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The balanced scorecard: Case X

Case X

Master’s thesis
Autumn 2019
International Business
Master of Business Administration

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Thesis abstract

Faculty: Seinäjoki University of Applied Sciences

Degree Programme: Master of Business Administration

Specialisation: International Business

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Title of thesis: The balanced scorecard: Case X

Supervisor(s): Henri Teittinen

Year: 2019 Number of pages: 48

The bottom line of a company's monthly profit and loss statement is not the only indicator of that company's development. The Balanced scorecard (BSC) is a tool that utilizes measures of knowledge, internal process, customer demand and financial proficiency. BSC is much more comprehensive than the profit and loss statement. The positive development of these measures will lead to the achievement of strategic goals.

The increase of net revenue, profit and equity ratio are the strategic goals of the case company. In the BSC, an instrument is created in which all aspects (financial, customer, internal process and knowledge) are taken into consideration. The measures of the created instrumentation are prioritized, and the strategy map is created. Additionally, a compensation plan that supports the BSC is created.

This thesis is divided into two parts. The first part includes the theory of the balanced scorecard. The second part is a case study that includes the designing of the balanced scorecard for the case company.

As a result of this thesis, the case company possesses the instrumentation of the balanced scorecard, compensation plans and strategy map, which ensures the achievement of its strategic goals.

Keywords: balanced scorecard, strategic goals, efficiency monitoring, meters, measures

SEINÄJOEN AMMATTIKORKEAKOULU

Opinnäytetyön tiivistelmä

Koulutusyksikkö: Seinäjoen ammattikorkeakoulu

Tutkinto-ohjelma: Tradenomi, ylempi amk

Suuntautumisvaihtoehto: Kansainvälinen liiketoiminta

Tekijä: Jukka Paulamäki

Työn nimi: The balanced scorecard: Case X

Ohjaaja: Henri Teittinen

Vuosi: 2019 Sivumäärä: 48

Yhtiön kehittymistä ei tarvitse tyytyä seuraamaan vain yrityksen kuukausittaista tulosta seuraamalla. BSC on työkalu, jossa luodaan mittarit, jotka ottavat huomioon kokonaisvaltaisesti henkilöstön osaamisen, sisäiset prosessit, asiakastarpeen ja taloudellisen seurannan tuloslaskelmaa huomattavasti kattavammin. Positiivinen kehitys seurattavissa mittareissa johtaa strategisten tavoitteiden saavuttamiseen.

Kohdeyrityksessä nämä strategiset tavoitteet ovat liikevaihdon, tuloksen ja omavaraisuusasteen paraneminen. Kohdeyritykselle luotin mittaristo, joka ottaa huomioon kaikki BSC:n näkökulmat (talous, asiakkaat, sisäiset prosessit ja henkilöstön osaaminen). Luodun mittariston mittarit priorisoitiin, ja yritykselle luotiin strategiakartta. Lisäksi rakennettiin Balanced scrorecardia tukevia palkitsemismalleja.

Opinnäytetyö on jaettu kahteen eri osaan. Ensimmäisessä osassa käydään teoria liittyen Balanced scorecardiin. Toisessa osassa teoriaa sovelletaan kohdeyritykseen.

Opinnäytetyössä kohdeyritykselle luotiin BSC- mittaristo ja strategiakartta, jotka takaavat strategisten tavoitteiden saavuttamisen.

Asiasanat: balanced scorecard, strategiset tavoitteet, tehokkuusseuranta, mittarit

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Terms and Abbreviations

BSC	Balanced scorecard
ERP	Enterprise resource planning
FY	Fiscal year
IMA	Institute of Management Accountants
L&G	Learning and growth
OTD	On time deliveries
ROCE	Return on capital employed
SME	Small and medium-sized enterprise

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1 Introduction

The balanced scorecard (BSC) is strongly connected to an organization’s strategy. Additionally, the BSC takes all aspects of a company into consideration. Because of this, I was sure that the BSC was the tool that I was searching for and was suitable for the case company.

I was very fascinated by this subject. It was revealed that the management team is normally focused mainly on monthly net operation profit. Thus, the conflict between the monthly net operation profit and the strategic goals was noticed.

Generally, the focus of any company is largely on net profit in the short-term run. This thesis will help the case company to find both financial and non-financial meters to achieve their strategic goals in the long run. For example, this paper identifies factors that influence profit both in the short term and the long run. If the company monitors their realization of strategy in the long run by implementing the balanced scorecard instead of controlling the monthly profit in the short term, their business decisions may change.

For example, the increase of trainee expenses may negatively influence net operating profit within a short period. Still, this investment would increase the capability of the organization to develop talent and potentially increase net revenue. As a result of their choice to invest in trainees, the company’s long-term profits would increase.

The situation may worsen when the firm is compelled to pursue short-term goals at the cost of the organization’s long-term objectives. The management may reject a positive net value project simply because it may have an adverse effect on short-term return on investment due to depreciation and asset valuation policy (Dearden 1969; Hopwood 1972; Vancil 1979; Kaplan 1984; Demirag 1998).

2 Research methodology

Case study is the most widely used method when conducting qualitative business research. Case studies can be designed to include either one or several cases of the same phenomenon and can be conducted at any number of sites. A case study is one which investigates a real situation in order to answer specific research questions and which seeks a different kind of evidence (Ghauri 2004, 109-111, Gillham 2000, 1-2, Lapan et al. 2011).

Qualitative data is relevant to case study for at least two reasons. First, the data covers the behaviour or events that the case study is trying to explain. Second, the data may be related to an embedded unit of analysis within the broader case study (Yin 2009, 133).

A qualitative case study methodology was used to analyse the implementation of strategy. Qualitative case study methodology provides tools for researchers to study complex phenomena within their contexts. (Baxter & Jack 2008, 545).

According to Yin (2009, 98), data or evidence for a case study can be collected from six sources: documents, archival records, interviews, direct observation, participant observation and physical artefacts.

The research process of this master's thesis started with a preliminary analysis of the literature. The SeAMK-Finna database provided topic-related sources for this thesis through ProQuest Ebook Central and the EBSCO eBook collection. The number of relevant books was extensive and high-class.

The information concerning the case company was gathered mainly by interviews with its top management team. The top management team collaborated closely with the writer of this thesis. The past, present and future of the company are sensitized by the interview sessions and part observation with top management. According to Yin (2009, 102), case study interviews focus directly on the case and provide fundamental explanations. Additionally, the company's documentation was utilized. This documentation consisted of strategy and management reports.

The measures suggested in Chapter 9 were prioritized based on interviews with top management. Therefore, the final strategy map was influenced by the top management of the case company.

3 The balanced scorecard – definition and history

The balanced scorecard facilitates strategy execution through the translation of strategy into a carefully chosen set of objectives on a strategy map and performance measures, targets, and strategic initiatives on a scorecard (Niven 2014, 19).

