HØGSKOLEN I ÅLESUND

Aalesund University College

Master's degree thesis

AM521413 - Master thesis - discipline oriented

Strategic management tools – Worth the trouble?

An examination of entrepreneurial businesses in the United Kingdom

Marielle Skaar Stave

Number of pages including this page: 96

Aalesund, 12.06.2014

Mandatory statement

Each student is responsible for complying with rules and regulations that relate to examinations and to academic work in general. The purpose of the mandatory statement is to make students aware of their responsibility and the consequences of cheating. **Failure to complete the statement does not excuse students from their responsibility.**

	Please complete the mandatory statement by placing a mark _**in each box**_ for statements 1-6 below.	
1.	**I/we hereby declare that my/our paper/assignment is my/our own work, and that I/we have not used other sources or received other help than is mentioned in the paper/assignment.**	☒
2.	**I/we herby declare that this paper** 1. Has not been used in any other exam at another department/university/university college 2. Is not referring to the work of others without acknowledgement 3. Is not referring to my/our previous work without acknowledgement 4. Has acknowledged all sources of literature in the text and in the list of references 5. Is not a copy, duplicate or transcript of other work	Mark each box: 1. ☒ 2. ☒ 3. ☒ 4. ☒ 5. ☒
3.	**I am/we are aware that any breach of the above will be considered as cheating, and may result in annulment of the examination and exclusion from all universities and university colleges in Norway for up to one year, according to the Act relating to Norwegian Universities and University Colleges, section 4-7 and 4-8 and Examination regulations paragraph 31.**	☒
4.	**I am/we are aware that all papers/assignments may be checked for plagiarism by a software assisted plagiarism check**	☒
5.	**I am/we are aware that Aalesund University college will handle all cases of suspected cheating according to prevailing guidelines.**	☒
6.	**I/we are aware of the University College's rules and regulation for using sources paragraph 30.**	☒

Publication agreement

ECTS credits: 30

Supervisor: Øyvind Helgesen

Agreement on electronic publication of master thesis

Author(s) have copyright to the thesis, including the exclusive right to publish the document (The Copyright Act §2).
All theses fulfilling the requirements will be registered and published in Brage HiÅ, with the approval of the author(s).
Theses with a confidentiality agreement will not be published.

I/we hereby give Aalesund University College the right to, free of charge, make the thesis available for electronic publication: ☒yes ☐no

Is there an <u>agreement of confidentiality</u>? ☐yes ☒no
(A supplementary confidentiality agreement must be filled in)
- If yes: Can the thesis be online published when the period of confidentiality is expired? ☐yes ☐no

Date: 12.06.2014

Preface

The Master thesis laying before you is the culmination of 18 years of education. Performing my very own research on a topic of great interest to me has proved challenging and very rewarding. I would like to thank the respondents who took the time to help me conduct my research and who made this thesis possible.

I would also like to thank my mentor, Øyvind Helgesen, for his helpful advice and constructive criticism, and not least for our interesting discussions.

Abstract

Although small businesses outnumber larger corporations, little focus has been given to such businesses with regards to the performance effect of utilising strategic management tools. This thesis focuses on entrepreneurial businesses in the United Kingdom as it investigates whether use of strategic management tools affects performance.

This study employed a quantitative research methodology whereby an electronic survey was sent out to 239 entrepreneurial businesses in the UK. A performance measure was developed for the testing of the hypotheses, and was found to be a reliable measure with strong internal consistency. A statistically significant relationship between use of strategic management tools and performance was found. Four additional hypotheses were developed concerning the effect on performance by use of the Balanced Scorecard, Total Quality Management, the Business Model Canvas and Strategic Benchmarking. Insufficient data on the use of these strategic management tools meant these hypotheses could not be tested.

Table of Contents

Table of figures and tables

1. Introduction

With the advent of social media and rapid globalisation it has become easier than ever for entrepreneurs to start businesses and perform well. But what determines great performance for an entrepreneurial business? Any study on international business and marketing will include strategic management tools as a central part of strategic management, suggesting these are of vital importance to any business wishing to succeed. But does use of such strategic management tools really result in increased business performance? Are strategic management tools worth the trouble? These questions are at the heart of this thesis as it attempts to uncover whether active use of strategic management tools affects business performance.

In order to test whether use of strategic management tools affect performance we of course need to measure performance. This can be a difficult task as it is a complex construct dependent on many factors. Literature on performance is vast and no clear «best way» of measuring it has been put forward; indeed some even argue that the construct of performance should be abandoned altogether (Chakravarthy 1986). Although there is no easy way to measure business performance, performance improvement is at the very heart of strategic management, and there is a real need for evaluation of performance. Indeed some claim that "if you don't measure it, you can't manage and improve it" (Atkinson et al. 2012, p. 42). The main aims of this thesis are to create a dependable performance construct and then use this to test whether use of strategic management tools really affect performance.

Little is known about strategic management tools' effect on performance in entrepreneurial businesses. This thesis will seek to remedy this through use of a quantitative research methodology involving a survey. It is beyond the scope of this thesis to study entrepreneurial businesses worldwide, and so entrepreneurial businesses in the United Kingdom were chosen as the focus of this study based on practicality and relevancy concerns. In order to be classified as an entrepreneurial business a business must exhibit behaviour which corresponds to one of five cases; the introduction of a new good, the introduction of a new method of production, the opening of a new market, the conquest of a new source of supply, or the reorganisation of any industry (Schumpeter 1983). According to (Carland et al. 1984) an entrepreneur is someone who establishes and runs a business for profit and growth objectives. It is noteworthy that the authors include employment of strategic management practices in their definition of entrepreneurs.

This thesis presents the following simple model as a starting point:

Figure 1 - Provisional model

The overall structure of this thesis takes the form of five chapters, including this introductory chapter. Chapter two contains the theoretical foundations of the thesis, and the third chapter comprises the research methods including a discussion on validity and reliability. The thesis will then go on to review the results and findings in the fourth chapter, and in the last chapter the results will be discussed and a conclusion will be presented.

2. Theoretical framework

This chapter presents the theoretical foundation of this thesis. The theories outlined in this section will assist the creation of the hypothesised model, the hypotheses, and the basis for data collection. As outlined in the introduction, performance is the dependent variable in this thesis and as such will be examined first. Following from this will be a definition of strategy and strategic management, followed by an examination of a selection of strategic management tools.

2.1 Performance

A well-defined performance construct is possibly even more crucial in entrepreneurial research as reliable data is often hard to come by, and entrepreneurial businesses are more difficult to compare than larger more established businesses. This is due to entrepreneurial businesses' most often dynamic and fast growing nature. As for measuring performance, both the field of organisation theory (sociology) and that of strategic management (business economics) have developed theoretical approaches to performance measurement (Murphy, Trailer & Hill 1996). As this paper is concerned with strategic management, and as it integrates organisation theory's three perspectives on performance measurement – namely the goal-based, systems, and multiple constituency approach - strategic management's theoretical approach will be used in this thesis. We will begin by examining what performance is, before reviewing how to measure it.

What is performance?

Venkatraman and Ramanujam (1986) argue that the concept of business performance can include up to three domains dependent on the scope of the research. The most narrow concept of business performance contains the first of these domains; that of financial performance. Financial performance is measured by fulfilment of economic goals through use of different financial indicators. Inclusion of operational (nonfinancial) performance means a broader concept of business performance, and constitutes the second domain. By including nonfinancial indicators in the business performance concept (such as in the balanced scorecard discussed below) operational key success factors can be discovered which clarifies the link between operations and strategy. Indeed good indicators on the key success factors will most likely lead to better financial performance as well, and so this broader concept of business performance can offer additional insight into the relationship between operations and strategy. The last of the three domains includes the previous with the addition of multiple stakeholders' influence and the multiple and conflicting nature of goals in the organisation.

Although the latter domain - organisational effectiveness - is preferable, it is more complex and so the second dimension is most often used in strategy research. According to Atkinson et al. (2012) firms needed to start creating value through their intangible assets by the end of the 20th century, which made purely financial measures of performance insufficient as it fails to capture changes in value of an organisation's intangible assets. This highlights the need to include operational measures as well in the business performance definition. The need to capture changes in value of an organisation's intangible assets and discovering their causes and effects also prompted the creation of strategy maps discussed later on. Due to the complex nature of measuring performance objectively and consistently in entrepreneurial businesses – and indeed any business – this thesis will include only the narrowest concept of business performance so as to increase accuracy and comparability of business performance in the surveyed entrepreneurial businesses. Now that we have a clearer idea of what business performance is, we can examine how to measure it.

How can performance be measured?
Venkatraman and Ramanujam (1987) maintain that business economic performance's (BEP) measurement is reliant on two major issues: data source and mode of performance assessment. As for data source it can be either primary which means it is observed or collected from first-hand sources, or secondary which means the data has previously been observed or collected by someone other than the utilizer of the data (Venkatraman & Ramanujam 1986). The mode of performance assessment can be either objective or perceptual. In this context a perceptual mode of performance assessment most likely entails judgements by executives, whilst objective modes of performance assessment is fact-based rather than based on opinions or feelings and include such modes as systematic tracking by external agencies (Venkatraman & Ramanujam 1987). Based on these two issues the authors put forward a BEP measurement classification scheme which highlights four different approaches (figure 2).

	«Factual» reports of Business Performance e.g., Internal Management Accounting records, MIS reports, Indices in PIMS Project (e.g., ROI) **1**	«Reports compiled by and for External Agencies» e.g., Annual Reports, 10K Reports, Business Week Scorecard **2**
«Objective» (say, based on records/systems) MODE OF ASSESSMENT		
«Perceptual» (judgements)	**3** Perceptual Assessments and evaluations by managers; some indices in PIMS Project (e.g., relative market share position)	**4** Perceptual assessments of performance by industry observers/other «experts» external to organisation
	PRIMARY (Directly from the organisation)	**SECONDARY** (From sources external to the organisation)

SOURCE OF DATA

Figure 2 – BEP measurement classification scheme (Venkatraman & Ramanujam 1987)

The four approaches shown in figure 2 are equal as each has its merits and demerits. For example a merit of measures using secondary data is that they can be replicated, with the demerit that they may be inaccurate. Measures using primary data may not be replicable, but have the advantage of being less likely to exaggerate performance. Objective assessment is often desirable, but the data may not be available in the desired form, which perceptual assessments can provide. The latter do however require respondents to make difficult judgements.
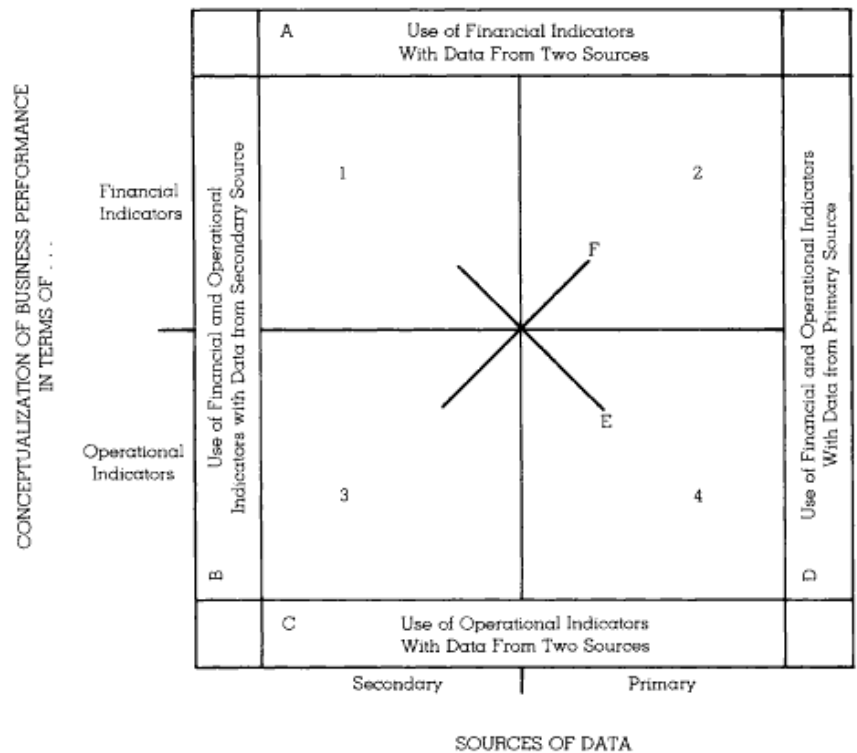
Figure 3 – A classification scheme for business performance measurement approaches (Venkatraman & Ramanujam 1986, p. 110).

Venkatraman and Ramanujam (1986) also developed a classification scheme for business performance measurement approaches using source of data and conceptualisation of business performance. This scheme contains four cells and a total of ten different approaches to measuring business performance (see figure 3).

The four cells represent the within-cell approaches which are approaches using only one dimension of business performance and only one source of data. This is a narrow approach to measuring business performance and should be avoided if possible according to the authors. The remaining six approaches are termed across-cell approaches and these represent significant improvements on the previous four approaches as they either reflect a broader conceptualisation of business performance, or address concerns of convergence across methods.

Having examined the dependent variable, performance, we will now examine the independent variables - the strategic management tools.

2.2 Strategic management tools

In order to discuss strategic management tools we must start at the beginning, and it begins with strategy. Literature on strategy is vast and no single definition can encompass all its different elements and interpretations. In this thesis we will simply scratch the surface to provide a foundation on which to discuss strategic management tools - the focus of this thesis.

What is strategy?

According to the Oxford Advanced Learner's Dictionary (Hornby 2010) strategy is a plan that is intended to achieve a specific purpose. For businesses, this purpose is generally considered to be achieving sustained competitive advantage so as to achieve long-term profitability (Mazzucato 2002). Strategies are not only deliberate plans however. Mintzberg (1987) maintains that realised strategy consists of both deliberate and emergent strategies (see figure 4). Businesses that do not strategize still have a strategy; it is simply entirely emergent strategy. In other words no strategy is also a strategy. Similarly, intended strategy cannot be equalled to realised strategy as elements of it will become unrealised and elements of the realised strategy will be emergent strategy. Although it is important to keep this in mind, in the following review we will focus on intended strategy.
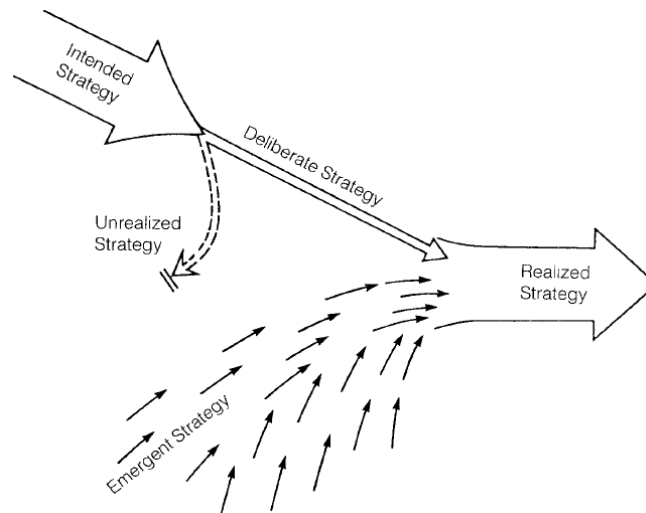
Figure 4 - Deliberate and emergent strategy (Taken from Mintzberg 1987)

According to Mazzucato (2002) an action is strategic only when it leads to sustainable competitive advantage, or else it is seen as merely maintaining the status quo (or even destroying value). When seeking an answer to "what is strategy?" some such as Porter focus on positioning, whilst some others focus on how to make the best of the business' current situation. Porter (1996) maintains that preserving what is distinctive about a business through strategic positioning can help businesses achieve sustained competitive advantage.

Strategic positioning is built on three key principles. One of these principles is that strategy is the creation of a valuable and unique position, and it rests on unique activities. Strategic positioning emerges from three distinct sources; variety-based positioning which involves serving few needs of many customers, needs-based positioning which involves serving broad needs of few customers, and access-based positioning which involves serving broad needs of many customers in a narrow market. These three bases for positioning help further specify Porter's generic strategies of cost leadership, differentiation and focus. Another principle is the requirement of strategy to make trade-offs in competing. This means that businesses must choose what not to do, as some competitive activities are incompatible and therefore require businesses to purposefully choose and limit what it offers. Porter's generic strategies demonstrate this, as Porter argued that unless businesses chose between the generic strategies they risked getting caught between the inherent contradictions of the different generic strategies. These contradictions are explained by the trade-offs between the activities of incompatible positions. The final principle is that strategy involves creating "fit" among a company's activities. This involves deepening the strategic position by strengthening the fit among the business' activities. Fit drives both sustainability and competitive advantage as

7

mutually reinforcing activities become difficult to imitate by competitors. This is because the whole is worth more than its parts.

Strategy researchers also disagree to some extent as to how strategy emerges; whether it is rational and deliberate or evolutionary through trial-and-error (Mazzucato 2002). This relates to the discussion on emergent and deliberate strategy mentioned earlier. There has also been some debate as to whether external or internal factors should be emphasised when discussing strategy. Internal factors have gained more attention recently as being of greater importance than previously considered by many. More recent research suggests that industry structure and strategy co-evolve, and so finding tools for analysing both are becoming increasingly important in strategic management. But what is strategic management and what exactly are strategic management tools?

What is strategic management and what are strategic management tools?
Şentürk (2012, p.12) states that strategic management is "the ability of a firm's management to properly align itself with the forces driving change in the environment in which it competes". This alignment necessitates investment by management in competitive methods – strategic management tools – which will yield the greatest value to the firm. According to Teece, Pisano and Shuen (1997) strategic management is fundamentally concerned with determining how organisations achieve and sustain competitive advantage. Following from this strategic management tools can therefore be defined as tools which help firms discover, achieve and sustain competitive advantage.

According to Blindheim (2010) any tool has three component parts; an objective function which specifies what the tool is intended to do, a technical construction which must meet its function, and user benefit(s) which is derived from the use of the tool. Blindheim (2010, p. 16) further states that "the main subject matter in management accounting is to make quantified information useful for managerial purposes", and consequently the objective function of a management tool is to provide quantified information to managers. The technical construction of a management tool must generate this quantified information in order to enable the user of it to obtain benefit(s). The term management accounting is suitably named as it demonstrates the link between depicting something with quantified information, and the managerial aspects of using this information (Blindheim 2010). Measurement is at the heart of management accounting tools as quantified information is obtained through measurement of objects. These objects can be customers, brands, the company as a whole, or

parts of it etc. In order to quantify information on this object a numerical value is assigned which describes one property of the measured object rather than the object itself. For example sales volume describes the quantity of a product sold in a specific time-period, not the product itself. These measure-object combinations (such as sales volume) are the technical building blocks of management tools.

To further characterise a management tool we can examine its seven technical features. Location is the only one of these features used to characterise the object, and this is achieved through specifying whether it is external or internal to the organisation performing the measurement. Four of the features are used to specify the measure, one of which is data source. Data source specifies whether the data (the raw-material of the measurement) is obtained from sources located externally or internally to the measuring organisation. Another feature is quantification which specifies whether the measure if financially or non-financially quantified. Time is another feature which is divided into time-horizon which specifies whether the measure is a historical or future description, and time-period which specifies the period of time covered by the measure (Blindheim 2010). Construction is the last feature pertaining to the measure, and this feature specifies whether it is a simple measure or composed such as return on investment (ROI) which is built from two or more measures. The level of aggregation feature specifies whether measure-object combinations are summarised into a unified measure-object combination or decomposed into its component parts. Causality is a feature which denotes whether a directional relationship exists between two measure-object combinations.

Now that we have a clear idea of what a management tool is, we can begin to examine specific strategic management tools.

Strategic management accounting tools

According to Blindheim (2010, p. 170), a subset of strategic management tools – strategic management accounting tools- are:

> A set of management tools whose purpose is to help management teams improve the company's financial performance. These management tools are developed from a system perspective were [sic] performance is measured and compared in relative terms and where the players in the strategic triangle are the main objects in focus[1].

Blindheim (2010) identified six tools as belonging to the strategic management accounting concept, and a short review of each of these follows.

---

[1] The players in the strategic triangle consists of the company, its competitors, and customers.

The strategic performance measurement approach

This strategic management tool was developed by Kenneth Simmonds, however as no label was identified this label is taken from Blindheim (2010). The strategic performance measurement approach seeks to measure and compare the organisation's performance with the performance of competitors, in addition to intercept shifts in customer preferences over time by measuring total market size. The performance of the organisation is benchmarked using market share, volume achievement, unit-cost, and price (and thereby profit). This strategic management tool is based on experience effects in that it evaluates the strength of the organisation in relation to competitors in terms of market share, as it deems organisations with higher market shares to have lower costs due to these experience effects, and therefore higher levels of profits. The strategic performance measurement approach can help demonstrate course-of-action implications on performance and the organisation's competitive position through measuring past performance between two different dates. This helps managers in measuring and evaluating their performance. The strategic performance measurement approach can also help visualise course-of-actions future implications on performance and the organisation's competitive position by predicting future experience curve effects from technology investments and price changes. In other words use of the strategic performance measurement approach can result in better decision making as a problem-solving benefit in addition to potentially providing both an attention-directing (tool is used diagnostically) and a score-keeping benefit (tool is used interactively).

The value chain analysis

This strategic management accounting tool seeks to quantify the financial value created in each of the major chain activities performed by the organisation (Blindheim 2010). Value in relation to the product is measured through operating costs and revenues (and hence profit), whilst a replacement cost measure is used to determine the quantified value of the assets invested at each major activity in the value chain. Return on assets (ROA) can be estimated as both the profit generated and a financial value on the assets employed at each major activity is determined. This results in a quantified financial value for each step of the value chain in both absolute and relative terms through profits and ROA respectively. Value chain analysis can help identify external activities with superior earnings through mapping the financial value created in upstream (supplier) and downstream (customer) activities. The value chain analysis can also help identify unprofitable activities that perhaps should be outsourced, as well as determine the organisation's bargaining power in relation to its customers and suppliers.

