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ABSTRACT

Despite the common knowledge that we live in a branded world, not all industries have found brands (Aaker and Joachimstahler 2000). In the present study I examined the adoption of a brand strategy in companies that did not possess much marketing knowledge, such as high tech Small and Medium (SME) size enterprises. The major motivation for my study was the wish to understand if such a phenomenon as an adoption process existed and in such case to describe it. Moreover, I wanted to explore a potential adoption process through which a high tech manager passes from the first knowledge of a brand strategy to forming an attitude towards it and reaching a decision to adopt or reject it. Brands are considered strategically important and one of the most valuable intangible assets that companies have since they provide protection against competition and drive financial performance (e.g. Berthon et al. 2008; Keller 2008). However, in high tech marketing literature, branding has been seen as having only little, if any, importance in the future success of high tech companies. In order to identify the challenge of building up strong brands, the perspective should include the people who build it up. There is a relative scarcity of research conducted on the perceptions of managers about branding. The chosen research approach is referred to as "abductive" since I interplayed between a theoretical frame and findings from the data. The methodology applied in the empirical study was a qualitative, exploratory research. (Patton 2002). The data was collected primarily from personal face-to-face in-depth interviews in the USA and in Finland. The findings propose and richly describe the existence and the concept of a brand strategy adoption process, focusing on SMEs in high tech industry. Based on the results, a model of the early stages of a brand strategy adoption process in high tech SME context is proposed. One critical factor why so many companies do not build successful brands is that SME high tech managers are at the very early stage of the adoption continuum. The present study contributes to marketing theories primarily by narrowing down an infinite set of hypotheses on a puzzling phenomenon, namely brand strategy adoption in the high tech context, to a feasible number. Moreover, this study suggest several recommendations for public organisations and provides a perspective for understanding what changes are needed in order to facilitate the adoption of a brand strategy in high tech SME companies.

Keywords: adoption, abduction, brands, brand strategy, high tech marketing, SME, content analysis, brand management

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FIGURES

TABLES

CONTENTS

1   INTRODUCTION

1.1   Brand strategy adoption in high tech

Getting a new idea adopted, even when it has obvious advantages, is difficult[1]

A major theme for the present study was the story of adopting new ideas. The roots of the term adoption can be traced back to meanings ranging from the act of legally taking a child to be looked after as one's own to accepting or starting to use something new. All in all, adoption is about change in human behaviour. The attempt to understand human behaviour extends the roots of the present study back to the early 1900's and to sociology and social psychology (Rogers 2003, 41, 53-61). Gabriel Tarde, one of the forefathers of sociology and social psychology, underlined the essential role of adoption, although he called it "imitation" at the time. He observed the S-shaped rate of the adoption curve and recognized the important role of opinion leaders in an organisation using a new idea. (Rogers 2003, 39-100). Later on, several researchers from different disciplines, made remarkably congruent findings about changes in human behaviour in their empirical studies. According to Rogers (1962), it was the foundation for the research on the diffusion of innovations and its cross-disciplinary viewpoint was established already then. Today, the challenge is to expand the research field and search for objectives different from those in the past. The focus in the present study was on brand strategy adoption by the managers of small and medium-sized high tech enterprises.

The purpose in this work was to provide an in-depth analysis of small and medium-sized enterprises, so called SMEs since governments globally have recognized SMEs as an important component of economy. According to the EU definition, SMEs are enterprises employing fewer than 250 persons, and their annual revenue does not exceed 50 million euro. The present study follows the EU definition (European Commission 2005) of SMEs in that they are considered *growing* small or medium size businesses, enterprises and entrepreneurs. Hence,

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[1]   Rogers (2003, 1)

the predisposition and the focus in the present study are to emphasize growth-orientation, since SMEs are seen as drivers of regional and global growth, new advanced technology and innovations. Moreover, they generate employment and foster competitiveness. (European Comission 2005; Litvak 1992; Locke 2006; Martin et al. 2009). They also struggle with most of their marketing activities (Abimbola 2001; Berthon et al. 2008; Meziou 1991) although they often recognize the importance of marketing to their success (Hills et al. 2008). Strategic marketing literature discusses how market orientation (MO) is seen a prerequisite to good performance and business growth (Tzokas, Carter & Kyriazopoulos 2011). Prior research has recognized a direct positive link between market orientation to firm's performance (Kohli et al. 1993; Ngo & O'Cass 2012) or indirect link through mediators such as innovativeness, customer loyalty and quality (Reijonen & Komppula 2010). Market orientation has been studied in SME context, however the number of the studies is low (Blankson & Cheng 2005; Reijonen et al. 2012).

The role of branding in SME context has been inadequately researched although the advantages of strong brands are widely recognized. Existing branding literature emphasizes the positive link between strong brands and companies' performance (Berthon et al. 2008; Keller 2008). Several researchers (Keller 2000; Keller & Lehmann 2006; Aaker 2006) see that brands endure since the rewards are so clear. Although the attention has been in mature consumer markets and in big companies, lately the interest has shifted also to other marketing environments. According to Keller (2000), building and properly managing brand equity has become a priority for companies of all sizes, in all types of industries and in all types of markets. Wong and Merrilee (2005) classify brand orientation typologies for SMEs and identified in their case study four essential factors of branding for SMESs. Abimbola and Vallaster (2007) suggested that brand and reputation building are critical factors in the success of SMEs in competitive markets. This view is also supported by Berthon et al. (2008) and Krake (2005) who discovered in their study that brand management influenced SMEs organizational performance in a significant and positive way.

Challenges for high technology (later high tech) SMEs are more numerous and complex compared to SMEs in other sectors due to the turbulent business environment. Therefore, it is important to allocate resources to finding the means to compete and succeed. The present study concentrates on high tech enterprises, because innovation technology is vital for growth. Technology changes the world and as a result it changes our lives. The changes are not only evident but also very quick and fundamental. Technology also offers us and our children the possibility of living a better life. It has an impact on education, learning, communication, infrastructure, entertainment, physics and many other fields. In other words, it offers many opportunities to traditional and future businesses.

The new idea to be adopted in the present study is brand strategy. It may not at first seem like a new idea, since brands have been in existence for centuries. Nonetheless, there is an insufficient amount of discussion in the academic

literature on the subject of the diffusion of a brand strategy in different industries or companies. By adapting innovation literature and definitions, a brand strategy can be viewed as "a new idea" from two perspectives. Firstly, the frequency of a brand strategy can be reviewed by way of exploring its visible outputs, brands. Since a visible outcome, a brand, is being created as a result of a brand strategy process and implementation by a company, it possible to observe those industries where brands have not emerged (adapted from Love et al 2009). Hence, the absence of (strong) brands indicates the absence of a brand strategy (Wong & Merrilee 2007). It can be stated that brands are not established marketing constructs in all industries, companies or organisations (Aaker & Joachimstahler 2000). Secondly, a brand strategy can be viewed as a process which indicates if a brand strategy is exploited and implemented within a company (adapted from Love et al 2009). Especially Oslo Manual's (OECD 2005) definition emphasizes that "*.. implementation of any new.. marketing, organizational or managerial methods or processes in business practices, workplace organization or external relations*" can be defined as innovation. The latter view is adapted in the present study.   Although academic literature provides only a limited number of empirical research findings, many authors seem to have adopted the perspective, that only a few SMEs take branding seriously (Wan et al. 2013, 259; Ward et al 1999). Hence, it can be stated that brand strategy implementation is "a new idea" in their business context.

There are two major perspectives on the process of adopting branding strategies. The first perspective, derived from high tech marketing and SME literature, recognizes that high tech SME companies are more reluctant than larger companies to embrace marketing concepts, such as brands. Marketing as a concept is unfamiliar to many managers due to their background. Managers of high tech companies often have technological backgrounds and lack the necessary professional marketing training or experience. According to Ward et al. (1999), the difference between a successful high tech company and an unsuccessful one can be brand management. However, it is possible that managers do not truly understand what good brand management involves and what it can do to their companies. (Meziou 1991; Ward et al. 1999; Temporal & Lee 2001; Berthon et al. 2008).

The second perspective, derived from branding literature, sees that companies are "born" with a brand mind-set already in place. In contrast to the first perspective, the learning or adoption process is not adequately acknowledged or its role is not seen as insignificant. (Aaker 1991; Kapferer 1997; Keller 1993). The most important academic brand-related discussions have recently focused on how to build, measure and manage brand equity and they have not been about how organisations have started to create and commit to their brand strategies. Furthermore, academic interest has focused on large, multinational companies and organisations with well-established brands usually operating in the consumer goods sector. Only a few studies and some literature can be found pertaining the high tech context. Studying the past in mature consumer markets has failed to awaken interest towards the adoption process, since the brands

have been long established and they have been taken for granted. In the consumer sector the origin of brands is usually in tangible products and not in intangible technology, as the case usually is with high tech companies. (Kapferer 1994; Aaker & Joachimstahler 2000; Keller & Lehman 2006).

Much of the earlier research on high tech marketing appears to focus firstly on comparing its differences to traditional marketing and secondly on its high level of uncertainty (Mohr 2001; Moriarty & Kosnik 1989). The more recent studies in the subject area aim to discuss the key issues related to high tech marketing such as time perspectives, and how to organize marketing functions within companies (Grønhaug & Möller 2005; Möller & Rajala 1999). Generally, in high tech enterprises many products and services are becoming increasingly similar. If one manufacturer has the first entrance advantage today, the competitors will most likely catch up tomorrow. We can learn from literature (Moriarty & Kosnik 1989; Grønhaug & Möller 2005) that high tech marketers have adapted the best marketing tactics and implemented them in a new, rapidly changing technological environment. They have discovered sophisticated ways of adapting traditional marketing practices to their particular situations. However, one of the most widely discussed marketing activities, *branding*, has not been given high priority. Only a few researchers have noted the problems with a poor implementation of branding strategies in high tech SMEs (Ward et al. 1999; Temporal & Lee 2001).

Warren & Hutchinson (2000) note that literature on high tech SMEs is concerned more about identifying the outcomes of the success factors rather than the process. They recommend more effort in studying the processes designed to achieve those outcomes. Traditional branding literature also concentrates on these outcomes by emphasizing how difficult and challenging it is to build up brands. It simultaneously reveals the inadequate level of current research from the perspectives of individual and organizational resources or knowledge-base. Traditional branding literature as such enables high tech SMEs to provide targets, but the present study also provides a guide on how to reach those targets. By promoting the advantages of branding strategies, high tech SME managers may allocate more attention and resources to brand building and possibly, in the long run, promote high tech SME companies' competitiveness.

Although there is only a little academic discussion about high tech SME brands and how companies should build and manage them, within business to business literature interest in the brand area seems to be increasing. The results of the study conducted by Bick and Bendixen (2009) suggest that brand is very important and followed by durability and price in b2b markets. According to a study conducted by Deloitte (2005), 10.6 % of the companies regard "establishing and maintaining brand presence" as the biggest challenge in sustaining the company's revenue growth. Lehmann and Warren (2002) outlined the top priorities for marketers and noticed that brands had steadily increased in importance over the preceding decade. They also observed that the practitioners placed somewhat greater emphasis on brands than the academics. On the other hand, based on systematic literature review Ker et al. (2012) identified five pos-

sible issues that impede current b2b branding research. Those are: the lack of systematic theory development, the transference of consumer concepts, the dominance of quantitative research, the lack of longitudinal research and the focus on single industries.

The phenomenon examined in the present study is challenging due to several factors. The existing theoretical models have not been developed to address the challenges of commencing brand building or brand management. The existing branding literature provides well-grounded theories on how companies achieve financial, strategic and managerial advantages through strategic brand management but it does not consider why some companies are not building up brands at all. Another challenge is that high tech industry is relatively new and research on high tech marketing is limited. The existing literature focuses on identifying how high tech marketing challenges differ from those in the traditional markets, not how traditional marketing concepts are adopted in the high tech environment.

1.2   Focus and approach of the study

The purpose of the present study is to focus on the phenomenon of brand strategy adoption in SME high tech companies. The preliminary assumption in the present research is that the high tech SME managers do not build up or manage brands. This view is drawn from the prior literature. However, this behaviour raises puzzling questions. Why do they delay the implementation of something that could be profitable to them? Certain factors, other than just financial reasons, might be in the heart of this. It is possible that branding in certain contexts is not a relevant choice of strategy. The challenge in this type of a situation is how to approach a phenomenon that might or might not be there at all. In addition to the integration of multidisciplinary literature, regularities and patterns explaining social change need to be found as well. This thought drew my attention towards the diffusion of innovations literature.

The present study participates in the debate on adopting innovations. This debate is multidisciplinary by nature. Adoption involves change and implementation and scholars have made various attempts to design and implement models that facilitate change in various environments (Sharp et al. 2009; Teece et al. 1997). The majority of research on the process of adoption focuses on the end results, the consequences of the adoption, or the rate of adoption and it is usually measured in a quantitative manner. For example, Meziou's (1991) model measures the level and the strength and weaknesses in small businesses' efforts to adopt the marketing concept. These models contribute only a little to the present study because my emphasis is on the early stages of the adoption and the problem setting is of a qualitative nature due to the lack of previous research into the subject area.

Researchers (Alexander 1989; Brancheau and Wetherbe 1990; Moore 1987; Johnson and Rice 1987 in Moore and Benbasat, 1991) have relied on the theories

of innovation diffusion when studying implementation problems (Moore & Benbasat 1991). A major line and a classic issue in the innovation literature has been the perception view of potential users, which is also the focus in the present study. According to Moore and Benbasat (1991), one of the most often cited reviews of the perceived characteristics literature is that of Rogers's (2003). Although his Innovation Diffusion Theory is not concerned with business or marketing exclusively, it offers a conceptual framework at a general level. It is a universal process of social change. Therefore Rogers's (2003) Model of Innovation Decision Process was chosen in the present study to contribute to our understanding of the core elements for the theoretical frame of reference. With the help of the diffusion research (Moore & Benbasat, 1991) it is possible to chart out elements that are part of the explanation of the research phenomena. Thus, the aim is not to test or to develop the model itself.

The Model of Innovation Decision Process is based on the diffusion of the innovations theory of which the most prominent developer is Everett M. Rogers (2003). His book, Diffusion of Innovations, was first published in 1962, and in this study the fifth edition is quoted. The theory describes the process through which new ideas, practices or technologies are disseminated throughout a social system. Rogers (2003) defines diffusion as *"the process in which an innovation is communicated through certain channels over time among the members of a social system"*. The end results of diffusion are adoption, implementation and institutionalization. An individual or organisation *"adopts an innovation upon the decision to acquire the innovation, implements the innovation by putting it into practice and testing it and institutionalizes an innovation by supporting it fully and incorporating it into typical practice routines"*. (Murray 2009, 110).