The world was introduced to the concept of the balanced scorecard in a 1992 *Harvard Business Review* article, "The Balanced Scorecard – Measures that Drive Performance." The balanced scorecard was launched in 1992 by Robert Kaplan, a Harvard Business School professor, and his associate David Norton, a business theorist and consultant. (Anand 2016, 25, Niven 2014, 1).

Kaplan and Norton focused on building a framework for strategy execution. The result is known as the balanced scorecard, in which vision and strategy are translated into performance measures (Anand 2016, 26, Niven 2005, 13).

Kaplan and Norton found that most firms focused too much on financial performance and other pitfalls. Thus, those firms were unable to execute effective strategy. Kaplan and Norton were convinced that if organizations were to derive the maximum value from their investments in intangible assets, those same intangibles would need to be integrated into the organizations' measurement systems (Anand 2016, Niven 2014, 1).

Recent research reflected in the Ocean Tomo 300 Patent Index shows that 80 percent of the market value of companies in the United States' Standard & Poor's 500 Index is due to intangible assets from the period of 2005–2010 (Person 2013, 5).

According to Niven (2014, 3), "the balanced scorecard is one of the world's most popular management frameworks".

The *Harvard Business Review* has called the balanced scorecard one of the most important management ideas in the last 75 years. Additionally, it has been hailed as one of the 75 most influential business ideas of the 20th century and relied on in thousands of organizations spanning every conceivable type and size across the globe (Meyer 2002, Niven 2010).

A survey of Institute of Management Accountants (IMA) members in management positions indicated that 88% of regular users of the balanced scorecard believe it has led to improved operating performance (Debusk & Crabtree 2006, 1).

Most companies claimed that the implementation of the balanced scorecard has led to the identification of cost-reduction opportunities in their organizations, which, in turn, has resulted in improvement of their bottom lines (Anand et al. 2005, 1).

As displayed in Figure 1, the BSC is applied across business industries. The largest adopter is the manufacturing industry.

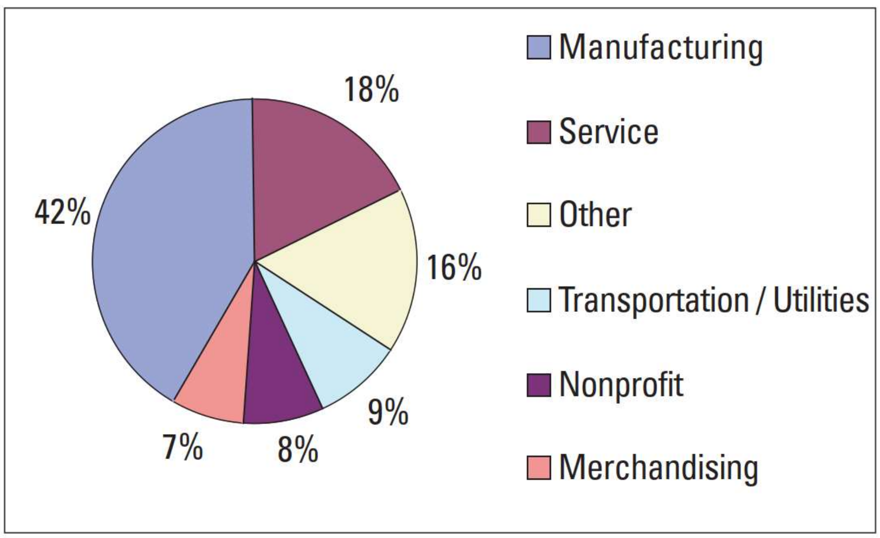

Figure 1. The use of the BSC by industry (Debusk & Crabtree 2006, 4).

4 Perspectives of the BSC

One of the major features of the BSC is that it is more comprehensive than traditional performance methods. This is accomplished by determining objectives and measures in each of the scorecard's four interrelated perspectives: financial, customer, internal process and learning and growth (Niven 2005, 13).

The perspectives of the BSC are presented in more detail in this chapter. Additionally, these perspectives are shown in Figure 2.

The cause-and-effect relationships of the perspectives of the BSC can be seen in Figure 3. For example, return on capital employed (ROCE) is a scorecard measure of the financial perspective. Customer loyalty is expected to have a strong influence on ROCE. Increased on-time deliveries (OTDs) lead to high customer loyalty. To increase OTDs, a business must achieve short cycle times in operating processes and high-quality internal processes. These are achieved by the training and improving the skills of the operating employees (Kaplan & Norton 1996, 30).

As shown in Table 1, financial measures are lagging indicators of performance. They are usually too aggregated to be of much help to management. Financial measures are also easily manipulated to achieve short-term results at the expense of long-term performance. Almost all measures in the learning and growth perspective are leading indicators of performance. They drive change in the internal process and customer perspectives (Person 2013, 74, Debusk & Crabtree 2006, 1).

Figure 2. The perspectives of Balanced Scorecard (Niven 2014, 8).

Table 1. Each Perspective Has a Different Mixture of Leading and Lagging Measures (Person 2013, 74).

PERSPECTIVE	TYPE OF MEASURE
Financial	100% lagging (result)
Customer	Mixture of leading and lagging
Internal operations	Mixture of leading and lagging
Learning and growth	100% leading (driver)