Furthermore the value chain analysis might reveal causal relationships which exist between activities, and so could help visualise the financial value created in one activity which stems from an initiative in another activity.

The cost driver analysis

This strategic management accounting tool was developed by Shank and Govindarajan, and seeks to determine the organisation's cost position for each product manufactured in each of the organisation's major activities in the vertical chain, as well as quantify the effects of cost drivers on cost in activities (Blindheim 2010). This cost position is determined by identifying the cost driver(s) in action and analysing how they favour or disfavour the organisation in relation to its competitors. 11 generic cost drivers were developed, five of which were structural, and the rest were executional. Structural cost drivers reflect the structural choices the organisation has taken, and include economies of scale, economies of scope, experience/learning, technology, and level of product complexity. Executional cost drivers reflect the organisation's skills in executing activities, and include work force involvement, total quality management, capacity utilisation, process design, product design, and exploiting linkages. Through use of the cost driver analysis the organisation will gain insight into its relative cost position for every major activity. If the organisation combines this insight with profitability information on these activities (obtained from value chain analysis), it can show which activities are profitable and these activities' cost positions in the industry. From this the organisation can determine which activities are responsible for its competitive cost advantage. This in turn reveals where in the value chain the organisation should invest its resources, and could also assist in make-or-buy decisions. In addition cost driver analysis help identify the real sources of costs and cost differences between organisations.

The target cost management approach

Target costing involves setting a target cost and frequently measuring the gap between this and the current costs throughout the product planning and design process (Blindheim 2010). Determining the target cost requires determining the target price and a target profit. Once a target price and profit is determined, the target cost becomes evident. The difference between the current cost of bringing the product to market and the target cost is the cost gap, which must be closed before the project can be launched. This cost gap is then divided into separate cost gaps for each of the major activities involved. In order to reach the target cost the product is considered in terms of its functions, and each of these functions is estimated in both absolute terms and as a percentage share of the total current cost. As in the value creation

model a sample of the target customers perform a customer importance ranking in addition to a customer satisfaction ranking, which involves ranking competing products (Atkinson et al. 2012). The product development team performs a satisfaction ranking of their product. The customer satisfaction ranking is then compared to the development team's ranking. This reveals how well the product performs on different functions compared to competing products. Next the functions are analysed in terms of its relationship to each product-feature. Each function's percentage contribution to a product-feature is multiplied with the customer importance ranking which results in a function importance ranking. This reveals how much customer value each function is creating. The function importance ranking is then compared to its relative cost, which creates a value index. If the index value is less than one, that function is a candidate for value engineering (reducing costs). If the index value is higher than one, the function is a candidate for enhancement as spending on it is not proportional to the value to the customer. This strategic management tool can help organisations meet customer demands in a profitable way, and ensure product profitability before introduction to the market. By relying on customer information in the research and development process, the organisation can also avoid creating products that have a hard time selling due to lack of demand.

The entry protecting analysis

This strategic management tool was developed by Michael Bromwich, however as no label was identified for this tool this label is taken from Blindheim (2010). The analysis in this strategic management accounting tool is concerned with establishing the value of an organisation's invested sunk cost assets after recently entering an industry. Sunk cost assets are so named as they have no resale value in the market should the organisation need to withdraw from the industry. The necessary sunk cost investments needed to enter a particular industry represent a barrier to entry. For an incumbent firm this analysis is performed to quantify the sunk cost value embedded in the firm. For a potential entrant to the industry the analysis is performed to quantify the sunk cost value embedded in an existing firm in the industry. For both firms the analysis will reveal the existence and strength of this barrier to entry in this industry. Incumbent firms can derive an attention-directing benefit from this tool if profitability in the industry is great and the analysis reveals a non-existing or a very low sunk cost barrier to entry. Potential entrants can derive a problem-solving benefit from this tool as it helps determine – in conjunction with other analyses and tools – whether the firm should enter the industry or move into a new step on the vertical chain.

The value creation model

This strategic management accounting tool was developed by McNair, Polutnik, and Silvi, and seeks to measure the organisation's effectiveness in meeting customer needs (Blindheim 2010). The way this tool works is it gets target customers to identify the set of product-features imbedded in the offered product, and these features are then ranked by customers in terms of their relative importance. The same target customers are also asked to quantify their satisfaction with the offered product-features. Management teams perform the same ranking in relation to the product-features relative importance. The price set by the market is then divided on the different product-features through their percentage share of customer importance rankings. This reveals revenues generated by each product-feature as well as the customer value attached to each product-feature. The value creation model's second step is to track the use of all resources and linking the cost of the organisation's activities to each product-feature. Activity costs which directly contribute to the provision of product-features are termed value added costs, whilst other needed resource-consuming activities' costs are termed non-value added but required. The last cost category is waste, which' responsible activities neither directly nor indirectly create customer value. With this information on hand the organisation can identify the cost-value gap, which is the difference between the percentage share of total cost for a product-feature and its corresponding customer importance ranking termed in percentage share of total value. The cost information gathered can also be used to calculate realised profit, profit potential, and the revenue multiplier for each product-feature. The benefit of this tool is streamlining an organisation's activity system so that cost-driving activities better fit the valued product-features. It helps identify wasteful activities which should ideally be eliminated, and the management ranking of the importance of product-features reveals whether they are similar to those of the organisation's customers. If not, the organisation could be spending its resources on the wrong product-features. The cost-value gap can reveal other significant information about whether the organisation is spending the right amount of money on the right product-features, and where it can improve. Similar information is gathered from the revenue multiplier which represents the revenue created for each monetary unit of value added cost spent.

Strategic management tools selected for this study

We have now briefly examined strategic management accounting tools, but as stated earlier, strategic management tools are all tools which help firms discover, achieve and sustain competitive advantage. Knott (2006) provides another broad definition of strategy tools,

stating that they act as an aid to strategic thinking and decision making, and classify such tools into three categories. The first of these – concept – consists of tools which simply provide a way of thinking such as the resource-based view of the firm, the second – technique – is more specific and limited, and entails the possible use of multiple techniques used simultaneously for the same problem. The VRIO framework is an example of such a technique. The third category is approach, which combines concepts and interconnected techniques and provides a more complex method for managing aspects of the business (such as the balanced scorecard discussed below). This thesis will focus solely on tools in the latter category – approach.

Due to the time constraints and other considerations such as readability this paper will focus on a selected few strategic management tools. These focus on objective as well as perceptual measures of performance as these are likely to be more helpful in the strategic management of an organisation (cf. the discussion on business performance measurement above). The Balanced Scorecard and Benchmarking tools were chosen as these were found to be the most used in Europe (Rigby & Bilodeau 2013). Awareness and use of Total Quality Management is high even in small and medium-sized enterprises in the United Kingdom and therefore this tool was also chosen (Parkin & Parkin 1996). The Business Model Canvas was chosen as it is a relatively new tool compared to the more established tools already mentioned, and differs from the other chosen three tools in that it was developed with the entrepreneur in mind (Osterwalder and Pigneur 2010). The focus of the theoretical framework with regards to the selected strategic management tools will be on the Balanced Scorecard and the Business Model Canvas as these are somewhat more overarching strategic management tools. Furthermore the Balanced Scorecard is a very well-known strategic management tool which has been developing for over 20 years. The opposite is true for the Business Model Canvas. This tool is new and has not yet reached high levels of recognition and widespread use. A focus on explaining this tool more thoroughly therefore seems appropriate. We will begin by examining Total Quality Management, and then move on to the Balanced Scorecard. After this we will review the Business Model Canvas, and then we will finish the review of the selected strategic management tools with Strategic Benchmarking.

Total Quality Management (TQM)

According to Omachonu and Ross (2004) the goal of Total Quality Management (TQM) is customer satisfaction. Powell (1995) maintains that the concept of TQM can be traced back to 1949 in Japan, where a committee was put together to improve Japanese productivity and

quality of life. The concept became increasingly important as a need arose to increase the quality of western products and services in the 1980's due to increased competition from Asia. TQM seeks to achieve continuous improvement in the quality of a business' goods and services through integration of all functions and processes in the business. In other words quality is considered in all aspects of the business, and so the overall effectiveness of TQM is greater than the sum of all individual output from the subsystems in the business. These subsystems include management subsystems as well as the organisational functions in a product's life cycle. Omachonu and Ross (2004) state that achieving superior quality can have the following benefits for the business: greater customer loyalty, market share improvements, higher stock prices, reduced service calls, higher prices, and last but not least, greater productivity. Powell (1995) maintains that TQM leads to reduced waste and fewer errors, improved internal communication, customer satisfaction, and understanding of customer needs, greater employee motivation and commitment, stronger relationships with suppliers, and better problem-solving. TQM also has some possible drawbacks; it demands substantial time investment from managers, intense CEO commitment, it is expensive but rarely produces short-term results, and it makes unrealistic assumptions about most business' capacities to transform their cultures. According to Powell (1995), complete TQM programs share the following 12 factors: committed leadership, adoption and communication of TQM, closer customer and, supplier relationships, benchmarking, increased training, open organisation, employee empowerment, no-defects mentality[2], flexible manufacturing, process improvement, and measurement. Of these 12 factors Powell (1995) found that TQM success seemed to depend on the more intangible factors executive commitment, employee empowerment and open organisation. Firm size was negatively correlated with TQM performance suggesting that a larger firm size may impede successful TQM implementation. This suggests that TQM is likely to be more successfully implemented by smaller firms such as those examined in this thesis.

As discussed previously, TQM is one of 11 cost drivers developed when creating the cost driver analysis tool. Of these it was one of five executional cost drivers, which reflect the organisation's skills in executing activities. This highlights the role TQM can have in achieving and sustaining competitive cost advantage.

---

[2] A no-defects mentality entails spotting defects as they occur rather than relying on inspection and rework later on in the process.

Zu, Robbins and Fredendall (2010) maintain that Six Sigma, which was initiated in the 1980's by Motorola Inc., is treading in TQM's footsteps. Although closely related, Six Sigma includes three additional practices namely its role structure, structured improvement procedure, and its focus on metrics. Role structure regards the hierarchical coordination mechanism for quality improvement work which ensures that tactical tasks match the overall business strategy by assisting the coordination and control of work across organisational levels (Zu, Fredendall & Douglas 2008). The hierarchy consists of improvement specialists referred to as champions, master black belts, black belts and green belts. Quality improvement throughout the organisation is ensured by the placement of these specialists throughout the organisation after they have received tailored training. The second practice, structured improvement procedure, provides teams with a methodological framework to help guide them through the process of conducting improvement projects. This builds on the Plan-Do-Check-Act (PDCA) cycle, but differs in that it specifies which tools and techniques to use within each step. Lastly, focus on metrics entails using quantitative measures to set project goals, measure process and product quality performance, as well as integrating process-level performance measures with customer expectations and business-level performance measures. As these distinct Six Sigma practices complement TQM, businesses would not be ill-advised to implement TQM integrated with Six Sigma (Zu, Robbins & Fredendall 2010). Such an implementation would likely result in synergistic affects according to the authors (Zu, Robbins & Fredendall 2010).

The Balanced Scorecard

Kaplan and Norton (1996) – creators of the Balanced Scorecard (BSC) – state that this performance measurement framework was born out of a belief that traditional financial performance measures were becoming obsolete. Value-creating activities from an organisation's intangible assets cannot be measured through use of financial measures, but developing and mobilising these intangible assets is critical to success in knowledge-based competition (Kaplan & Norton 2001a). The BSC was presented as a solution to this problem by including leading indicators of performance through the customer, process, and learning and growth perspective. Financial measures are lagging indicators of performance, whilst value-creating activities from an organisation's intangible assets can only be measured through leading indicators. According to Andersen, Cobbold, and Lawrie (2001) two main benefits of implementing the balanced scorecard in a small or medium sized enterprise as is the focus of this thesis, is building consensus through describing the business' strategic

objectives and priorities, as well as the encouragement of the development and application of more effective strategic management processes. The authors believe the balanced scorecard is a great help to small businesses as it facilitates the development of more complex management structures which are needed as the business grows. Andersen, Cobbold, and Lawrie (2001) do however stress the need for empirical research on whether the conclusions they draw are indeed correct.

What is the BSC?
Although it maintains an emphasis on achieving financial objectives, the framework also includes the financial objectives' performance drivers (Kaplan & Norton 1996). In other words the BSC still measures past financial performance, but includes additional perspectives which measure the drivers of future performance.

The financial perspective, which tends to be the only lagging indicator of performance as opposed to the other three leading indicators, addresses the financial performance the business seeks to deliver to its owners. The customer perspective addresses how the business seeks to deliver value to its customers in order to achieve its vision and financial objectives. The process perspective addresses the processes the business must excel at in order to meet its financial and customer objectives, and the learning and growth perspective addresses how the business should align and enhance its intangible assets in order to improve its critical processes. This framework is intended to capture an organisation's value creating activities, and help managers execute their strategy. Indeed the real problem in business today with regards to strategy is not finding the right strategy, but rather implementing it (Kaplan & Norton 2001a). Kaplan and Norton (2001a, p.274) state that "85 percent of management teams spend less than one hour per month discussing strategy". The BSC is designed to help organisations continuously review strategy and make strategy a continual process. The strategic management tool achieves this through helping organisations focus, being forward-looking, integrating both internal and external measures, and through providing a top-down reflection of the organisation's mission and strategy (Kaplan & Norton 1993). Figure 5 shows a template of the BSC framework.
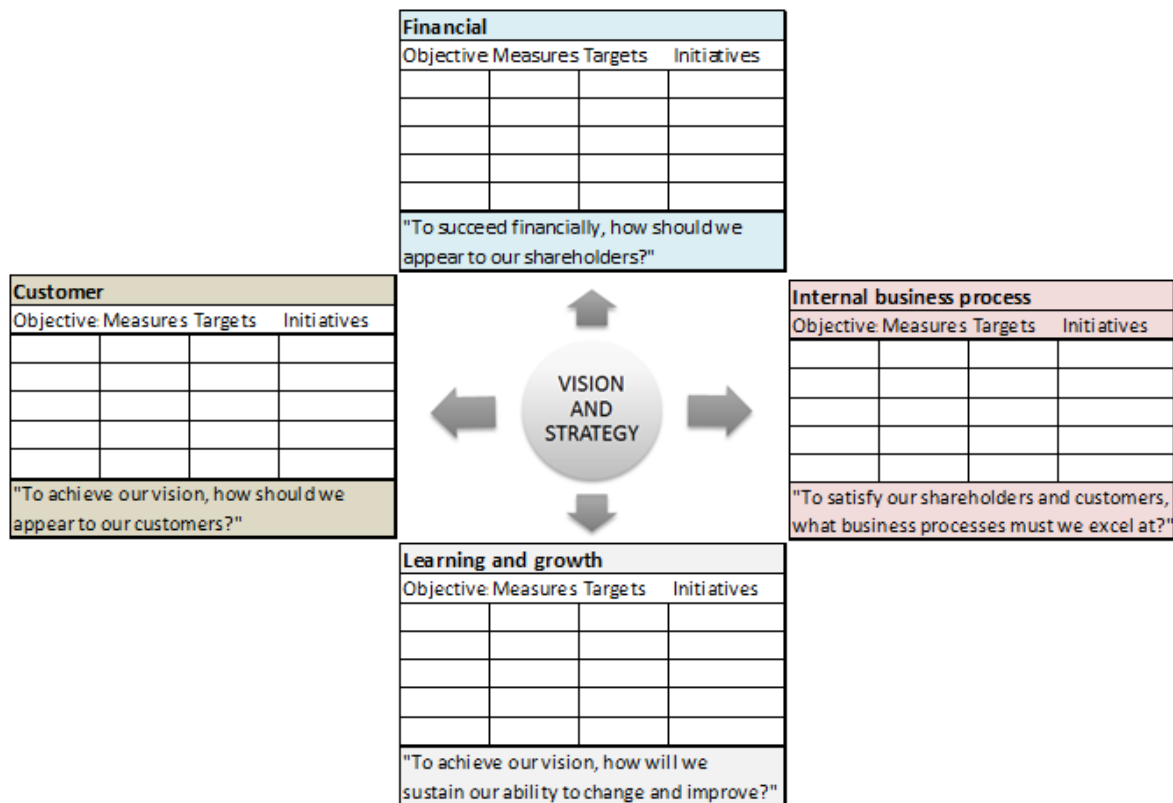
Figure 5 – A BSC template (Kaplan & Norton 2007, p. 153).

The financial perspective of the BSC is concerned with establishing how success is measured by the organisation's shareholders (Atkinson et al. 2012), whilst the customer perspective is concerned with how the organisation creates value for its customers. These two perspectives are said to be concerned with the "what" of strategy, whilst the following two perspectives are concerned with the "how" of an organisation's strategy. The internal business process perspective (hereafter simply referred to as the process perspective) is perhaps the most important to some organisations according to Kaplan and Norton (2001a), and concerns establishing which internal processes the organisation must excel at to satisfy not only shareholder expectations but also those of its customers. The learning and growth perspective concerns how the organisation can continually improve its critical processes and customer relationships.

Atkinson et al. (2012) suggest adding an additional perspective to represent a specifically important aspect of their strategy such as social impact for not-for-profit organisations. As these perspectives should reflect the business, in reality the business may end up with more or less perspectives than initially suggested by Kaplan and Norton (2001a). For each of these perspectives objectives should be chosen, as well as measures for the objectives. After agreeing on the objectives for each of the perspectives, the organisation should choose

measures for each of these. The process of setting these measures forces the organisation to clarify the meaning of its strategy statement. Kaplan and Norton (2001a) suggest five measures for all but the process perspective for which they suggest eight to ten measures. The reason for the emphasis on the process perspective is its key role as a driver of future performance. Overall the suggestion is to have twenty to twenty-five measures, which is the expectation of the authors based on their own experience. This limited number of indicators helps focus the organisation's strategic vision (Kaplan & Norton 1993). Furthermore about 80 % of measures should be nonfinancial (Kaplan & Norton 2001a). Once the organisation has determined these measures goals are set for each of them. Lastly, as can be seen in figure 5, the organisation can keep track of the relevant initiatives for reaching these goals. This helps the organisation prioritise the correct initiatives that will help the organisation fulfil its objectives.

How to build a BSC

For organisations without a clearly defined strategy, Kaplan and Norton (1993) propose the following process of building a BSC: firstly the organisation must prepare by deciding which, if there are multiple, business unit is suited for a top-level BSC. The second step is the first round of interviews in which senior managers are briefed on the BSC and senior managers provide information on the organisation's objectives and tentative measures of these. Third in this process is the first round of executive workshops where top management is brought together with the BSC facilitator (internal or external) to begin developing the BSC. This happens through deciding on the organisation's mission and strategy statements, as well as defining key success factors and formulating a preliminary BSC complete with operational measures. The next step is a second round of interviews in which senior executives are interviewed regarding the preliminary BSC as well as on potential issues with regards to implementing the BSC. Next in this process is a second round of executive workshop where the tentative BSC is debated along with the vision and strategy statements decided on in the first round. An implementation plan is developed in this round and stretch goals for the proposed measures are requested from the participants. A third executive workshop is the next proposed step (Kaplan and Norton 1993). In this step the vision, objectives and measurements are finally decided, an implementation plan is agreed upon, and preliminary action programs are identified. The seventh step is implementation which involves communicating the BSC through the organisation, linking measures to databases and information systems, and perhaps even developing new information systems. The last step is periodic reviews. This involves

revisiting the BSC metrics and a discussion on the BSC measures with top management as well as with decentralised departments and divisions.

Although the balanced scorecard is most often discussed with regards to large corporations, Kaplan and Norton (2001a) maintain that the benefits of implementing the balanced scorecard framework are just as real for small businesses as entrepreneurial businesses often are. Any organisation regardless of its size will benefit from aligning strategy with its human resources and processes. Kaplan and Norton (1993) state that a true test of successful implementation is transparency; whether the organisation's competitive strategy can be gaged from merely examining the measures included in the organisation's BSC.

From measurement to management

Kaplan and Norton (1996) maintain that the BSC framework is best used as a strategic management system rather than an operational or tactical measurement system. In order to achieve this, the authors present four specific processes to carry out. The first of these is to clarify the organisation's vision and strategy, and to translate these into specific strategic objectives. Second is the process of communicating and linking strategic objectives and measures. The third process consists of planning, setting targets, and aligning strategic initiatives. The fourth process for using the BSC as a strategic management system is enhancing strategic feedback and learning. As we can see from figure 6, the fourth process transforms the BSC from a single-loop learning process to double-loop learning. This means that organisations re-examine their strategies and techniques for its implementation in light of the current situation, which in single-loop learning is neither required nor facilitated (Kaplan & Norton 2007). In double-loop learning people's goals, norms, assumptions and behaviour are open to change (Argyris 1991). Argyris gives a simple analogy to demonstrate the distinction between single-loop learning and double-loop learning which revolves around a thermostat. A thermostat which simply turns on the heat when the temperature drops below 21 degrees demonstrates single-loop learning, while double-loop learning is demonstrated by a thermostat which questions why it is set at 21 degrees, and whether another temperature setting would be more economical in heating the room. This example demonstrates the importance of the fourth process in using the BSC as a strategic management tool.
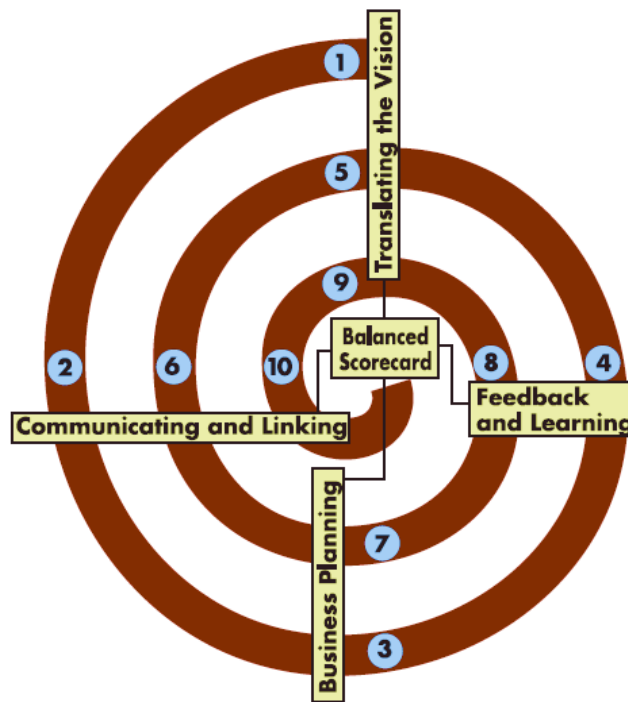
Figure 6 – Double-loop learning with the BSC (Kaplan & Norton 2007, p. 158).

