermore provide a natural forum for reviewing the PMS as all of the in the study included companies, except for company C, regularly review the strategy.

Company A, company B and company C have developed their PMSs during the last couple of years, whereas the rest of the companies have had their systems for a longer time. The former three companies all have a fairly limited number of measures, whereas the remaining four tend to use more measures, with the exception of company D. This could be a sign of what the interviewee from company G discusses regarding a tendency to over time put more focus on adding new measures instead of removing old and less relevant ones. This tendency is also described in the literature (Kaplan and Norton, 1992). In general, it is recommended that companies use at most 25 performance measures (Kaplan and Norton, 2001; Garengo et al. 2005; Ferreira and Otley, 2009). Recommendations regarding PMSs in SMEs however tend to put an emphasis on having a lower number of measures in order to increase focus and clarity, even though no explicit numbers are given (Garengo et al., 2005; Cocca and Alberti, 2010). It is hence

likely that the 18 measures of company E and the 16 measures of company F surpass the recommended level. It is interesting to note that company F has reached this number of measures even though it regularly reviews the PMS, indicating that such reviews alone are not enough to keep the system focused.

Only the interviewee from company E can remember the last time a measure was removed from the PMS. It should however be noted that some of the companies have fairly new system and it is possible that no measures have been removed from these systems as of yet, and that some of the interviewees are fairly new at their companies. However, the lack of formal reviews in combination with the inability to recall the last removed measure from the system indicates that the included companies' PMSs are far from the dynamic, rapidly changeable and regularly reviewed systems recommended in the literature (Hudson et al., 2001; Garengo et al., 2005; Hudson and Smith, 2007; Cocca and Alberti, 2010).

5.2.3.2 The usage of the PMS

It should be noted that this aspect of the third research question is related to the first aspect considered under the second research question regarding the main perceived benefits from measuring performance. Here however, some other issues concerning PMS usage will be considered.

All included companies except company A have some kind of a financial bonus or reward system. Among these companies, all companies except company F have tied the rewards to the PMS. However, only company B bases their reward systems on performance measures from other dimensions than the financial one. The development in the PMS field during the last three decades has to a large degree been focused on promoting the measurement of other aspects of performance, besides the purely financial one, as it has been claimed that too strong of a focus on financial measures creates short-termism and an emphasis on the past rather than on the future (Neely, 1999; Eccles, 1991; Parker, 2000). In this sense it may be ill-considered to base rewards purely on financial performance, as this could potentially make employees and managers focus too much on this dimension, creating a breeding ground for the problems mentioned above.

As stated in the subchapter on the analysis of the first research question, all in the study included companies have goals for at least some of the measures. Furthermore, in all of the companies, these goals are formulated by top management. As shown in the subchapter dedicated to the analysis of the second research question, two of the companies; company A and company C, see the main benefits regarding measuring performance in terms of the motivational effect it has on the employees. For at least these two companies, and other companies with a similar view on PMSs, it could be beneficial to include the employees in the goal setting process. This is further supported by the discussion the interviewees from company A had regarding the detrimental effect on motivation that unattainable goals have. If the employees are involved in the process the risk of formulating unattainable goals is most likely lower. Involving the employees in this process in order to raise motivation is additionally recommended by Debusk and Crabtree (2006).

Finally, all companies follow up on most of their measures at least monthly and use the information from the PMS as input when strategic decisions are taken, although most often in combination with other types of information.