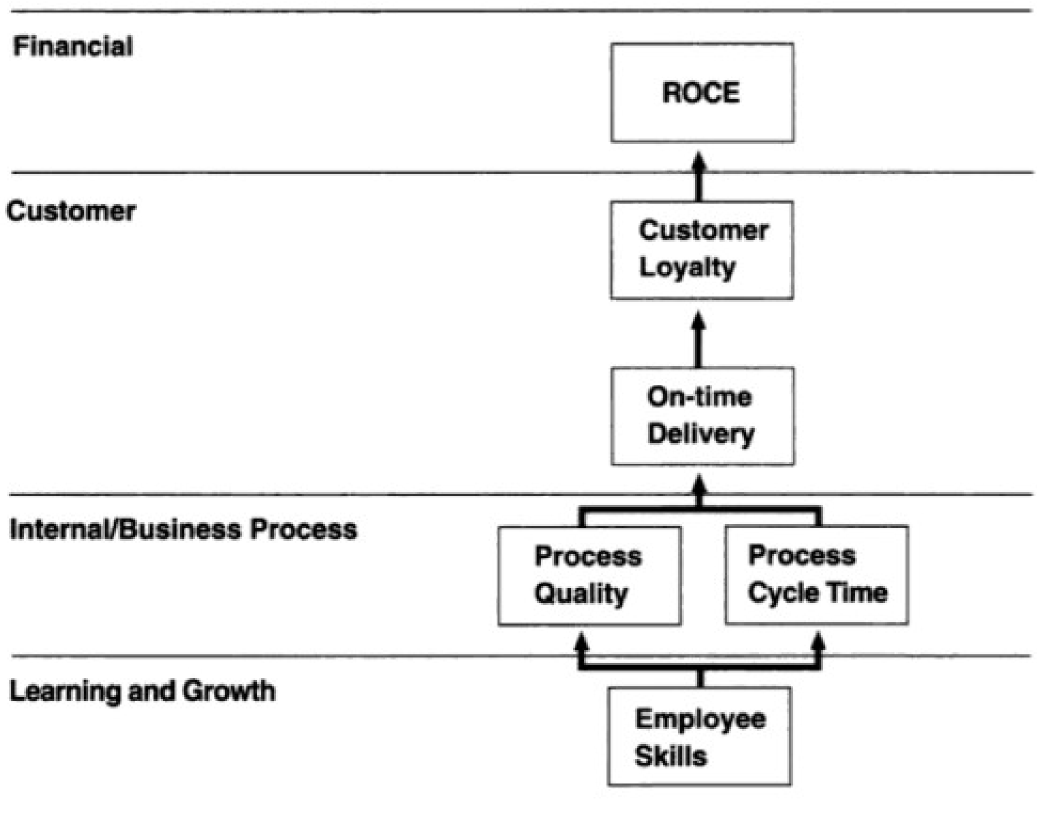

Figure 3. Cause and effect relationships of BSC perspectives (Kaplan & Norton 1996, 31).

4.1 Customer perspective

In the customer perspective of the balanced scorecard, managers identify the customer and market segments in which the business unit will compete and the measures of the business unit's performance in these targeted segments. The customer perspective enables business unit managers to articulate the customer and market-based strategy that will deliver superior future financial returns. The perspective includes several core and generic measures of the successful outcomes of a well-formulated and -implemented strategy (Kaplan & Norton 1996, 26).

These core outcome measures include customer satisfaction, customer retention, new customer acquisition, customer profitability and market and account share in targeted segments (Kaplan & Norton 1996, 26).

Several questions are raised in the literature from the viewpoint of the customer perspective:

Who are our target customers (Niven 2014, 5)?

What do they expect or demand of us as an organization (Niven 2014, 5)?

What is our value proposition in serving them (Niven 2014, 5)?

If we do everything right in terms of processes, what are the key customer expectations we need to meet in order to accrue the financial benefits we are seeking (Sanjiv 2016, 47)?

According to Treacy and Wiersema (1995), all organizations will choose one of the following disciplines:

Operational Excellence: Organizations pursuing operational excellence focus on low price, convenience, and often no frills.

Product Leadership: Product leaders push the envelope of their firm's products. Constantly innovating, they strive to simply offer the best product in the market.

Customer Intimacy: Doing whatever it takes to provide solutions for customer needs helps define the customer-intimate company. They don't seek one-time transactions but instead focus on long-term relationship building through their deep knowledge of customer needs.

4.2 Financial perspective

The BSC retains the financial perspective since financial measures are valuable in summarizing the readily measurable economic consequences of actions already taken. Financial performance measures indicate whether a company's strategy, implementation, and execution contribute to bottom-line improvement (Kaplan & Norton 1996, 25).

The top ten performance measures in Japan do not include any financial measures, whereas Europe widely uses the cost indicators. The other criticism of financial measures is that they strive to quantify too many things and do that, too, in a wrong way. Their relevance in the information age when the companies are building internal assets and capabilities is questioned (Jeans & Morrow, 1990; Elliott 1992).

Every measure selected should be part of a link of cause-and-effect relationships that culminate in improving financial performance (Kaplan & Norton 1996, 47).

The typical strategical themes for the financial perspective are as follows (Kaplan & Norton 1996, 51):

1. Revenue growth and mix
2. Cost reduction/productivity improvement
3. Asset utilization/investment strategy

It is essential to set the financial objective. The overarching financial objective drives the rest of a company's strategy. According to Sanjiv (2016, 47), there are three financial goals:

1. Grow revenue faster than profit.
2. Grow profit faster than revenue.
3. Focus on maximizing market share.

4.3 Internal perspective

The balanced scorecard is a tool for executing strategy. It is not likely to measure all of an organization's core- or subprocesses. These measured processes should rise from the organization's competition strategy. Most of these processes are not vital to the execution of the chosen strategy and therefore do not belong on the balanced scorecard. The challenge is the ability to prioritize and determine which processes have a significant impact on reaching strategic objectives (Malmi et al. 2006, 27-28, Niven 2014, 5, Anand 2016, 48).

According to Anand (2016, 47-48), the internal process perspective can be broken into five focus areas:

1. Identifying opportunities
2. Innovation – developing opportunities
3. Selling and marketing effectively to leverage those opportunities
4. Delivery excellence
5. Excellence in service or product quality

4.4 Learning and growth perspective

The fourth perspective of the balanced scorecard, learning and growth, identifies the infrastructure that an organization must build to create long-term growth and improvement. Businesses are unlikely to able to meet their long-term targets for customer and internal processes using today's technology. Analysis of other perspectives reveals large gaps between existing capabilities of people, systems and procedures that are required to achieve breakthrough performance. To close these gaps, businesses will have to invest in retraining employees, enhancing information technology and systems and aligning organizational procedures and routines (Kaplan & Norton 1996, 28-29).

Peter Drucker has called managing worker productivity one of the great management challenges of the 21st century (Niven 2002, 16).

The learning and growth perspective is typically populated by three areas of capital: human, informational and organizational. The learning and growth perspective is normally the last perspective to be developed (Niven 2014, 7).

This perspective cannot be overlooked in the development process. The learning and growth perspective provides the foundation for the rest of the scorecard. It is the root that finally leads to leaves of financial returns (Niven 2014, 7).

The learning and growth perspective measures aspects related to employees, system or infrastructure and methods of work. It typically measures employee satisfaction, sick leaves, employee turnover and resources used for training. Changes in this perspective affect the financial perspective (Malmi et al. 2006, 28-29).

5 Prioritizing of initiatives

Organizations that face a crisis will find it easy to prioritize initiatives. Their selection of initiatives is driven by the need to surmount their crisis. Complex organizations with a large number of initiatives need a structured approach to selecting and prioritizing them. One way to do this is to use a spreadsheet that prioritizes initiatives by weighting factors, as shown in Table 2 (Person 2013, 69).

The weighting factors used depend on the organization's business priorities. According to Person (2013, 69), they could include the following:

1. Strategic value
2. Initiative's impact on objective's success
3. Time required for implementation
4. Resources required for implementation
5. Current alignment with initiative definition

Table 2. Prioritize initiatives using a spreadsheet with exponential weighting (Person 2013, 69).