Using the BSC to align key management processes and systems to strategy

Kaplan and Norton (2001b) maintain that the key to achieving breakthrough performance is focus and alignment. The authors propose that this can be achieved through five principles common to strategy-focused organisations. First of these principles is translating the strategy into operational terms. The second principle concerns aligning the organisation to the strategy through aligning different business unit strategies, staff functions etc. to the organisation's strategy. Third of the principles is making strategy everyone's everyday job (Kaplan & Norton 2001b). The fourth principle is making strategy a continual process. Lastly, leadership must be mobilised for change.

Strategy maps

Kaplan and Norton (2000) further expanded the BSC strategic management tool by including strategy maps. Strategy maps were included to provide a visual of a business' critical objectives and their performance driving relationships. The objectives in the four perspectives in the BSC are linked together in a chain of cause-and-effect relationships (Kaplan & Norton 2004). In other words strategy maps show cause-and-effects relationships between improvements and outcomes (Kaplan & Norton 2000). Furthermore strategy maps can help show businesses how to convert their resources and initiatives into tangible outcomes. Strategy maps can also reveal major gaps in strategy implemented at lower levels in the

organisation. Perhaps most importantly, strategy maps enable organisations to communicate their strategy throughout the organisation.
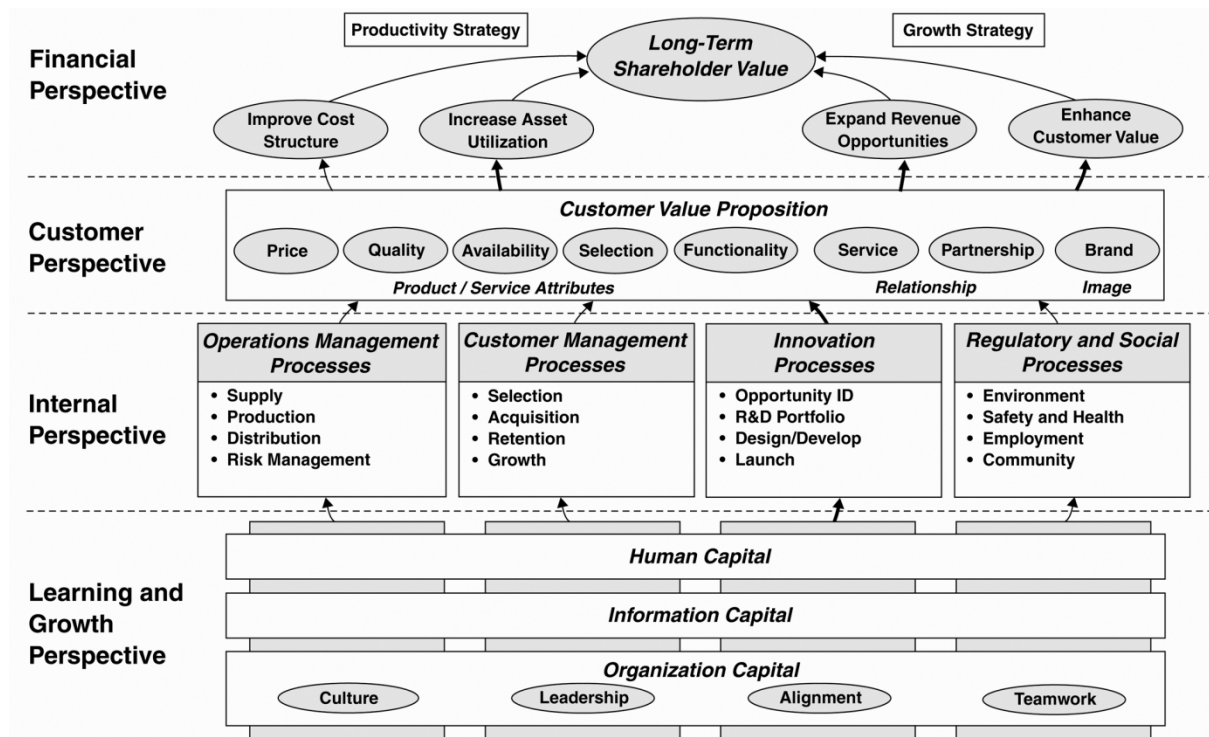
Figure 7 – A strategy map (Kaplan & Norton 2004, p. 11).

At the top of figure 7 we find the financial perspective of the BSC; a financial strategy for increasing shareholder value is placed at the top of the strategy map. This perspective is placed at the top as it is seen as the ultimate objective of profit-maximising businesses (Kaplan & Norton 2004). This financial strategy usually has two component strategies - productivity and growth – as profit in essence can only increase by either selling more or spending less. The growth strategy has a further two components; expanding the business by seeking revenue from new sources, and increasing value to customers and thereby customer profitability. The productivity strategy also commonly has two components; improving the organisation's cost structure, and improving asset utilisation. Next on the strategy map is the customer perspective of the BSC which is described by the business' value proposition. This value proposition is generally chosen from the following three: customer intimacy, operational excellence, or product leadership. Kaplan and Norton (2000) maintain that clearly defining a business' value proposition is the most important step in developing a business strategy. Businesses will strive for excellence in one of the value propositions mentioned above, whilst maintaining an adequate standard in the other two. The selected value proposition is key to determining what the business should focus on excelling in. Below the

customer perspective in figure 7 we find the internal process perspective of the BSC. This part of the strategy map clarifies the means to which the business can achieve its value proposition and financial objectives. These means – organisational activities – fall into four categories of processes; achieving operational excellence, establishing effective relationships with external shareholders, and, just as importantly, building the franchise by innovation and increasing customer value. At the bottom of the strategy map is its foundation, which is based on the learning and growth perspective. This part of the strategy map represents the support of the organisation's strategy through identifying the needed support from the organisation's human-, information-, and organisation capital.

Figure 8 – The link between the strategy map, balanced scorecard and action plan (Kaplan and Norton 2004, p. 53).

Figure 8 demonstrates how the strategy map, balanced scorecard and action plan is linked together. The strategy map is used to visually represent the strategy and determine objectives, the balanced scorecard translates these objectives into measures and targets, and the action plan shows the strategic initiatives needed to achieve the targets as well as the cost of these strategic initiatives. Combined and used correctly, these components can provide an excellent strategic management tool.

The Business Model Canvas (BMC)

A great deal of theory on business models exist, this thesis will focus on the business model canvas as a relatively new strategic management tool. Theory on the trinity of businesses in a corporation will also be discussed, as well as specific business models namely long tail, multi-sided platform, "free", and open business models.

What are they?

Kalakou and Macário (2013) maintain that no unique definition of business models exists, and that there has previously been confusion as to what distinguishes business models from strategy and competitive strategy. Osterwalder and Pigneur (2010, p.14) define a business model as a description of "the rationale of how an organisation creates, delivers, and captures value". Hedman and Kalling (2003) describe business models as a good tool which is becoming increasingly popular, but as lacking a well-defined construct. A merit of business models is that they integrate both the resource-based view and that of industrial organisation (both content based approaches to strategic management), as well as the strategy process perspective (Hedman & Kalling 2003). Osterwalder and Pigneur (2010) put forward nine basic building blocks of a business which cover its four main areas; customers, offer, infrastructure and financial viability.
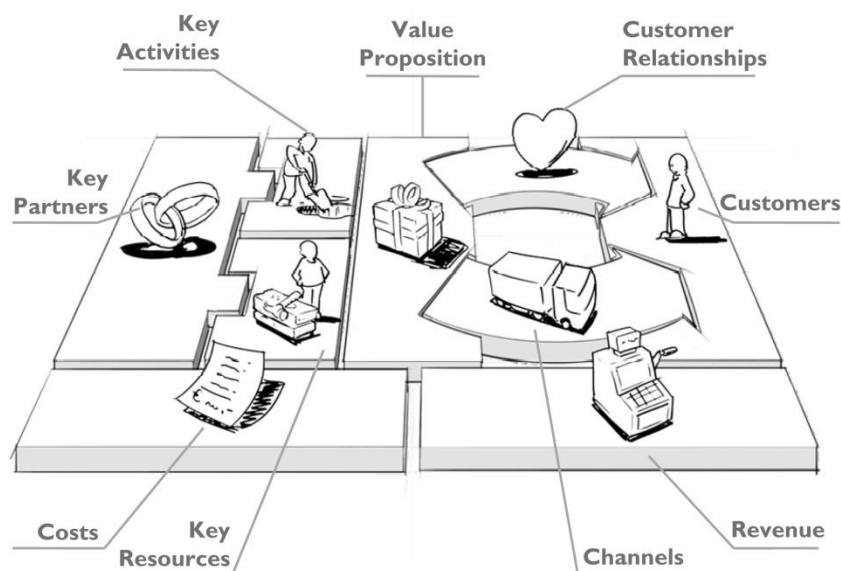
Figure 9 – The Business Model Canvas (Osterwalder & Pigneur 2010, pp. 18-19).

This business model canvas (figure 9) was developed as a powerful, easy-to-use strategic management tool, and as such is particularly suited for use by entrepreneurs. One of these nine building blocks is customer segments (customers in figure 9). This building block is concerned with defining an organisation's customer segments in order to better satisfy their

specific needs to ensure better long-term profitability. Second is value propositions, which entails describing the organisation's bundle of products and services which create value for its customer segments. The next building block is channels, and this concerns how the organisation reaches and communicates with its customer segments. The fourth building block is customer relationships, which entails determining the type of relationship the organisation wishes to establish with its different customer segments. Revenue streams is another building block, which entails determination of the organisation's different revenue streams which can be two types; transaction revenues or recurring revenues. The sixth building block is key resources, which entails establishing an organisation's key resources which can be physical, intellectual, human or financial. Key activities is the next building block, and is concerned with establishing which are an organisation's key activities. These can be categorised under production, problem solving, or platform/network. The key partnerships building block involves identifying an organisation's network of partners and suppliers. According to Osterwalder and Pigneur (2010) there are four different types of partnerships; strategic alliances, coopetition, joint ventures, and of course buyer-supplier relationships. Lastly, the cost structure building block involves describing an organisation's cost structure through identifying its most important costs incurred when operating its current business model. By filling in these nine building blocks in the business model canvas (see appendix 1), business owners are expected to gain good insight into what makes their business competitive as well as spot areas in need of improvement. The nine building blocks should be linked together, for instance the organisation's channels should describe how it delivers its value proposition to its customer segments.

The business model canvas was co-created by 470 people worldwide (Osterwalder & Pigneur 2010), and according to Barquet et al. (2013) these were experts from academy and industry. The authors conclude that the business model canvas was a result of reaching consensus among these. Barquet et al. (2013) further state that the performance of the business model canvas has been empirically supported by the successful application in successful organisations such as IBM. Osterwalder and Pigneur (2010) point to Telenor among others which have seen the promise of the business model canvas and utilised it from an early start. With a clear concept of business models and the BMC we can move on to examining difference types of business models.

The trinity of businesses in a corporation

Hagel III and Singer (1999, p.1) highlight the importance of understanding your business model by stating: "what business are you really in? Chances are, it's not what you think". The authors maintain that there are three types of businesses in an organisation; customer relationship management, product innovation, and infrastructure management. These are very different, but are all organisationally entwined. The role of customer relationship management is to find and build relationships with customers, whilst the role of product innovation is to create new products and services and bring these to market in the best way and as successfully as possible. As for infrastructure management this part of the business is concerned with the building and maintaining of business facilities for such things as manufacturing and logistics. Hagel III and Singer (1999) maintain that bundling these three businesses into one is done in the belief it will reduce interaction costs[3], but that this will inevitably result in a need to compromise performance as the economics governing each of these three types of businesses conflict. The authors maintain that in order to be successful in the long term, businesses must unbundle these three business types, and chose one on which to focus. This is due to the different key aspects underlying the three businesses; for customer relationship management economies of scope are key, for product innovation speed is key, and for infrastructure management economies of scale are key. To excel in any of these the organisation must unbundle and choose its focus. Treacy and Wiersema (1995) suggest three different value disciplines in a similar fashion, each intended for a different type of customer segment; operational excellence which entails providing competitively priced reliable products or services, product leadership which entails providing customers with innovative products, and customer intimacy which entails providing the customer with a solution rather than a product or service. Although the terminology is somewhat different, the thought behind it is the same; focus is needed to excel. And discovering the right area to focus on can be aided by use of a tool such as the business model canvas.

Long tail business models

Anderson (2004) introduced the term *the long tail* to describe a shift in the media industry towards selling large numbers of niche products in small volumes. Businesses employing long tail business models sell some top products, but also include the long tail of more niche products often not offered by businesses employing more traditional business models such as bookstores and record shops. The author warns that simply selling long tail products is

---

[3] These are transaction costs with the addition of costs relating to the exchange of ideas and information (Hagel III & Singer 1999)

destined to fail however, as the business model is centred around offering bestselling products to customers and recommending more niche products to drive demand down the long tail. This pattern of business model is therefore most likely to be found among businesses in the media industry.

Multi-sided platform business models

Another pattern of business models is that of multi-sided platforms. Platforms are products and services which bring together groups of users in multi-sided networks (Eisenmann, Parker & Van Alstyne 2006). Profit in this business model is made through facilitating transactions between the groups. A network effect was termed by economists to describe the phenomenon which is the mutual attraction of the groups. These network effects result in increasing returns to scale for businesses that are able to successfully employ this business model. Eisenmann, Paker and Van Alstyne (2006) highlight three challenges to this business model, the first of which is pricing the platform. As the success of the platform is dependent on the number of users on either side, businesses will often have one subsidy side in order to attract a satisfactory large paying group on the other. Deciding which side should be subsidised, if either, can be difficult, as can determining user sensitivity to price, quality, output costs etc. The second challenge facing platform businesses is winner-take-all dynamics. This challenge involves determining if the platform network should only be served by one business and if so the businesses must decide whether to fight or share the network. The third and last challenge highlighted by Eisenmann, Paker and Van Alstyne (2006) is the threat of envelopment. The threat of envelopment is real when there are adjacent platform providers and overlapping user bases as is often the case. These platform providers pose the biggest threat when they can enter the market and provide the functionality of the existing platform provider in a bundle of multiple platforms and functionalities. Threats like these are difficult to counter as prices most likely cannot be lowered on the paying side of the platform's users, which is likely to result in a loss of paying users to the new multi-platform provider.

"Free" business models

Another recognisable business model pattern is that of free products or services offered to at least one customer segment continuously. This type of business model can be further categorised into three different patterns; the "freemium model", the "bait and hook" model, and the advertising based model (Osterwalder & Pigneur 2010). The freemium model is based on offering basic services for free and charging a fee for a premium version of the service, such as Spotify and others employ where the premium version is void of advertising. The

"bait-and-hook" model is based on offering a free or low-cost initial offer which is intended to lure customers into making repeat purchases. The advertising based model is a multi-sided platform model as discussed above where one group receives a service for free and another pays the platform provider for advertising to the users.

Open business models

Yet another type of business model is that of the open business models. These are somewhat newer and according to Chesbrough (2006) were made relevant due to the widespread of useful technology and knowledge. Open business models entail making use of external knowledge and technologies, whilst letting others make use of the business' own unused ideas. Main benefits of utilising an open business model include lowering the cost of innovation and also reducing time to market. A drawback is the likely internal resistance to use of external ideas termed by Chesbrough (2006) as not invented here (NIH) syndrome.

With this information on different patterns of business models, it is easier to determine whether businesses actively use the business model canvas, or indeed use information on business models in general as a strategic management tool. According to Osterwalder and Pigneur (2010) business models must be regularly evaluated through for instance SWOT analysis of each of the nine building blocks of a business' business model.

Strategic Benchmarking (SB)

According to Camp (2006, p. xi) benchmarking is "the search for those best practices that will lead to the superior performance of a company". Drew (1997) lists three types of benchmarking; process, product/service, and strategic benchmarking. The author maintains the latter is used to compare business strategies, management practices, and organisational structures. Strategic benchmarking therefore is the type of benchmarking most relevant for use as a strategic management tool and will therefore be the focus of this paper. The three types of benchmarking may however occasionally overlap as they are not exclusive.

Camp (2006) outlines four steps to benchmarking that are fundamental to success; knowing your operation, knowing the industry leaders or competitors, incorporating the best, and gaining superiority. Drew (1997) maintains that implementation is vital, and without it benchmarking can at best be regarded partially successful. The author further summarises several different models of project management into five more concrete steps to benchmarking. The first step is to determine what to benchmark, followed by the formation of a benchmarking team. The third step involves identifying benchmarking partners, followed by

collection and analysis of the benchmarking information. Lastly, but just as important, the organisation must take action.

Drew (1997) found that benchmarking is one of the best tools available for promoting organisational learning and change, and that this is increasingly important with the ever expanding innovations in technology and knowledge. The author does however caution that benchmarking is not suitable for all organisations. For instance if an organisation with a resource-based competitive advantage was to benchmark with external partners it would require the organisation to reveal the source of its competitive advantage, which could then be imitated.

2.3 Previous research

Now that we have reviewed the selected strategic management tools we need to examine previous research regarding the main research question of this thesis. Based on previous research, is use of strategic management tools likely to affect performance?

Andersen, Cobbold, and Lawrie (2001) claim recent research has indicated the presence of a direct link between the degree of strategic planning and business performance. Jennings and Beaver (1997) state that 'the root cause of either small business failure or poor performance is almost invariably a lack of management attention to strategic issues'. Abdel-Kader and Luther (2006) found in their research on the British food and drinks industry that 78 per cent of respondents reported frequent use of financial measures and rated them as important, 87 per cent rated nonfinancial measures related to customers as at least moderately important, and 77 per cent rated nonfinancial measures related to operations and innovation as at least moderately important. These four measures are the components of the BSC, and so it would seem that at least 77 per cent (the lowest percentage of the components) deem using a system such as the BSC to measure these components at least moderately important. The researchers further found that benchmarking had not yet gained popularity in this industry. Furthermore, this research found that strategic analysis techniques were not very frequently used despite being seen as moderately important, which is indicative of a change towards more widespread use of these techniques in the future.

Although Rigby and Bilodeau (2013) do not show results specific to the UK, the survey conducted shows that the BSC and benchmarking were the two most used strategic management tools in the EMEA (Europe, Middle-East, and Africa). These two tools were shown to not only have high usage, but they also showed high levels of satisfaction among

their users (small, midsize, and large companies were grouped together in the survey). The survey further revealed that small businesses used less strategic management tools than larger businesses, and also showed a decrease in the number of strategic management tools used by small businesses. This was however interpreted to be a good sign by Rigby and Bilodeau (2013), as it indicates a greater focus on the appropriate strategic management tools.

Giannopoulos et al. (2013) found that financial factors were strongly favoured in UK small businesses. Furthermore Giannopoulos et al. (2013) found that only 20 per cent of the surveyed UK small businesses were aware of what the BSC was, with only 25 per cent of these utilising the tool. As the sample in this paper was quite small (20 UK small businesses) this translates to just one company utilising the BSC. The company was however very satisfied with the tool, and deemed it appropriate for use by a small company. This was contrary to the opinion of the three other companies aware of the BSC but not using it, suggesting that the BSC's limited use by small companies could be due to a misinterpretation of the strategic management tool as a tool only suited to large companies. These three other companies did however use other performance measurement tools, which indicate that Giannopoulos et al. (2013) could be correct in their belief that many small businesses may be utilising the BSC to some degree without realising it.

Use of the BMC and performance

As the business model canvas presented by Osterwalder & Pigneur (2010) is reasonably new, no research into its performance effects was found when writing this thesis. As its primary use is the understanding of a business' building blocks and developing new business models, it is understandable that research into its effect on performance has not yet been undertaken. Although any such tool is likely used to enhance performance, this is most likely indirectly through actions taken based on insight gathered through use of the tool.

Use of TQM and performance

Regarding TQM, Hendricks and Singhal (1997) found that effectively implementing TQM programs (winning a quality award was used as a proxy for this) had a positive effect on operating income (used as a measure for business performance). The study further found that implementing TQM programs had no negative effect on operating income when it is implemented, suggesting that the benefits of implementing TQM programs can exceed costs of implementation. Once in place, successfully implemented TQM programs also led to

increased sales growth, employment, and total assets. These firms were also found to perform better with regards to controlling costs.

Use of the BSC and performance

As for the BSC, Braam and Nijssen (2004) found that use of the BSC was positively correlated with performance, but only affected performance in a positive way if the management tool was used strategically. According to their research a mechanistic use of the BSC could in fact decrease performance, most likely due to too much focus on details and not enough focus on the company's strategy. In other words when the BSC is seen as an end rather than the means to a goal it is intended to be, it can in fact damage performance. Davis and Albright (2004) also found that banks branches that used the BSC outperformed (financially) other branches of the same bank which did not use the BSC, suggesting that the management tool affects performance in a positive way.

Use of SB and performance

Mann, Samson, and Dow (1998) found that benchmarking led to improved performance (measured by percentage increase over a four month period in sales performance), and seemed most effective when used in conjunction with goal setting and evaluation of these goals. This suggests that benchmarking is most useful when used as a management tool, and strategic benchmarking is therefore likely to lead to improved performance.