6. Discussion and recommendations for future research

In this study the following criteria, proposed by Gimbert et al. (2010), has been used as a definition for SPMS:

1. Translation of long-term strategy into used measurements
2. Using measurements from multiple dimensions
3. For each dimension where measures exist, having goals and plans for how the goals are to be reached
4. Having causal relationships between different performance measurements, for example the notion of how increased performance in one measurement drives increased performance in other measurements

I subchapter 5.2.1 some ambiguities regarding criteria 1 and 4 were discussed, namely whether these issues have to be considered when the PMS is developed or if it is enough that the system fulfils the criteria, regardless of how it has been developed. Another interesting issue related to this set of defining criteria, not mentioned in the article by Gimert et al. (2000), regards whether or not a hierarchy exists between them. In our opinion criterion 1 should be regarded as the most important one. A company can hardly be said to use a *strategic* performance measurement system if the measures are not derived from strategy. Also criterion number 2 should be regarded as essential. However, if a company fulfils criterion 1 then criterion 2 should follow automatically, as the company in its strategy most likely considers issues from more than one performance dimension. To take criterion number 4 explicitly into account during the development of the PMS is perhaps less important. This criterion is most likely subconsciously present in most such processes anyway, as one major reason for improving performance in other dimensions than the financial should be, in the longer term, to improve financial performance.

It could also be discussed whether or not criterion 2 is too loosely formulated. As shown in subchapter 5.2.1 all in the study included companies fulfil this criterion. This is not really surprising. All included companies are limited companies (aktiebolag in Swedish) and are therefore required to measure certain aspects of their financial performance. Furthermore, the majority of the included companies have an in-house manufacturing function, and it would be surprising to see a manufacturing company not measuring its operational performance is some regard. An alternative would be to use the concept of balance instead in criterion number 2 and thus require a balance between different dimensions of performance for the fulfilment of this criterion. An apparent drawback of this solution is however that the concept of balance is fairly vague and subjective. Another potential drawback is that certain companies might mainly have strategic focus areas related to a smaller set of dimensions. For example, a company categorised as a pure defender in the topology by Miles et al. (1978), mainly focused on retaining its main customers by being cost-efficient may only focus on strategic issues corresponding to the financial and internal operations performance dimensions. Such a company should therefore be able to employ a SPMS without at the same time having a balanced system. Another option would be to remove criterion 2 from the defining set of criteria.

This based on the logic expressed in the section above, namely that criterion 2 most likely will be fulfilled automatically if criterion 1 is fulfilled.

In subchapter 5.2.2 a tendency, regarding that the companies with outsourced manufacturing functions see their PMS of more of a strategic tool compared to the companies with manufacturing in-house, was identified and described. However, as only two companies with outsourced manufacturing functions were included in the study, more research is needed to confirm or dismiss this relation.

More research is also needed on the potential benefits and drawbacks of using SPMSs in SMEs. In subchapter 5.2.2 it was shown that the, in the study interviewed, managers had very limited knowledge regarding the concept of PMSs in general. In order to efficiently be able to spread information regarding PMSs and SPMSs to these kinds of managers it is important to have tangible benefits to point towards. The research on SPMSs in larger companies has mostly been based on the BSC. This framework is most likely not suitable for smaller companies, supported both by previous research (Garengo et al., 2005) and the opinions of the interviewees in this study. It is therefore important that research on SPMSs in SMEs focus on using very clear definitions regarding what exactly is meant when referring to PMSs and SPMSs. A recommendation is to use the defining criteria for SPMS proposed by Gimbert et al. (2010) as a starting point, but to further define how these have been interpreted as some ambiguities exists.

Furthermore, regarding the development of SPMS frameworks suitable for SMEs, based on the data from this study, the circular method of implementing the BSC proposed by Garengo et al. (2012) is perhaps not the right way to go. The managers interviewed in this study are all fairly confident in a top-down approach to strategy formulation, and state the resource requirements and the bureaucracy of the BSC as bigger obstacles. Thus, instead of trying to implement the BSC via a bottom-up approach, focus should perhaps rather be put on developing resource efficient frameworks, which are easily understood and communicated.

Even though this study is of a qualitative nature it is interesting to regard how representative the interviewed companies are for the general population of companies fulfilling the inclusions criteria of the study. In some sense the companies which agreed to take part in the study did this for two sets of reasons. Firstly, there were companies which recently had made larger changes to their PMS and were interested in how other companies treated these issues. Secondly, there were companies with managers with a similar academic background to ours, who in some sense wanted to give something back to the academia. It is not unlikely that both these types of companies have a bigger interest in measuring performance than the average company. It would therefore be of interest to use more quantitatively based research methods, for example surveys, to further investigate the topics of this study in a larger sample.