The diffusion of innovations theory by Rogers (2003) is appropriate for the present study, because describes the *whole* process of how innovations become diffused and adopted. The visual illustration of the model is presented in Figure 1. The theory has been studied and applied in various academic disciplines, including anthropology, communication, sociology, marketing, political science, economics and public health (Moseley 2004, Rogers 2004).

Rogers's (2003, 170) model of five stages in the Innovation-Decision process is defined as *"the process through which an individual (or other decision-making unit) passes from first knowledge of an innovation, to the formation of an attitude toward the innovation, to a decision to adopt or reject, to implementation and use of the new idea, and to confirmation of this decision."* It consists of five stages. At the *knowledge* stage (1) the individual becomes aware of an innovation and begins to search for some information about it. The knowledge stage is influenced by prior conditions and the decision-making unit, such as the individual's previous practice, perceived needs or personality. At the *persuasion* stage (2) the individual forms an attitude towards the innovation, either favourable or unfavourable. During the *decision* stage (3) the individual either accepts or rejects the innovation. During the *implementation* stage (4) the individual puts the innovation to use. So far the process has been internal but now it becomes external. Finally, the *confirmation* stage (5) is reached when the individuals validate their innovation-decisions. When the innovation diffuses, it may change during the

process. If a change takes place, the stage is called *reinvention* and it may occur during the adoption or implementation.

Bearing in mind the main object of interest, the present study focuses only on the first three stages of Rogers's (2003, 170) model. Furthermore, the emphasis is on the prior conditions and the perceived characteristics of the innovation since the phenomenon is viewed from an individual high tech manager's perspective.
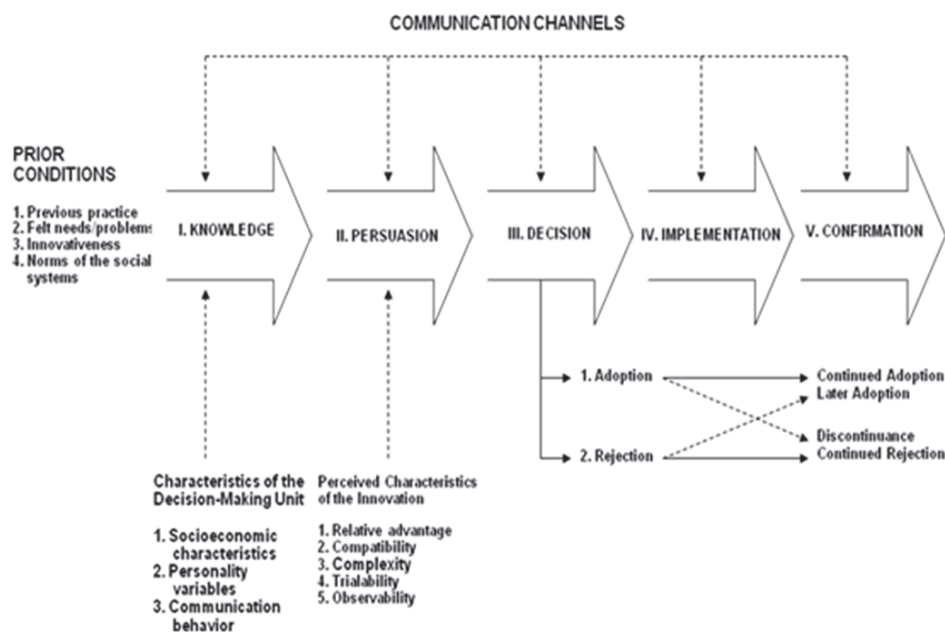
FIGURE 1   A Model of Five Stages in the Innovation-Decision Process
                Source: Rogers (2003, 170)

Creating a brand strategy requires strategic thinking. To provide a background against which strategy theories contribute to develop and define the research problem, three dominant theoretical approaches to modern business strategy, namely 1) the industry-based theory, 2) the resource-based theory and 3) the competence-based theory were examined. The industry-based theory explains the results primarily based on industry factors. In contrast, the resource-based (RB) theory focuses on internal factors leaving, however, an incomplete model for explaining a company's success and growth. The competence-based (CB) theory can be seen as an extension to the RB theory and emphasizes the dynamic state environment. (Hunt & Lambe 2000, 17-24). Among those, a leading management strategist Minzberg (1994, 107) focuses on the strategy-making process, which is the focus in the present study. His definition of strategy-making: "*capturing what the manager learns from all sources (both the soft insights from his or her personal experiences and the experiences of others throughout the organisation) and the hard data (from market research and the like) and then synthesizing*

that learning into a vision of the direction that the business should pursue" is used as one basis in theory development.

In the marketing domain the present study belongs largely to marketing management school of thought. The managerial school has had the most impact on marketing for decades. It is characterized by a decision-making approach to managing the marketing functions and in tandem focusing on the customer. (Lagrosen & Svensson 2006, 373; Vargo & Lusch 2004, 3-4). In addition, since the specific interest is in high tech SME's, the present study is also rooted in industrial marketing school. It represents one of the recent developments in the framework of marketing schools. The principal contributions are the business interaction and network approaches to marketing which are relevant approaches to this study. (Lagrosen & Svensson 2006, 376-377). Although there are crucial differences between the marketing of consumer and industrial products, that is, there are crucial differences between managerial and industrial school of marketing, both approaches are relevant in the present study. The suitability of the approach depends upon what the target audience is and how a high tech SME company handles its business relationships. Therefore, both perspectives are applied in the study.

Since the early 1990's the concept of branding has been widely discussed in the marketing literature. Within the marketing schools of thought branding overlaps at least with those of managerial and industrial marketing. The roots of the early branding literature lay mainly in the consumer mass markets. The focus was on brand management and creation of value and brand equity. (Keller & Lehmann 2006). In contrast to the dominating branding theories, the shift in the present study is moved towards strategic management. The aim is to explore branding not merely as an asset but also as a strategy. This view is also supported in the recent brand orientation literature.

Urde (1999) commences a theoretical discussion and conceptual development of the need for an approach to brands as strategic resources. Urde et al. (2013) see brand orientation as an identity-driven approach where brands are a hub for an organization and its strategy. A typology of brand orientation includes a model of the brand strategy process in which the links between four critical constructs (brand distinctiveness, brand orientation, brand marketing performance and brand barriers) are specified. (Wong & Merrilees 2005). In other words, the model presents a cross-section of the nature of a company's choices. In recent years, there has been an increasing interest in studying brand orientation, although the number of the studies is still small, particularly in the SME context. Brand orientation is measured in terms of whether a brand is seen as a valuable asset and whether it is an essential part of the firm's strategy (Reijonen et al 2012, 699). The research interest has focused on measuring the relationship between brand orientation and a firm's performance (Wong and Merrilees 2008) and firm's growth (Reijonen et al. 2012). However, far too little attention has been paid, to the prerequisites that a firm needs in order to become brand oriented and to how to achieve a brand oriented mind-set.

An orientation with branding as a strategic platform was also employed in this study. Anyway, the present study paves the way to a better understanding of alternative approaches to branding. In comparison with brand orientation, another or supplementary way of expressing strategic role of a brand is by emphasising the link between branding and strategy. Several authors suggest the integration of multiple theoretical frameworks (Hoskisson et al. 1999, 446). The present study aims to propose the conception of a brand strategy by integrating theories of branding and strategic management. Hence, the conception of a brand strategy highlights a dynamic framework and the content of decisions. The research to date has tended to focus on the outcomes of brand management and building, not the process of adoption or implementation. Nonetheless, the aim of the present study is not to understand or describe the conception of brand strategy in high tech SMEs as such. The role of a brand strategy in the present study is the objective of adoption.

Figure 2 is the depiction of the position of the present study within the marketing domain. The relations between other relevant theories and concepts from other disciplines are also being illustrated. It is noteworthy that only the research areas of relevance to the present study are shown. The references in Figure 2 are examples of prior research, however not all-inclusive. More references are introduced in the literature review.
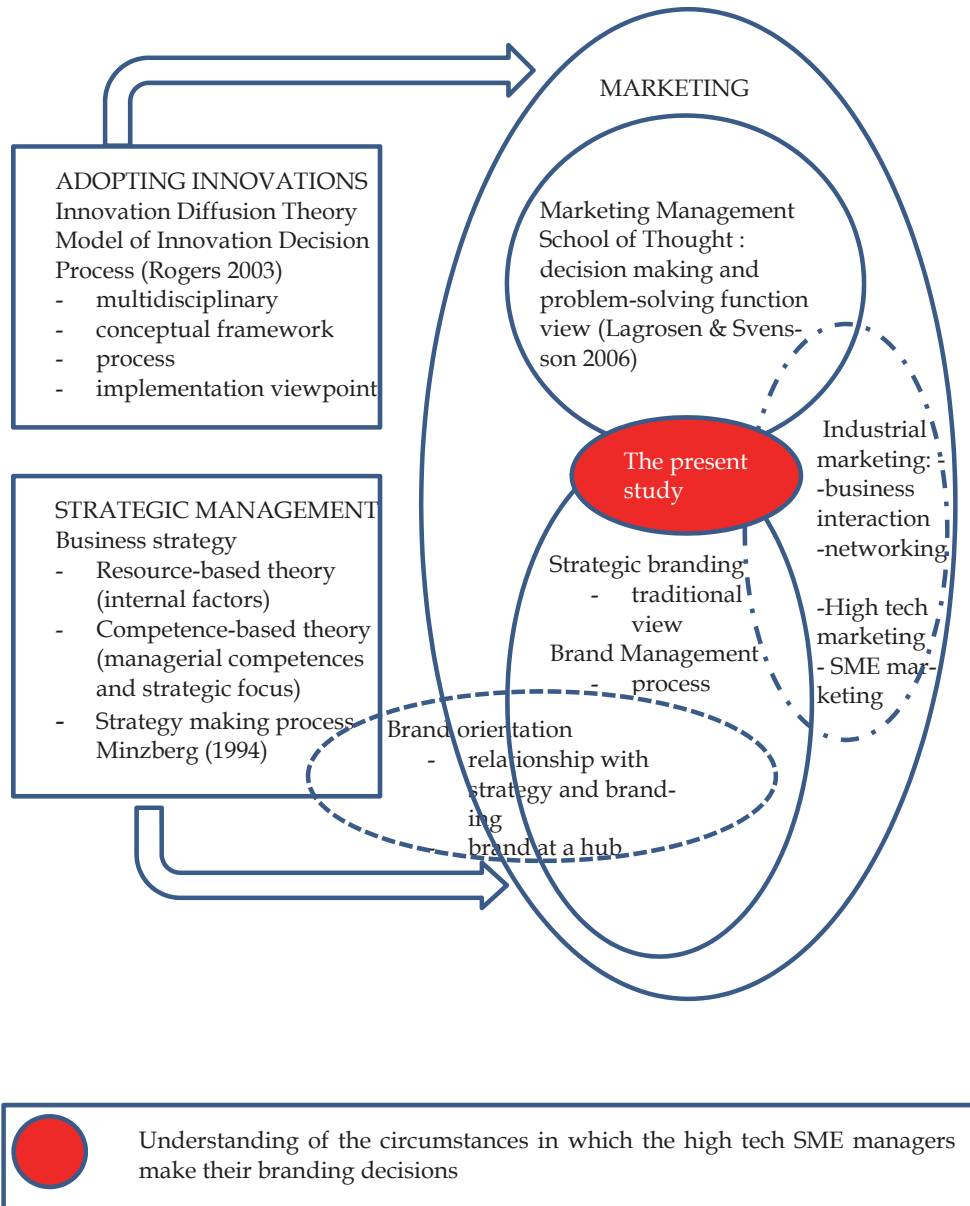
FIGURE 2   Position of the study within the marketing domain and the origins of the
relevant theories, models and concepts

The main contribution of the present study is to strategic branding and brand
management literature by increasing the related knowledge and understanding
about the adoption of a brand strategy in new marketing environments. In ad-
dition, the present study offers a contribution to the brand orientation literature
by discussing the relationship with strategy and branding. Furthermore, this

study contributes high tech and SME marketing literature by increasing understanding of the branding phenomenon in a high tech SME context.

1.3 Research aim and research questions

The present study aims to shed some light on the process through which an individual, in this study a high tech manager, passes from the first knowledge of branding strategies to forming an attitude towards them and to a decision to adopt or reject branding strategies. In other words, this study aims to develop understanding what brand strategy adoption by high tech SME managers is. (adapted from Rogers 2003). The aim of the present study is expressed in the main research question as follows:

What kind of a process is brand strategy adoption by high tech SME managers?

In order to make the main research problem clearer and simpler to understand, supportive research questions were developed based on the related theory. Firstly, in accordance with Rogers's guidelines the main object of interest in this study was also divided into three main parts. The first part, the knowledge stage, occurs when an SME high tech manager becomes aware of branding strategies and begins to search for more information. The stage is influenced by prior conditions and the characteristics of the decision-making unit. Secondly, Minzberg (1994) suggests that the first step in strategy-making is to recognize the main constructs of the phenomenon. More specifically, what the manager learns from all sources and what the primary components are. Constructs are concepts that cannot be observed directly but are created by the researcher as a result of literature analyses. The first part is expressed below as the first supportive research question of the study.

    1.1 What are the factors that enable a high tech manager to become aware of a brand strategy?

During the second stage, persuasion, the manager formulates an attitude towards the innovation, in the present study an attitude towards a brand strategy. According to Minzberg (1994, 107), the manager has to synthesize learning into a vision of the direction that the business should pursue. Rogers (2003) identifies, based on a review of several thousand innovation studies, five primary characteristics of innovations that influence their rates of diffusion: relative advantage, complexity, compatibility, trialability, and observability. The second part, the persuasion stage, is expressed below as the second supportive research question of the study

1.2 How do the perceived attributes of a brand strategy affect its adoption?

The decision stage occurs when an individual adopts an innovation upon the decision to acquire it. In the present study an SME high tech manager makes a decision whether to accept and adopt a brand strategy or reject it. The third part summarizes the above two stages and describes the beginning of the adoption process of a brand strategy by a high tech manager and is expressed below as the third supportive research question of the study

1.3 What are the activities that lead to a choice to adopt or reject a brand strategy?

The aim of the present study was to enhance the forming of scientific knowledge involving both the generation and evaluation of explanatory hypotheses, theories and research questions for future research. The major motivation was to contribute to the knowledge of adopting branding strategies in new marketing environments and increase the related knowledge and to understand more about the adoption of branding strategies. The existing branding literature addresses this issue only at an insufficient level. Understanding the factors that affect the adoption of branding strategies highlights the companies needs and helps them to develop their marketing and branding practises.