Based on these findings previous research seems to support the hypothesis that use of strategic management tools affects performance, as well as the hypotheses that use of the BSC, TQM, BMC and/ or SB affects performance. This thesis therefore presents the following model and hypotheses.

2.4 Theoretical model

Based on the theoretical work presented above this thesis presents the following model:
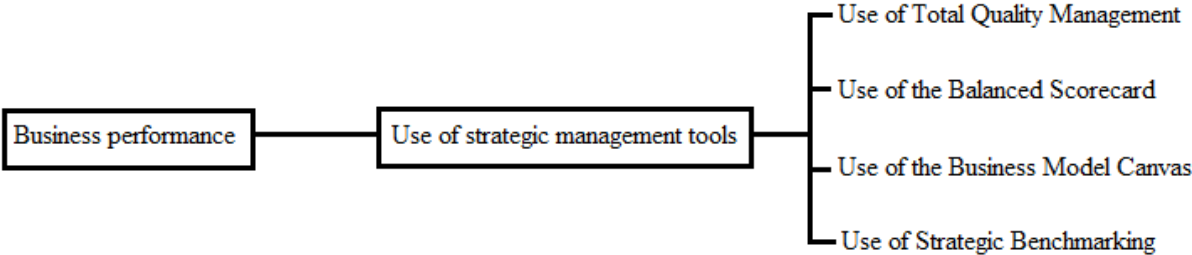
Figure 10 – Hypothesised model

Based on the model in figure 10 the following hypotheses are proposed:

H_1: Use of strategic management tools affects business performance

H_2: Use of the Balanced Scorecard affects business performance

H_3: Use of the Business Model Canvas affects business performance

H_4: Use of Total Quality Management affects business performance

H_5: Use of Strategic Benchmarking affects business performance

In order to test these hypotheses there is a need for data. We will now examine the research methodology of this thesis in the next chapter.

3. Research Methodology

The purpose of this study is to attempt to discover whether the use of strategic management tools affects performance in entrepreneurial businesses in the United Kingdom. In order to test the hypotheses of this thesis there is a need for data. This chapter describes the research design of this study, the sample selection, the procedure used to design the instrument as well as data collection, and finally the statistical methods used to analyse the data.

3.1 Research design

According to Kothari (2004) research is an academic activity which refers to the search for knowledge. Hair et al. (2011) state that research typically follows one of three designs; exploratory, descriptive, or causal. Exploratory research is research which seeks to formulate hypotheses rather than test them, and causal research is a research design which tests whether one event causes another; in other words its focus is establishing causality. Due to the complex nature of business performance, this study will simply attempt to determine whether the use of strategic management tools is correlated with increased business performance. As this study will not attempt to establish causality a causal design would not be appropriate for this study. Research is termed descriptive when the main purpose of a study is to describe the current state of affairs at a certain point in time. As all hypotheses presented in this paper aim to do just that, a descriptive type of research is appropriate for this study.

Descriptive studies are usually either cross-sectional or longitudinal in nature. Longitudinal studies are studies which collect data from the same sample units multiple times, as research requiring longitudinal studies deals with research questions that are affected by how things change over time (Hair et al. 2011). Cross-sectional studies differ from longitudinal studies in that data is only collected at a given time, not multiple times. As this study will only collect data once, it can be characterised as a cross-sectional study.

Research studies are further characterised as either quantitative, qualitative, or as using a combination of these methods often referred to as triangulation (Jick 1979). Quantitative studies are, as the name suggests, studies which are based on the measurement of quantity (Kothari 2004). Qualitative studies on the other hand are concerned with studying qualitative phenomenon such as studying the underlying reasons for human behaviour. Triangulation is '…the combination of methodologies in the study of the same phenomenon…' (Denzin 2009, p. 297). As this study is concerned with quantities (both use of strategic management tools

and business performance is quantifiable), a quantitative research design is the most appropriate for this study.

3.2 Sample

The United Kingdom was chosen as the focus of this study, and so the sample used in this study was drawn from the population of entrepreneurs in the United Kingdom. In order to achieve reliable and generalizable results, a large number of respondents are desirable, and so the pool of potential respondents was not narrowed down further. Although no list of entrepreneurs exists, several organisations related to entrepreneurship exist in the UK. Contact was first made with the Institute for Small Business and Entrepreneurship (ISBE) as it is an organisation for people and organisations involved in research on small business and entrepreneurship. ISBE could not provide any potential respondents but recommended contacting the Federation of Small Business (FSB) as it is the leading business organisation in the United Kingdom. Regrettably the FSB were unwilling to support any research not performed by the organisation itself. Similar attitudes were held by other relevant organisations, and so personally contacting each entrepreneurial business became necessary. These entrepreneurial businesses were found through the United Kingdom's number one service for starting a business; startups.co.uk, and through the Investec hot 100 list of the UK's fastest-growing private companies published on realbusiness.co.uk. These lists were utilised due to the time-constraint of this thesis.

3.3 Data collection

As previously mentioned in the theoretical framework, data collection can be either primary or secondary. This study uses primary data as no previous research has been done on this exact topic. Again primary data means it is observed or collected from first-hand sources, and secondary data means the data has previously been observed or collected by someone other than the utilizer of the data (Venkatraman & Ramanujam 1986). Secondary data was only used to compare results with what existing research there is, and to discuss previous research as part of the theoretical framework.

Primary data collection

In order to collect the primary data, an online questionnaire was developed. Some of the advantages of questionnaires are that they are low cost, respondents are given adequate time to answer, and it enables the researcher to gather data from a large sample in a relatively short period of time (Kothari 2004). As mentioned earlier a large sample is desirable for reliable

and generalizable results. Questionnaires also have some disadvantages which include, but are not limited to, most often a low rate of return, inbuilt inflexibility, and interpretation of missing replies can be difficult (Kothari 2004). Furthermore questionnaires are not tailored to each respondent but must be standardised. This standardisation means the data can be collected quickly and analysed statistically. The lack of customisation to each respondent means extra care must be taken not to formulate leading questions etc. so as not to influence the respondent.

The questionnaire starts with more general questions before presenting more specific questions as is recommended, as was placing questions about the respondent and his/ her business at the end of the questionnaire (Kothari 2004). Some detail was needed to enable adequate analysis of the study's hypotheses, but the questionnaire was kept as short and simple as possible to increase the amount of responses. Respondents took between five and ten minutes to complete the questionnaire. Care was taken to avoid leading and double-barrelled questions etc. as is suggested by academic literature on this subject. To ensure this was achieved, the questionnaire was sent to the adviser before going live on SmartSurvey.co.uk. This online survey tool was chosen as it is the UK's leading online survey software, and a familiar name is more likely to make respondents feel safe when providing information. Anonymity in the survey was promised and respected. Businesses were invited to take part in the survey through e-mail, an example of which can be found in appendix 2. A facsimile of the survey can be found in appendix 3.

Operationalization

'Operationalization is the translation of the concepts to the questions' (Sahir and Gallhofer 2014). In other words, before the research can be carried out concepts must be made measurable through a process of categorisation and concretising.

Concepts such as business performance are complex, and cannot be measured accurately through a single question alone (a discussion on the difficulties of using performance as the dependent variable can be found in the discussion section later on). Many different concretisations of performance exist; this study chose to describe performance through turnover, return on sales (ROS), return on assets (ROA), and the percentage increase in these three measures. Performance was further measured by comparisons of these figures to the business' closest competitors, as well as comparisons of overall performance compared to industry average and their own expectations. Concretising of the different management tools

was done through explanations of the different terms prior to the questions, as splitting these tools into different components would be difficult and inexpedient. The BSC was however split into financial and nonfinancial measures as well as including an overall measure. This was due to some businesses possibly using the tool without being aware of it.

All questions are categorised into the following categories: performance, strategic management tools, and background. These can be found in table 1 to 3. The tables also contain information on why each question was included.

In order to measure strategic management tools' effect on performance we needed a good measurement of performance. As previously discussed business performance can be a difficult concept to measure, and due to its complexity multiple measures needed to be included. Three questions were included to measure performance (questions 36-38) and another (42) was included to validate the performance measurement.

Q. #	Questions on performance	Explanation
36	Please indicate below how you perceive your business has performed compared to your closest competitors over the last three years (2011-2013).	Helps determine performance through asking for a comparison of the business' performance to that of the closest competitors with regards to turnover, growth in turnover, return on sales, return on assets, overall performance, and expected future performance.
37	Please indicate below how you perceive your business has performed compared to your expectations over the last three years (2011-2013).	This question helps create a stronger performance measure through adding the dimension of expectation with regards to the business' performance.
38	Please indicate below how you perceive your business has performed compared to your industry average over the last three years (2011-2013).	This question helps create a stronger performance measure by adding the dimension of performance compared to the industry average.
42a	Average turnover 2011-2013 (£)	Helps determine performance, construct validity and convergent validity as the answers to this question should correlate with those of Q36.
42b	% increase in turnover over the last three years (2011-2013)	Helps determine performance, construct validity and convergent validity as the answers to this question should correlate with those of Q36.
42c	Average return on assets (ROA) 2011-2013 (£)	Helps determine performance, construct validity and convergent validity as the answers to this question should correlate with those of Q36.
42d	% increase in return on assets (ROA) over the last three years (2011-2013)	Helps determine performance, construct validity and convergent validity as the answers to this question should correlate with those of Q36.
42e	Average return on sales (ROS) 2011-2013 (£)	Helps determine performance, construct validity and convergent validity as the answers to this question should correlate with those of Q36.
42f	% increase in return on sales (ROS) over the last three years (2011-2013)	Helps determine performance, construct validity and convergent validity as the answers to this question should correlate with those of Q36.

Table 1 – Questions on performance

Q. #	Questions on strategic management tools	Explanation
1	Does your business use strategic management tools?	Included to establish whether the respondent uses strategic management tools in general.
2	If yes, to what extent does your business use strategic management tools?	Establishes to what extent strategic management tools are used overall.
3	Does your business use financial measures?	Included to help establish whether the BSC is used, or indeed the financial aspect of the BSC.
4	To what extent does your business use financial measures?	Included to establish how actively the business uses financial measures.
5	Does your business use non-financial measures?	Included to help establish whether the BSC is used, or indeed the non-financial aspect of the BSC.
6	To what extent does your business use non-financial measures?	Included to establish how actively the business uses non-financial measures.
7, 15, 21, 27	Have you heard of this strategic management tool before?	Included to establish whether the respondent is equipped to answer questions about the different strategic management tools.
8, 16, 22, 28	Does your business use this strategic management tool?	Included to establish whether the respondent uses the strategic management tool in question and is equipped to answer questions about its use.
9, 17, 23, 29	To what extent does your business use this strategic management tool?	Included to establish whether the strategic management tool in question is actively used.
10	Does your business use strategy maps?	Included to establish how extensively the BSC is used.
11	To what extent does your business use strategy maps?	Included to determine whether this element of the BSC is actively used.
12, 18, 24, 30	How long has your business used this strategic management tool?	This question helps determine whether performance changed after implementation of the tool.
13, 19, 25, 31	How useful would you say this strategic management tool is?	This question was included to investigate the businesses own perception of the usefulness of the different strategic management tools.
14, 20, 26, 35	How likely would you say it is that you would make use of this strategic management tool in the future?	This question helps determine the perceived usefulness of the different strategic management tools with the cost of implementation taken into consideration.
32	Does your business use other theory on business models?	This question was included to help determine whether theory on business models is used in management, as the Business Model Canvas might be too new for its use to be likely.
33	To what extent does your business use other theory on business models?	Included to establish whether it is actively used.
34	Do you use any of the following theories on business models to strategically manage your business?	Included to determine which theories were used; Long tail business models, Multi-sided platform business models, "Free" business models, Open business models or none of the above.

Table 2 – Questions on strategic management tools

In order to test whether strategic management tools affect performance, there is also a need for data on the use of strategic management tools. Table 2 outlines each of the questions included in the questionnaire, and why they were included.

Q. #	Questions on background	Explanation
39	How old is your business?	Helps determine where the business is in its life cycle - concerns the issue of whether the business can be considered entrepreneurial.
40	Please indicate to what extent you agree with the following statement: "I am an entrepreneur".	This question helps determine whether the business can indeed be considered entrepreneurial.
41	How many employees does your business currently employ?	Size is known to affect performance and as such must be included. Furthermore this study will focus solely on small and medium-sized enterprises.
43	How much of your turnover is due to internet sales? (Last fiscal year) Please provide an approximate percentage.	Included to determine whether the businesses behind the results are mostly internet-based. If so, or not at all, it can affect external validity.
44	What is your position?	Included to determine that the respondents were equipped to answer questions as they are directed towards management.
45	Which industry are you in? Please adhere to The United Kingdom Standard Industrial Classification of Economic Activities (SIC) if possible.	Included to determine which industries are behind the results. Additionally if few industries answer it can affect external validity.
46	Do you have any comments about this survey?	This can provide valuable feedback, especially with regards to possible faults with the questionnaire.
47	Would you be willing to be contacted for a quick interview?	This question was included in case a qualitative addition to the study was needed.

Table 3 – Questions on background

Table 3 shows all background questions included in the questionnaire and why they were included. These questions were included to provide a description of the businesses in the sample, for validity reasons, and to determine size of the business as this must be controlled for when analysing performance.

Validity and reliability

According to Kothari (2004) measurements are only considered sound when they have met the tests of validity, reliability and practicality.

Validity

Validity is often considered the most critical criterion, and is comprised of internal and external validity (Kothari 2004). External validity concerns whether the results of the study can be generalizable. Results can only ever be generalizable to the population the sample was drawn from, in this case the United Kingdom, but this is only if the respondents are representative for the entire population. A small number of responses from a large population sample threaten external validity, as does the possibility that a certain type of business did not answer the survey. To help prevent receiving a small number of responses the survey was kept as short as possible.

Internal validity means that a test measures what we want it to measure (Kothari 2004). Although internal validity often is not considered relevant to descriptive studies, it is of vital importance in studies attempting to establish a causal relationship. Two relevant types of internal validity will be discussed here; content validity, and construct validity. Content validity regards whether the measuring instrument provides sufficient coverage of the relevant topic. Content validity is primarily decided by use of judgement, and in this study the advisor was consulted to ensure content validity. Construct validity is often considered the most critical aspect of validity and concerns whether results of the study's measures can be generalizable to the concept of the study's measures, i.e. in this study it is most important with regards to whether the performance measure actually measure performance. Explanations for each question on the questionnaire were included in order to help ensure construct validity; it was important that respondents understood what we were asking. This was especially important with regards to each of the strategic management tools as some entrepreneurial businesses are likely to be unaware of the different tools and what they involve. Construct validity was further ensured through convergent validity; question 36, 37 and 38 were all related to performance, and as such should be highly correlated. This was confirmed in chapter 4.2. Correlation analysis was performed between two different types of questions related to the same construct – performance. These were questions 36-38, and question 42, and the analysis can be found in chapter 4.2. Furthermore confirmatory factor analysis was performed and the Cronbach's alpha was examined for the performance construct. These analyses and results are also discussed in chapter 4.2.

This study focuses on entrepreneurial businesses, and although the businesses chosen for this study were selected through lists of entrepreneurs; it is difficult to clearly determine whether a business is entrepreneurial or not due to the term's multitude of definitions. This study chose to validate the entrepreneurial status of businesses by asking respondents whether they agreed with the statement "I am an entrepreneur" (question 40, appendix 3). Possible answers to this question ranged from 1 – strongly disagree to 7 – strongly agree. The answers to this question are discussed in chapter 4.1.

Reliability

Reliability concerns the overall consistency of a measure, in other words the results should be the same if the study was repeated. According to Kothari (2004), the two most important aspects of reliability are stability and equivalence. Ensuring stability involves standardising the conditions under which the measurement takes place, as we do not want external sources

of variation to impact the results. The most common form of testing stability is a test-retest, which the short time span of this study does not permit. Although the use and effect of strategic management tools are likely to change over time, they are unlikely to do so quickly. Stability should therefore not present a considerable problem in this thesis. Equivalence in this thesis concerns whether different indicators of the same item yields consistent results. In order to test for this, different questions asking for the same information on performance in different formats was included (cf. questions 36, 37, 38 and 42 in appendix 3). Due to a very low response to question 42 vigorously testing equivalence was unfortunately not possible, a correlation analysis was however performed, the results of which can be found in chapter 4. A clarification of the concepts used was given; this additional direction to respondents concerning what each question was really asking for should further have helped improve equivalence.

Practicality

Practicality is achieved when the measuring instrument is economical, convenient, and interpretable. The latter criterion was achieved as the designer of the test was also interpreting the results, and it was convenient as the survey was easy to administer and included definitions and examples where necessary. The measuring instrument was also economical as the data collection method and length of the instrument were chosen based on economic considerations as well as appropriateness to the research problem.

3.4 Statistical methods

Before the data can be analysed, it must be screened and cleaned to avoid errors in the data file as these can affect the results of any analyses (Pallant 2010). The categorical variables were examined first to check for outliers, i.e. values outside the range of possible values. No such errors were found, however some of these variables had missing values. This is to be expected as entrepreneurs that have not heard of a strategic management tool are unlikely to have an opinion on the usefulness of it, and therefore will have missing values on such variables. Next the continuous variables were examined for errors. None were found. Below follows an overview of the techniques used to analyse the data in this study. All analyses were performed with the use of the software SPSS version 22 (Statistical Package for the Social Sciences).

Correlation analysis

In order to ensure validity of this study correlation analysis is used to examine the correlation between answers to questions which should correlate. Although the analysis is designed for interval and ratio data, this analysis is still appropriate as the ordinal variables used in the analysis can be treated as interval data due to the answer options given. Pearson correlation coefficients (r) produced in a bivariate correlation analysis can range between -1 and +1. The closer to zero the less of a relationship exists between the two variables. A value of -1 means a perfect negative relationship between the two variables; as one variable increases the other decreases. Correlation coefficients of between .1 and .29 are considered small, values between .3 to .49 are considered medium, and correlation coefficients above this are considered large.

Factor analysis

Factor analysis is a data reduction technique of which there are two main approaches; confirmatory and exploratory factor analysis (Pallant 2010). Exploratory factor analysis is used to explore the interrelationship among a set of variables when the researcher often has no a priori hypotheses regarding the underlying structure of the variables. Contrastingly, confirmatory factor analysis is used to test specific hypotheses regarding the underlying structure of a set of variables. This study will use factor analysis to reduce performance variables into one single variable representing performance, and as we have a clear idea of which variables describes this construct, the use of confirmatory factor analysis is appropriate. Several different approaches to factor analysis exist; this study will use principal component analysis (PCA) as it is the most commonly used approach (Pallant 2010).

Factor analysis has four assumptions, the first of which is sample size. Ideally this should be above 100 cases (Hair et al. 2010); however some researchers argue that the sample size is of lesser importance and that the ratio of cases to variables is more important (Pallant 2010). This ratio should be 5:1. Not satisfying this assumption means the results are less reliable, however the ideal guidelines for this assumption have been decreasing in later years as more research has been done (Pallant 2010). The second assumption is factorability of the correlation matrix which means that the correlation should show at least some correlations above 0.3. Additionally the Kaiser-Meyer-Olkin (KMO) value should be 0.6 or above, and Bartlett's test of sphericity should be statistically significant ($p < 0.5$). Assumption number three is linearity. As checking each of the relationships between variables is not practical a spot check of some is recommended (Pallant 2010). The fourth and final assumption concerns

outliers among cases. As factor analysis can be sensitive to these, any potential outliers should be either recoded or removed before the analysis is performed.

After the analysis has been performed the amount of factors to extract will depend on several pieces of information. The first piece of information guiding the amount of factors to extract is the Kaiser criterion - the amount of factors with eigenvalues above 1 (Pallant 2010). Only these factors should be retained. As the Kaiser criterion often will extract too many factors the scree plot will be examined next. Factors above a point of change in the plot should be retained. Lastly the component matrix is examined which show item loadings on each factor. These should be above 0.3 and each factor should have three or more loadings. To further assist in factor analysis factor rotation is usually performed. As the factor analysis performed in this study is likely to yield only one factor and factor rotation is not performed on only one factor, factor rotation will not be discussed further in this study.

Multiple linear regression analysis

Multiple linear regression analysis is used to model the relationship between a continuous dependent variable and two or more independent variables which are usually also continuous (Pallant 2010). The model is created by attempting to fit a linear equation to the data being analysed. Multiple regression analysis does not determine causality, but rather the predictive quality of the independent variables (predictor variables) on the dependent variable. Three main types of regression analysis exist; simultaneous, hierarchical, and stepwise. In the first method the independent variables are entered into the equation simultaneously, whilst the second method enters the variables into the equation in blocks chosen by the researcher. This method is relevant when the researcher wants to know how well a predictor variable predicts after another variable has been controlled for. In stepwise regression the statistical program determines which variables are entered into the equation and when, based on certain statistical criteria. Hierarchical multiple linear regression analysis will be used to test the hypotheses of this thesis as we want to examine the predictive abilities of use of strategic management tools on performance when controlling for size of the business.

Multiple regression analysis has quite a few assumptions, the first of which regards sample size. Guidelines on ideal sample sizes vary, with one stating that around 15 respondents per predictor variable is needed for reliability of the analysis (Pallant 2010). Not satisfying this assumption means that the results of the analysis are not generalizable and are therefore of little scientific value (Pallant 2010). The second assumption regards multicollinearity and

singularity. Multicollinearity occurs when independent variables are highly correlated, and is an issue in multiple regression analysis as it is difficult to tease apart the effects of the different variables and perform a good analysis due to inflated standard errors of the coefficients. In other words the inflated standard errors of some independent variable's coefficients could result in their contribution being falsely deemed insignificant. Singularity is an extreme form of multicollinearity often due to subscale scores being included as well as total scores of the same scale. Singularity and high degrees of multicollinearity should be avoided to ensure good results of a regression analysis. Additionally, multiple regression analysis is very sensitive to outliers, which is why an absence of outliers is the third assumption of this analysis technique. Lastly, multiple regression analysis assumes normality, linearity, homoscedasticity, and independence of residuals. Residuals will be tested using the Shapiro-Wilk test, where p should exceed 0.05.