It is also interesting to regard to which extent the answers received during the interviewees would have differed if other individuals in the organisations had been interviewed. For most of the issues treated during the interviews, our perception is that the interviewed managers had a fairly comprehensive view on the companies' PMSs. This, with a possible exception for issues regarding the development of the PMS over time. In some cases, this was because of the interviewee's limited time at the company,

in other cases it could rather have to do with general difficulties in remembering such things. It could of course also be taken as an indication that the development of the PMS over time is not regarded as very important at the companies. It is possible that interviewing more managers per company would have improved the study in this regard, but in order to really research this topic, it would be beneficial to actually follow SMEs over time. This would however be considerable more resource demanding, both on behalf of the studied companies and the researchers.

7. Conclusions

In this chapter the main conclusions from the study are presented, with the research questions and the purpose as a guiding structure.

To which extent do SMEs use SPMSs?

The concept of SPMSs is in this study defined in accordance with the four criteria suggested by Gimbert et al. (2010). None of the studied companies fulfil this definition to a full extent, but all companies satisfy at least one of the criteria. Criterion number one, in this study interpreted as the existence of a formal method for translating long-term strategy into performance measures, is only fulfilled by one of the companies. This criterion can possibly also be seen as the most essential one in the set.

Why do SMEs use SPMSs to the extent that they do?

One possible reason as to why the companies are not fulfilling all the criteria is that the majority of the companies see their PMSs as systems for identifying problems or for raising motivation rather than as strategic tools. This tendency was less apparent for the companies having outsourced their manufacturing system, but as only two such companies were included in the study, more research is needed to further investigate this relation.

The included companies generally have fairly formalised strategies and a top-down approach to strategy formulation. This is in line with what most SPMS frameworks assume, which indicates that these factors do not act as barriers towards SPMS implementation. More likely identified barriers are a lack of resources, an unwillingness to adopt a system perceived as too bureaucratic and a lack of knowledge regarding PMSs and SPMSs.

How are SMEs (S)PMSs used and maintained?

In general, the studied companies do not review their PMSs with any regularity. The interviewees additionally find it hard to recall the last time a measure was removed from the systems. This indicates that SMEs' PMSs are far from the dynamic, rapidly changeable and regularly reviewed systems recommended in the literature. Almost all included companies however review their strategy regularly. Formally tying the PMS to the strategy would thus create a natural forum for PMS reviews.

Finally, the majority of the studied companies have reward systems which are only based upon financial performance. A central tendency in the PMS field over the last three decades has been to move away from the strong focus on financial measures. By only basing rewards upon the financial measures it is possible that the strong focus on financial performance prevails even in the face of a more balanced PMS.

The purpose of this study regards the need for research on, and tools and solutions for how the performance of SMEs can be sustained long-term. It has in this thesis been shown that there clearly is room for implementing more strategically focused PMSs in SMEs, which indicates that SPMSs could be one such tool or solution. More research is

however needed on the potential benefits and drawbacks of implementing such systems in SMEs.

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Appendix 1: Interview guide

Vi börjar med att beskriva syftet med studien!

- Beskriv kortfattat företagets historia och vad företaget gör?
    - B2C/B2C
    - Regionalt/Nationellt/Internationellt
    - Antal anställda
    - Omsättning
    - Har detta växt mycket senaste åren?
    - Egen produktion?

1. Frågor kring företagets strategi

- Har ni någon vision?
    - Hur formellt är den uttryckt - nedskriven, spridd?
    - Om de behöver hjälp på traven: vart ser ni företaget om 5 år?

- Har ni något mission statement?
    - Hur formellt är den uttryckt - nedskriven, spridd?