First, an attempt was made to shed light on why brands are more established in some marketing environments than in others. However, the focus of this study is not on brand leveraging (i.e extending brands into new product classes) but on how to extend branding as a marketing strategy into a new environment, such as that of high tech marketing. The reasons behind the branding decisions reveal much about the adoption of branding strategies in companies. The existing high tech marketing literature indicates that high tech SMEs do not build up brands (Keller 2008, 14; Temporal & Lee 2001, 57, 62: Ward et al 1999). Anyway, the existing literature and research is scarce and limited. The present analysis of the adoption process also attempted to reveal, if branding was a relevant strategy for all companies or if they rejected branding strategies for a reason.

Secondly, the results can set a context for a deeper understanding of the branding phenomenon in a high tech environment. I attempted to shed some light on the circumstances in which high tech marketers make their decisions. The relevance of learning more about high tech branding with a theoretical approach becomes obvious when one recognizes the companies' struggle's with in trying to commercialize their products. VICTA (2007, 12) report points out that many Finnish start-ups are operating with insufficient resources and cannot source the best talent to help commercialize their technology. Understanding the factors that affect the adoption of branding strategies highlights high tech companies' needs and helps them to develop their marketing and branding practices. This kind of knowledge that has its roots in academic research but can

and is supposed to work in actual business situations with their everyday realities and limitations, appears to be contextually and timely relevant.

1.4   Personal interests

The researcher is part of a qualitative research process. Gummesson (2000, 14-15) points out that the concepts of access and preunderstanding are significant and challenging to the researcher. He defines access as *"opportunities available to find empirical data and information"* and the concept of preunderstanding as *"people's insights into a specific problem and social environment before they start a research program"*. Traditionally, academic researchers form insights into a specific problem in the form of theories, models and techniques and only seldom have personal experience of working in a company in a position where responsibility for results and risk taking are demanded. However, the researcher needs to go below the surface, and my previous experience and current position contribute to this understanding. The third challenge to the researcher, according to Gummesson (2000, 16-17), is quality. The concept of quality is difficult since there is a wide range of possible criteria depending on the viewpoint, which can be academic or business-related. In order to understand the issue under study, the researcher has to take the context seriously (Gibbs 2007, xi).

During the research process I have come to understand that my *tacit knowledge* (we know and do things without actually being able to explain how) has guided me to develop both the research problem and the results. (Kogut & Zander 1992). The aspects I consider worth discussing and drawing attention to in the present study are somehow related to my pre-understanding but also to my future. My personal motivation for studying branding strategies in high tech companies was aroused by the conflict between my past and current work experience that can be categorised in two types of experiences.

The first type is practical because I worked in the consumer goods industry in various, international marketing and sales duties. During those years, I was in a situation where I had to adopt a brand strategy in a marketing environment where the brands were not strongly established at the time. I was appointed as the first brand manager in an organisation which lacked the knowledge resources of how to manage a brand. I had no previous experience or education on brands since the theories of branding were not available when I studied at the university. Nevertheless, a brand strategy was adopted successfully among the members of the organization, from top management to production. According to my experience, the brand strategy adoption contributed to major changes in the firm's orientation and culture, including managers and other stakeholder's involvement and commitment. Thus, it enhanced the company's financial performance and competitive position.

My second type of experience is from the pedagogical and academic environment. Currently I work as a senior lecturer in the International Business programme at JAMK University of Applied Sciences. The focus of our pro-

gramme is on high tech industry, and part of my work is tutoring projects and thesis designed to develop high tech companies' marketing. When moving from the practical to the academic environment, I soon noticed the absence of branding literature and academic research in high tech marketing context. Furthermore, when the companies heard about my background, they asked for my advice in their branding efforts. During my pedagogical studies I came to understand the importance of reflection in experimental learning. When I reflected on my experiences in the consumer goods industry, I began to outline and conceptualize the steps and phases that were taken from the time of merely producing of goods to building up a brand.

According to my personal experience, the trigger to start the process was motivation. The changes in the environment such as the increasing decision power of the retailers and the intensity of the competition demanded fundamental changes in order to survive. At the same time the need for more knowledge arose. The role of knowledge was essential from three different perspectives. First, it helped to understand the advantages of strong brands and to convince why they were worth considering. Already at a very early stage, it was obvious that what we were about to do would take a great deal of time and require a great deal of work and costs, and, therefore a strong motivation base was important. Secondly, knowledge was an important ingredient in brand strategy creation, because, strategic thinking promoted the brand. We, the managers *decided*, what the brand was, what the company was and what the role and relationship of the brand owner were. Strategic thinking would not necessarily have required factual knowledge about branding but the knowledge, in my opinion, guided us to make decisions that later proved to be successful and could be regarded as the "correct choices". Moreover, we needed to challenge the company's traditional view of formulating the strategy and as well as not only the existing marketing strategy but also the business strategy. We had potential choices of strategies from product-origin brands to a corporate-brand. Nevertheless, our choices and decisions affected on the business strategy. This understanding had a great influence in formulating the phenomenon for the present study. Thirdly, knowledge enhanced the actual implementation inside and outside the organisation. Patton (2002, 49) reminds that major contributions to our understanding of the world have come from scientists' personal experiences. Closeness does not make bias and the loss of perspective inevitable and distance is no guarantee of objectivity. This encouraged me to begin this path of understanding more.

All in all, the key drivers that motivated me to select the research phenomenon were curiosity and the possible outcome. I wanted to understand and provide insights of the nature and scope of branding in high tech industry since, I was curious to find out, why high tech SMEs had not adopted a brand strategy. Moreover, to be able to develop my work and help high tech companies to be successful, I needed more understanding and knowledge of the phenomenon. Due to my positive and successful branding experience in the consumer goods industry, I wanted to reflect on and have a dialogue between my past and fu-

ture. The process was also greatly helped by the fact that in my current job I have the opportunity to access empirical data and information.

Gummesson (2000, 20) sees that it is desirable for the researchers to account for their personal values and share their values with the readers of their studies. However, the threat related to my personal experience and values is that I may express my personal views on different subjects. Therefore, it is important to be aware of this and discuss it in an open manner.

1.5 Outline of the thesis

The thesis consists of three main parts. First, the basis for a theoretical framework is provided. The contents are from Minzberg's (1994, 107) definition on the strategy-making process and Rogers's (2003) diffusion of innovations theory. However, the guidelines for a theoretical framework structure are an adaption of Whetten's (1989) ideas. The theory development begins with charting the factors that are part of the explanation of the phenomena of interest. In the present study the constituent elements of the theoretical framework are described in chapters 2, 3 and 4. This study rests on four fundamental constructs which form the theoretical frame; 1) the environment and previous experience setting the prior conditions (="*hard data*") which affect the decision makers, 2) the role of a brand as a strategic concept, 3) the perceived characteristics of a brand strategy and 4) a social system in which the branding strategies are adopted and which consists of individual, informal groups organizations and/or subsystems. In choosing the four fundamental constructs I followed the theoretical and methodological qualitative approach. In qualitative research the concepts are developed and refined in the process of research and that was also the case in this study. (Gibbs 2007).

Chapter 2 and paragraph 1.6 provide some background information which is called *"hard data"* in Minzberg's (1994, 107) definition. One important source that affects the manager's decisions is the surrounding environment and its communication channels. Since the focus in this study is not on any particular industry, the high tech environment is described at the general level. The other important source is the branding literature. In chapter 2 the branding literature discussion is narrowed specifically to what has recently been the focus of the most important academic brand-related discussions such as brand equity viewpoints and strategic brand-management decisions. Moreover, the strategic role of the brand is emphasized. Adopting a brand strategy is a decision made by the managers, and creating a successful brand requires strategic thinking. Integrating Mintzberg's five different definitions of strategy and Teece et al's (1997) dynamic capabilities approach and branding theories enable us to identify and emphasize the strategic role of a brand in a company.

The target in chapter 2 is to give significant background information to understand the prior conditions of the adoption process, and the context is approached in other chapters as well. By narrowing the discussion in each chapter

to the special challenges of high tech SME's and/or branding it is possible to create content that is in line with the focus of this study. The value of the literature review is not to replicate what has been written before but to identify the many dimensions of each construct and select the most appropriate one that will help to determine and understand the adoption of a brand strategy.

In chapter 3 the discussion is focused on the perceived characteristics of branding strategies. The emphasis is on the financial motivation, relative advantage to build up brands. Individuals only seldom expose themselves to messages unless they first feel a need for the innovation. In addition, unless the innovation is perceived relevant, the exposure to messages has only a little effect. (Hassinger (1959) in Rogers 2003, 171).

The target for chapter 4 is to characterise the role of all members of the organisation as a source of learning. The initiative for branding strategies may come from a manager but a single person cannot build a brand on her/his own. Instead, the whole company should be focused on brand management. Therefore, it is also relevant to review the marketing management literature so as to be able to understand brand management as an essential marketing concept. All the marketing mix variables are used to create, manage and maintain brands.

Building up a brand requires a great deal of knowledge, which is, according to knowledge-based scholars (Grant 1996), the most strategically important of the firm's resources. Knowledge of brand building in a high tech environment helps companies to develop brand strategies that meet the customer's needs and create differentiation. In other words, knowledge throughout the organisation helps companies to build successful and strong brands. According to Minzberg (1994), the soft insights based on the manager's personal experiences are one source for learning and thus in chapter 4 the discussion is also focused on a high tech manager's role. It increases also our understanding of previous practice of high tech managers.

The above mentioned four constructs should be considered as part of the explanations of the research problem and interest. The theoretical frame of this study helps to thoroughly understand the adoption of a brand strategy process. The results of the work provide a mechanism to understand what changes are needed in order to enhance the adoption of branding strategies in high tech SME's. It is possible to identify general attributes and define the characteristics which affect the rate of adoption of branding strategies. An application of the diffusion of innovation theory is the foundation for conceptualizing the adoption of branding strategies in high tech SME companies.

Finally, the practical applicability is considered. The adoption of branding strategies is part of the process of brand management implementation and a research area which has not received substantial attention. However, I would like to emphasize that the disadvantages and challenges of branding strategies are not approached in this study. They are left for the future researchers.

The structure of the study is clarified by the visual presentation in Figure 3. The theory building blocks are illustrated by using boxes and the links between the factors are illustrated by using arrows to connect the boxes.
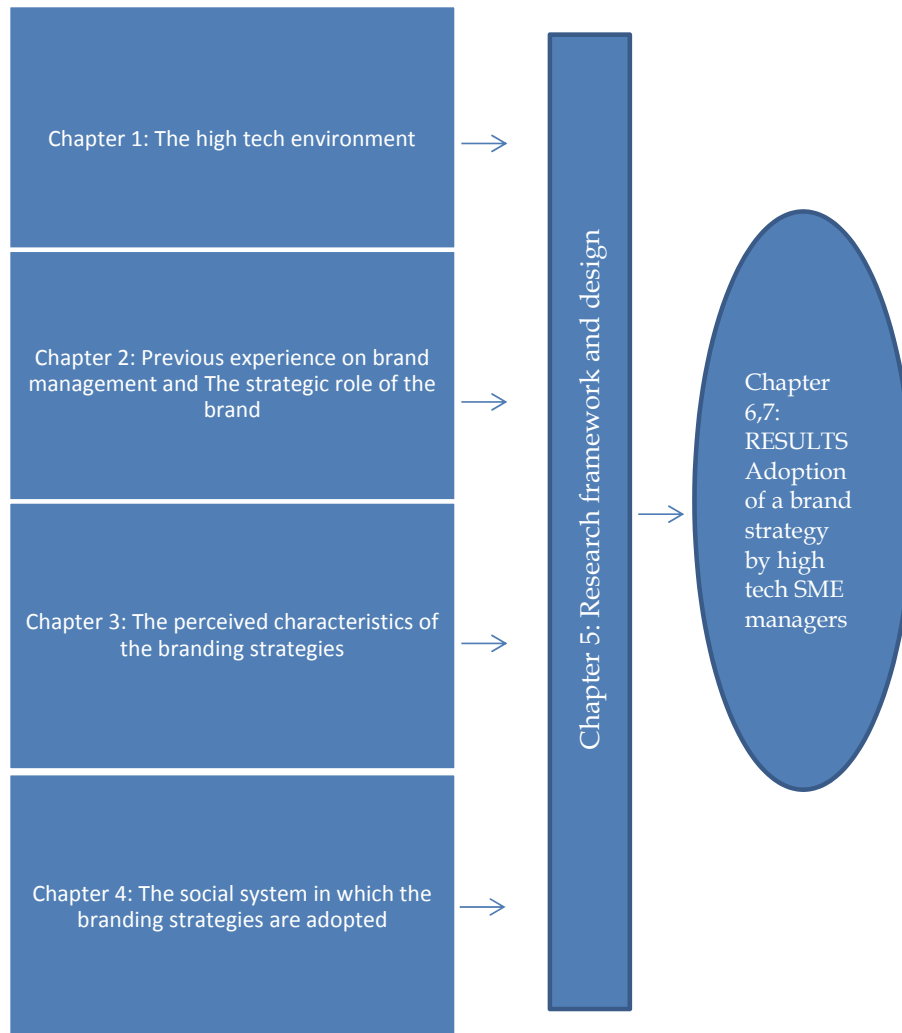
FIGURE 3   The sources affecting the adoption of a brand strategy by high tech SME managers

1.6   The definition and description of high technology

This paragraph begins by shortly defining and describing the context of the present study: the high technology environment as a business and marketing environment. The objective is to describe why it is important and relevant to study the high tech companies but also to introduce the first source, *"hard data"* (Minzberg 1994) or *"prior conditions"* (Rogers 2003) that affect the adoption of a manager's brand strategy decisions. All companies should pay attention to and, in their own way acknowledge the current and anticipated changes in the market and activities of competition. The forces in the environment affect a company, sometimes only slightly or sometimes directly. According to marketing management thought, marketers must be aware of the five major environmental forces: political/legal, economic, ecological/physical, social/cultural and demographic and technological. In order to carry out their analysis, planning, implementation and control responsibilities, marketing managers need a marketing information system (MIS). Bearing in mind the objectives of this study, the focus is only on those sources that affect the manager's branding strategy decision.

The term high tech does not only refer to a certain industry. The term is also used to describe occupations and products. A high tech company usually employs a "high" proportion of scientist, engineers and technicians and spends a "high" proportion of its expenditures on research and development. Some employees focus on R&D, increasing scientific knowledge and using it to develop products and production processes; others apply technology in other areas such as design of equipment, processes and structures. Others are focused on computer applications as well as on sales, purchasing and marketing. Finally, we should not forget quality assurance and the management of these activities. Most of the high tech industries are expected to grow faster than the industry average. This is noteworthy because the industries employ such a high proportion of high salary personnel. (Hecker 2005, 57-58, 61-62). Technology-oriented employees apply their education and knowledge to lead their company and simultaneously the industry that the company represents and, eventually, contribute to the growth of the national product.