The model fit of the regression model is evaluated by R^2 which ranges between 0 and 1, and as we seek to explain as much of the dependent variable as possible a high value is desirable. With small sample sizes this value has a tendency to overestimate the predictive qualities of the model, and so an adjusted R^2 value is used to get a better estimate of the true predictive quality of the model. After evaluating overall model fit, each independent variable's contribution to the predictive capability of the model is evaluated by examining their beta coefficients, or b. The variable with the highest beta coefficient makes the strongest unique contribution to the predictive qualities of the model. Beta is used in this study as different scales are used in the multiple regression analysis (ratio and 7 point Likert scale) which necessitates the use of the standardised beta coefficient.

Now that we have examined the research methodology of this study we are ready to perform analyses and examine the results.

4. Analyses and results

In order to test the hypothesised model outlined at the end of chapter one, hierarchical multiple linear regression analysis was used. This form of analysis was chosen for its ability to evaluate the model based on its predictive abilities, as well as the contribution of each subscale to the predictive abilities of the model. Before testing the model in subchapter 4.4 the sample of respondents is reviewed in subchapter 4.1 before the dependent variable is reviewed in subchapter 4.2 and the independent variables are reviewed in subchapter 4.3. Subchapter 4.5 provides a summary of the results.

4.1 Respondents

Sample size and external validity

Of the 239 businesses which were sent the invitation to take part in the survey, 29 completed it. The response rate was therefore 12,1 %. The inclusion of the phrase "I look forward to hearing from you" in the invitation e-mail (appendix 2) was included so as to encourage businesses to reply. The replies received helped identify why businesses chose not to complete the survey. Knowing why businesses chose not to complete the survey helps determine whether external validity is threatened (for instance if a specific industry chose not to participate). Three businesses replied stating they did not believe they were suited to complete the survey as they believed strategic management tools were not relevant to their business. Seven businesses responded that they could not complete the survey due to time concerns. Time concerns can affect any business and so the lack of participation due to time concerns does not indicate non-response bias. The businesses stating they did not feel strategic management tools were relevant to them were small businesses, but as small businesses are adequately represented in the survey responses this does not threaten external validity. As no specific characteristic was common in these businesses it seems there is no non-response bias and the external validity is not threatened.

Ensuring validity – were respondents entrepreneurs?

As mentioned in chapter 3 this study chose to validate the entrepreneurial status of the businesses by asking respondents whether they agreed with the statement "I am an entrepreneur" (question 40, appendix 3). The results of this question are shown in figure 11. Labels for each answer level are included in the figure for easier interpretation, however the questionnaire only included the extreme answers of strongly disagree and strongly agree to aid tidier and quicker to understand answer options for respondents. As we can see from this

histogram, the lowest answer given was 2, by only one person. The mean was 5.1 with a median of 5 (see table 4). This means that most businesses surveyed agreed that they are indeed entrepreneurial. Five respondents in total did not identify themselves as entrepreneurs, one of which was an assistant manager. Of the remaining four, three only somewhat disagreed with the identity of an entrepreneur. That leaves one respondent which as an owner-manager disagreed with the label of an entrepreneur. This respondent was however not excluded for analysis as the business was clearly marked as an entrepreneurial business.

Question 40: Please indicate to what extent you agree with the following statement: "I am an entrepreneur". (n=29)

1 - Strongly disagree	2	3	4	5	6	7 - Strongly agree	Mean answer	Standard deviation	Skewness	Kurtosis	Median
0 %	3.4%	13.8%	24.1%	13.8%	17.2%	27.6%	5.10	1.566	-.183	-1.231	5

Table 4 – Descriptive statistics for question 40.
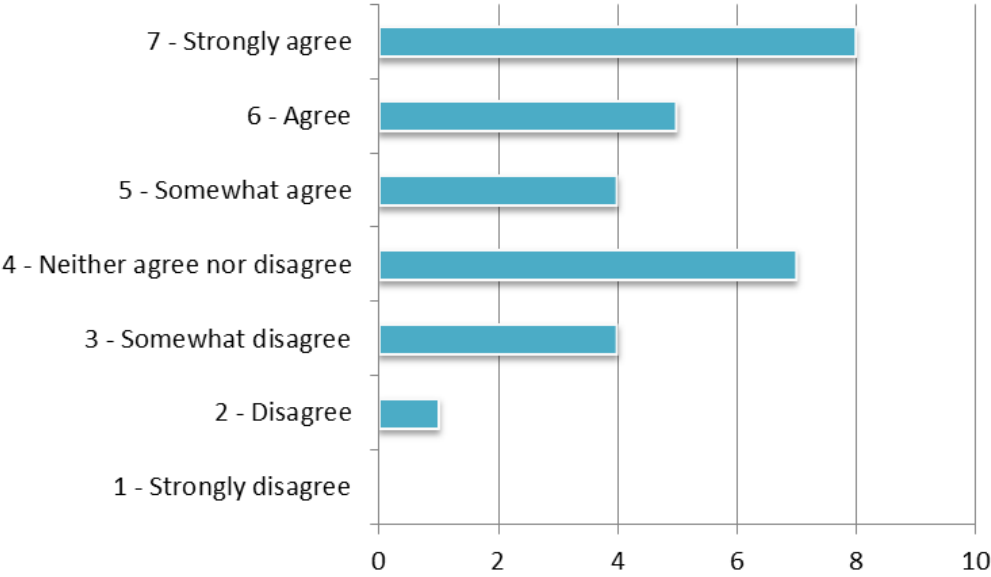
Figure 11 – Distribution of answers to question 40; "I am an entrepreneur"

In addition to the mean and median table 4 contains the standard deviation, skewness and kurtosis of the distribution. Although these questions strictly speaking contain ordinal data, when a Likert scale with the same distance between possible answers is used, the data can be considered interval and the use of a mean statistic is therefore appropriate. The standard deviation is included as mean statistics are sensitive to extreme values. Skewness of the distribution of -.183 (see table 4) means the distribution is somewhat asymmetrical with a long tail to the left (this we can also see from the histogram of the distribution). This

45

skewness is however unsubstantial as it is well below 1. The negative kurtosis of the distribution of -1.231 tells us the distribution is relatively flat, which can possibly result in an underestimation of the variance. Next we will examine which industries our respondents operated in.

Industry

Of the 29 respondents, 16 (55,2 %) disclosed their industry, the most common of which was Retail which combined (Retail, retail clothing and retail smoking accessories) represented 17,10 % of respondents, and approximately 31 % (30,97 %) of businesses which disclosed their industry. The distribution can be seen in figure 12. The numbers in the pie chart represent the percentage representation of the industries in the overall sample.
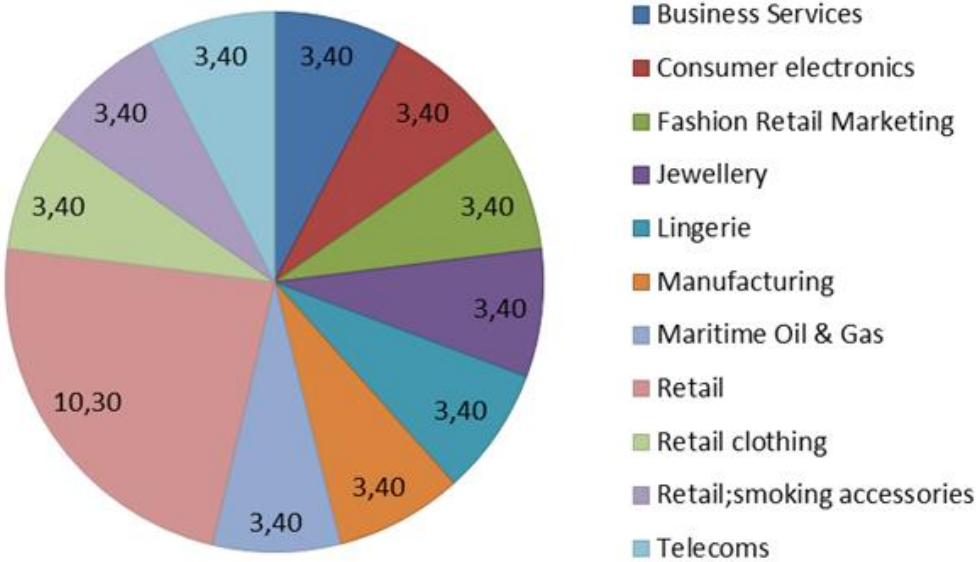
Figure 12 – Distribution of industries

Organisational positions

In order to ensure reliability of the results the respondents were asked to disclose their position in the business (question 44, see appendix 3). This was in order to ensure that the respondents were equipped to answer questions about the business' performance and use of strategic management tools. Respondents were given three possible answers; owner-manager, assistant manager, and other. For other answers respondents were asked to specify their position. As we can see from figure 13 75.9 % (22) of respondents were owner-managers, 20.7 % (6) were assistant managers, and 3.4 % i.e. one respondent was a marketing manager. These are all managing positions and it is reasonable to assume that all respondents were equipped to answer the questionnaire as questions regarded the management of the business.

46
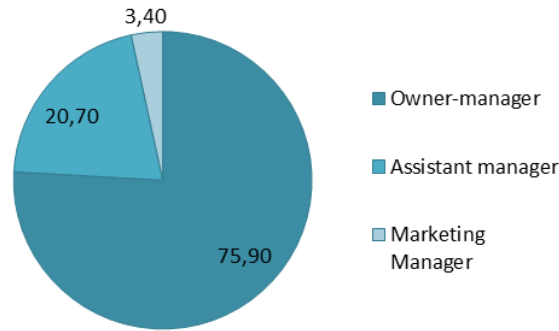
Figure 13 – Percentage distribution of organisational positions

Now that we have a clearer idea of the businesses our sample consists of we will move on to examine our dependent variable more closely.

4.2 Performance – the dependent variable

Descriptive statistics

Tables 5 and 6 show the distribution of answers, mean answers, standard deviations, skewness and kurtosis for questions 36-38 regarding performance. Although these questions were scored on a seven point Likert scale from "-3 Worse than competitors" to "+3 Better than competitors", the answers were coded to correspond to the 1-7 Likert scale used in all other questions. This means that the mean answer with regards to Turnover – 4.45 - in reality was 0.45, which corresponds to slightly better than competitors.

Q36: (n=29)	Worse than competitors -3	Worse than competitors -2	Worse than competitors -1	About the same 0	Better than competitors +1	Better than competitors +2	Better than competitors +3
Turnover	6.9%	3.4%	6.9%	37.9%	24.1%	6.9%	13.8%
Growth in turnover	3.4%	0.0%	20.7%	31.0%	17.2%	20.7%	6.9%
Return on Sales (ROS)	3.4%	0.0%	0.0%	62.1%	17.2%	10.3%	6.9%
Return on Assets (ROA)	3.4%	0.0%	10.3%	58.6%	17.2%	0.0%	10.3%
Overall performance	3.4%	0.0%	10.3%	31.0%	34.5%	17.2%	3.4%
Expected future performance	3.4%	0.0%	6.9%	37.9%	13.8%	17.2%	20.7%
Q37 (n=29)	3.4%	0.0%	10.3%	37.9%	20.7%	17.2%	10.3%
Q38 (n=29)	3.4%	0.0%	6.9%	44.8%	24.1%	10.3%	10.3%

Table 5 – Distribution of answers - perceptual performance variables

Q36:	Mean answer	Standard deviation	Skewness	Kurtosis
Turnover	4.45	1.572	-0.283	0.347
Growth in turnover	4.48	1.405	-0.128	-0.063
Return on Sales (ROS)	4.48	1.153	-0.03	2.771
Return on Assets (ROA)	4.28	1.222	0.438	2.407
Overall performance	4.59	1.211	-0.67	1.589
Expected future performance	4.93	1.510	-0.276	-0.021
Q37	4.66	1.370	-0.216	0.547
Q38	4.59	1.296	-0.098	1.255

Table 6 – Descriptive statistics for the performance variables
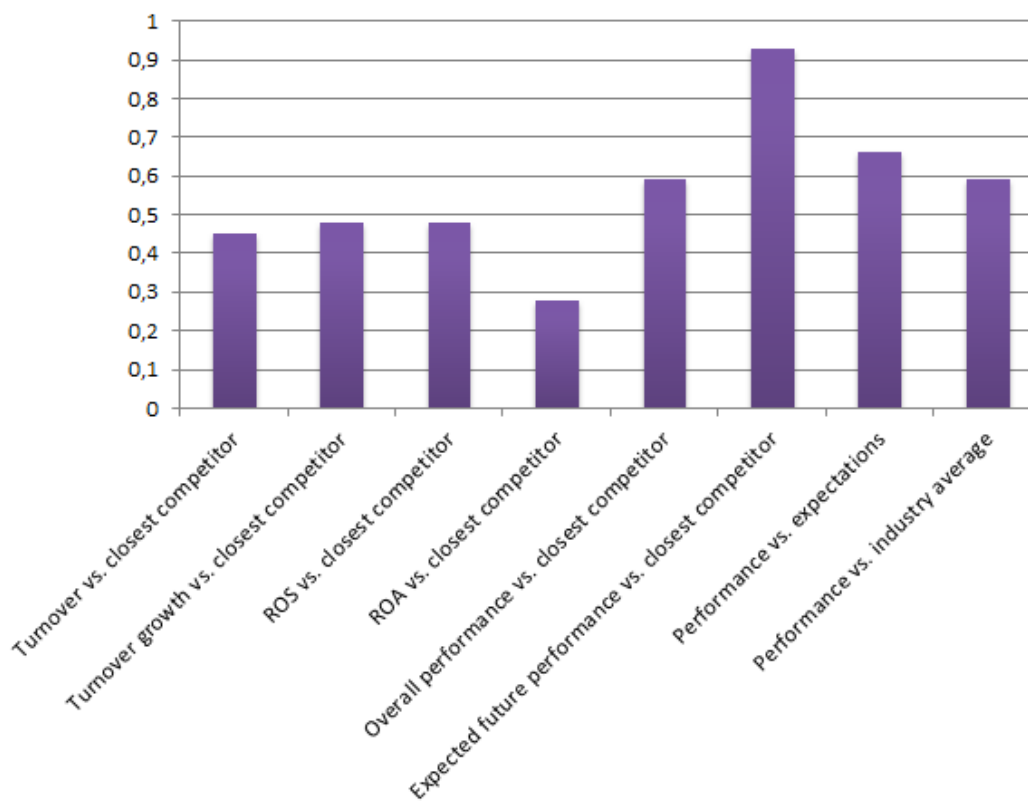
Figure 14 – Mean answer scores on comparative performance measures

As we can see from table 5 most answers are clustered around "0 - About the same" (around 4 on the converted scale). This is to be expected as we are asking for an averaged judgement of performance over the last three years, and logically when asking for comparative judgements of performance the "average" answer is likely to centre on "average" performance if we have a representative sample and the measurement instrument is valid and reliable. Figure 14 consists of a histogram of the mean answers to the questions regarding comparative performance of the businesses. Table 6 further shows skewness values ranging from -0.03 to -0.67 which means that answers are clustered to a varying degree to the higher end of the scale,

and indeed we see that the mean scores are all above 4, albeit some only slightly. As values range well within general guideline limits of -1 and 1 skewness is not considered substantial. Some performance measures have higher kurtosis than others, and these could result in an underestimation of the variance (Pallant 2010).

Q42:	Mean	Median	Std. Deviation	Skewness	Kurtosis	Minimum	Maximum	N
AverageTurnover	943775,86	55000	2753243,261	3,503	12,376	30000	12500000	29
TurnoverGrowth	119,6	100	126,415	0,651	-1	0	300	5
AverageROA	8,33	0	14,434	1,732	*	0	25	3
ROAGrowth	1,67	0	2,887	1,732	*	0	5	3
AverageROS	506257,5	12515	995897,983	1,999	3,997	0	2000000	4
ROSGrowth	4,25	3,5	4,349	0,83	-0,037	0	10	4

*not enough data

Table 7 - Descriptive statistics for performance variables included in question 42

Table 7 shows descriptive statistics for the remaining performance variables which were included for validation purposes. As we can see only average turnover was disclosed by all businesses in the sample (n=29), and ranged from £30 000 (in the retail industry) to £12 500 000 (in the telecoms industry).

Having examined the descriptive statistics for the dependent variable we will now check the validity of the measurement instrument using correlation analysis.

Correlation analysis

Questions 36 and 42 asked respondents for information regarding performance, but although the same information is sought after in both questions, the format of the questions differed. A correlation between answers to the two questions therefore helps ensure validity. Due to the few responses given to items in question 42 (the item Average turnover in question 42 got a full 29 answers, others had five or less), only a few relationships returned a significant result. These significant relationships were however encouraging. Average turnover showed a relatively strong positive relationship with growth in turnover compared to the closest competitor (.451, p=.014), and turnover compared to the closest competitor (.436, p=.018). Although not significant at the 95 % confidence interval, at a 10% significance level average turnover also correlated with overall performance compared to the closest competitor (.343, p=.069), and expected future performance compared to the closest competitor (.343, p=.069). Due to the small sample size (n=29), the significance level may not be truly indicative of the statistical significance of the results as moderate correlations often do not reach statistical significance at the traditional 95 % confidence interval (Pallant 2010). The latter two

correlations thus could be interpreted to be supporting the validity of this study as well as the previous two. With validity established factor analysis was performed in order to create our dependent variable.

Factor analysis

In order to test our model with the use of multiple linear regression analysis, we must first create our dependent variable – performance. As performance is a complex concept it was measured by several different questions. In order to create a single dependent variable representing performance we therefore reduced the data, and did this using the data reduction technique known as principal component analysis (PCA) (cf. statistical methods in chapter 3). 8 items were subjected to PCA using SPSS version 22. These were questions 36 to 38 which can be found in appendix 3 (question 36 consisted of six items). Prior to performing the PCA the suitability of the data was assessed. Inspection of the correlation matrix revealed that all coefficients were above 0.3. Bartlett's test of sphericity reached statistical significance, and the KMO value was 0.81 (above the recommended minimum value of 0.6). All assumptions were met apart from the assumption regarding ideal sample size. Going by the ratio rule of thumb, a factor analysis with eight factors should have 8*5 cases – 40. This study however has only 29. This affects the reliability of the factor analysis, however as all other assumptions were met, and it is a confirmatory factor analysis performed based on sound theory, the analysis went ahead. The PCA revealed one factor with an eigenvalue above 1, and the scree plot had a clear break after one component which also indicates the appropriate extraction of one factor. The component matrix revealed strong loadings by all eight items on the factor, which further supports these items representing the same construct. This one factor solution explained 70.5 % of the variance. (For all relevant output regarding the factor analysis see appendix 4).

The summated scale Performance was created by adding together respondents' answers to the eight items included in the PCA and dividing by eight. Hair et al. (2010) maintain that the real benefit in using summated scales is its ability to portray complex concepts in a single measure – making it ideal for use with performance measures. It furthermore reduces measurement error. Other methods such as selecting surrogate variables and computing factor scores were deemed inappropriate for this study as no variable had a significantly higher factor loading than the other, and factor scores are not easily replicated across studies.

Once the summated scale had been created the reliability of the new scale was examined. In order to check the internal consistency of a scale the Cronbach's alpha coefficient is commonly used. A Cronbach's alpha of 0.8 or higher is preferable, although values of 0.7 and higher are accepted (Hair et al. 2010). As the Cronbach alpha is quite sensitive to the number of items in a scale (Pallant 2010) short scales such as the Performance scale (consists of less than ten items) quite often result in a low Cronbach alpha. The achieved Cronbach's alpha was 0.935 (table 8) and is considered very high which suggests that the Performance scale has good internal consistency.

Scale	Cronbach's Alpha
Performance	0.935

Table 8 – Performance scale reliability

Examining table 9 we see that only deletion of one item would increase the Cronbach's alpha of the Performance scale; Turnover vs. competitor. The Cronbach alpha would however only increase by .007, and as the Cronbach alpha was already very high the item was not deleted from the scale.

| Items	Cronbach's Alpha if Item Deleted
TurnoverGrowthVScompetitor	.920
ROSVScompetitor	.928
ROAvsCompetitor	.934
OverallPerformanceVScompetitor	.919
ExpectedFuturePerformanceVScompetitor	.920
PerformanceVSexpectations	.928
PerformanceVSindustry	.922
TurnoverVScompetitor	.942

Table 9 – Cronbach's Alpha if Item Deleted

4.3 Strategic management tools

Of the 29 respondents which completed the survey, 13 said they used strategic management tools. The frequency with which these businesses used strategic management tools is illustrated in figure 15, and descriptive statistics for this question (question 2) are shown in table 10.

	Mean answer	Standard deviation	Skewness	Kurtosis	N
Q2: Degree of use	4	1.414	-0.418	0.209	13

Table 10 – Descriptive statistics for question 2
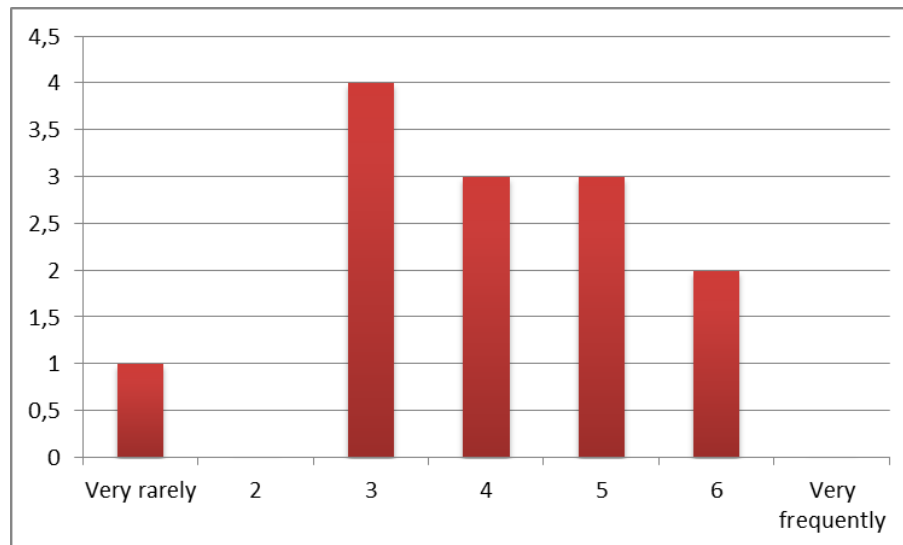
Figure 15 – Frequency of strategic management tool use

As we can see from table 10, the mean answer regarding the frequency of strategic management tool usage is 4. Standard deviation of the distribution is 1.414 with a skewness of -.418 which means answers are clustered somewhat towards the higher end of the scale. Kurtosis is acceptably low at .209.