Initiative Prioritizing Matrix

	Weighting Factors						
	Strategic Value of Obj.	Impact on Obj. Success	Time to Implement	Resource Requirement	Current Alignment		Priority
	9 - High 3 - Mid 1 - Low	9 - High 3 - Mid 1 - Low	9 - Low 3 - Mid 1 - High	9 - Low 3 - Mid 1 - High	9 - High 3 - Mid 1 - Low		
Theme 1							
Initiative 1	9	9	1	3	1		243
Initiative 2	1	3	9	3	9		729
Initiative 3	9	3	9	9	3		6561
Initiative 4	3	3	1	3	9		243
Initiative 5	1	9	3	1	3		81
Initiative 6	9	3	1	9	3		729
Initiative 7	3	3	9	3	9		2187

6 Strategy map

A strategy map is a one-page graphical representation of what an organization must do well in order to successfully execute its strategy. Strategy maps are composed of objectives, which represent the concise statements of what the organization must do well in the financial, customer, internal process and learning and growth perspectives. A strategy map is a graphical representation, which deems that it contain not only a narrative (objectives) but also images that bring the words to life and imbue the document with a sense of the organization's unique culture (Niven 2014, 159).

Without a strategy map, the balanced scorecard would be an executive scorecard. It would report on measures important to the executive, but it would not provide an accurate view of how the entire organization is driving and succeeding at its strategic objectives. An example strategy map is shown in Figure 4 (Person 2013, 47).

A strategy map is the executive team's hypothesis of how to drive success. The strategy map details how an organization will execute its strategy. The strategy map shows the objectives needed to execute the strategy and the causal links between objectives. The strategy map is a tool for clear communication and helps identify the "critical few" metrics necessary to monitor strategic execution (Person 2013, 6, 50).

According to Kaplan and Norton (2004, 10, 12-13), the strategy map is based on several principles: strategy balances contradictory forces; strategy is based on a differentiated customer value proposition; value is created through internal business processes; strategy consists of simultaneous, complementary themes and strategic alignment determines the value of intangible assets.

Research on best practices by the Palladium Group and Kaplan and Norton's consultancy shows that the best success results from strategy maps with fewer than 24 objectives. If a map has too many objectives, it is difficult to form a clear and concise mental model of what drives its organization's strategy. Some large multinational organizations use only 10–15 objectives in their strategy maps (Person 2013, 59).

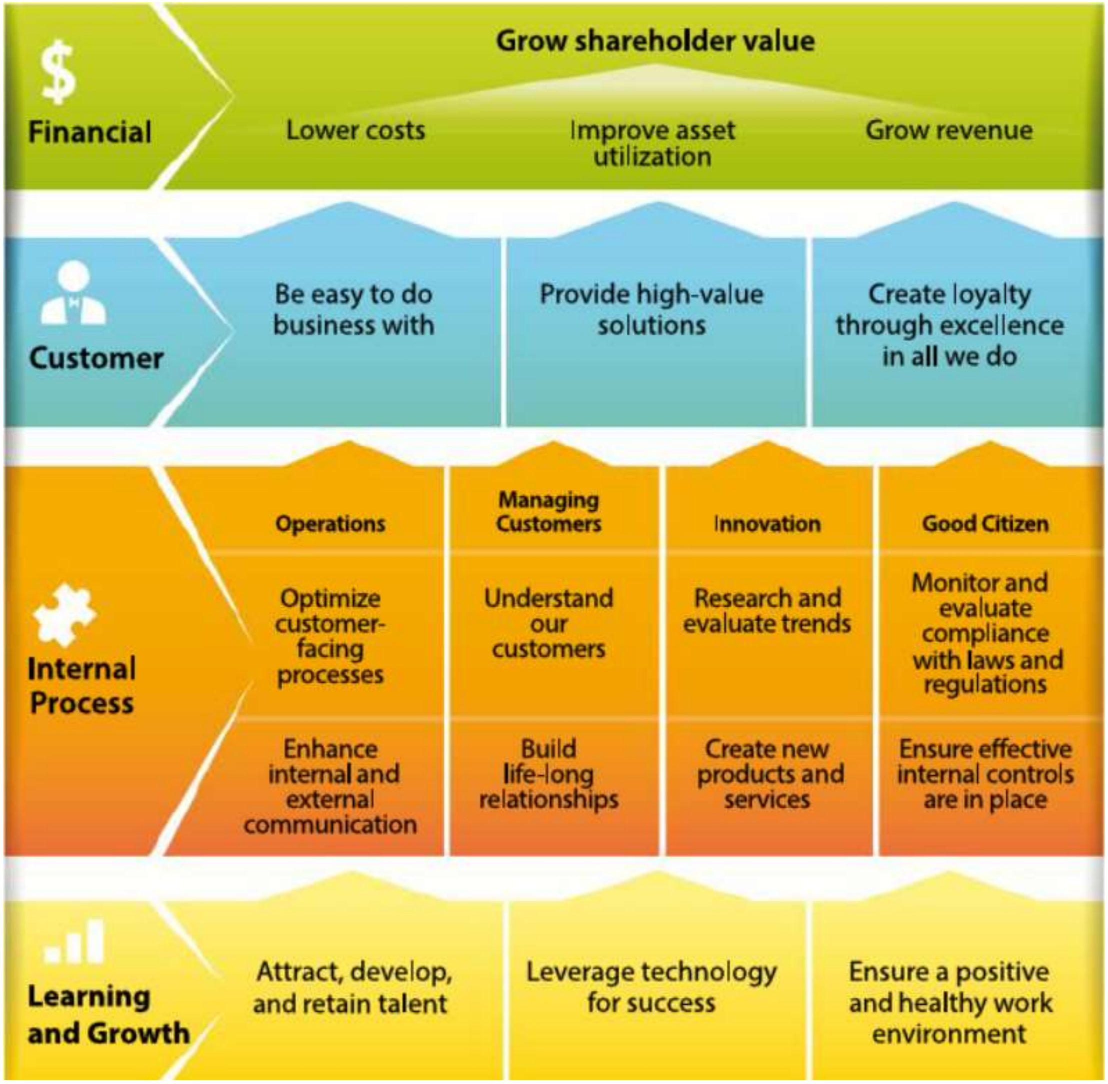

Figure 4. Example Strategy map (Niven 2014,10).

7 Incentive compensation

Spechbacher et al. (2003), in their survey of 174 senior management executives from German-speaking countries – namely, Austria, Switzerland and Germany – found that more than two-thirds of firms using the balanced scorecard have linked their compensation and incentive system to the balanced scorecard.

Sixty percent of regular users of the BSC provided financial incentives to employees for meeting or exceeding targets that were congruent with BSC measures. Linking BSC measures to compensation is difficult. The difficulty comes in determining the relative weights of the various performance measures on the scorecard (Debusk & Crabtree 2006, 4).

There are two methods for determining the weightings of multiple performance measures for an incentive pay scheme. One method uses predetermined weights for each measure in a prescribed formula. For example, 15% of the incentive pay may be based on operating income, 10% on revenue growth, 10% on customer satisfaction, 5% on internal defect rates, etc. The percentages of weights would be determined before the beginning of the period and could not be changed by the supervising manager (Debusk & Crabtree 2006, 4).