The concept of "technology" has been defined in various ways. The defining characteristics of this concept are Knowledge, Skills and Artefacts, in summary: useful know-how. The British Broadcasting Corporation's definition of technology, adapted from BBC Online, "Reinventing the Wheel" (www.bbc.co.uk/education/archive/wheel) *"The practical knowledge, know-how, skills and artefacts that can be used to develop a new product or service and/or a new production/delivery system. Technology can be embodied in people, materials, cognitive and physical processes, plant, equipment, and tools".* (Moriarty & Kosnik 7, 1989).

The word technology comes from the Greek word "techne", meaning art or craft, which implies a set of crafts, techniques or a collection of methods that can be used for building, manufacturing or producing. This definition can be

broadened to mean *"that which humans use to control their environment" or "the ways that people bring nature under control."* Although the word technology comes from Greece, it was not part of the Greek vocabulary. In fact, the word did not even exist until the nineteenth century. Thus, even though technology has been used ever since people inhabited the earth, it has actually been called technology only for the last hundred years. In modern times, technology is also seen as the application of science, where a scientist conducts research, develops theories and writes a journal article, after which the scientist or someone else may commercialize the product of science into something useful. (Mohr 2001, 5).

Furthermore, the concept of "high tech" has various definitions. Some of the characteristics of technology can be related to and explain specific challenges for firms operating in "high tech markets". For example, the U.S Congress, Office of Technology Assessment (1982) defines high-technology industries as" *(those) engaged in the design, development, and introduction of new products and/or innovative manufacturing processes through the systematic application of scientific and technical knowledge."* (Mohr 2001, 5)

Most government definitions (e.g. The Organisation for Economic Cooperation and Development (OECD), The National Science Foundation, U.S. Bureau of Labor Statistics) of high technology classify industries as high-tech based on certain criteria such as

- high proportion of scientist, engineers and technicians (science, engineering, and technician occupation intensity)
- high proportion of R&D employment (R&D employment intensity)
- production of high-tech products, as specified on a Census Bureau list of advanced-technology products
- use of high-tech production methods, including intense use of high-tech capital goods and services in the production process. (Hecker 2005, 58)

Definitions based on these specific criteria do have shortcomings. The range of technical innovations in industries classified by the bureau of Labour Statistics as R&D intensive is extremely wide including some industries whose products are modified only incrementally (e.g., cigarettes) and in which new technological breakthroughs have not been seen in years. The classification may include industries in which the most of the output is standardized and produced in large volumes by relatively unskilled workers. (Mohr 2001, 5).

Nations seek to develop high tech industries for many reasons. The United States has been the leading producer of high tech products for the 14 or the 15 years examined. In 1995 the US share was 32 % of the world's production. Japan has been losing its relative share steadily since 1991. For example, its share of the world's production was 23 % in 1995. The European nations' share of the global high tech production is much lower. China has gained the most because in 1995 its share of the world's high tech production was nearly 6%. (Rausch 1998). High tech companies are innovative, they tend to gain market share, create new product markets and use resources more productively. They are also associated with value-added production and success in the global markets. The

effects of R&D conducted by high tech companies benefit also other business areas. They can lead to business expansions and creation of new high-salary jobs. (Rausch 1998).

I used my own country, Finland, as a case example in this study. Being a Finnish citizen one cannot ignore noticing the relatively short but successful economic development in Finland. The success of today's Finland is based on many factors, but one of them is being successful in high tech business. (High-Tech 16.4.2008). Finland has a reputation of being one of the most successful corporate-driven innovation economies in the world. The success is demonstrated by the two illustrations below (Figure 4 and Table 1). First, one measurement of an innovation's success is to compare the level and growth of high-tech exports. Countries that invest in their innovation environments have also succeeded in high tech export markets. According to European Union Eurostat statistics, in 2009 the three world leaders in exports of high tech products were China (21,6 %), the EU (15,9 %) and the United States (13,5 %).

In Finland, the share of high-tech exports as share of total exports was the fifth highest in the EU in 2007. Finnish high technology exports in 2007 totaled 11.7 billion euros which was 17,5 per cent of the total exports of goods. However, the share has decreased in recent years because of the difficulties in the Finnish telecommunication sector. In 2011 the share was 8 per cent. (Hyvärinen 2012, 22).
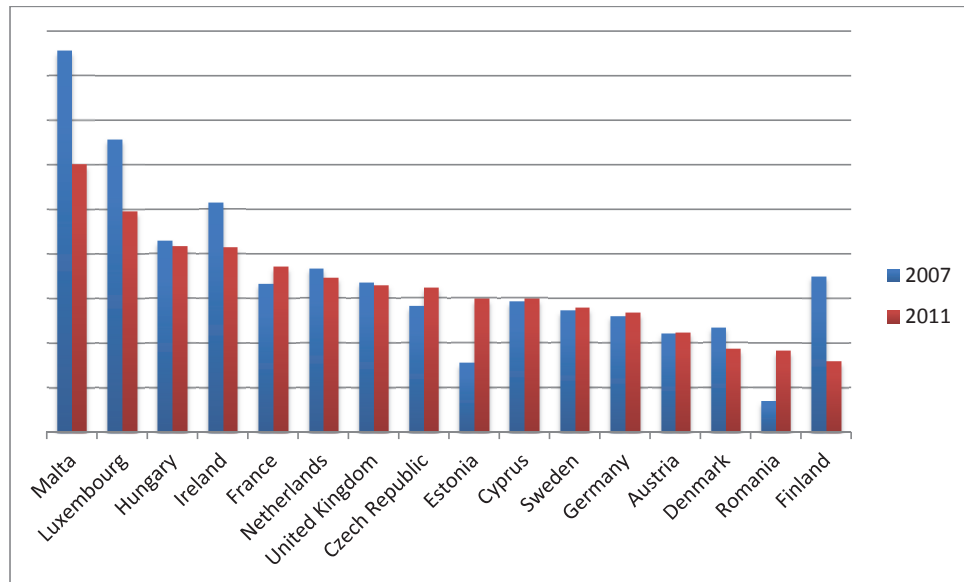
FIGURE 4   The share of high tech exports in 2007 and in 2011 in some EU countries
            Source of data: Eurostat / last update 12.4.2013

Secondly, according to the World Economic Forum (2012-2013) top 10 rankings is dominated by European countries. Along with the US three Asian countries appear in the list. In 2009-2010 Finland was the sixth most competitive economy in the world, but in 2012-2013 has moved up to reach 3rd position. The three the most competitive countries were Switzerland, Singapore and Finland.

TABLE 1   The Global Competitiveness Report 2012-2013

Rankings 2012-20103 Top Ten			
Rank	Country	Score	RANK 2009-10
1	Switzerland	5.72	1
2	Singapore	5.67	3
3	Finland	5.55	6
4	Sweden	5.53	4
5	Netherlands	5.50	
6	Germany	5.48	7
7	United States	5.47	2
8	United Kingdom	5.45	
9	Hong Kong SAR	5.41	
10	Japan	5.40	8

Source: World economic forum 2012 - 2013

The growth of the Finnish GDP comes mainly from high tech. According to the new growth model, economic growth is rooted in education, research and technology (TEKES publications 2008). GDP per capita in Finland has grown faster than in the OECD on average. (TEKES publications 2008; Sources for Finland ETLA 2006 and for OECD: OECD). In other words our well-being, our jobs, education and ultimately, our standard of living and wealth rely on success in high tech. High tech companies drive our economic activity. However many experts (e.g. Veli-Pekka Saarnivaara, Director General of Tekes, the Finnish Funding Agency for Technology and Innovation, Esko Aho, President of Sitra, the Finnish Innovation Fund, and a past Prime Minister, Erkki KM Leppävuori, President & CEO of VTT Technical Research Centre of Finland) point out that also other countries are now powering ahead. The future success is very much dependent on having a strong skill and expertise base to build on. (High-Tech 16.4.2008). Somehow the Finnish system fails to generate high-growth start-ups and support their growth to a global level. (VICTA 2007, 3). The investment in R&D per capita ranks among the highest (currently nr. 3 behind Israel and Sweden), and Finland is nr. 1 in the ranking of global competitiveness (WEF) (VICTA 2007, 2). Although Finland is one of the most research intensive countries in the world, many Finnish start-ups are struggling in commercializing their innovations. (VICTA 2007, 12). Many academic and industrial experts agree that it is common that small high-tech start-ups lack marketing expertise or relegate the role of marketing to a second-class status. (Mohr 2001, 24).

All in all, there is a clear need for change in Finland and this study aims to be part of the change. The aim of the VICTA Tekes project (2007) was to find new ways to improve the Finnish innovation environment. The VICTA project suggest that the results can be achieved by shifting the focus from quantity to quality by moving from project-based development to efficient long-term structures, by creating structures to enable the success of commercial players and by attracting much more international talent into the Finnish early-stage community (VICTA 2007, 4).

2 OVERVIEW ON BRANDING RESEARCH

As mentioned before, Rogers's (2003) diffusion of innovation theory is used as one of the main elements of the theoretical framework for the present study. The four main elements of diffusion are (1) an innovation, which is (2) communicated through certain channels (3) over time (4) among the members of a social system. All the elements are introduced more in detail throughout the whole study in the high tech context.

Paragraph 2.1 introduces the first element of Rogers's theory, innovation. In the present study the innovations for a high tech SME manager are brands and branding strategies. Oslo Manual's (OECD 2005) definition of innovation was introduced already in section 1.1. Rogers (2003, 12-18) defines innovation as *"an idea, practise, or object that is perceived as new by an individual or other unit of adoption."* In TEKES publications (2008) innovation is defined as *"knowledge and competence utilised in a manner that is new in commerce or society"*. Branding in high tech context fulfils these conditions. Whether the idea is "objectively" new matters only a little from the perspective of human behaviour. If the idea seems new to the individual, it is an innovation. "Newness" of an innovation may be expressed in terms of knowledge, persuasion or a decision to adopt it.

The focus is then moved to reviewing traditional branding literature. By studying branding literature we can understand more about the environment related to the traditional marketing view of it. Moreover, all that is missing from a high tech viewpoint enables us to predict what prerequisites high tech managers have in adapting and choosing branding as a strategy. The review of previous research provides us a framework but also a reflection, concepts, structure and direction for continuation. After this the discussion is moved towards the perceived characteristics of branding strategies. Rogers (2003, 223) points out that the individuals' perceptions of the attributes of an innovation determine the rate of adoption.

2.1   Previous research and literature on brands and branding

The literature of branding is relatively new compared to the history of brands. The roots of today's brands lie in the Greek and Roman times, and a number of brands that were introduced 200-300 years ago are still available today (Twining 1706, Drambuie 1745, Schweppes 1798, Cointreau 1849, Coca-Cola 1886, Pepsi-Cola 1898, Aspirin 1899) (Riezeboz 2003; Kapferer 1994). However, in order to track the roots of branding literature we need to go back only a little more than 100 years. Merz et al. identified four different brand eras in terms of how brands were viewed. The first brand era is called "Individual Goods-Focus" (1900 – 1930s). When the concept of brand was first introduced into the marketing literature, brands constituted a way for customers to identify and recognize products. Thus, brands were viewed as identifiers. Firms showed their ownership but also took responsibility for their goods. Brand value was seen as being embedded in the physical products. The customers were passive in the brand value creation process. (Merz et al. 2009, 328-329).

The second brand era was called "Value-Focus" (1930 – 1990s). The literature begun to view brands as images and the focus of brand value creation was on the creation of this image. The symbolic value of brands was discovered during this era. In other words, it was acknowledged that people buy things not only for what they can do, but also for what they mean. (Merz et al. 2009, 330-333).

During the "Relationship-focus brand era" (1990 – 2000s) brand scholars focused on the role of customers in the brand value creation process. The marketing academics examined brand from three different viewpoints: brand as knowledge, brand as a relationship partner and brand as a promise. All in all, during this era the customer was moved into the center of the brand value creation process. (Merz et al. 2009, 333-337).This can be observed in the brand modelling literature where the brand value was measured from a customer-based perspective (Keller 1993; Keller and Lehmann 2006).

From 2000 onwards the attention in branding literature moved towards stakeholders' perspective (Stakeholder-focus brand era). The dominant thinking was shifted towards the brand community literature. A brand is viewed as a continuous social process and value is created and dynamically constructed through social interactions among different stakeholders. (Merz et al. 2009, 337-342). Table 2 shows the summary of Merz et al. analysis of the four different brand eras and the evolution and explanation of branding literature. In the discussion column I bring the perspective of high tech SMEs into the analysis.

TABLE 2   Evolution of the branding literature and discussion from viewpoint of the present study

Brand Era	Evolution of Branding Literature	Explanation	Discussion from the viewpoint of the present study
1900s–1930s: Individual Goods-Focus Brand Era	Customers and brands constitute operan*d* resources. Brand value is embedded in the physical good and created when goods are sold (output orientation). Brand value is determined through value-in-exchange.	The Individual Goods-Focus Brand Era takes a Goods-Dominant Logic perspective to branding.	Argumentation: One key problem within this view is that branding is not seen relevant at the early stage of product development. Over-looks the challenge how to brand an idea or innovation. Context-view: Since the benefits of the products are emphasized, it is compatible with high tech managers' views.
1930s–1990s: Value-Focus Brand Era Functional Value-Focus Branding	Brands constitute operan*d* resources. Brand value is determined through value-in-exchange.	Brands add functional value to any market offering when exchanged in the marketplace.	Argumentation: A considerable amount of literature has been published on the functional and symbolic value of brands.
Symbolic Value-Focus Branding	Brands begin to be viewed as operan*t* resources, but brand value is still being viewed as determined through value-in-exchange.	Brands stand on their own.	Context-view: It is difficult to communicate and understand a technology-based product and come up with an understandable value-proposition.
1990s–2000s: Relationship-Focus Brand Era Customer-Firm Relationship Focus	Brand value is determined through customers' perceived value-in-use.	Customers constitute co-creators of brand value.	Argumentation: Points of parity between products increase, and it is difficult for a customer to per-

		Brand value is the perception of a brand's use value collectively determined by all customers.	ceive the difference. Moreover, the ingredient brand perspective is under-theorized.
Customer-Brand Relationships Focus	Brand value creation is relational (process orientation).	Brand value is co-created through affective *dyadic* relationships that customers form with their brands.	Context-view: Since value is uniquely determined by the beneficiary, difficulties arise when an attempt is made to implement the policy. High tech SMEs have insufficient resources for marketing.
Firm-Brand Relationship Focus	External and *internal* (employees) customers constitute operan*t* resources.	Internal customers provide a point of difference. Through their direct and indirect interaction with the external customers, they constitute co-creators of brand value.	Argumentation: There is still a need to develop a framework for the strategic brand management process and the strategic role of a brand. A brand plan can be a business plan including all stakeholders.
2005s and Forward: Stakeholder-Focus Brand Era	*All* stakeholders constitute operan*t* resources.	All stakeholders form network relationships with brands and interact socially with other stakeholders. All stakeholders co-create brand value.	Argumentation: All economic and social actors are resource integrators. This thought leads to a notion that branding may be different in different contexts, network relationships and with different types of products. There is a need for literature and empirical research on branding extending to a new marketing phenomenon.