We will now examine descriptive statistics for each of the four strategic management tools discussed in this thesis starting with the balanced scorecard.

The Balanced Scorecard

Out of the 29 respondents, 11 (37,9 %) were familiar with the BSC. Out of these, 3 (10.3 %) used the BSC, and one of these rated their use of the BSC as 6 on a scale from very rarely (1) to very frequently (7). The other two rated their use of the BSC as 1, very rarely. Only the business which rated their use as 6 disclosed for how many years the business had been using the BSC; 6 years. As discussed in the theoretical framework earlier, some small businesses may be using what is akin to the BSC without realising it, due to either no knowledge or insufficient knowledge of the BSC. Because of this, questions about the use of financial and nonfinancial measures were also included in the questionnaire. 15 (51.7%) businesses stated they used both financial measures and nonfinancial measures. The distribution of the answers regarding the frequency of use of financial and nonfinancial measures can be found in figure 16. Descriptive statistics for relevant questions regarding the BSC can be found in table 11.

	Mean answer	Standard deviation	Skewness	Kurtosis	N=
Q4: Degree of financial measure use	5.43	1.785	-1.331	1.636	14
Q6: Degree of nonfinancial measure use	4.71	1.729	-0.111	-1.025	14
Q9: Degree of BSC use	2.67	2.887	1.732	*	3
Q11: Degree of strategy maps use	4.00	1.414	*	*	2
Q13: Perceived usefulness of the BSC	3.20	2.280	0.228	-2.507	5
Q14: Likelihood of future use of the BSC	3.44	2.007	-0.313	-1.806	9

*not enough data

**Table 11 – Descriptive statistics – The BSC**
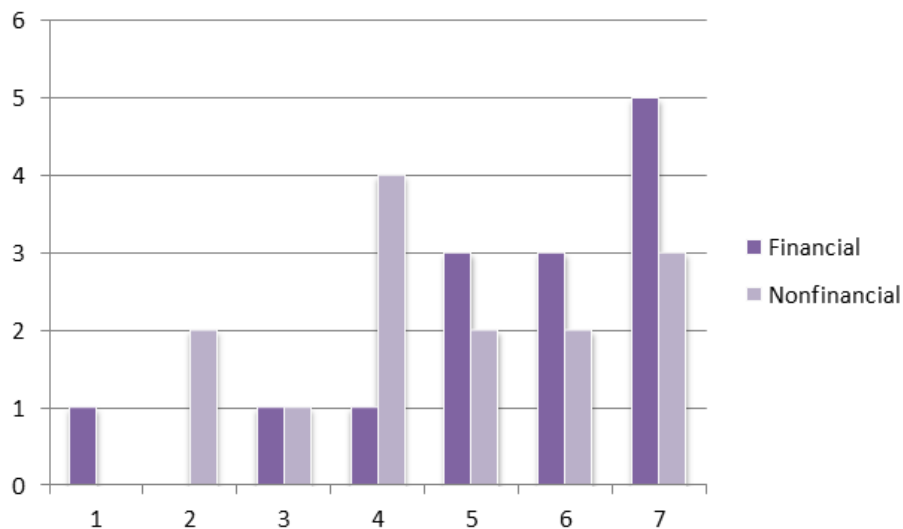
Figure 16 – Frequency of use: financial and nonfinancial measures

As per the discussion in the theoretical framework, businesses which frequently use both financial and nonfinancial measures may be using some form of the BSC without realising it. Businesses were also asked whether they used the strategy map, and if so to what degree. Two businesses used the strategy map (6.9%), one business rated their use as 3 on the same scale as mentioned above, and the other rated their use as 5. Businesses were further asked how useful they perceived the BSC to be. The distribution of their answers can be found in figure 17. Lastly, businesses were asked how likely it was that they would make use of the BSC in the future. The distribution of answers to this question can be found in figure 18.
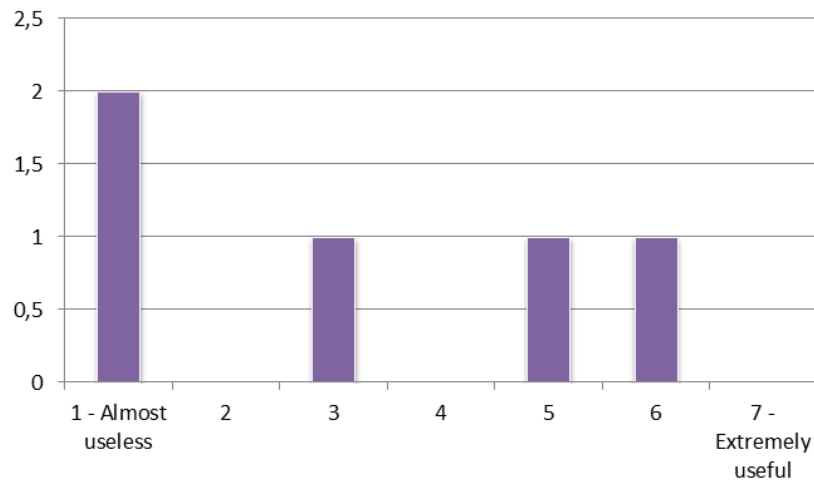
Figure 17 – Distribution of answers regarding the BSC's usefulness
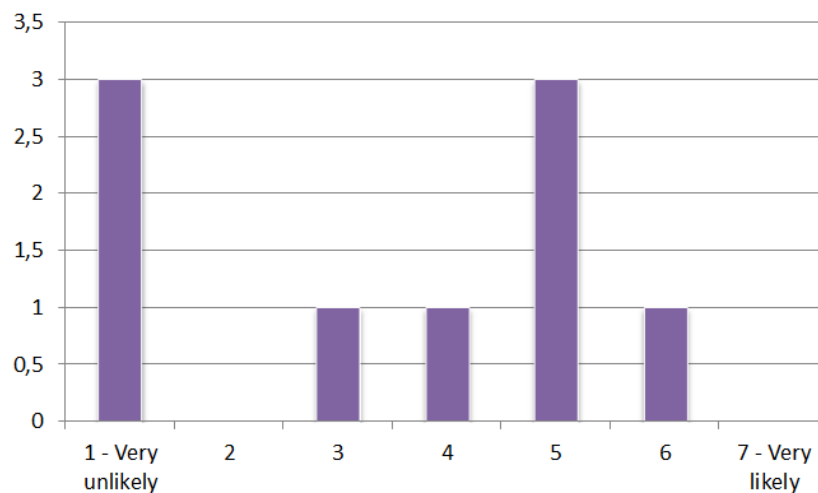
Figure 18 – Distribution of answers regarding likelihood of future use of the BSC

As we can see from figure 13, 3 businesses thought it very unlikely that they would make use of the BSC in the future. These businesses were asked to provide further information as to why they did not perceive it to be likely that they would make use of the BSC in the future. One business complied and simply stated "not relevant to my business".

Total Quality Management

As for TQM, 16 businesses (55.2 %) were familiar with the strategic management tool, of which 3 (10.3%) were users. Of these three one used it very rarely and the two others used it very frequently. These same two businesses disclosed that they had been using the tool for two years. Businesses were further asked to rate the tool's usefulness, and their expected future use of it. The distribution of answers to both questions can be found in figure 19. Usefulness was scored between 1 and 7 where 1 was almost useless and 7 was extremely useful. Likelihood of future use was also scored on a seven point scale, where 1 was very

unlikely, and 7 was very likely. Businesses which deemed it very unlikely that they would use TQM in the future were asked to explain why. Out of the two businesses in question, one complied and stated that the tool was "not relevant to my business". Descriptive statistics for the relevant variables can be found in table 12.

	Mean answer	Standard deviation	Skewness	Kurtosis	N=
Q17: Degree of TQM use	5.00	3.464	-1.732	*	3
Q19: Perceived usefulness of TQM	4.75	2.63	-1.443	2.235	4
Q20: Likelihood of future use of TQM	4.00	2.757	0.000	-2.299	6

*not enough data

**Table 12 – Descriptive statistics – TQM**
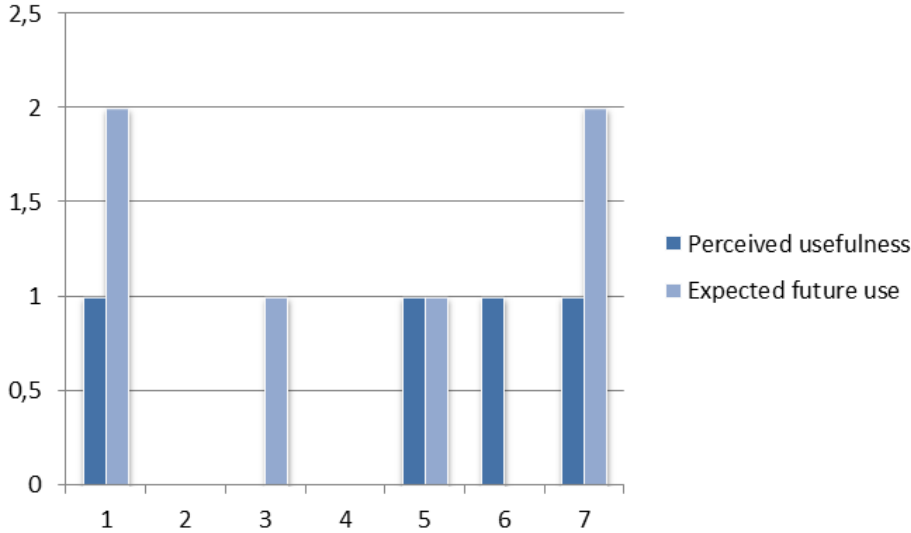
Figure 19 – Distribution of answers regarding TQM's usefulness and expected future use

The Business Model Canvas

Out of the 29 respondents 5 were familiar with the BMC, however none of the businesses used the BMC. In anticipation of a likely low amount of businesses using the BMC - considering its recent development – businesses were asked whether they used any other theory on business models. 5 businesses said that they did, albeit all of them very rarely. Two businesses used long tail business models (6.9%), one used a "free" business model (3.4%), and two (6.9%) used none of the models specified, but others. None of the businesses rated the BMC's usefulness, but six businesses disclosed how likely it was that they would use the BMC in the future. The distribution of these answers is illustrated in figure 20, and descriptive statistics are shown in table 13.

	Mean	Std. Deviation	Skewness	Kurtosis	Minimum	Maximum	N
Q35: Likelihood of future BMC use	1.83	1.169	1.586	2.552	1	4	6

Table 13 – Question 35 – Descriptive statistics
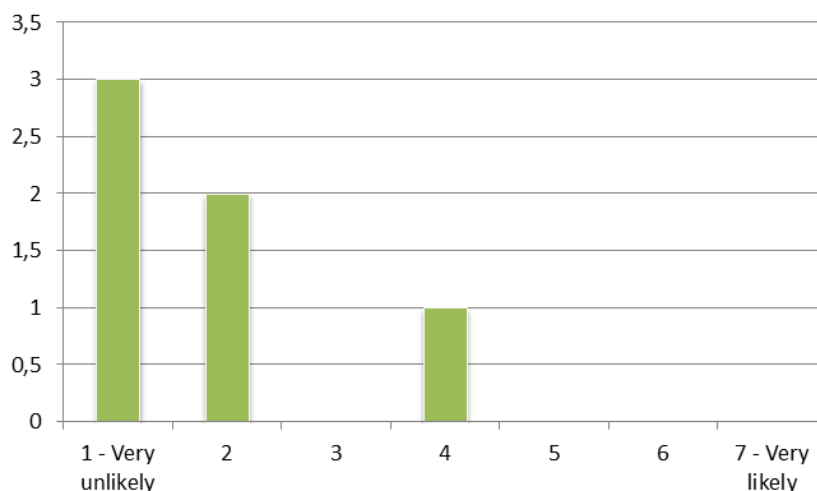
Figure 20 – Distribution of the likelihood of future BMC use

As we can see from figure 20, three businesses deemed it very unlikely that they would make use of the BMC in the future. These businesses were encouraged to explain why this was, two of which complied. One business stated that it was "not relevant to my business", the other that "I have no time or desire to learn about it".
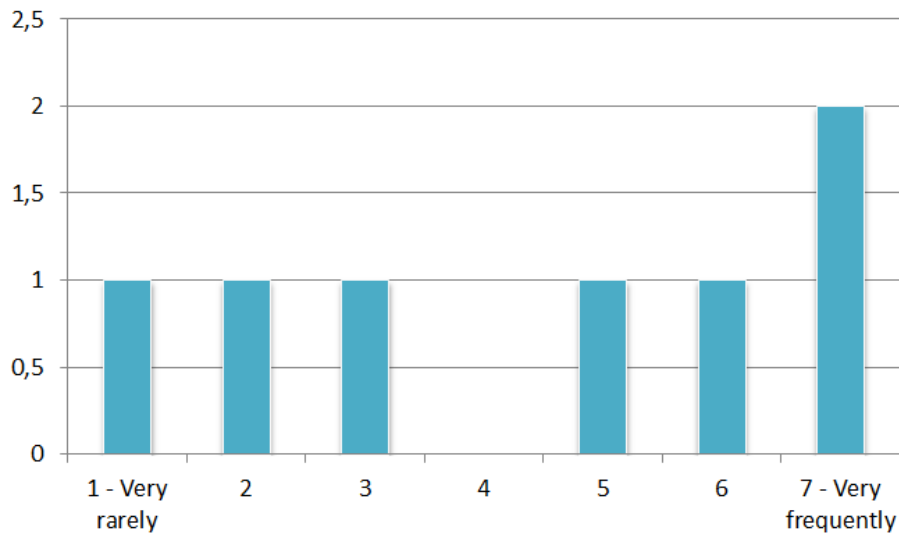
Strategic Benchmarking

17 businesses in the sample were familiar with strategic benchmarking, and 7 of these (24.1 % of the sample) used strategic benchmarking. The extent to which these businesses used the strategic management tool is shown in figure 21. Descriptive statistics for the relevant questions regarding strategic benchmarking are shown in table 14.

|	Mean answer	Standard deviation	Skewness	Kurtosis	N=
Q23: Degree of SB use	4.43	2.440	-0.313	-1.833	7
Q19: Perceived usefulness of SB	5.2	2.490	-1.671	2.815	5
Q20: Likelihood of future use of SB	4.29	3.094	-0.326	-2.745	7

Table 14 – Descriptive statistics – Strategic benchmarking

Figure 21 – Frequency of strategic benchmarking use

Four of the businesses using strategic benchmarking disclosed how many years they had been using strategic benchmarking; 1, 2, 3, and 4 years. Businesses were also asked to rate the tool's usefulness, and how likely they were to use it in the future. The results of these questions are shown in figure 22. Businesses which rated their future use of the strategic management tool "1 – very unlikely" were asked to explain why this was. Two of the three businesses complied. One stated that it was "not relevant or necessary" and the other that it was "just due to time - it's a lower priority for me".
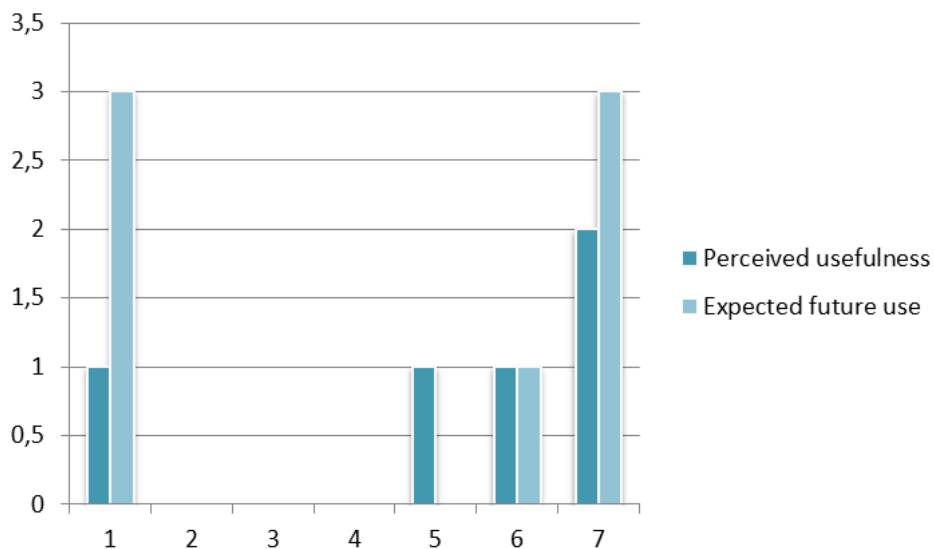
Figure 22 – SB's perceived usefulness and expected future use

4.4 Testing the model – Multiple regression analysis

Due to the small sample size achieved in this study multiple regression analysis with separate variables for each strategic management tool included in this thesis could not be performed. This was due to the high degree of multicollinearity between the predictor variables. A correlation of .982 was found between the use of strategic benchmarking and total quality management. According to Pallant (2010) correlation coefficients between independent variables below .7 are preferable, and coefficients above .9 means the independent variables are highly correlated and multicollinearity exists. Correlations between the other tools could not be calculated as none of the businesses used a combination of these tools. Unfortunately this means hypotheses H_2, H_3, H_4, and H_5 could not be tested. We do however have enough data to test H_1, and this is done below.

A high degree of multicollinearity is unfortunate for analysis purposes, but not unexpected as this paper hypothesised that strategic management tools affect performance, and as such use of the strategic management tools should correlate with each other. Because of this, the general model of strategic management tools and their effect on performance was tested by performing multiple regression with the performance variable computed above as the dependent variable, and the degree of use of strategic management tools (question 2, appendix 3) and the size of the business (question 41, appendix 3) as independent variables.
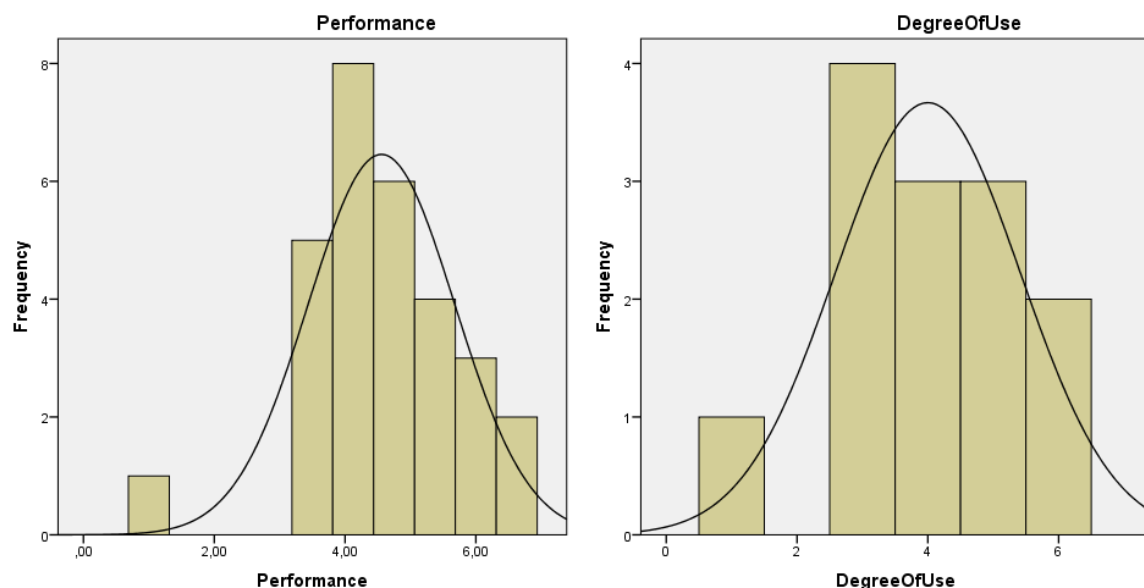
Descriptive statistics

Figure 23 – Histograms including normality graphs

Histograms of the performance variable and the variable used to represent use of strategic management tools in the regression analysis can be found in figure 23. The histograms show that the two variables satisfy the normality assumption.

		Performance	Size	DegreeOfUse
N	Valid	29	29	13
	Missing	0	0	16
Mean		4.556	8.86	4
Median		4.75	2	4
Std. Deviation		1.11982	23.626	1.414
Skewness		-0.767	4.212	-0.418
Kurtosis		2.347	18.83	0.209

Table 15 – Descriptive statistics – Dependent and independent variables

Table 15 shows descriptive statistics for the variables used in the regression analysis.