Formula-based systems usually ignore most of the BSC measures, however, because of the complexity of basing bonuses on a formula with 20 or more variables. Incentive pay based on a few variables will focus the manager’s attention on those variables that can increase his or her compensation. The remaining variables will tend to be ignored, even though they are also linked to the organization’s strategy. An incentive pay plan that focuses on only a few variables will also tend to focus on financial measures, which are focused on short-term results and can be manipulated easily (Debusk & Crabtree 2006, 4).

Another method allows the supervising manager to subjectively determine the measurement weights at the end of the period. Financial and BSC results are reported for a typical accounting period, such as a month or quarter, and targets are established for each period (Debusk & Crabtree 2006, 4).

Kaplan and Norton assert that BSC implementation makes it easier for managers to subjectively set bonuses and other incentive rewards. They believe that the development of performance measures with their targets allows supervising managers an opportunity to better observe the performance of subordinate managers and assess their abilities. The supervising managers can then set incentive rewards (such as bonuses and pay raises) subjectively (Debusk & Crabtree 2006, 4, Kaplan & Norton 1996).

Kaplan and Norton believe that a subjective weighting scheme allows supervising managers to utilize key measures for a defined time period and ignore other BSC measures that are not key for that period (Debusk & Crabtree 2006, 5).

The subjective weighting scheme helps to ensure that subordinate managers cannot “game” the system. For example, an unscrupulous purchasing manager whose bonus is based primarily on material prices might order excessive quantities of raw materials in order to get quantity discounts. This practice could completely ignore the organization’s emphasis on keeping inventory levels low (Debusk & Crabtree 2006, 5).

These attempts to trick the system should be apparent to the supervising manager with a BSC. The supervising manager can thwart attempts to game the system by failing to pay incentives in such situations. In this instance, the supervising manager has subjectively determined the weights of the various measures in the incentive pay plan (Debusk & Crabtree 2006, 5).

In fact, the survey provides evidence of a correlation between improved operating performance and the linking of the BSC to compensation. In another survey result, we found that 65% of the respondents who did not see an increase in operating performance did not use the BSC to determine management compensation (Debusk & Crabtree 2006, 5).

Of those respondents who did see an increase in operating performance, 66% used the BSC to determine management compensation. While linking BSC performance goals to compensation may present additional complexity, this step seems to be a valuable tool in implementing the BSC successfully (Debusk & Crabtree 2006, 5).

According to Debusk and Crabtree (2006, 5), there are several risks in subjectively determining measurement weights.

1. Too much emphasis may be placed on financial measures, which are lagging indicators of performance that focus too much attention on gaining short-term results at the expense of long-term performance. This occurs because managers have historically used financial measures in incentive pay plans.

2. It may be difficult for the employee to understand exactly how bonuses were determined.

3. Those who receive less incentive compensation than they had expected may allege favouritism or bias.

8 Criticism

The old saying “What you measure is what you get” has a corollary from the dark side: “If you measure the wrong thing, you’ll get the wrong result.” With new information systems, it is possible to measure almost limitlessly, and from the large number of meters, it is hard to find the significant ones (Person 2010, 79, Oksanen 2010, 292).

Critics of the balanced scorecard argue that it is difficult to achieve balance between financial and non-financial measures and that firms do not adhere to this balancing act because of implementation problems (Anand et al. 2005).

According to Person, executives and managers face two serious problems. First, the source of value production has switched from tangible assets that can be monitored with current accounting systems to intangible assets that are difficult to manage. Second, most corporations fail at executing their strategy (Person 2013, 5).

Whether the problem is too few or too many measures, many accountants believe that corporate performance measurement systems do not support management objectives well (Meyer 2012).

According to Niven (2010, 43), “Half of all balanced scorecard users aren’t achieving the results they hoped for, and a significant number still rate their performance measurement systems as “adequate.”

The most striking attribute of these comparisons is not any one HR management practice – it is not recruiting or training or compensation. Rather, the differences are much more comprehensive – and systemic. It wasn’t one or two specific measures that made a difference. It was an entire system of specific metrics that seemed to make the difference between winners and losers. If you measure the right HR metrics, doing so can help make your organization a winner. If you measure the wrong HR metrics, at best you waste your time and money (Ulrich et al. 2001).

9 Case: case company

9.1 Presentation of the case company

The case company, a key player in the woodworking industry, is a small and medium-sized enterprise (SME) with approximately 120 employees. Its net revenue has more than tripled in last 10 years (Figure 5). Additionally, during the past two years, almost all members of the company's top management have changed positions. Thus, the company has the potential to make significant changes in its management processes. One of its new focus points has been the creation of a management measurement system. The application of the balanced scorecard supports the creation of this performance measurement system.

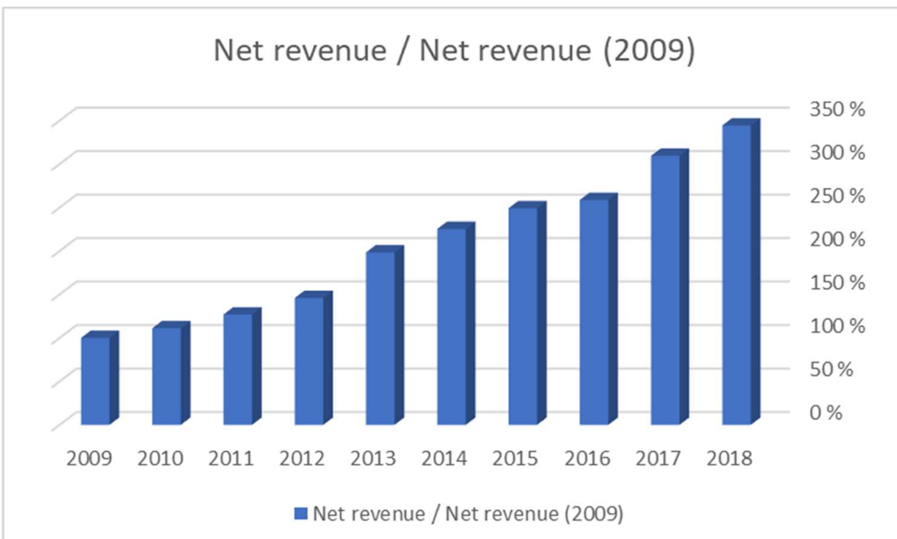

Figure 5. The case company's development of net revenue compared to FY 2009.

The case company's products are typical industrial materials. The company's cost efficiency and high quality are its focus points. Its special characteristic is its short delivery time. The company's product is necessary for its customers' packing processes. At worst, the production processes of these customers will stop without the products of the case company. Thus, the customers need these top-quality products delivered on time.