Source: adapted from Merz et al. 2009, 339

The branding literature analysis by Merz et al. (2009) emphasises that the meanings of brands and branding have been evolving over the decades. Although it is valuable to organize branding literature into eras, there are, however, other approaches to studying and organizing branding literature. Brodie and de Chernatony (2009) published a paper in which they focused on the interface between theory and practise. The importance of *context* was raised from their analysis. The majority of branding research has been in the consumer goods industry (Brodie & Chernatony 2009, 95). Brands and literature have emerged in those industries (such as banks, consumer goods and car industry) where the competition intensity has been the hardest (Aaker & Joachimstahler 2000). In their literature review Keller & Lehmann (2006) seek to identify what has been learned from an academic perspective on branding. Apart from highlighting relevant branding research they also put emphasis on areas of future research. Five branding areas are raised for marketers and managers, which align with the brand-management decisions: 1) developing brand positioning, 2) integrating brand marketing, 3) assessing brand performance, 4) growing brands and, 5) strategically managing the brand. The emphasis has been on brand extensions and development processes of brand equity. Less effort has been directed towards financial, legal and social impacts of brands. According to Keller & Lehmann (2006), to move branding towards rigorous science a general model needs to be tested and calibrated. They see that only a little progress has been made in estimating the financial impact of marketing activities.

Although Keller & Lehmann's (2006) literature review was extensive, it consists mainly on articles published in leading US- based journals. Brodie & de Chernatony (2009, 95) mention that within this stream of research the theoretical framework is a marketing management perspective and that the dominant context is consumer markets. Vargo and Lusch (2004) highlighted the need for more attention to the role of brands from a service perspective. They refer to it as the "service centric logic". Brodie & de Chernatony (2009) also suggested a broader theorizing about brands and the inclusion of three new perspectives: service, relational and social in addition to the traditional managerial perspective.

All in all, the aim of the new conceptualizations of branding theories (Brodie & de Chernatony 2009) was to challenge the traditional marketing management thinking. Their focus was on the interface between theory and practice in order to ensure managerial relevance. As a conclusion, they suggest that the new emerging theories on branding be integrated with the traditional marketing management perspective. This approach was also adapted in the present study. Hence, the discussion in paragraph 2.3 refers to the emerging theories on brands as a strategic platform and to the strategic management literature. Furthermore, the present study participates in a debate whether branding is relevant for all companies (e.g SMEs) and suitable in new contexts (e.g high tech) in paragraph 2.4. Finally, Brodie and de Chernatony (2009) suggest revising the traditional definitions of a brand. In the next section, the focus is on the evolvement of brand definitions.

2.2 The scope of brand definitions

In order to understand a theory of branding and to set the boundaries for the present study, it is beneficial to explore the main concepts and their definitions. In the three Tables (3-5) below, key concepts of brands and branding are shortly defined.

There are several approaches to categorizing brands. The categorization of the brand management process by Capon et al. (2001, 220-224) is presented in paragraph 3.2.1. A very broad, but a very commonly used categorization is presented in the following Table 3. However, such broad categorization, tends to overlook the fact that brand is a multidimensional concept. In addition, from the viewpoint of this study the categorization adds only a little to the adoption theory since brand is seen as an outcome of strategic decisions (either conscious or subconscious decisions).

TABLE 3   The main categories of brands

Concept	The definition	Function of the brand
Product	Tangible items which people can touch and feel	Build a halo around the product
Service	Experience	Branding can decorate the experience
Corporate brand	Manifesting itself in distinct forms in different circumstances. Cannot be touched or felt	Can manifest multiple product categories

Source: Raj and Choudhary 2008, 20

The literature review in the present study shows that the definitions of a brand and brand related concepts have evolved during time. De Charnatony and Riley identified twelve themes already in 1998 when they analysed different brand definitions, and the concepts have evolved since. Therefore, only the relevant ones from the viewpoint of the phenomenon were selected for Table 4.

TABLE 4   Definitions of brands

Source	Definition	Critical analysis
AMA (American Marketing Association)	*"A name, term, sign, symbol or design, or combination of them which is intended to identify the goods and services of one seller of group of sellers and to differentiate them from those of competitors."* (in Kotler 1991, 442).	One of the most commonly referred definitions of brand. Represents the traditional marketing management thinking.
de Chernatony (2001)	A brand should be considered *"to be a promise of the*	Services branding, unlike product branding, is more

	bundle of attributes that some-one buys".	about internal consistency.
Schindehutte, Morris and Pitt (2008).	*Brands have five different roles (stages): identity, trustmark, experience, lovemark and story. Each role can be evaluated from two viewpoints, the customer's or the marketer's viewpoint*	One of the recent definitions.
The Chartered Institute of Marketing (UK)	*The set of physical attributes of a product or service, together with the beliefs and expectations surrounding it - a unique combination which the name or logo of the product or service should evoke in the mind of the audience.*	Emphasizes the complexity of communication. A brand is a product or service whose dimensions differentiate it in some way from other products or services (=positioning) designed to satisfy the same need.

The above AMA definition (see Table 4) implies that whenever marketers create a new name, logo or symbol for a new product, they have created a brand. However, it captures the consumers view (Keller 2008, 2). Alternatively, a brand can be viewed as a holistic, emotional and intangible experience. (Kotler et al. 2009, 426). Ambler and Styles (1997) align with this view and also see brands to be perceived within the scope of the "holistic approach" as opposed to the "product plus approach". De Chernatony (2001) places more emphasis on managing the total services brand experience and is more about social processes. It stresses the need for accepting the brand inside and outside the organisation. The Charted Institute of Marketing definition of a brand refers to positioning and, thus, to some extent to a brand's strategic role in the organisation. Some authors have attempted to define brand from a strategic perspective. However, there is still a need to further conceptualise it.

What we know about brand definitions is largely based upon academic literature. Empirical studies that investigate the perceptions of customers or managers on brand definitions are scarce. Moreover, according to Keller (2008, 2-4), there is a lack of the industry's definitions of a brand in literature. Understanding the gaps in literature and the differences between definitions is important (and also the foundation for understanding the objectives of this study) since the disagreements and guidelines about branding usually revolve around the brand term and definition. (adapted from Keller 2008, 2-4).

Furthermore, in Table 5 more brand-related concepts that possess strategic dimensions are shortly defined.

TABLE 5   Definitions of brand-related concepts

Concept	The definition	Critical analysis
Brand identity	Conceptualised as a brand element that the brand manager aspires to create and develop composed of different dimensions (Aaker 1996; Kapferér 1997)	Dimensions of brand identity vary depending on the author
Brand equity	*"a set of associations and behaviors on the part of a brand's consumers, channel members and parent corporation that enables a brand to earn greater volume or greater margins than it could without the brand name and, in addition, provides a strong, sustainable and differential advantage"* The Marketing Science Institute (MSI) (source: Srivastava & Shocker 1991, 5).	Sees brand as an intangible asset and facilitator. Brand value can be measured.
Customer-based brand equity	*"as the differential effect of brand knowledge on consumer response to the marketing of the brand. Brand knowledge is conceptualized according to an associative network memory model in terms of two components, brand awareness and brand image."* (Keller 1993, 8)	A commonly used definition. Focus on how to build, measure and manage brand equity

Included in Keller's (1993) customer-based brand equity
  - "Differential effect"
 	
  - "Brand knowledge"
 	
  - Consumer response to marketing
	Determined by comparing the consumer response to the marketing of a brand with the response to the same marketing of a fictitiously named or unnamed version of the product or service.
	
	Defined in terms of brand awareness and brand image and is conceptualized according to the characteristics and relationships of brand associations.
	
	Defined in terms of consumer perceptions, preferences, and behaviour
		Traditional perspective that is arising from marketing mix activities and an outbound marketing view

Brand awareness	*"Awareness refers to the strength of a brand's presence in the consumer's mind…Awareness is measured according to the different ways in which consumers remember a brand, ranging from recognitions to recall."* (Aaker 1996, 10)	Signals of much more than just remembering a brand.
Brand orientation	*"An approach in which the processes of the organization revolve around the creation, development, and protection of brand identity in an ongoing interaction*	Approaches brands as a strategic resource. Describes and measures the extent to which the organi-

	with target customers with the aim of achieving lasting competitive advantages in the form of brands". Urde (1999, 117-118)	sation is oriented to a brand or to seeking its full potential. However, only a little attention has been paid to, how it has been achieved
	Brand orientation is a deliberate approach to brand building where brand equity is created through interaction between internal and external stakeholders. This approach is characterized by brands being the hub around which the organization's processes revolve, an approach in which brand management is perceived as a core competence and where brand building is intimately associated with business development and financial performance. Gromark & Melin (2001, 394).	Sees brand orientation as a method for governing the brand building process.
Brand building	*discussed more in detail in 4.2.3*	An external view since it aims at strong brand equity. Brand strategy is the key to successful brand building (Aaker 1996; Keller 2008)
Brand management	*discussed more in detail in 4.2.3*	An internal view since it is a process which is co-ordinated within a firm. When managed well, provides strategic advantages since difficult to imitate by competitors

To sum up, what we can learn from the above is that much of the earlier research conducted on branding appears to focus on the brand from traditional marketing management perspective. The classical definition of brand equity refers that it is a reflection from outside the company, investors or customers perception of the brand compared to competitors. The associations of a brand are in the core of the brand and they are the result of a long history of the combination of brand communication and product experiences. (Christodoulides & Chernatony 2004, 168; Shett & Mittal 2004, 399-400; Keller & Lehmann 2006). Brand equity can be considered from four inter-related viewpoints: the customer, the firm owning the brand, the channel distributor and the financial markets (Vázquez et al. 2002, 27-28). The research interest seems to go to the direction of understanding more of the brand itself, how to conceptualise and measure brand equity (Vázquez et al. 2002, 27-28) and how to identify and measure brand association networks (John et al. 2006).

The existing literature in brand-related topics mainly supports those marketers who already possess a brand and knowledge about it, or at the minimum

level, knowledge about branding as a marketing strategy. The assumption from the traditional viewpoint is that the managers in all industries have adopted what Kapferer (1994, 3) called *brand consciousness* or Urde (1999) *brand orientation*. Moreover, the definitions of the strategic role of a brand are absent in literature.

2.3 Perspectives for the strategic role of a brand

One of the cornerstones of the present study is to understand the strategic role of a brand. In the branding literature, researchers and practitioners share a wide understanding of the strategic importance of brand management (Aaker 1991; Berthon et al. 2008; Capon et al. 2001; de Chernatony et al. 2001; Deloitte report 2005; Kapférer 1997; Keller 1993; Knapp 2003; Krake 2005; Riezebos 2003; Ulrich & Smallwood 2007; Urde 1999; Wheeler 2003; Abimbola 2001). In the entrepreneurship literature it is well established that the strategies have a direct and strong influence on the financial performance of new ventures (Shrader & Siegel 2007, 895; Aspelund et al. 2007). Given a theoretic reasoning outlined above it is logical to assume that there should be a link between branding and strategy. As discussed in the previous paragraph, much of the earlier research done on brands and branding appears to represent brands as assets and not as a strategy. However, de Chernatony et al. (2011, 52) recognize an eight-category typology of brands and highlight that the strategic view has been adopted only by enlightened marketers. Moreover, Ho & Merrilees (2005) have discussed the role of branding strategy in SMEs.

The aim of this section is to expand the discussion and open new perspectives for different roles of brands by integrating strategic approaches with branding literature. There are two different perspectives on brand strategy - *formulation and implementation*. First, it is worth looking into the formulation and concept of strategy, since there really are many interpretations of strategy.

Strategies are likely to exist at a number of levels in an organisation because an organisation can have a single strategy or many strategies. For example, a *corporate strategy* is concerned with the type of businesses that a firm is in or should be in as a whole (Walker & Mullins 2008, 10-11). It addresses such issues as the organization's scope and resource balance in the organisation's portfolio. Overall, the objectives are such as the attractiveness of entire businesses and references to important strategic criteria, such as revenue growth, profitability, ROI, earnings per share and contribution to other stakeholders. (Walker & Mullins 2008, 10-11, Bowman & Asch 1987, 37).

A firm's *operating* level *strategy* is concerned with how the various functions – finance, marketing, operations, research and development etc. – contribute to both business and corporate strategy. The focus of a marketing strategy is to effectively allocate and coordinate marketing resources. The main scope is to specify the target market, define the branding policies and to build synergy within marketing communications. A marketing concept can also offer a gener-

alized theory of competition that can be integrated into business strategy. (Walker & Mullins 2008, 10-11; Hunt & Lambe 2000, 25).

The characteristics that make a brand a strategic construct are discussed by integrating theories of branding and competence-based business strategy. Adapting Mintzberg's five different definitions of strategy and Teece et al.'s (1997) dynamic capabilities approach and branding theories enables the development and enhancement of a dialogue about the strategic role of a brand in the company. These approaches were chosen since a holistic internal explanation of a brand strategy concept requires a dynamic and internal theory of business strategy. Such a theory is a competence based theory as argued by Hunt and Lambe (2000, 22-24).

Teece et al. (1997) identify four strategic approaches and develop further a dynamic capabilities framework especially relevant to firms operating in environments of rapid technological change. Their approach tends to steer managers to achieve a competitive advantage by creating distinctive and difficult-to-imitate advantages. They identify three key categories that help determine their firm's competitive capabilities. The first category is processes, in which the essence of competences and capabilities is embedded. The second category, position, refers to the content of these processes, such as intellectual property, customer base and relations with suppliers all of which also develop the competitive advantage. The third category, paths, refers to the strategic alternatives available to the firm. Firms can adopt or inherit these paths, and their current position is shaped by the paths they have travelled. What the firm can do and where it can go is constrained by its positions and paths.