Regression analysis

All assumptions of multiple regression analysis were met, and a hierarchical multiple regression analysis was performed. This method was chosen as we wanted to check whether use of strategic management tools can help predict performance, whilst controlling for size as this is known to affect performance (cf. discussion on performance in the theoretical framework). The Size variable (measured by number of employees) was entered in step 1, and explained 1.3 % of the variance in Performance (the computed variable discussed above). The model containing only size as a predictor variable did however not reach significance at p = .304. Although the variables making up the Performance variable was measured on 7 point Likert scale, the use of Likert scales as continuous in regression analysis is generally accepted as it can be deemed interval data. After entering DegreeofUse in step 2, the total variance explained by the model was 37.2 % using the Adjusted R^2. With a 95 % confidence interval the model was significant (p=0.022, p<0.05) which means that we can be 95 % sure that the use of strategic management tools affects performance (see table 16). DegreeofUse explained an additional 35.9 % of the variance in Performance, after controlling for Size. In the final model only DegreeofUse was statistically significant with a beta of .624 (see table 17). Beta was used as the size of the business and the degree of strategic management use were measured using different scales (ratio and 7-point Likert scale). To ensure compliance with the assumptions of multiple regression analysis the residuals were checked for normality using the Shapiro-Wilk test. This test was used as it is suited for sample sizes smaller than 50 and a numerical value is easier to interpret than graphical representations for less experienced

researchers. Normality of residuals was confirmed as P=.544, well above the required .05 (see appendix 5).

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					Adjusted R Square Change	F Change	df1	df2	Sig. F Change
1	.309[a]	.095	.013	1.11241	.013	1.161	1	11	.304
2	.691[b]	.477	.372	.88710	.359	7.297	1	10	.022

a. Predictors: (Constant), Employees

b. Predictors: (Constant), Employees, DegreeOfUse

c. Dependent Variable: Performance

Table 16 – Model summary of hierarchical regression analysis

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	4.426	.331		13.364	.000		
Employees	.015	.014	.309	1.077	.304	1.000	1.000
2 (Constant)	2.487	.765		3.251	.009		
Employees	.011	.011	.222	.960	.360	.980	1.020
DegreeOfUse	.494	.183	.624	2.701	.022	.980	1.020

Table 17 – Coefficients – hierarchical regression analysis

The analysis and results above enable us to confirm H_1; use of strategic management tools does in fact affect performance. In an effort to test the effect of the strategic management tools chosen in this study a new variable was created. This was due to the inability to test the tools separately due to very little data on the use of each tool and the high degree of multicollinearity between the variables. The new variable was created by creating a mean score of management tool use based on answers to all relevant questions on each management tool. The same procedure as above was conducted, and the results were positive. The analysis is not included however as the validity and reliability of the analysis is questionable at best. An appendix containing summarised information and output from the analysis is however included (see appendix 6).

4.5 Summary

We found that use of strategic management tools affects performance, and H_1 was supported. We further found that – assuming representativeness of the sample – approximately 10 % of entrepreneurial businesses used the BSC, 10 % used TQM, and just under 25 % of

entrepreneurial businesses used SB. None of the businesses used the BMC, but a five businesses disclosed their use of different business models. H_2, H_3, H_4, and H_5 could not be tested due to insufficient data.

		Result
H_1	Use of strategic management tools affects business performance	Confirmed*
H_2	Use of the Balanced Scorecard affects business performance	Untested
H_3	Use of the Business Model Canvas affects business performance	Untested
H_4	Use of Total Quality Management affects business performance	Untested
H_5	Use of Strategic Benchmarking affects business performance	Untested

*$p < 0.05$

Table 18 – Results of hypothesis testing

Now that we have examined the results, it is time to discuss the findings, the implications for future research as well as the limitations of this research, and present the managerial implications of the findings.

5. Discussion

This discussion chapter consists of a discussion of the results of this study, limitations and future research implications, managerial implications of the findings, and a conclusion.

5.1 Discussion of the results

This section will start by discussing the main finding of this study before moving on to discuss the findings with regards to the respondents' use of the strategic management tools. It will then discuss the performance measure developed in this thesis.

Main finding

This study set out to discover whether use of strategic management tools in entrepreneurial businesses affected their performance. The results of this study indicated the presence of a statistically significant relationship between the use of strategic management tools and performance in entrepreneurial businesses in the United Kingdom. This is consistent with current theory and previous research including that of Anderson, Cobbold, and Lawrie (2001), and Jennings and Beaver (1997). Although very little research has been done of the performance effects of utilising strategic management tools in entrepreneurial businesses, some similar research on SMEs (Small and Medium sized Enterprises) has been performed, such as the two studies mentioned above. SMEs and entrepreneurial businesses are not mutually exclusive terms however, and some of the SMEs in these studies are likely to have been entrepreneurial businesses. This study has added to this pool of empirical research, and further supports the use of strategic management tools in entrepreneurial businesses.

Based on the comments received during this research, there appears to be a trend of disbelief among entrepreneurial non-users of strategic management tools that these can be useful also to them. Comments received from non-users included such statements as "not relevant to my business", "it's a lower priority for me", and "most of the questions are not relevant to a small independent business who relies on old fashioned hard work for results!!". One comment was also received from one of the businesses which used strategic management tools. This business' founders were both MBA alumnus and stated that they used a lot of different tools although perhaps not in the most formal of manners. This contrast of comments indicates that without relevant education on strategic management tools business owners may not see strategic management tools as applicable to them, in the belief that they are only suited for large corporations. The main finding of this thesis contradicts this. In fact the median size of the businesses in the sample was 2, which shows that these results were not only valid for

entrepreneurial businesses, but also for very small business which indicates the relevancy of strategic management tools in any sized business. This thesis cannot conclude that entrepreneurial businesses which do not use strategic management tools do this out of the belief that they are only suited for larger businesses, but would like to recommend future research on this topic.

Although this thesis found a significant relationship between the use of strategic management tools and performance, and this result was expected based on current theory and previous research, the finding needs to be interpreted with caution due to the small sample size and the large size of the population.

Use of the BSC, TQM, Business Model Canvas and Strategic Benchmarking
Although the hypotheses regarding the effect on performance by the tools discussed in this thesis could not be tested due to insufficient data, a contribution to existing knowledge on use of strategic management tools in entrepreneurial businesses was made. We found that (assuming the sample is representative for the population) approximately 10 % of entrepreneurial businesses in the UK use the BSC, around 10 % use TQM and almost 25 % of businesses use strategic benchmarking. Although none of the businesses in the sample used the business model canvas, it is unlikely that no entrepreneurial business in the UK uses it. The latter result is relatively unsurprising as the business model canvas is a relatively new tool and as such is less likely to be widely used. With such a small sample it is therefore not very surprising to find no users. As for strategic benchmarking being the most widely used tool this is again not too surprising as it is less specific than the others. Businesses are likely to start "small" by comparing certain results or aspects of their business to others before implementing the use of a new strategic management tool which is more overarching such as the BSC. This is because such an implementation is likely to be more time consuming and costly. Strategic benchmarking can take very little effort at all, although the benefit will of course be much greater as more thought is put into it such as identifying the best benchmarking partners. The finding that one in ten businesses use TQM is again not too surprising as the tool is quite popular in the UK.

In their study on the use of the BSC in small businesses in the UK Giannopoulos et al. (2013) found that 5 % of their surveyed businesses used the BSC, and 20 % were aware of the tool. In comparison this study found that around 10 % of entrepreneurial businesses used the BSC and 37.9 % were aware of the tool. The study by Giannopoulos et al. (2013) did however

achieve an even smaller sample size (20) than that of this thesis (29), and with such low figures, a single respondent can drastically impact these percentages. The results of the studies therefore appear to have achieved comparable results. This study further found that 51.7 % of entrepreneurial businesses in the UK used both financial and nonfinancial measures. With an awareness percentage of 37.9 %, it becomes apparent that some of the businesses which utilised both financial and nonfinancial measures were unaware of the BSC. This may be interpreted as possible support to the hypothesis put forward by Giannopoulos et al. (2013) that these businesses may be using what is akin to the BSC without realising it. This study did not focus on this topic in the research however and does not have sufficient data to either support or discard this thesis. Further research is needed on this topic.

The Performance measure

In addition to problems which concern the measurement of complex concepts such as business performance, March and Sutton (1997) present three problems in studies of performance: instabilities of performance advantage, overly simple models, and retrospective recall of informants.

The first of these concerns the self-destructiveness of successes at understanding performance. Once a link between a certain practice and improved performance has been found, low performing competitors will attempt to imitate the practice thereby eliminating the difference in practice between high and low performing organisations. March and Sutton (1997) maintain that this takes place regardless of the "reality" of the link between a certain practice and performance as long as the link is generally believed to be real. Furthermore diffusion of knowledge of the mechanism is likely to be faster the more powerful the mechanism is believed to be. This process questions the usefulness of discovering practices which provide performance advantages as these discoveries prompt imitation by all competitors, and the greater the advantage the quicker the diffusion of knowledge. Important differences have however been observed between formally adopted and actual organisational practices, indicating a continued real difference between high and low performing organisations with regards to the discovered practices linked to better performance.

This study is not overly affected by this problem due to the use of strategic management tools not being very specific as businesses are likely to use different tools to a differing degree. As March and Sutton (1997) point out there is a real difference between actual and formally adopted organisational practices. The findings of this thesis support the hypothesis that use of

strategic management tools affect performance, but did not pass judgement on which strategic management tools should be used. Which strategic management tool is best suited will differ from business to business as it is dependent on a vast array of factors. The problem of losing the benefit of discovering a possible "cause" of performance is therefore not a significant issue with regards to the findings of this thesis.

The second problem is concerned with the overly simple nature of causal models which tend to ignore important mutual effects (March & Sutton 1997). Although these mutual effects are not established beyond doubt the authors maintain that they are sufficiently plausible to make simple causal models unwise to use. There are numerous ways in which performance feeds back upon itself; the authors focus on three. The first of these is the mechanism in which past performance positively affects performance in a later period. High performance following past high performance can be due to several reasons such as the positive effect on human resources by being assessed as successful through rankings etc. Similarly, poor prior performance can negatively affect future performance through for instance creating a work environment where the emotional climate is one of failure. Second, the authors describe negative feedback effects whereby prior high performance leads to a decrease in performance through for instance an increase in organisational slack, aspirations or through a decrease in search. The opposite is true for organisations with past low performance which leads to higher performance through a decrease in organisational slack, aspirations or an increase in search (March & Sutton 1997). Thirdly, short and long run effects of some mechanisms are most likely different. For instance poor past performance might cause an organisation to reduce investment in research and development which will reduce costs in the short run, but most likely damage performance in the long run. The authors maintain that this problem is reduced by using past performance as a control variable, but that this will tend to obscure the mechanisms involved.

This thesis does not state that use of strategic management tools cause performance, as performance is a complex concept likely to feed back upon itself, and this would be ignoring important mutual effects as well. We state that use of strategic management tools affect performance, but likewise performance is likely to influence the use of strategic management tools. For instance a business which has stagnated and is experiencing a lull in the increase in performance is perhaps more likely to increase its use of strategic management tools in an attempt to better understand and manage its competitive advantages in an effort to stay competitive and increase its market shares and/ or profits. Rather than include previous

performance as a control variable this thesis chose to ask for an averaged performance over the last three years.

The third problem March and Sutton (1997) present is that of retrospective recall of respondents. This problem concerns the use of variables which require the use of respondent's retrospective recall as the variables are not observed directly, or at least not over time. A problem with this is the assessment of variables used to explain performance markedly after the performance is known to the respondents, with the introduction of retrospective bias as a likely consequence. Organisational research has found that respondents in such a situation are likely to attribute high performance to conventionally believed causes of good performance, just as poor performance is likely to be attributed to conventionally believed causes of poor performance, which does not necessarily create an accurate picture of the real causes of the performance.

This thesis stayed clear of the third problem outlined by March and Sutton (1997) by asking businesses about their current use of strategic management tools and performance of their business over the last three years without linking the two. Respondents were not asked for performance before and after implementing strategic management tools due to this very reason; such answers are likely to be influenced by retrospective bias.

Bearing in mind the difficulties of using performance as the dependent variable discussed above, perhaps the greatest contribution of this study is the creation of a sound performance measure with good internal consistency. The performance measure presented in this thesis includes several measures of performance based on sound theory, and includes multiple elements of performance. These include performance over time (the last three years), comparative measures to the closest competitors, industry average, and expectations as well as an overall measure of performance. This thesis has steered clear of the problems put forward by March and Sutton (1997) quite well as discussed above.

An unexpected finding was that size of the business did not have a significant effect on performance, which goes against current theory. As this study focused on small entrepreneurial businesses and the sample consisted mostly of businesses with between one and three employees however, this is most likely due to the small differences in size in the sample and a non-normal distribution. With a normal distribution of size and/or a bigger sample this is likely to change and therefore is more a reflection on the size variable in this study rather than the performance measure.

5.2 Limitations and implications for future research

A number of limitations need to be acknowledged. Firstly, this study was limited to a quantitative research design and the use of a survey comes with some limitations. Perhaps most important is the inability to explain points of confusion to respondents, which can result in less valid answers. Furthermore this study asked for information on the use of different strategic management tools. Although explanations for each tool were included, the use of a survey design meant respondents were unable to request clarifications if needed. Answers regarding how actively the strategic management tools were used were limited to a scale of 1 – very rarely to 7 – very frequently. Different businesses may for instance perceive very rare use of a tool differently, which can affect the validity and reliability of the results.

Another important limitation of this study was the achieved sample size. Future research should seek to achieve a larger sample size in order to gain more reliable and valid results. A larger sample size would also enable further analyses into which strategic management tools have the largest effect on performance, and would be able to test hypotheses H_2, H_3, H_4, and H_5.

This study was further limited to examining the use of the balanced scorecard, total quality management, strategic benchmarking, and the business model canvas, as well as one general question on how often –if at all – the businesses used aids to strategic thinking and decision making. Again these theoretical terms and concepts may be perceived differently by different businesses. Additionally, Knott (2008) states that managers often do not fully utilise strategic management tools, but rather use them as inspiration to concoct their own tools to solve specific problems as they appear. This makes the tools difficult to quantify as they cease to be recognisable as they are often absorbed into practice. Future research into this topic might be well advised to use a qualitative approach and ask businesses how they strategically manage their businesses. Such an approach would most likely be quite time consuming, but could result in more specific knowledge on this topic. For instance rather than discovering that strategic benchmarking affects performance, one could discover exactly what and with whom a business should benchmark in order to achieve the greatest benefit.

Perhaps most importantly this thesis was limited to entrepreneurial businesses in the United Kingdom. Research into the use of strategic management tools and their effect on performance in different businesses in different countries would be interesting, as would the

use of a qualitative study to validate the findings of this study. A comparison between countries would also be an interesting point of future research.

This thesis has presented a performance measure which uses established scales to test multiple facets of performance over time. The reliability testing and confirmatory factor analysis revealed a sound measure with very strong internal consistency. This has implications for future research as strong, valid performance measures are hard to come by, and this thesis presents a sound performance measure which is relatively easy to measure and understand. Deletion of one of the items in the performance measure would have resulted in a higher Cronbach's alpha – albeit only slightly – which suggests that future research may debate leaving this item out of the scale. The item in question was turnover compared to the businesses' closest competitors. This item did however only have a slight negative effect on the Cronbach's alpha which means that in all likelihood it will not have significant detrimental effect on the performance measure if it is included.

5.3 Managerial implications

The managerial implication of the main finding of this thesis is evident: utilise strategic management tools. This finding is in agreement with previous research and current theory, and although some entrepreneurs seem to disagree, the results of this study points to performance benefits of using strategic management tools also for small entrepreneurial businesses. Unable to test H_2, H_3, H_4, and H_5, this thesis was unable to make any recommendations as to which strategic management tool to utilise. The benefits of each tool to any business are however likely to vary, not only between businesses, but also as the business develops.

As discussed previously, there is not always a clear division between the different strategic management tools as managers tend to pick and choose elements from different tools to best suit their specific needs. Additionally, strategic management tools are not necessarily best when working alone. For instance Kaplan and Norton (2001a) maintain that the BSC framework is not only consistent with total quality management (TQM) principles, but that it enhances the effectiveness of TQM programs. The BSC achieves this in two ways; firstly by revealing which processes are most critical to the success of the organisation and therefore most relevant for improvement through TQM, and secondly by making the link between critical process improvement and increased customer and shareholder outcomes explicit. Wongrassamee, Gardiner and Simmons (2003) maintain that the major differences between

the BSC and the European Foundation for Quality Management (EFQM) Excellence model is the latter's closer link to TQM concepts, different methods of information feedback, and the BSC's higher degree of flexibility. The latter relates to the BSC's need to be customised to fit the organisation's culture, strategy, mission and technology (Kaplan and Norton 1993). Consequently these strategic management tools may best be used in unison with each other, provided the business is in need of the benefits they can provide. The compatibility of these tools was merely an example; strategic management tools are likely to provide different benefits which means any number of different combinations exist. Managers should therefore familiarise themselves with different strategic management tools before selecting either one or a combination of tools to best assist in the strategic management of their businesses.

Use of performance measures – and by extension strategic management tools - also has a positive psychological role. Marginson et al. (2014) found that using performance measures reduces role ambiguity and supports psychological empowerment. Role ambiguity is the uncertainty of what one's position includes, and when present, it results in an increased need for information. Psychological empowerment can be defined as consisting of the following four elements; the ability to produce intended effects (impact), competence, self-determination, and meaning (Marginson et al. 2014). Use of performance measures decrease role ambiguity by creating clarity - through for instance setting clear goals - and by encouraging discussion and debate. Use of performance measure support psychological empowerment (PE) as information is a source of PE, and it further stimulates discussion and debate which is an additional source of information. Nonfinancial measures provided the greatest support for PE. These findings further support the benefit of using strategic management tools, also in entrepreneurial businesses as the benefits of a low degree of role ambiguity and a high degree of psychological empowerment is desirable in any business.

Another implication of the main finding of this thesis is not for managers of entrepreneurial businesses, but rather for those involved with helping start-ups and lecturers in courses relating to entrepreneurship. It would seem – although this thesis cannot confirm – that at least a portion of entrepreneurs do not use strategic management tools because they do not believe these are of use to them. The main finding of this thesis contradicts this, as results showed that use of strategic management tools affected performance also in small entrepreneurial businesses. It therefore seems appropriate, and necessary, to inform those wanting to start a new business, or those that are in the start-up phase, of the benefits also to them of using strategic management tools. Indeed the Business Model Canvas was developed

for entrepreneurs so as to provide a better understanding of their business model. Although this study was unable to determine its effect on performance, it seems likely that utilising this tool would have a positive effect on performance if only indirectly. Tools such as the Balanced Scorecard, which traditionally have been discussed mostly for use in larger businesses, are also relevant, as the authors maintain that implementing the tool at an early stage eases the cost and effort of implementation. As the business then grows, so does the Balanced Scorecard. Furthermore, strategic management tools need not be costly, as the information needed to utilise most tools is freely available either in books or on the internet. The downsides to utilising strategic management tools therefore do not seem to outweigh the benefits.

5.4 Conclusion

Existing literature on strategic management tool use in entrepreneurial businesses is sparse, and even less research has been done on its effect on performance in such businesses - in fact no available research on this exact topic could be found when writing this thesis. The purpose of this thesis was to remedy this situation by investigating whether strategic management tools were worth the trouble for entrepreneurial businesses in the United Kingdom. This thesis found a statically significant relationship between strategic management tool use and performance in a sample consisting of mostly very small entrepreneurial businesses. This highlights the benefit of using strategic management tools also in businesses such as these. This study further contributed to the field of strategic management by gathering data on UK entrepreneurs' awareness and use of the Balanced Scorecard, Total Quality Management, the Business Model Canvas and Strategic Benchmarking. Lastly, this thesis provided a reliable performance construct which is relatively easy to use and understand.

Although further research is needed on this topic we can tentatively conclude based on the findings in this thesis; strategic management tools are indeed worth the trouble.

References

Abdel –Kader, M & Luther, R 2006, 'Management accounting practices in the British food and drinks industry', *British Food Journal*, vol. 108, no. 5, pp. 336-57.

Andersen, H, Cobbold, I & Lawrie, G 2001, 'Balanced scorecard implementation in SMEs: reflection in literature and practice', paper presented to SMESME conference, Copenhagen, May 2001.

Anderson, C 2004, *The long tail*, viewed 29 January 2014, <http://www.wired.com/wired/archive/12.10/tail.html?pg=5&topic=tail&topic_set=>.

Argyris, C 1991, 'Teaching smart people how to learn', *Harvard Business Review*, vol. 69, no. 3, pp. 99-109.

Atkinson, AA, Kaplan, RS, Matsumura, EM & Young, SM 2012, *Management accounting: Information for Decision Making and Strategy Execution*, 6th edn, Pearson education, Harlow.

Barquet, APB, de Oliveira, MG, Amigo, CR, Cunha, VP & Rozenfeld, H 2013, 'Employing the business model concept to support the adoption of product-service systems (PSS)', *Industrial Marketing Management*, vol. 42, no.5, pp. 693-704.

Blindheim, K 2010, 'Perspectives on strategic management accounting', PhD thesis, Norges Handelshøyskole.

Braam, GJM & Nijssen, EJ 2004, 'Performance effects of using the Balanced Scorecard: a note on the Dutch experience', *Long Range Planning*, vol. 37, no.4, pp. 335-49.

Carland, JW, Hoy, F, Boulton, WR & Carland, JAC 1984, 'Differentiating entrepreneurs from small business owners: a conceptualization', *The Academy of Management Review*, vol. 9, no.2, pp. 354-9.

Camp, RC 2006, *Benchmarking: The Search for Industry Best Practices that Lead to Superior Performance*, Productivity Press, Portland.

Chakravarthy, BS 1986, 'Measuring strategic performance', *Strategic Management Journal*, vol. 7, no. 5, pp. 437–58.

Chesbrough, H 2006, *Open business models: how to thrive in the new innovation landscape*, Harvard Business Review Press, Boston.

Davis, S & Albright, T 2004, 'An investigation of the effect of Balanced Scorecard implementation on financial performance', *Management Accounting Research*, vol. 15, no. 2, pp. 135–53.

Denzin, NK 2009, *The Research Act: A Theoretical Introduction to Sociological Methods*, Transaction publishers, New Jersey.

Drew, SAW 1997, 'From knowledge to action: impact of benchmarking on the organizational performance', *Long Range Planning*, vol. 30, no. 3, pp. 427-41.