Currently, the company's main strategic goal is the increase of its net revenue. The secondary strategic goals are the increase of net profit and equity ratio. The equity ratio will increase as the result of the increase of net revenue and profit. The goals are clearly financially.

9.2 Financial perspective

The financial perspective is the best-monitored view by the case company (see Table 3). This financial perspective is addressed in the company's monthly management meeting. Management examines cost performance in relation to budget; for example, they analyse staff and material costs in relation to net revenue.

The management team's main focus is net profit. It is partly conflicted with the strategy. At the moment, the focus of management meetings is mainly on the previous month and partly last 12 months.

The viewpoint of the BSC is focused on the future. Increasing net revenue is the case company's main strategical goal. Still, the focus of management meetings is mainly on history and monthly profit. It is vital to make changes to the agendas of the management meetings so that these meetings support the organization's strategical goals. The company must adopt a forward-looking perspective. This will ensure that its strategical goals are controlled and achieved.

Still, based on literature, the company should choose one main goal to achieve (Anand 2016, 47).

Several of the organization's financial goals are in conflict with one another. The increase of net revenue is the main goal. Still, the total profit cannot decrease. The increase of market share is strongly connected with the main goal, although the market share is not allowed to increase by low-profit contracts.

Although the company's number of customers and its prices are not its main focuses, they are directly linked with its main strategic goal. Therefore, I added those meters to the balanced scorecard. The control of the amount of customer contacts is already taken into account, which supports the company's strategy.

Table 3. The metrics of the BSC from the financial perspective.

Objective	***Measure***
Decrease staff costs	*Staff costs in relation to net revenue (%)*
Increase sale prices	*Realized prices in relation to last year's prices (%)*
Increase amount of customers	*Total amount of customers (n)*
Decrease material costs	*Material costs in relation to net revenue (%)*
Development of net revenue	*Change of net revenue/net revenue (%)*
Increased profit	*Change of profit/profit (%)*
Improved equity ratio	*Change of debt/equity (%)*

9.3 Customer perspective

Several measures were found from the viewpoint of the customer perspective (see Table 4).

The case company has stated that customer intimacy is its main principle within the customer perspective. The construction of long-term relationships through deep knowledge of customer needs is the key.

The company’s target customers are classified into three categories according to sales numbers. Still, key customer expectations are very similar irrespective of category.

In the case of its customers, the case company regularly satisfies expectations. The company’s target is to create value for customers with its services and products. For example, the company provides remote monitoring for large clients. It is involved in pricing and can provide this service for high-volume customers because extra working hours are few in relation to volume. The development of remote monitoring should be controlled.

Thanks to professional knowledge, the case company is capable of providing the most cost-effective solutions. The original dimensions or materials might be overestimated in the consideration of the application. The capability to provide new solutions is not yet measured.

Quality and delivery reliability are traditional measures that I want to use in the BSC (see Table 4). Flexibility, image, competitive prices and willingness to serve are innovative measures that could be monitored by the BSC. The safety is important from the viewpoint of the customer perspective. Thus, safety is relevant as one of the controlled measures.

The actual prices compared to competitors are not analysed regularly in management meetings. This is vital. Otherwise, the prices are set too high or too low. The control of this measure ensures that the prices of products will be optimal.

*Table 4.*The metrics of the scorecard from the viewpoint of the customer perspective.

Objective	***Measure***
Delivery reliability	*Deliveries on time/deliveries*
Quality	*Customer reclamations per net revenue (MEUR)*
Flexibility	*Average response time between order date and delivery time*
Competitive prices	*Case company's prices compared to known prices of competitors*
New solutions	*New products per year*
Image	*Results of customer satisfaction survey*
Willingness to serve	*Extra serviced customers (net revenue of these customers)/all customers (net revenue)*
Increase in amount of customer contacts	*Customer contacts per year*
Safety	*Lost-time injuries/working hours*

9.4 Internal perspective

In the case of this company, most of its processes are connected at least indirectly to its executing strategy. This is exceptional. The main reason stems from the history of the company. Most of its white-collar workers are promoted from shop-floor worker to manager. These white-collar workers have a practical view, which benefits the company by resulting in no unnecessary processes.

Still, there are not enough processes or measures to ensure that strategy will be executed in the best possible way. The middle management's overall view of internal processes is not good enough. The company's processes are not sufficiently controlled. Its shift managers and production managers need many more metrics by which to monitor the overall flow of production. These metrics would lead to improved processes.

Several new measures of internal processes were found (see Table 5). The use of a deviation system should be measured. The effective use of the deviation system affects safety, quality and efficiency. The development of stock control is not yet measured. It is important because the excellence of stock control affects the accuracy of the bottom line of the company's monthly profit and loss statement. Thanks to effective stock control, production efficiency will increase. The material will not run out and stop production.

The company's amount of waste is already analysed. It plays a significant role in material costs. The better utilization of current enterprise resource planning (ERP) is a totally new measure and vital for every operation.

The increase in efficiency and capacity must be monitored as BSC measures. Those measures are already followed. They support the plan to ensure satisfactory delivery and reliability and decrease staff cost.

The development of production methods and processes on the shop-floor level must be controlled. The chosen measure is the total amount of initiatives. It indicates that the entire staff takes part in the development of the plant. The use of a deviation system is indirectly linked with this measure. New initiatives improve production efficiency and capacity and decrease production waste.

The strategies of networking with other companies and utilizing subcontractors are not employed often enough. These steps are important and would have a positive effect on the net revenue by making it possible to expand to new market areas.

The company’s quality management must improve so that its quality can be further developed. Its marketing efforts must increase so that new customers can find its products. Its amount of safety observations must increase. As a result, the company’s safety will drastically be improved to the next level.

Table 5. The metrics of the scorecard from the viewpoint of the internal process perspective.

Objective	***Measure***
More effective use of deviation system	*Deviations per year*
Development of stock control	*Amount of balance corrections*
Decrease of waste	*Waste (kg) in relation to production volume (units)*
Better utilization of current ERP system	*Working hours per year of parallel systems in production planning (e.g. excel)*
Increase in production efficiency	*Products per hour*
Development of production methods and processes on shop-floor level	*Total amount of initiatives per year*
Increase in production capacity	*Number of produced products per year*
Stronger networking ties with other companies	*Networking meetings per year*
Better utilization of subcontractors in services and production	*Sales of outsourced services/net revenue*
Development of quality management	*Quality tours per year*
Increased marketing efforts	*Marketing costs/net revenue*
Increased number of safety observations	*Number of observations/total number of working hours*

9.5 Learning and growth perspective

According to Niven (2014, 7), the learning and growth perspective is normally the last perspective to be developed. In the case of this company, the long-term targets of this perspective are not defined. One of the main principles of the BSC is that the learning and growth perspective provides the enablers for the rest of the scorecard. The learning and growth perspective is the root that finally leads to leaves of financial returns (Niven 2014, 7).