According to Mintzberg's (2005, 26-28) definition, "s*trategy is what is right for you*". Strategy is a *plan* – some sort of consciously intended course of action, a guideline or set of guidelines to deal with a situation. It is developed consciously and purposefully. As a plan, strategy deals with how leaders try to establish a direction for organizations, to set them on predetermined courses of action. Strategy is also a *perspective*. While a position looks outwards, seeking to locate the organization in the external environment, a perspective looks inside the organization, indeed, inside the heads of the strategists. Here a strategy becomes the ingrained way of perceiving the world. Some organizations, for example, are aggressive pacesetters, while others build protective shells around themselves. (Mintzberg et al. 2005, 26-28). By adapting the above definitions to branding theories it is possible to perceive brand as *a plan and perspective*. Prior studies suggest that brand is a vision. Brands just do not happen, they result from the creation of winning brand strategies and brilliant executions from committed, disciplined organizations (Aaker 1996, 358; Capon et al. 2001, 218-220). A company decides whether to sell the products with or without the brand and thus it can be stated that a brand is developed consciously and purposefully.

According to Mintzberg et al. (2005, 26-28) strategy is a *ploy*, whereas Teece et al. (1997) refer to a *path*. Both refer to a specific "manoeuver" intended to outwit an opponent or competitor. As a ploy, a strategy takes us into the

realm of direct competition, where threats and feints and other manoeuvers are employed to gain advantage. This places the process of strategy formation in its most dynamic setting, with moves provoking countermoves and so on. (Mintzberg et al. 2005, 26-28). A brand is possible to perceive in the light of previous studies also as *a ploy and a path*. Most products are suitable for a brand strategy, but their success depends on the decisions made by the company. Strong brands help companies to occupy new markets. (Capon et al. 2001, 220-227; Riezebos 2003, 23).

Strategy is seen by Mintzberg et al. (2005, 26-28) as a *pattern*, whereas Teece et al. (1997) refer to a *process*. If strategies can be intended either as general plans or specific ploys, it is certain that they can also be implemented. In other words, defining the strategy as a plan is not sufficient. We also need a definition that encompasses the resulting behaviour; a pattern in a stream of actions. According to this definition, a strategy is consistency in behaviour, either intentional or unintentional. As a pattern, a strategy focuses on action, reminding us that the concept is an empty one if it does not take behaviour into account. (Mintzberg et al. 2005, 26-28). Furthermore, a brand can be perceived as *a pattern and process* since it can be implemented. Creating a brand is a strategy, but actively managing brand-building is a process (Aaker 2007, 23). The basic idea in brand management is the creation of value. According to Aaker (1996) value is created by managing brand equity, which requires consistency and can be measured financially. Consequently, the primary capital of many businesses is their brand (Kapferer 1997), whose success lies in profitability. The company delivers its promise of value and the customers are willing to pay price premium and to recommend the brand to others (Vázquez et al. 2002, 27-28; Ward et al. 1999, 86).

A strategy is a *position* -specifically a means of locating an organization in its "environment." A position is usefully identified with respect to the competitors. As a position, a strategy encourages us to look at organizations in a context, specifically in their competitive environments – how they decide on their products and markets and protect them in order to meet competition, avoid it, or subvert it. (Mintzberg et al. 2005, 26-28; Teece et al. 1997). Brands are used to create a strong *position* in the end-users minds. A brand can be the best way to protect the company against competition (Capon et al. 2001, 215-217). In addition, according to Porter (1980), branding is an effective way of creating a monopolistic market situation.

Secondly, the discussion is moved to the other perspective on brand strategy, implementation. A brand management process can be considered strategic since managers' and marketers' actions play a vital role in creating and developing a brand. According to Bowman and Asch (1987, 4) s*trategic management* is the process of making and implementing strategic decisions, or in other words, strategic management is about the process of strategic change. A decision which has no discernible impact on the organisation and which leads to no change in the organisation is of little interest. The key in creating a brand is in making decisions. It is a choice of the company to commit to a brand strategy. The manag-

er has to choose the *brand elements*, the different components of a brand that identify and differentiate it. The brand elements come in many different forms such as brand names and logos. Choosing the brand elements can enhance creating strong brand equity (Keller 2008, 3, 145).

Recent literature suggests that *brand orientation* is a strategic direction for brand management. A study by Wong and Merrilees (2007) suggests that firms with a high brand orientation are able to achieve a higher percentage of their strategy's potential value. Recent studies (Wong and Merrilees 2007; Gromark & Melin, 2011) have also found that brand orientation has a direct influence on the brand, or more specifically financial performance. Gromark and Melin (2011) highlight the organisation's deliberate approach (as opposite to ad hoc approach) to brands. They also draw our attention to other essential viewpoints: the interaction with all stakeholders (internal and external), the organisation's capability of developing brand equity and the fact that brand management is a core competence. Majority of the studies reviewed so far, however, suffer from the fact that they focus either on conceptualisation or measuring the impact of brand orientation. They fail to open a discussion on how brand orientation has been or can be achieved. Studies on how the firms have become brand oriented are robust. Yen-Tsung and Ya-Ting (2013) propose a theoretical model explaining what factors contribute to brand orientation. However, their context perspective is on the organisation. The findings would have been more interesting if they had also included the manager's perspective. Gyrd-Jones et al. (2013) conducted a case study about how an organisation can frustrate the achievement of brand orientation. However, the findings are more useful for large organisations than SMEs.

To sum up, understanding the strategic role of a brand is one corner stone of the present study. Adopting a brand strategy is a *decision* or *a deliberate approach* of the company and creating a successful brand requires strategic thinking. Branding contributes significantly to marketing activities but potentially can leverage knowledge and guidelines throughout the organization. Specifically, the whole company may adopt a brand strategy and their activities may be focused around brand management. In such a case, all the people working for the company from owners and top management to production understand and commit to a brand strategy in long term since all the functions of the company create value to the brand. As a result, a successful brand possessing a unified, holistic promise which the organisation can deliver is created. All in all, a brand strategy can even contribute to a business strategy. (Capon et al. 2001, 226; Gromark & Melin 2011; Ward et al. 1999, 85-95; Wong and Merrilees, 2007).

This thought will lead us to the next section. Is it possible that despite a capable branding leadership and management process, not all products are suitable for branding? Is it possible to find the necessary components, fundamentals that are also distinct from the competition in each and every product or innovation? Is branding a relevant strategy for all companies and in all contexts?

2.4 The role of branding in SMEs and high technology

This section discusses realisation, and whether branding is realistic and important for all industries and products, including intangible and/or high tech-products. One of the limitations of the existing branding literature is that a considerable amount of it has been published on large companies in consumer industries. This has left the relevance of branding theories within other contexts unquestioned. However, it is possible that a product's, an organization's and industry's characteristics may influence on brand building. When integrating this notion with the evolvement of branding literature (the discussion in sections 2.1 – 2.3) it is possible that branding is different with different types of products, network relationships, organizations and industries. This issue has grown in importance in the light of the recent branding literature which has indicated that branding is context-related (Centeno et al. 2013; Brodie & Chernatony 2009, 95; Gundala et al 2014; Wong & Merrilees 2005).

The discussion in this section is narrowed in relation to the focus of the present study and it is structured as follows. First, a discussion of SME branding provides some background information about the nature and type of organisations. Secondly, the key themes of the role and characteristics of product type in high tech are presented. The discussion begins by introducing the basic concepts of all brands; fundamentals and differentiation. The concepts are clarified by using practical examples. Thirdly, the role of industry and the characteristics of branding in high tech industry are discussed.

Several authors point out that the number of studies on SME brands or branding is relatively small (Centeno et al. 2013; Gundala & Khawaja 2014; Reijonen et al. 2012; Wong & Merrilees 2005). However, in the wider domain of SME marketing there has been a greater amount of research which provides insights into the nature of SME branding. Gilmore et al. (2001) draw our attention to SMEs that have a different approach to marketing. The traditional marketing view is inappropriate for describing how SMEs practice marketing. The discussion about the relevancy of SME branding can be based on their unique marketing characteristics. This viewpoint has been adapted in chapter 4 in which the discussion is focused on typical marketing characteristics of high tech SMEs .

Although there already are some studies on SMEs that have focused on branding, this relatively new context-related approach of brand study is still at a pioneering stage. Abimbola (2001) attempted to understand SME branding as a competitive strategy. He concludes that branding is highly relevant to an SME. Several researchers (Berthon et al (2008); Centeno et al 2013; Gundala & Khawaja 2014; Krake 2005; Spence & Essoussi 2010; Warren & Hutchinson 2000) have studied brand building and management in SMEs. There is a large understanding that SME brands are built in a non-traditional manner, from an innovative, experiment-oriented and resourceful approach. Interesting new research on brand orientation in the SME context has been conducted by some research-

ers (Wong and Merrilees 2005; Reijonen et al 2012). They found that the extent of brand orientation can be measured and that a high level of orientation can help companies to grow. In addition, brand communication activities have been examined by Centano & Hart (2010), and they state that reputation building becomes one of the key resources over time (Abimbola and Vallaster 2007). Taken together, it is for future research to show the full potential of SME branding research and to make a significant influence and contribution to branding and to the marketing discipline (Krake 2005; Merrilees 2007).

Now the discussion is moved towards reflecting if all high tech products are suitable for branding. According to the OECD definition (Eurostat indicator 2014), high tech products and manufacturing involve a high intensity of R&D. However, the types of product may range from traditional tangible consumer products to in-tangible online, ingredients and/or b2b products. Thus, within the scope of this study, the product type as such does not play an important role. A more relevant viewpoint is whether a product based strategy is as relevant to high tech companies as a brand strategy. In the present study, the product strategy is not specifically defined. Product strategy refers to the tendency in many industries in the 1980's when companies managed products that happened to have a name. (adapted from Aaker & Joachimstahler 2000). Product strategy also refers to the low level of adoption of the elements of market and brand orientation (adapted from Reijonen et al 2012). Hence, the low level of adoption of marketing elements indicates product and/or production orientation.

The two constitutional brand elements, fundamentals and perceived differentiation are identified as the main constructs for understanding the difference between these two managerial options, namely product or brand strategy. The selection of these constructs is based on suggestions in the literature that both elements are important. (Aaker 1991; Riezebos 2003; Keller 2008).

The fundamentals, to which Riezebos (2003, 18-19) refers as added value, mean that a branded product has more value to the customer than a "bare" product. Christodoulides and de Chernatony (2004, 168-179) provide guidance for new technology brands. They tested a new approach to branding, namely how to make a brand interactive online. As a result they advise new branding needs addition, not replacement. Managers are suggested to introduce methods, approaches and systems that allow the brand to grow. According to them, it would be wrong to forget the old methods, but it would be equally wrong to forget that new branding requires adaptations compared to the traditional marketing approach. The slogan here is: *"Don't sit back and wait"*, because the rate of change invites companies to be involved. Knowing when and where to change from one place to another and having the power to make the shift is essential.

The most successful technology and telecommunications brands have shown how quickly they can arise. It has been suggested that in order to survive long-term they need emotional as well as technological appeal. Companies seem to invest in their brand as their major sustainable competitive advantage. (Clifton 2003, 227-229; Ward et al. 1999). In high tech, however, the problem is

that technology is complicated and the differences are difficult for customer to perceive or understand (Clifton 2003, 234). Aaker (1996, 257-260) suggests that companies should brand a feature, component or service that will provide the customer the benefits. Also a service can be branded. Most of the high tech companies are in the b-to-b industry and a branded service is especially powerful when selling to an organization. (Aaker 1996, 261).

Adding a branded component can provide a point of differentiation. Riezebos (2003, 17-19) sees differentiation in a company's effort to distinguish its products from the competition. This differentiation can be the source of a sustainable competitive advantage. Often advertising is used to highlight the perceived differentiation. Keller (2008, 11) points out that many products cannot be physically differentiated and that they are at first seen as commodities, but have become highly differentiated when strong brands have been built in the category. Such examples are coffee (Maxwell House), bananas (Chiquita) and even water (Perrier). Whether a product or product class is suitable for branding can be turned into a question whether the product in question is differentiable in the first place.

According to Keller (2008, 10) the key to branding is the *perceived difference*, which means that the consumers relate to attributes or benefits of the product itself or they may relate to intangible image considerations. Only very few of us can really taste the difference between beer brands in a blind test or pick up the taste of one's favourite cigarette brand among 100 brands which are available. These product classes are typical examples of low level brand parity, and the majority of consumers see few or no differences between products. Consequently, only seldom can differentiation be based on the material aspects such as product qualities. Therefore, differentiation is usually based on immaterial aspects. However, both material and/or immaterial differentiations can be a basis for adding value to a brand. (Aaker 1991; Kapfere 1997; Riezebos 2003, 20-21).

Brands are traditionally associated with consumer products. Keller (2008, 11-27) argues with the help of case examples that brands have emerged to new industries and product classes that have never before supported brands. Therefore he sees, that it is possible to brand business-to-business products, high tech products, services, retailers and distribution, online products and services, people and organizations, sports, arts and entertainment, geographic locations and finally ideas and causes.

The number of branding studies in the context of high tech is small. Some authors have attempted to draw attention towards high tech branding, but the literature primarily aims at giving guidelines for managers. For instance, Ward et al. (1999, 88-90) and Mohr (2001, 284) remind that a brand is a signal of continuity and "staying power", it is made of promises that endure in a rapidly changing environment. In addition, a brand creates a sense of trustworthiness and expertise in the customer's minds when new products are introduced or modifications made on the existing ones.

Preliminary work on the impact of a complex, fast changing environment and the nature of high tech companies and products has pointed out that there are more challenges and risks for high tech branding. Keller (2003) notes that short product life-cycles have several significant branding implications. He recommends that the priority is to create a corporate or family brand with strong credibility associations. Many traditional brands have the problem that they are not distinctive, credible or easy to remember by nature.

Doyle (2001, 258-259) states that many marketers' and experts' views of brands are too naïve. He sees that in many industries the importance of brands is exaggerated. One of the leading brand consultancies in the world, Interbrand, estimates the relative importance of brands against other tangible and intangible assets (see Table 6). Based on Interbrands estimation, it seems that only in the luxury consumer goods brands are the dominant source of value. In many fast-growing industries, such as IT and pharmaceuticals (both within high tech industry), brands play a much smaller role.

TABLE 6   Relative importance of brands and other assets

	Tangibles %	Brand %	Other intangibles %
Industrial	70	5	25
Pharmaceutical	40	10	50
Retail	70	15	15
Info-tech	30	20	50
Automotive	50	30	20
Financial services	20	30	50
Food and drink	40	55	5
Luxury goods	25	70	5

Source: Interbrand
(Doyle 2001, 259)

According to Interbrand's (Doyle 2001, 259) estimation, it is possible that investing in branding does not maximize the creation of value in all industries. One of the limitations with this explanation is that it does not take into account that branding has only recently been shifted to companies and industries other than large consumer good companies and markets. Table 6 can be interpreted as a current reflection of the traditional branding and large consumer firm models applied to small settings and to different industries. Based on the literature review for this study, the context-related approach of branding studies is still at a pioneering stage. Therefore, it is important to conduct studies that are sensitive to the unique characteristics of SMEs and other market environments. There is a relative lack of understanding, and it is possible that in future a much more sys-

tematic approach may enhance *different and context-related* branding practices and contribute to the creation of brand value.