- Vilka är de huvudsakliga faktorerna som är viktiga för företagets framtida framgång?
    - För att nå företagets vision
    - Kan vara förmågor, kompetenser, egenskaper etc.

- Vilken strategi skulle du säga företaget har?
    - Hur tas nya strategier fram?
    - Skapar medarbetare egna strategier som inte är grundade i den som ni satt?
    - Förändras den ofta, hur ofta går ni över den?
    - Visar Miles and Snow och Regner modellerna och låter dem ringa in sig själva i dess kategorier

- Hur ser företagets organisationsstruktur ut?
    - Har ni olika funktioner?
    - Hur många chefer?
    - Hur mycket beslutsmakt finns ute i organisationen jämfört med hos dig (givet att det är VD som intervjuas)?

2. Frågor kring företagets PMS

- Vilka mätetal använder ni för att styra företaget och se att det utvecklas i rätt riktning?
    - Hur har dessa tagits fram?

        - Vem är det som tar fram dom?

    - Hur många är dom totalt?
        - Ser ni några samband mellan dom?
            - Några trade-offs - att uppfylla något gör det svårt att uppfylla något annat
            - Några orsakssamband - att uppfylla något leder till att annat lättare blir uppfyllt
            - Var detta något ni tänkte på när de togs fram?

    - Tycker du att dessa mätetal speglar de faktorer som är viktiga för företagets framtida framgång, vilka diskuterades tidigare?

- Sätter ni mål för dessa mätetalen?
    - Hur görs detta?
    - Av vem?
    - Har ni planer för hur målen ska nås?

- Hur utvärderas prestationerna?
    - Hur ofta?
    - Tydliggörs resultatet för de anställda?

- Ges belöningar efter hur målen uppnås?
    - Finansiella eller annan typ?
    - På vilka mål baseras belöningarna?
    - Objektiv formel för belöning eller mer subjektiv sammanvägning av olika mätetal

- Vad används mätetalen till i övrigt?
    - Påverkar de hur strategin utformas?

- Hur förändrar ni mätetalssystemet över tid?
    - Formella genomgångar?
    - Hur säkerställer ni att det ni mäter är det mest relevanta att mäta?
    - Vilket var det senaste mätetalet som togs bort och som lades till - beskriv processen!

- Hur utförs mätningarna?
    - Automatiskt eller manuellt
    - Har ni något affärssystem som all data sammanströmmar i
    - Har affärssystemet gjort det lättare eller svårare att arbeta med mätetal?
        - Kan ni känna er låsta av mätetalssytemet?

3. Faktorer kring företaget, som i forskning visats ha inverkan på hur företag arbetar med mätetal?

- Hur ser konkurrenssituationen ut för er?

    - Förändras ofta konkurrenters erbjudanden och kunders preferenser?
    - Påverkar detta vad ni mäter?

- Har ni implementerat något kvalitetsprogram eller certifiering?
    - ISO, Lean, TQM t.ex.
    - Har detta påverkat vad ni mäter?

- Hur ser ägandet ut av företaget?
    - Har detta påverkat vad ni mäter?

4. Allmänna tankar om mätetal

- Känner du till begreppet performance measurement systems?
    - Vad innebär det för dig?
    - Övervägt att implementera?

- Hört talas om Balanced scorecards eller liknande modeller?
    - Övervägt att implementera?
    - känner du att ni mäter detta? Varför, varför inte? Ser du poängen med att mäta det?

- Visar bild på Balanced scorecard dimensionerna
    - Känner du att ni mäter detta?
    - Ser du poängen med att mäta det?

- Känner du att du har tillräcklig information för att ta strategiska beslut kring verksamheten.
    - Får du denna information främst genom mätetalen eller genom andra kanaler

- Känns det som att ni mäter rätt saker?

- Vad är det svåraste/mest utmanande med att använda mätetal?
    - Skulle ni vilja arbeta mer med mätetal?
        - I så fall varför gör ni inte det?

- Vilka fördelar och nackdelar ser du med att använda mätetal?