I believe that the processes and targets of the learning and growth perspective must be defined for the roots of the operation system to be created, which leads finally to the development of net revenue.

These measures are not yet defined. The knowledge of the organization will improve if the measures for induction training, multiple skills, cooperation with schools, knowledge of quality know-how, sales knowledge and ERP know-how improve (see Table 6).

Induction training and multiple skills directly improve production efficiency. For example, forklift drivers can complete production workers' duties if they are educated enough.

Cooperation with schools ensures that skilled workers become available. This results in decreased induction training time.

Quality management know-how must be monitored. Quality know-how is increased by quality workshops. ERP skills must be monitored and increased so that the logging of work time and materials is correct.

Sales and production development skills can be improved by training. Employees can take advantage of external training.

Table 6. The metrics of the scorecard from the viewpoint of the learning and growth perspective.

Objective	***Measure***
Development of induction training	*Training weeks per person*
Support of multiple skills	*Different production line skills per person*
Increased cooperation with schools	*Training weeks for students per year*
Quality management know-how	*Quality workshops per year*
Increase of ERP know how across entire organization	*ERP trainings per year*
Knowledge of development of sales processes	*Training sessions per person*
Knowledge of development of production processes	*Training sessions per person*

9.6 Prioritizing of initiatives

Thirty four objectives were found for the case company in the previous chapter. This number is too high; the Palladium Group and Kaplan and Norton's consultancy show that the best success results from strategy maps with fewer than 24 objectives.

Thus, the objectives from the previous chapter were prioritized. Twenty-three of the most important objectives were identified. This was done using a spreadsheet that prioritized initiatives by weighting factors. The prioritizing of objectives is shown in Table 7. This method was presented by Person (2013, 69).

The weighting factors are:

1. Strategic value of objective
2. Impact on objective success
3. Time to implement
4. Resource requirement
5. Current alignment

In fact, the lower number of objectives may be more reasonable if the limited resources of SMEs are taken into account. Still, the diversity of the development plan would suffer.

Table 7. The prioritizing of objectives. The top-priority measures are bolded.

Perspective	Objective	Strategic Value of Obj.	Impact on Obj. Success	Time to implement	Resource Requirement	Current Alignment	Priority
		9 - High 3 - Mid 1 - Low	9 - High 3 - Mid 1 - Low	9 - Low 3 - Mid 1 - High	9 - Low 3 - Mid 1 - High	9 - High 3 - Mid 1 - Low	
Financial	**Decreased staff costs**	**9**	**9**	**3**	**1**	**9**	**2187**
Financial	Increased sale prices	1	9	9	3	1	243
Financial	**Increased number of customers**	**9**	**9**	**3**	**1**	**9**	**2187**
Financial	**Decreased material costs**	**9**	**9**	**3**	**1**	**9**	**2187**
Financial	**Development of net revenue**	**9**	**9**	**3**	**1**	**9**	**2187**
Financial	**Increased profit**	**9**	**9**	**3**	**1**	**9**	**2187**
Financial	**Improved equity ratio**	**9**	**9**	**3**	**1**	**9**	**2187**
Customer	**Delivery reliability**	**9**	**9**	**9**	**3**	**9**	**19683**
Customer	**Quality**	**9**	**9**	**3**	**1**	**9**	**2187**
Customer	Flexibility	9	1	3	1	9	243
Customer	Competitive prices	9	1	1	9	3	243
Customer	New solutions	9	3	3	1	3	243
Customer	Image	9	3	1	3	3	243
Customer	Willingness to serve	3	3	3	3	3	243
Customer	Increased number of customer contacts	3	3	1	1	9	81
Customer	**Safety**	**9**	**3**	**3**	**1**	**9**	**729**
Internal	**More effective use of deviation system**	**9**	**9**	**3**	**3**	**9**	**6561**
Internal	**Development of stock control**	**9**	**9**	**9**	**1**	**9**	**6561**
Internal	**Decreased waste**	**9**	**9**	**3**	**1**	**9**	**2187**
Internal	Better utilization of current ERP system	9	3	1	1	3	81
Internal	**Increased production efficiency**	**9**	**9**	**3**	**3**	**9**	**6561**
Internal	**Development of production methods and processes on shop-floor level**	**9**	**9**	**3**	**3**	**1**	**729**
Internal	**Increased production capacity**	**9**	**9**	**9**	**3**	**1**	**2187**
Internal	Networking with other companies	3	9	3	3	1	243
Internal	**Better utilization of subcontractors in services and production**	**9**	**9**	**3**	**3**	**1**	**729**
Internal	**Development of quality management**	**9**	**9**	**3**	**1**	**3**	**729**
Internal	Increased marketing	3	3	3	9	1	243
Internal	**Safety observations**	**9**	**3**	**3**	**1**	**9**	**729**
L&G	Development of induction training	3	3	1	9	1	81
L&G	**Support of multiple skills**	**9**	**3**	**9**	**3**	**3**	**2187**
L&G	**Increased cooperation with schools**	**3**	**9**	**3**	**3**	**3**	**729**
L&G	**Quality management know-how**	**9**	**9**	**3**	**3**	**9**	**6561**
L&G	**Increased ERP and systemin in the whole organization**	**9**	**9**	**3**	**1**	**3**	**729**
L&G	Knowledge of development of sales processes	3	3	3	1	3	81
L&G	Knowledge of development of production processes	9	9	3	3	1	**729**

9.7 Strategy map

The case company has not yet completed a strategy map. Its strategy map was created by this thesis (see Figure 6). The strategy map is based on the objectives prioritized in the previous chapter. These objectives form the spine of the entire organization. Every perspective of the BSC is taken into account.

The company's foundation is structured according to the learning and growth perspective. The achievement of the goals of the learning and growth perspective will lead to the fulfilment of the goals of the internal process perspective. As a result, the goals of the customer perspective will be realized. Finally, the goals of the financial perspective will be achieved.

For example, the increase of quality management know-how supports the development of quality management. As a result, the quality of the company's products will improve. Finally, the material costs of production will decrease, and the company's number of customers will increase.