All in all, products and technologies have life cycles, but brands have existed for hundreds of years. They are seen as a modern concept because they have been updated. Furthermore, the literature review conducted for this study implies that branding can be extended and applied to new marketing phenomena, including SMEs and high tech. There may be other possible strategies for high tech SMEs which remain so far unidentified due to the limited amount of literature. Branding literature has concentrated on inter-related viewpoints and on companies that already possess a brand or brand portfolio. A considerable amount of literature is highly normative and can be seen as guidelines for managers, not as research findings. For high tech SMEs, for instance, a source of caution on branding is that it may inhibit innovative activities within the firm. In other word, it could hinder innovation orientation and investments and thus, further opportunities for exploring and generating.

Difficulties arise, however, when an attempt is made to implement branding with the new marketing phenomena. Research from a manager's viewpoint and studies on brand execution seems relatively scarce. In addition, branding guidelines for companies that only possess an idea about the technology but not yet the tangible end-product are absent in literature. Furthermore, the complexity of the branding decisions requires expertise. There is a need for more literature and empirical research on branding extending to new marketing phenomena. Table 7 summarizes the key issues as derived from literature.

TABLE 7   Key issues of a brand strategy's impact on adoption process in high tech SME companies

Prior conditions	Literature review	Critical analysis
Previous practice	Dominant perspective; marketing management, consumer markets (Brodie & de Chernatony 2009, 95). Literature supports those marketers that already possess a brand and knowledge about it.	Need for new emerging theories on marketing, such as service, management, network relationships and a context perspective to challenge the traditional views. Literature indicates that branding is not seen relevant at the early stage of product development (the idea or innovation stage).
Felt needs / problems	Despite the public support many high tech SME firms struggle in commercializing their innovations in Finland. (VICTA – report 2007). Strategic role of brand (Ho & Merrilees 2005; Urde 1999).	Indicates a need to shift from tactical marketing operations towards strategic management. Definitions are absent in literature. This leads to a thought that branding as a paradigm has potential to shift towards

		theories of strategic management. Brand orientation research is limited to conceptualisation or measuring the extent and impact of brand orientation, not how firms have become brand oriented.
Felt needs / problems	Two perspective of brand strategy: formulation and implementation	
		A low extent of brand orientation implies that the firm is implementing product strategy.
	Threat to overinvest in branding.	It is possible that there are other core business processes that create more shareholder value than branding.
Innovativeness	Realisation	
	There is a large understanding that SME brands are built in a non-traditional manner (Berthon et al 2008; Centeno et al 2013; Gundala & Khawaja 2014; Krake 2005; Spence & Essoussi 2010; Warren & Hutchinson 2000).	Technology-based products are difficult to communicate and understand for the target audience. On the other hand, when branding an innovation a brand can create meaning and pre-empty a whole category.
	Research on implementation or from managers viewpoint are scarce (Centeno et al. 2013; Gundala & Khawaja 2014).	
Norms of social system	Importance of context (Brodie & de Chernatony 2009).	Branding seems to be context-related. There is potential for a new paradigm for brands.
	Relevance of branding theories within other contexts questioned scarce (Centeno et al. 2013; Gundala & Khawaja 2014).	It is possible that a product's, an organization's and industry's characteristics may influence on brand building. Need for more research. Context- related research may also enhance traditional branding literature by increasing our understanding of the complexity of brands.

3   PERCEIVED CHARACTERISTICS OF A BRAND STRATEGY

In this chapter the third element for the theoretical frame, namely motivation, is presented. Motivation in general is recognized as a key success factor in business (Sharp et al. 2009). Motivation refers to the initiation, direction, intensity and persistence of behaviour and has proved to have a major impact on quality and productivity in information and software technology. One of the main findings of Sharp et al.'s (2009) study was that motivation is heavily dependent on context which is more complex than the researchers initially suggested. Due to the complexity and context-dependency of motivation the focus in the present study was only on the business motivators, advantages of brand building. Rogers (2003, 229-240) uses the term *relative advantage* which refers to the degree to which an innovation is perceived to provide greater advantage and is, therefore, considered a particularly important one of the five attributes of innovation that influence on the rate of adoption. He identifies three dimensions of relative advantages, economic factors, status aspects and over-adoption. They are discussed in detail in due course. These dimensions are addressed when the discussion in narrowed to some of the new challenges in adopting a brand strategy in high tech companies.

Many of the ideas presented in this chapter may be familiar, but the value of this chapter is in integrating various notions to provide a more comprehensive picture. Within this framework, the author examines branding as an appropriate marketing principle for high tech SME. Moreover, this chapter addresses the *knowledge gap* concerning the branding activities in high tech SME's by firstly presenting the critical issues that high tech marketers face. The selection of high tech challenges is based on suggestions in the literature found for the present study. Due to the insufficient amount of prior research, high tech marketing challenges are mainly employed from Moriarty & Kosnik (1989) throughout the present study. Secondly, the discussion is then moved to present action recommendations to overcome these challenges. Action recommendations are proposed according to Moriarty & Kosnik (1989) as high tech mar-

keting tactics. Thirdly, a contribution and action recommendations suggested by branding literature is employed.

Furthermore, four other attributes, compatibility, complexity, trialability and observability and their effect on the adoption are discussed. According to Rogers (2003, 219) the perceived properties of an innovation are one important explanation and they affect the adoption. Especially the attributes predict the rate of adoption. Hence, the aim is to try to understand the difficulty of developing and carrying out a brand strategy.

3.1   Possible advantages of a brand strategy

Brands have existed for a long time and the puzzling question for the managers often is if a brand is more of an asset or more like an expense (e.g discussion in section 2.4 and Table 7). Another challenge is how to recognize and become aware of branding advantages. Cohen & Levinthal (1990) proposed a new perspective by introducing a term "absorptive capacity" that refers to the ability of a firm to recognize the value of new, external information, assimilate it and apply it to commercial ends. Absorptive capacity is dependent on a firm's level of prior related knowledge. As such, ease of learning is affected by the degree to which an innovation is related to this pre-existing knowledge. Pisano (1994) also suggests that there is no one best way to learn, but different approaches may be required in different knowledge environments. Nonaka (1994) focused on the knowledge creation process. He explained that the interactive amplification of tacit and explicit knowledge through socialization, combination, externalization and internalization, as well as of knowledge held by individuals, organizations, and societies can be enlarged and enriched simultaneously. A firm's knowledge capabilities used to create commercial value are hard to duplicate. (Hoskisson et al. 1999, 441-442).

Therefore it is important to discuss why brands are worth the effort, time and money. Some authors approached these issues by exploring how brands contribute to the firm's strategy (Abimbola 2001; Doyle 2001; Urde 1999). Capon et al. (2001, 216) formulated a company's challenge into a question "What do brands do?", "What are a brand's functions?". Relative advantage is an important part of the message content of providing the answer to these questions (Rogers 2003, 233). Based on the literature review, there are three categories of advantages in carrying out a brand strategy; financial, strategic and management advantages (Doyle 2001; Riezebos 2003, 23; Srivastava et al. 1998, 2-18).

3.1.1   Financial advantages

Economic profitability is one of the types of relative advantages which enhance adoption (Rogers 2003, 229). There is a large volume of published business articles and academic studies describing the benefit of having brands is in their potential to give higher rewards than a product strategy. A brand strategy in-

volves the need for investment but in return a brand can result in higher sales, higher margins and a certain guarantee of future income. (Berthon et al. 2008; Doyle 2001; Keller 2008; Krake 2005; Riezebos 2003, 23).

Doyle (2001, 261-262) suggests that one of the determinants of brand performance is to develop a strategy that aims at maximizing shareholder value. He sees brands as strategies that increase the financial value of the firm on the condition that it is managed correctly. As a result, the total sales will be higher. A brand can provide value not only to the organization but also to the customer. Customer equity refers to an individual customer's willingness to pay a price premium for a brand. If willing, as a consequence, the margins are higher and this has a major impact on the brand's value. Organizational equity refers to the number of present and future customers and their purchase frequency. Strong brands create customer loyalty, and loyalty contributes to a certain level of future income. The ability to gain future revenues can be used to determine a financial value for a brand. (Capon et al. 2001, 218; Doyle 2001; Riezebos 2003, 23-26).

The aim of the next paragraph is to challenge the traditional marketing management thinking about brands by considering it in a new context, high tech marketing environment. Based on the literature review in this study, due to the nature of high tech companies, financial advantages are closely linked to a company's ability to launch products to the market. Particularly in the early start-up phase high tech companies often have financial difficulties. Commercialization is crucial since restricted resources may reduce the launch of new innovative products and at worst, drive the firm into bankruptcy. (European Commission 2005).

The perspective of commercialization and branding in high tech

Commercialization is the production, manufacturing, packaging, marketing and distribution of a product. Together they give a tangible and saleable form to an innovation (Rogers 2003, 152). Rao (2005) found out that only about one quarter of R&D projects are commercially successful. Bearing in mind that many companies spend well over 50% of their sales on R&D, the risk of commercialization is high. Rao (2005) argues that marketing assets are central to increasing the appropriateness of the fruits of investments in R&D. Such assets comprise a whole range of cumulative investments i.e. all marketing activities that help create competitive advantages, with investments difficult to imitate, e.g. promotions to create and sustain a brand name. Imitating a brand strategy is much more difficult than imitating a product packaging.

Day (1997) has charted five sources of sustainable advantages, mentioned in Rao's (2005) article. 1) It is valuable in that it produces superior customer value, 2) it is durable, 3) it embodies causal ambiguity (i.e. competitors cannot figure out how the source of advantage works) 4) it is difficult to duplicate by the competitors even if they understand the source of advantage and 5) it is

likely for an innovator firm to deter efforts at imitation with a threat of retaliation. However, the real challenge is how to turn the assets into advantages.

Nevens et al. (1990, 154) see commercialization as a purely intuitive, creative process. They find it necessary for companies to develop this capability in order to thrive. In their study there was a strong linkage between an organization's competitiveness, industry leadership and its ability to commercialize technology. The key elements of a high-performing commercialization process are charted by Nevens et al. (1990, 154-162). He recommends the companies to make commercialization a priority even if it means changing the organizations' performance. The goal setting may help to focus on the effort, develop skills and make managers directly involved in the commercialization process so as to speed actions and decision. Nevens et al. (1990, 162-163) claim that good commercializers stress coordination, not functional skills, for example one does not confuse R&D and commercialization. Thus, the emphasis is on cross-functional and communicational skills.

According to Morgan (2003, 41-42) the competitiveness of high tech companies does not lie in the quality of their products but in the development, distribution, sales and marketing of these goods. He sees that the growing importance of intangible capital is due to the fact that it generates significantly more value than manufactured goods. However, Doyle (2001, 255) points out that marketers have oversimplified views on how intangible capital, for example, brands add value to the performance of business. Several authors have revealed that the value of a firm's intellectual capital can be frequently several times that of its material assets. However, it is important to note that intangible capital can be a two-edged sword. While it is one of the most elusive concepts in management and one of the most crucial resource categories, it is also a core to create business agility and added value. Failing to manage it can lead to irrevocable consequences. (Doyle 2001; Morgan 2003, 41-42).

In discussing branding as a practice relevant to commercialization challenges, two areas of importance are employed from the literature review. Firstly, a brand strategy can guide high tech managers. Keller & Lehmann (2006, 748) point out that a number of researchers have noticed a relationship between the brand- and customer-management perspectives. The value of a customer to a firm can be shown algebraically to be the sum of the profit from selling equivalent generic products and the additional value from selling branded goods. Traditional marketers can show the way and teach the tactical operations needed on the way to success. The framework of traditional branding will give the settings, structure, direction, tools and courage to the high tech SME managers to commercialize their products and, in addition, to earn higher margins.

Secondly, the recent developments in marketing may also help to refine branding practises in high tech. Franzak and Pitta (2011) highlight the service dominant logic (Vargo & Lusch 2004) view that can be applied to brand management. According to service dominant logic, the major purpose is not anymore to make and market physical goods, but to understand and create the relationship that the customer develops with the products. Franzak and Pitta

(2001) extend this application further and suggest the consumer part of the development process.

However, one of the problems with adapting the service dominant logic to the high tech marketing environment is that customers are uncertain how technology can meet their needs. They are not aware of what technologies are available or how they solve their problems. Furthermore, often customers are not aware of their needs. As a result, the firms gather not just information about customers, but also marketing intelligence, in other words, information about competitors and market trends. The key is to capitalize on the intelligence in product development and marketing decisions in order to accelerate the product development process. (adapted from Mohr 2001).

3.1.2   Strategic advantages

Riezebos (2003, 26-28) identifies three aspects of strategic advantages; the company's position in relation to (potential) competition, to trade and to the labour market.

The first aspect of strategic advantage of a brand strategy arises from the competition. Branding is an act of creating and sustaining a distinction. Sellers want to differentiate their offering from their competitors and offer value to customers in order to secure a marketplace. (Capon et al. 2001, 216). Brands are effective market entry barriers. The market is not very attractive if it is concurred by strong brands. A single company who possess strong brands is less vulnerable to attacks from the competitors. A well-managed brand portfolio, including brands that satisfy different needs and desires of the customers, raises market entry barriers sooner than single brands. (Riezebos (2003, 26-27). Effectively managed brands are well positioned to increase profits (Ward et al. 1999, 95).

The essence of brand positioning is that a brand has sustainable competitive advantage or "unique selling propositions" (Aaker 1996, 71; Doyle 2001; Keller 1993, 6). A number of traditional literature has focused on the importance of developing value-propositions. The uniqueness of brand associations is one dimension of brand knowledge. Brand associations may not be shared with competitors. It is critical for a brand's success that the associations are unique and superior over the other brands. However – shared associations can help to establish category membership. (Keller 1993, 6).

Furthermore, previous research suggests (see Keller 1993, 6) that even if a brand does not face direct competition in its product category, and thus does not share product-related attributes with other brands, it can still share more abstract associations and face indirect competition in a more broadly defined product category. Thus, although a biofuels company does not compete directly with another biofuels company, it still competes indirectly with other forms of energy supplies, such as peat and oil. Furthermore, GoreTex and nanotechnology solutions might share the same associations in fabrics, they both improve the perceived quality.