Eisenmann, T, Parker, G & Van Alstyne, MW 2006, 'Strategies for two-sided markets', *Harvard Business Review*, vol. 84, no. 10, pp. 92-101.

Giannopoulos, G, Holt, A, Khansalar, E & Cleanthous, S 2013, 'The use of the balanced scorecard in small companies', *International Journal of Business and Management*, vol. 8, no. 14, pp. 1-22.

Hagel III, J & Singer, M 1999, 'Unbundling the corporation', *Harvard Business Review*, vol. 77, no.2, pp. 133-41.

Hair, JF, Black, WC, Babin, BJ & Anderson, RE 2010, *Multivariate Data Analysis – A global perspective*, 7th edn, Pearson, New Jersey.

Hair, JF, Celsi, MW, Money, AH, Samouel, P & Page, MJ 2011, *Essentials of Business Research Methods*, 2nd edn, M.E. Sharpe, New York.

Hedman, J, & Kalling, T 2003, The business model concept: theoretical underpinnings and empirical illustrations', *European Journal of Information Systems*, vol. 12, no. 1, pp. 49-59.

Hendricks, KB & Singhal, VR 1997, 'Does implementing an effective TQM program actually improve operating performance? Empirical evidence from firms that have won quality awards', *Management Science*, vol. 43, no. 9, pp. 1258-74.

Hornby, AS 2010, *Oxford Advanced Learner's Dictionary*, 8th edn, Oxford University Press, Oxford.

Jennings, P & Beaver, G 1997, 'The performance and competitive advantage of small firms: a management perspective', *International Small Business Journal*, vol. 15, no. 2, pp. 63-75.

Jick, TD 1979, 'Mixing Qualitative and Quantitative Methods: Triangulation in Action', *Administrative Science Quarterly*, vol. 24, no. 4, pp. 602-11.

Kalakou, S & Macário, R 2013, 'An innovative framework for the study and structure of airport business models', *Case Studies on Transport Policy*, vol. 1, no. 1-2, pp. 2-17.

Kaplan, R & Norton, DP 1993, 'Putting the balanced scorecard to work', *Harvard Business Review*, vol. 71, no. 5, pp. 134–47.

Kaplan, R & Norton, DP 1996, *The balanced scorecard: translating strategy into action*, Harvard Business Review Press, Boston.

Kaplan, RS & Norton, DP 2000, 'Having trouble with your strategy? Then map it', *Harvard Business Review*, vol. 78, no. 5, pp. 167-76.

Kaplan, R & Norton, DP 2001a, *The strategy-focused organization: how balanced scorecard companies thrive in the new business environment*, Harvard Business Review Press, Boston.

Kaplan, R & Norton, DP 2001b, 'Transforming the balanced scorecard from performance measurement to strategic management: part II', *Accounting Horizons*, vol. 15, no. 2, pp. 147–60.

Kaplan, R & Norton, DP 2004, *Strategy maps: converting intangible assets into tangible outcomes*, Harvard Business School Press, Boston.

Kaplan, R & Norton, DP 2007, 'Using the balanced scorecard as a strategic management system', *Harvard Business Review*, vol. 85, no. 7, pp. 150–61.

Knott, P 2006, 'A typology of strategy tool applications', *Management Decision*, vol. 44, no. 8, pp. 1090 – 105.

Knott, P 2008, 'Strategy tools: who really uses them?', *Journal of Business Strategy*, vol. 29, no. 5, pp. 26 – 31.

Kothari, CR 2004, *Research Methodology: Methods and Techniques*, 2nd edn, New Age International, New Delhi.

Mann, L, Samson, D & Dow, D 1998, 'A Field Experiment on the Effects of Benchmarking and Goal Setting on Company Sales Performance', *Journal of Management*, vol. 24, no. 1, pp. 73 – 96.

March, JG & Sutton, RI 1997, 'Organizational performance as a dependent variable', *Organization Science*, vol. 8, no. 6, pp. 678-706.

Marginson, D, McAulay, L, Roush, M & van Zijl, T 2014, 'Examining a positive psychological role for performance measures', *Management Accounting Research*, vol. 25, no. 1, pp. 63– 75.

Mazzucato, M 2002, 'Different views of strategy', in M Mazzucato (ed.), *Strategy for Business: A Reader*, SAGE Publications, London, pp. 1-9.

Mintzberg, H 1987, 'The Strategy Concept I: Five Ps For Strategy', *California management review*, vol. 30, no. 1, pp. 11-24.

Murphy, GB, Trailer, JW & Hill, RC 1996, 'Measuring performance in entrepreneurship research', *Journal of Business Research*, vol. 36, no. 1, pp. 15-23.

Omachonu, VK & Ross, JE 2004, *Principles of Total Quality*, 3rd edn, CRC Press, Boca Raton.

Osterwalder, A & Pigneur, Y 2010, *Business model generation*, John Wiley & Sons, Inc., Hoboken.

Pallant, J 2010, *SPSS Survival Manual – A step by step guide to analysis using the SPSS program*, 4th edn, Open University Press, Maidenhead.

Parkin, MA & Parkin, R 1996, 'The impact of TQM in UK SMEs', *Industrial Management & Data Systems*, vol. 96, no. 4, pp. 6-10.

Porter, ME 1996, 'What is strategy?', *Harvard Business Review*, vol. 74, no. 6, pp. 61-78.

Powell, TC 1995, 'Total quality management as competitive advantage: a review and empirical study', *Strategic Management Journal*, vol. 16, no. 1, pp. 15-37.

Rigby, D & Bilodeau, B 2013, *Management tools & trends 2013*, viewed 26 February 2014, <http://www.bain.com/publications/articles/management-tools-and-trends-2013.aspx>.

Saris, WE & Gallhofer, IN 2014, *Design, Evaluation, and Analysis of Questionnaires for Survey Research*, John Wiley & Sons, Hoboken.

Schumpeter, JA 1983, *The theory of economic development: an inquiry into profits, capital, credit, interest, and the business cycle*, Transaction Publishers, New Jersey.

Şentürk, FK 2012, 'A study to determine the usage of strategic management tools in the hotel industry', proceedings of the 8th International Strategic Management Conference, Barcelona, *Procedia - Social and Behavioral Sciences*, pp. 11-8.

Teece, DJ, Pisano, G & Shuen, A 1997, 'Dynamic capabilities and strategic management', *Strategic Management Journal*, vol. 18, no. 7, pp. 509-33.

Venkatraman, N & Ramanujam, V 1986, 'Measurement of business performance in strategy research: a comparison of approaches', *Academy of Management Review*, vol. 11, no.4, pp. 801-14.

Venkatraman, N & Ramanujam, V 1987, 'Measurement of business economic performance: an examination of method convergence', *Journal of Management*, vol. 13, no. 1, pp. 109-22.

Wongrassamee, S, Gardiner, PD & Simmons, JEL 2003, 'Performance measurement tools: the balanced scorecard and the EFQM excellence model', *Measuring Business Excellence*, vol. 7, no. 1, pp. 14 – 29.

Young, D 1997, 'Economic value added: a primer for European managers', *European Management Journal*, vol. 15, no. 4, pp. 335 – 43.

Zu, X, Fredendall, LD & Douglas, TJ 2008, 'The evolving theory of quality management: The role of Six Sigma', *Journal of Operations Management*, vol. 26, no. 5, pp.630-50.

Zu, X, Robbins, TL & Fredendall, LD 2010, 'Mapping the critical links between organizational culture and TQM/Six Sigma practices', *International Journal of Production Economics*, vol. 123, no. 1, pp.86-106.

Appendices

Appendix 1: The Business Model Canvas

Appendix 2: E-mail invitation

Subject: Use of strategic management tools and its effect on performance

Dear Sir/Madam,

My name is Marielle Skaar Stave and I am a student at Aalesund University College in Norway where I am studying for a Master of International Business and Marketing. My master thesis is on whether active use of strategic management tools affects performance in entrepreneurial businesses in the United Kingdom. I am conducting a survey and some in-depth interviews if businesses are willing. I am writing to you in the sincere hope that you will consider completing my survey. The survey is perfectly anonymous and will take 5-10 minutes at most. I would be more than willing to provide you of a copy of my thesis once it is finished if you so wish. I look forward to hearing from you.

The link to my survey: [Link]

Kind regards,

Marielle Skaar Stave

[Phone number]

Appendix 3: Questionnaire

Strategic management tool usage

Use of strategic management tools

This part of the questionnaire contains questions on your business' use of strategic management tools. Strategic management tools are aids to strategic thinking and decision making. Examples include the balanced scorecard, total quality management, and benchmarking. Examples of strategic management accounting tools also include such tools as activity-based costing and time-driven activity-based costing.

1) Does your business use strategic management tools?

☐ Yes ☐ No

2) If yes, to what extent does your business use strategic management tools?

Very rarely ☐ ☐ ☐ ☐ ☐ ☐ Very frequently
1   2   3   4   5   6   7

The Balanced Scorecard

The Balanced Scorecard is a strategic management tool which usually includes four perspectives; one financial and three nonfinancial: the customer, process, and learning and growth perspective. The financial perspective tends to be the only lagging indicator of performance which addresses the financial performance the business seeks to deliver to its owners, whilst the other three (or more) tend to be leading indicators of performance. The customer perspective addresses how the business seeks to deliver value to its customers in order to achieve its vision and financial objectives. The process perspective addresses the processes the business must excel at in order to meet its financial and customer objectives. The learning and growth perspective addresses how the business should align and enhance its intangible assets in order to improve its critical processes.

3) Financial measures include such measures as turnover, return on investment, growth rates, return on assets (ROA) etc.
Does your business use financial measures? If no, please skip the next question.

☐ Yes
☐ No

4) To what extent does your business use financial measures?

Very rarely ☐ ☐ ☐ ☐ ☐ ☐ Very frequently
1   2   3   4   5   6   7

5) Non-financial measures are such measures as customer satisfaction, customer loyalty, service quality, and market share.
Does your business use non-financial measures? If no, please skip the next question.

- [ ] Yes
- [ ] No

6) To what extent does your business use non-financial measures?

[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7

7) Have you heard of The Balanced Scorecard before?

- [ ] Yes
- [ ] No

8) Does your business use The Balanced Scorecard? If no, please skip to question 14.

- [ ] Yes
- [ ] No

9) To what extent does your business use The Balanced Scorecard?

Very rarely [ ] [ ] [ ] [ ] [ ] [ ] Very frequently
1   2   3   4   5   6   7

10) The Strategy map was added to the Balanced Scorecard to provide linkages between the business' objectives in the four perspectives and to clarify cause-and-effect relationships.
Does your business use strategy maps? If no, please skip to question 12.

- [ ] Yes
- [ ] No

11) To what extent does your business use strategy maps?

Very rarely [ ] [ ] [ ] [ ] [ ] [ ] Very frequently
1   2   3   4   5   6   7

12) How long has your business used The Balanced Scorecard?

Years [   ]

13) How useful would you say The Balanced Scorecard is?

Almost useless [ ] [ ] [ ] [ ] [ ] [ ] Extremely useful
1   2   3   4   5   6   7

14) How likely would you say it is that you would make use of the Balanced Scorecard in the future?

Very unlikely [ ] [ ] [ ] [ ] [ ] [ ] Very likely

78

	1		2	3	4	5	6	7

If very unlikely, why?

[   ]

Total Quality Management (TQM)

Total Quality Management (TQM) seeks to achieve continuous improvement in the quality of a business' goods and services through integration of all functions and processes in the business. Traditional quality control techniques are often used in TQM.

15) Have you heard of total quality management before?

☐ Yes
☐ No

16) Does your business use total quality management? If no, please skip to question 20.

☐ Yes
☐ No

17) To what extent does your business use total quality management?

☐ Very rarely ☐ ☐ ☐ ☐ ☐ Very frequently
  1   2   3   4   5   6   7

18) How long has your business used total quality management?

Years [   ]

19) How useful would you say total quality management is?

☐ Almost useless ☐ ☐ ☐ ☐ ☐ Extremely useful
  1   2   3   4   5   6   7

20) How likely would you say it is that you would make use of total quality management in the future?

☐ Very unlikely ☐ ☐ ☐ ☐ ☐ Very likely
  1   2   3   4   5   6   7

If very unlikely, why?

[   ]

Strategic benchmarking

Strategic benchmarking is used to compare one's own business strategies, management practices, and organisational structures with those of the best in the industry or best practices from other industries.

21) Have you heard of strategic benchmarking before?

☐ Yes

☐ No

22) Does your business use strategic benchmarking? If no, please skip to question 26.

☐ Yes

☐ No

23) To what extent does your business use strategic benchmarking?

Very rarely ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very frequently
1   2   3   4   5   6   7

24) How long has your business used strategic benchmarking?

Years [   ]

25) How useful would you say strategic benchmarking is?

Almost useless ☐ ☐ ☐ ☐ ☐ ☐ ☐ Extremely useful
1   2   3   4   5   6   7

26) How likely would you say it is that you would make use of strategic benchmarking in the future?

Very unlikely ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very likely
1   2   3   4   5   6   7

If very unlikely, why?

[   ]

The Business Model Canvas and other business model theory

Business models are descriptions of the rationale of how an organisation creates, delivers, and captures value. Osterwalder and Pigneur developed the business model canvas as a strategic management tool containing nine building blocks; key partners, key activities, key resources, cost structure, revenue stream, value proposition, customer relationships, customer segments, and channels.

27) Have you heard of the business model canvas before? If no, please skip to question 32.

☐ Yes
☐ No

28) Does your business use the business model canvas? If no, please skip to question 32.

☐ Yes
☐ No

29) To what extent does your business use the business model canvas?

Very
rarely ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very
frequently
1   2   3   4   5   6   7

30) How long has your business used the business model canvas?

Years [   ]

31) How useful would you say the business model canvas is?

Almost
useless ☐ ☐ ☐ ☐ ☐ ☐ ☐ Extremely
useful
1   2   3   4   5   6   7

32) Does your business use other theory on business models? If no, please skip to question 35.

☐ Yes
☐ No

33) To what extent does your business use other theory on business models?

Very
rarely ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very
frequently
1   2   3   4   5   6   7

34) Do you use any of the following theories on business models to strategically manage your business?

☐ Long tail business models: Businesses employing long tail business models sell some top products, but also include the long tail of more niche products often not offered by businesses employing more traditional business models such as bookstores and record shops.

☐ Multi-sided platform business models: Platforms are products and services which bring together groups of users in multi-sided networks, and profit in this business model is made through facilitating transactions between the groups.

☐ "Free" business models: "Free business models" offer free products or services to at least one customer segment continuously.

☐ Open business models: Open business models entail making use of external knowledge and technologies, whilst letting others make use of the business' own unused ideas.

☐ None of the above

35) How likely would you say it is that you would make use of the business model canvas in the future?

81

	Very unlikely 1	2	3	4	5	6	Very likely 7
	☐	☐	☐	☐	☐	☐	☐

If very unlikely, why?

> (blank text box)

Comparisons

The purpose of this part of the questionnaire is to compare your business with other UK entrepreneurial businesses.

36) Please indicate below how you perceive your business has performed compared to your closest competitors over the last three years (2011-2013).

	-3 Worse than competitors	-2 Worse than competitors	-1 Worse than competitors	0 About the same	+1 Better than competitors	+2 Better than competitors	+3 Better than competitors
Turnover	☐	☐	☐	☐	☐	☐	☐
Growth in turnover	☐	☐	☐	☐	☐	☐	☐
Return on Sales (ROS)	☐	☐	☐	☐	☐	☐	☐
Return on Assets (ROA)	☐	☐	☐	☐	☐	☐	☐
Overall performance	☐	☐	☐	☐	☐	☐	☐
Expected future performance	☐	☐	☐	☐	☐	☐	☐

37) Please indicate below how you perceive your business has performed compared to your expectations over the last three years (2011-2013).

-3 Worse than expectations	-2 Worse than expectations	-1 Worse than expectations	0 About the same	+1 Better than expectations	+2 Better than expectations	+3 Better than expectations
☐	☐	☐	☐	☐	☐	☐

38) Please indicate below how you perceive your business has performed compared to your industry average over the last three years (2011-2013).

-3 Worse than industry average	-2 Worse than industry average	-1 Worse than industry average	0 About the same	+1 Better than industry average	+2 Better than industry average	+3 Better than industry average
☐	☐	☐	☐	☐	☐	☐

About your business

39) How old is your business?

Years [   ]

40) Please indicate to what extent you agree with the following statement: "I am an entrepreneur"

Strongly disagree [ ] 1   [ ] 2   [ ] 3   [ ] 4   [ ] 5   [ ] 6   [ ] Strongly agree 7

41) How many employees does your business currently employ?

[   ]

42) Please provide the following financial information: (the survey is anonymous and your business will not be identifiable in the paper)
Turnover is gross sales before any deductions.
Return on assets is calculated by dividing net income by total assets.
Return on sales is calculated by dividing net income by gross sales (turnover) *

* Average turnover 2011-2013 (£)	[ ]
* % increase in turnover over the last three years (2011-2013)	[ ]
* Average return on assets (ROA) 2011-2013 (£)	[ ]
* % increase in return on assets (ROA) over the last three years (2011-2013)	[ ]
* Average return on sales (ROS) 2011-2013 (£)	[ ]
* % increase in return on sales (ROS) over the last three years (2011-2013)	[ ]

43) How much of your turnover is due to internet sales? (Last fiscal year) Please provide an approximate percentage.

[   ]

44) What is your position?

[ ] Owner-manager

[ ] Assistant manager

[ ] Other (please specify):

[   ]

45) Which industry are you in? Please adhere to The United Kingdom Standard Industrial Classification of Economic Activities (SIC) if possible.

Concluding questions

46) Do you have any comments about this survey?

47) Would you be willing to be contacted for a quick interview?

Name	
Organisation	
E-mail	
Telephone number	

Appendix 4: Factor analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,810
Bartlett's Test of Sphericity	Approx. Chi-Square	210,685
	df	28
	Sig.	,000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,636	70,447	70,447	5,636	70,447	70,447
2	,846	10,571	81,018			
3	,666	8,322	89,339			
4	,358	4,473	93,813			
5	,191	2,382	96,195			
6	,153	1,911	98,106			
7	,089	1,111	99,216			
8	,063	,784	100,000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
TurnoverVScompetitor	1,000	,459
TurnoverGrowthVScompetitor	1,000	,822
ROSVScompetitor	1,000	,660
ROAvsCompetitor	1,000	,564
OverallPerformanceVScompetitor	1,000	,855
ExpectedFuturePerformanceVScompetitor	1,000	,826
PerformanceVSexpectations	1,000	,677
PerformanceVSindustry	1,000	,772

Extraction Method: Principal Component Analysis.

Scree Plot
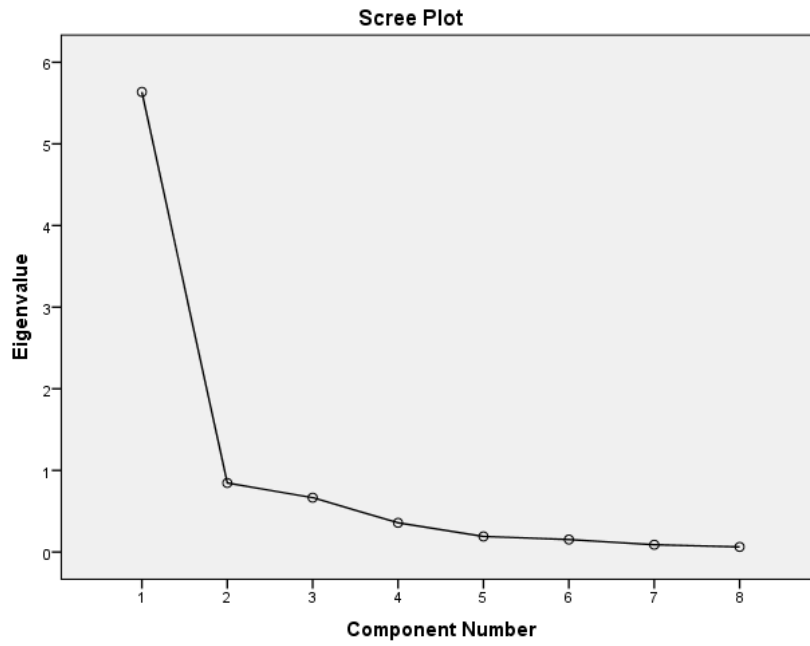
Component Matrix^a

	Component
	1
OverallPerformanceVScompetitor	,925
ExpectedFuturePerformanceVScompetitor	,909
TurnoverGrowthVScompetitor	,907
PerformanceVSindustry	,878
PerformanceVSexpectations	,823
ROSVScompetitor	,812
ROAvsCompetitor	,751
TurnoverVScompetitor	,677

Extraction Method: Principal Component
Analysis.

a. 1 components extracted.

Appendix 5: Test of normality; residuals

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual	,209	13	,124	,946	13	,544

a. Lilliefors Significance Correction

Appendix 6: Second regression analysis

In this model Size explained 3.5 % of the variance in Performance (Adjusted R^2 value). After entering UseMean into the model in step 2, the total variance in Performance explained by the model was 34.8 %, and the model was significant (p=0.012). UseMean explained an additional 31.3 % of the variance in Performance, after controlling for Size. In the final model only UseMean was statistically significant with a beta of .602. This model suggests that use of the Balanced Scorecard, Total Quality Management, and/ or Strategic Benchmarking affects performance.

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Adjusted R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.309[a]	.095	.035	1.09998	.035	1.583	1	15	.228
2	.656[b]	.430	.348	.90399	.313	8.209	1	14	.012

a. Predictors: (Constant), Employees

b. Predictors: (Constant), Employees, UseMean

c. Dependent Variable: Performance

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	4.426	.286		15.475	.000		
Employees	.015	.012	.309	1.258	.228	1.000	1.000
2 (Constant)	2.888	.586		4.928	.000		
Employees	.007	.010	.141	.671	.513	.922	1.084
UseMean	.362	.126	.602	2.865	.012	.922	1.084