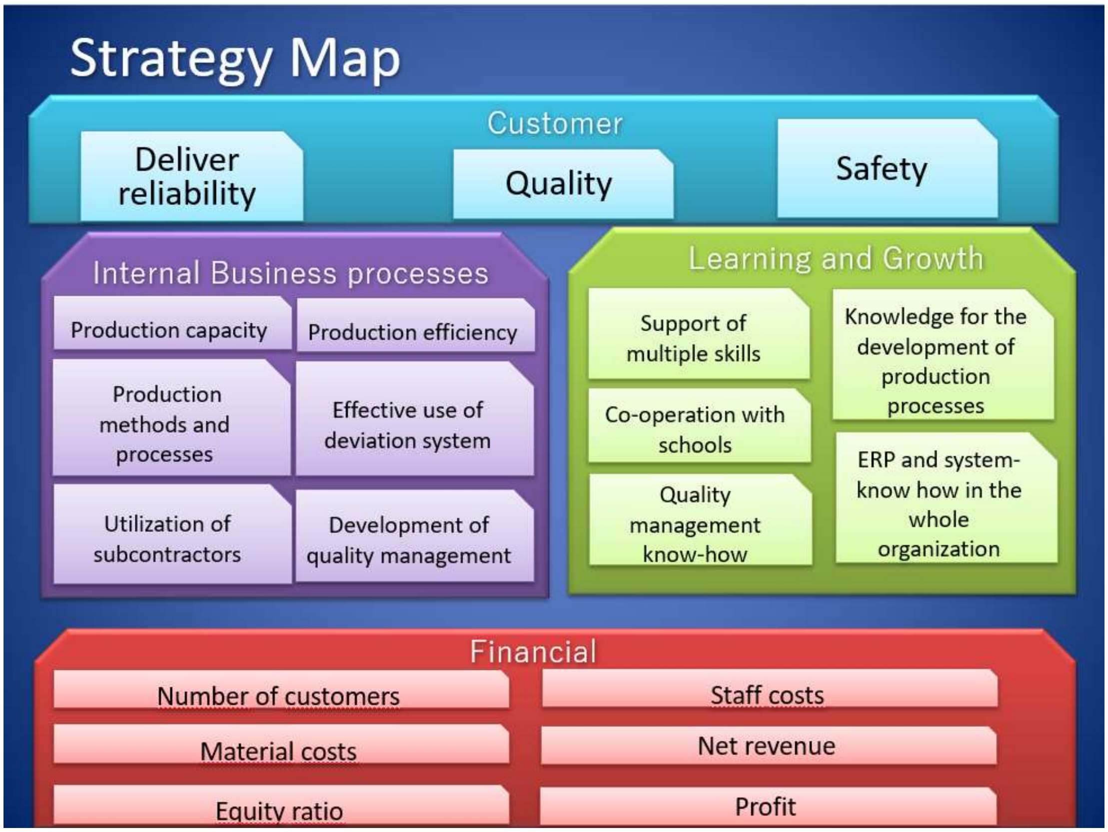

Figure 6. The case company's final strategy map.

9.8 Incentive compensation

The case company does not have a compensation system linked to the balanced scorecard. There are two methods for determining the weightings of multiple performance measures for an incentive pay scheme. One method uses predetermined weights for each measure in a prescribed formula. In the second model, the supervising manager has subjectively determined the weights of the various measures in the incentive pay plan (Debusk & Crabtree 2006, 5).

In this thesis, three compensation plans were created based on both models. The first plan, A, can be seen in Table 8. Every measure of the BSC is included. The second model, B, is shown in Table 9. In the case of this model, the number of measures is decreased. In these models, the percentages of weights would be determined before the beginning of the period and could not be changed by the supervising manager. The percentages of weights are based on the prioritization of the objectives in Chapter 9.6.

The third model is the typical example, where the supervising manager has subjectively determined the weights of the various measures in the incentive pay plan. Too much emphasis may be placed on financial measures, which are lagging indicators of performance that focus too much attention on gaining short-term results at the expense of long-term performance. The third model is shown in Figure 10.

These compensation models are suitable for the managers who are responsible for the achievement of strategic goals within the case company.

Table 8. Compensation model A.

Perspective	Objective	Weighting
Financial	Decreased staff costs	3.0%
Financial	Increased amount of customers	3.0%
Financial	Decreased material costs	3.0%
Financial	Development of net revenue	3.0%
Financial	Increased profit	3.0%
Financial	Improved equity ratio	3.0%
Customer	Delivery reliability	26.7%
Customer	Quality	3.0%
Customer	Safety	1.0%
Internal	More effective use of deviation system	8.9%
Internal	Development of stock control	8.9%
Internal	Decreased waste	3.0%
Internal	Increased production efficiency	8.9%
Internal	Development of production methods and processes on shop-floor level	1.0%
Internal	Increased production capacity	3.0%
Internal	Better utilization of subcontractors in services and production	1.0%
Internal	Development of quality management	1.0%
Internal	Safety observations	1.0%
L&G	Support of multiple skills	3.0%
L&G	Increased cooperation with schools	1.0%
L&G	Quality management know-how	8.9%
L&G	Increased ERP know how in whole of organization	1.0%
L&G	Knowledge of development of production processes	1.0%

Table 9. Compensation model B.

Perspective	Objective	Weighting
Customer	Delivery reliability	40.9%
Customer	Quality	4.5%
Internal	More effective use of deviation system	13.6%
Internal	Development of stock control	13.6%
Internal	Increased production efficiency	13.6%
L&G	Quality management know-how	13.6%

Table 10. Compensation model C.

Perspective	Objective	Weighting
Financial	Decreased staff costs	25.0%
Financial	Increased number of customers	25.0%
Financial	Decreased material costs	25.0%
Financial	Development of net revenue	25.0%

10 Conclusion

The balanced scorecard is an excellent tool. The BSC reveals that the bottom line of the case company's monthly profit and loss statement is not the only indicator of the organization's development. The BSC is a tool that utilizes measures of knowledge, internal process, customer demand and financial proficiency. The BSC is much more comprehensive than the profit and loss statement.

What separates the balanced scorecard from other performance management systems is the notion of cause and effect.

The profit and loss statement reveals information about the company's history, whereas the BSC consists of several time frames. According to Lönnqvist et al. (2006, 35), the measures of the financial perspective detail the company's history, while the measures of the customer and internal process perspectives indicate the company's present state. The measures of the learning and growth perspective forecast the company's future.

In the BSC, an instrument was created in which all aspects (financial, customer, internal process and knowledge) are taken into consideration. The measures of the created instrumentation were prioritized, and the strategy map was created. A high number of measures must be taken with discernment. An optimal number of measures is necessary to ensure the success of strategic goals. The prioritizing of BSC measures ensures that the most significant measures are included in the strategy map.

Thus, the positive development of a strategy map's measures will lead to the achievement of strategic goals.

As a result of this thesis, the case company possesses the instrumentation of the balanced scorecard, compensation plans and strategy map, which ensures the achievement of its strategic goals.

The BSC can be implemented at the case company. The measures of the BSC can be monitored monthly in both the management meetings and the plant meetings.

Additionally, the case company can link its compensation and incentive system to the balanced scorecard.

Still, the numeric targets for the company’s objectives were not defined in this thesis. This thesis is the first step for the case company in its introduction of the BSC.

This thesis is unique. I could not find any other balanced scorecard–related theses that focused on the achievement of the strategic goals of growing SMEs. The theory and case studies in this thesis can be adjusted to fit any industrial SME.

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