The second strategic advantage concerns infrastructure and distribution. Retailers possess a great deal of negotiation power. However, strong brands give a more favourable negotiation position for the manufacturer. Retailers are less critical and at a certain level forced to have strong brands in their selection due to consumer demand. Moreover, the launch of a new product under a strong brand is far more likely to be successful, and, consequently, the risk of failure is smaller. (Riezebos (2003, 27-28). Many high tech companies may have to use multiple routes to distribute their products to customers. High tech products require after sales service, installing, training and supporting the customer, and thus the distributor is supposed to do much more than just sell products. Moreover, it is important to bear in mind that the brand value has to be communicated to the end-user (pull-strategy) instead of the reseller channels (push-strategy). The partners that are able and willing to support the brand promise have priority for the partnership. (Ward et al. 1999, 90-95).

The third strategic advantage concerns the employees. People prefer to work for the companies that either have a strong corporate or product brand. Especially when the demand for employees is higher than the supply the relevance of a strong brand is substantial. (Riezebos (2003, 27-28). Many high tech companies struggle to have the best position in the labour market and attract the best employees. One motivation for high tech managers to adopt branding strategies could be just to gain social status for themselves or for their employees. Gabriel Trade (in Rogers 2003, 230) observed already in 1903 that status seeking was the main reason for imitating the innovation behaviour of others. Status motivation seems to be especially important at the early stages of an adoption process. The threat is that the branding strategies become "*over-adopted*" which means that individuals adopt the innovation even when the experts think that they should reject it. Over-adoption by high tech SME manager can occur because of insufficient knowledge about brands. (Rogers 2003, 231-233)

It would not be proper to discuss strategic advantages without also shedding light on the potential failure. In all businesses there is always the element of risk. Since this is a constant concern for managers, they need to manage risks. Due to its nature a risk in high tech is even greater than in traditional marketing and thus, the discussion in the next section is focused on the element of risk.

The perspective of risk and branding in high tech

High tech products are unfamiliar to suppliers and customers. This unfamiliarity creates uncertainty, which gives rise problems that need to be faced in order to be successful. According to Moriarty & Kosnik (1989, 7-8) high tech marketing involves two types of uncertainty, market- and technology-related. First, the uncertainty of customer needs, their type and extent, and how they can be satisfied by the technology being marketed. Secondly, there is the uncertainty of the technology actually delivering on its promise to meet the needs of the customer, once they have been expressed. Meldrum & Millman (1991, 43-50) chart ten key

areas of potential risks facing high tech marketing for consideration. In summary, these potential risks are categorized into two main categories: credibility and standards. They are presented with further details in the Table 8 below.

TABLE 8   Potential risks for high tech marketing

A. **Credibility of the technology and the company**	B. **Informal, nonexistent, or incompatible standards**
1. Inadequate technology The technology or its manufacturing process can be inadequate. As a result the product promise is not focused on customer needs, rather the product development process has been technology-driven.	8. Customer "mismanagement" of the technology The stage where customers make poor use of the product and/or suppliers fail to provide training is called "mismanagement" of the technology. As a result customers are disappointed and blame for non-performance. Such risk is especially regretful when technology is combined with other products to form a system or its performance depends upon subsequent conversion processes, for example in medical equipment in which human life may be at risk.
2. Not an acceptable substitute The customers may not be willing to change the existing technology because it solves at the moment the customer's problems very well. The market penetration is slow until the new technology is perceived to offer competitive advantages.	9. Cost/Time overrun Development processes do not always run according to plans. However it seems that cost overruns will have less impact than time. Meldrum and Millman (1991, 49) quote John Doyle, the Vice President of Hewlett Packard; "*If we overspend by 50% on our engineering budget, but deliver on time, it impacts 10% on revenue. But if we are late, it can impact 30% on revenue.*"
3. Specification drift Often high tech products are defined by customers against a specification. To change the current specifications may take too much effort and therefore the customers stick to old systems.	10. Lack of infrastructure Sometimes the development process has to wait an "enabling" technology. A product is worthwhile to purchase only when supporting technology is at adequate level. The "paperless office" is one example of this type of risk.
4. Technology "leapfrogging" By the time the company has been able to develop a product, a substitute technology can be launched to the market. The fundamental question for many companies is, in which technologies to invest when the rapid innovativeness is a given factor.	
5. Credibility Credibility can be viewed from two aspects: the credibility of the technology itself and the credibility of the organization offering it.	

6. Time scale for projected sales A thing that makes the marketing much more complicated and unpredictable is that the cash flow comes very often two-three times slower than expected. The implications are enormous and often additional resources for advertising or promotions are needed.	
7. Standards It can be questioned whether the existence or the nonexistence of performance and quality standards for high tech products is preferred. It is true that the formal standards are a challenge in marketing. However, in the absence of standards the purchase includes higher risk. Also informal standards can appear and confuse the customer requirements.	

Source: Meldrum and Millman (1991, 43 – 50)

Meldrum & Millman (see Table 8) describe the potential risks by categorizing them into two main concepts: credibility and standards. By acknowledging these risks the high tech marketers may develop strategies and implementation in such a way that the likelihood to overcome the potential problems is greater. However, the perception of the potential risks may change the strategies and implementation into a less favourable direction. Since high tech marketers have more information about a potential failure, it may depress the decision making. As exposure to risks can have adverse effect making the marketers turn away from the great opportunities, it is essential to discuss about a brand strategy's potential of reducing the risk.

One of the most important advantages of a brand is the ability to reduce perceived risk. According to Erdem & Swait (1998), brand names act as signals to the customer and consequently reduce uncertainty. Strong brands are created by developing elements and messages that together communicate a consistent brand meaning. Information conveyed by a brand may facilitate product trial, in other words, reduce product risk or uncertainty. (Klink 2003, 143-157). A brand signal is the sum of a company's past and/or current marketing activities. A credible brand signal reduces the uncertainty in a customer's mind and creates value by reducing perceived risk, reducing information search costs and by creating favourable attribute perceptions. One implication is that fewer marketing expenditures may be needed to position the brand in a customer's mind. (Aaker 1996; Keller 2008).

On the other hand, it is a risk to commit to a brand strategy since brands require a great deal of resources, time and money. According to Doyle (2001), companies can also over-invest on brands, especially if they focus solely on value propositions. He argues that in addition to attractive value propositions, a brand has to be effectively integrated with the firm´s resources (discussed further in sections 4.2.3 and 4.2.4). In addition, the market in which the firm operates has to be attractive and finally, the managers have to create strategies that maximize shareholder value. Doyle (2001) highlights that strategic thinking and

branding advantages can 'go down the drain' without an intelligent decision making and management process. The next section discusses the possible advantages of a brand strategy from the management viewpoint.

3.1.3 Management advantages

The third aspect of the advantages of carrying out a brand strategy is reflected in management advantages. Brands are easier than single products to launch to new markets. Brand extensions and endorsements are increasing in business, since they have proved to be successful strategies. Moreover, brands are global by nature because a global brand strategy allows the company to spread the market risk and to reach a strategically stronger position, also in the domestic market. Especially companies with international strategies should create a global branding strategy simultaneously. (Riezebos (2003, 27-30).

Traditional branding literature offers a great deal of marketing research to support a company's success in executing global branding strategies. Henderson et al. (2003, 308) suggest that using visual brand stimuli can enhance the international launch to new markets. They recommend the companies to create an effective tool, a visual brand image or logo that can be used internationally. Such image can improve quality perceptions and help to overcome language differences. It will be especially beneficial in such market areas as Asia, where people are not yet proficient in the English language.

Based on the literature review, in the high tech environment a crucial management issue is timing. According to Nevens et al. (1990, 154-155), as compared to average-performing companies high-performing technology-based companies bring their products in less than half of the time and compete in twice as many product and geographic markets. Their study found a strong linkage between an organization's competitiveness and its ability to launch products first to the market. Thus, in high tech the management advantages are linked to first-mover advantages and, consequently, this is the focus of the following paragraph.

The perspective of "First-mover Advantages" and branding in high tech

Many authors (e.g Lieberman & Montgomery 1988, 41; Nevens et al. 1990, 154-155) have argued that the main reason to launch advanced technology products first to the market is to earn higher returns. Lieberman & Montgomery (1988, 41) define the first-mover advantages: "*the ability of pioneering firms to earn positive economic profits (i.e. profits in excess of the cost of capital).*" Marketing may launch many "mini-introductions" of an innovative product and incorporate the information gained from customer reactions into updated market offerings, so that with superior learning about the market the firm accumulates loyal customers and a higher market share. By having a faster speed-to-market, a firm can maximize the number of try-outs into the market and bring out products that are more closely matched to customer needs. The first-movers gain advantage through three primary sources: technological leadership, pre-emption

of assets and development of buyer switching costs. In addition, there is, of course an element of luck as in any business. (Lieberman & Montgomery 1988, 41; Nevens et al. 1990, 154-155).

According to Lieberman & Montgomery (1988, 42-43) leadership in technology emerges from a learning curve (falling costs) and success in patent or R&D races, in which the competition cannot enter the market due to research or patent lead. The company does not always have to create the assets – they can simply control information or available space, geographical location or product characteristics. The company can also create a situation where it is not profitable for the customer to change due to the increase in cost. (Lieberman & Montgomery 1988, 42-43). The overall trend seems to be that prices decline rapidly when there is more competition. According to McKinsey & Co, if a company launches its product 6 months behind the schedule, the profit loss is 33 %. This is due to the fact that pioneer companies can often expel the competitors. (Nevens et al. 1990, 155-157). Collins in Walker & Mullins (2008, 265) point out that being the first may help attract investors and venture capitalists, but that it is not a short-cut to success. *"Best beats first"* in the long run. They recommend the pioneers to hold their early leadership position and to continue to innovate in order to maintain a differential advantage.

The timing of the entry is seen crucial. Often first-mover disadvantages are late-mover advantages. Lieberman & Montgomery (1988, 47-48) published a paper in which they described that late entry is successful by companies with relative strengths in marketing and manufacturing. In addition, late entrants may be able to acquire the pioneers or practice free-riding on first-mover investments (Lieberman & Montgomery 1988, 47-48).

Furthermore, Golder & Tellis (1993, 168-169) found that being a pioneer is not as rewarding as previously believed. Above all, the probability of long-term market dominance is small. Especially, when comparing to risks, it only seldom pays off. According to Golder & Tellis (1993, 168-169) the logic of success is not in the companies pioneer position but in actively adapting to changing market conditions and shaping the industry and buyer needs to sustain their competitive advantage. Market leadership can be targeted based on recognizing opportunities and the company's strengths. (Golder & Tellis 1993, 168-169).

As discussed above, previous studies have reported that it is critical for many high tech companies to enter the global market place as soon and as fast as possible. Market economics can explain much about brand performance. Doyle (2001) points out that the intensity of competition and the pressure level of customers determine the attractiveness and profitability of a market. As the global marketplace becomes more integrated, it may be useful and increasingly important to develop and build consistent marketing constructs, such as brands. Based on the branding literature found for this study, global brands provide credibility and authority for the customer. From a company's point of view the advantages come from cost savings (economy of scale), power and feeling of belonging to a specific global segment. (Hsieh 2001, 60-63).

> "A brand is a "trust mark". It's shorthand. It's a sorting device." Tom Peters, Brand You[2]

Prior studies have revealed that it is a great risk to launch a product or a brand to new markets, especially to consumer markets. The cost to introduce a new brand has been estimated to be between $50 million to $100 million. To reduce the risk, traditional marketing companies use established brand names to facilitate entering new market. Examples of such established brand names are line extensions. Line extension means a situation where a current brand name is used to enter a new market segment in its product class. Brand extension is also an option. Brand extension occurs when a current brand name is used to enter a completely different product class. The advantage of introducing new products as brand or line extensions lies in the fact that a familiar, strong brand name can substantially reduce the risk of failure. Furthermore, it reduces the cost of gaining distribution and/or increases the efficiency of promotions. The risk of using brand extensions is in that they can create negative associations that may be expensive or even impossible to change. (Aaker & Keller 1990, 27-28).

3.2 The perceived attributes of branding

In addition to a relative advantage, the interest of this section is to understand the impact of four other attributes, namely compatibility, complexity, trialability and observability on the branding strategies as perceived by high tech SME managers (adapted from Rogers 2003, 222). Furthermore, the outcomes of the non-branding decisions are evaluated.

3.2.1 Compatibility of a brand strategy

Compatibility refers to the degree to which an innovation is matched or in sync with an individual's current state. The more compatible and consistent an innovation is with an individual's values, ideas, norms and experiences, the more likely it will be rapidly adopted. (Rogers 2003, 96-98). One indication of compatibility is how a high tech manager feels that a brand strategy is needed. Based on the literature review (Centeno et al 2012; ;Spence & Essoussi 2010; Ward et al. 1999), it seems likely that high tech SME managers do not quite recognize that they need a brand strategy. A brand strategy is quite an uncertain concept to them and it does not fit closely with their specific situation.

Old ideas are the main tools that people utilize to asses new ideas. A positive aspect is that regardless of the industry or the complexity of the product, the types of brand and the process of making strategic brand decisions remain the same. One reason for high tech SME managers non-branding decisions may be that they trust their products to sell due to their superior technology itself (Keller 2008, 16). Furthermore, high tech SME managers are not necessarily

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[2]   Wheeler (2003, 3)

aware, that a product or process as such is not that relevant when it comes to branding decisions. The technology or innovation *per se* is not relevant, the relevance lies in their ability to create new value to the customer (Chasm Institute 2007, 8). Whether the brand has its roots in nano- or biotechnology does not matter, the customer values the fulfilment of the need. A brand strategy may also guide managers to position their innovation and help identifying the potential niche markets (adapted partly from Rogers 2003, 240-256).

All in all, based on a literature review a brand strategy is quite an uncertain concept to high tech SME managers and thus, a barrier to adoption. Since a brand strategy is not regarded as familiar, it is difficult for the high tech SME managers to give a meaning to it. It seems that a brand strategy is incompatible with their (1) sociocultural values and beliefs, (2) previous and current practises and (3) their need for a brand strategy.

3.2.2 Complexity of a brand strategy

Complexity refers to the degree to which an innovation is perceived to be difficult to understand or use. As discussed in the above section, branding choices are not clear in their meaning to high tech SME managers and therefore complexity alone is a potential barrier of adoption. I chose the brand portfolio view to explain and clarify the complexity of strategic choices. Bearing in mind the objective of this study I chose to integrate the brand architecture theories and high tech companies. The high tech companies are categorized according to what types of brand they have or could potentially have. The aim of this chapter is to raise the awareness of the variety of the branding choices also in a high tech environment.

> "Always design a thing by considering it in its next larger context – a chair in a room, a room in a house, a house in an environment, an environment in a city plan." – Frank Lloyd Wright[3]

The world of brands is rather complicated and careful planning is required already at the very early stages of marketing decisions. As the above citation by Mr. Wright implies, a brand needs to be designed by considering it in its next larger context: in a brand portfolio. Brand architecture decisions are particularly important since they are closely related to positioning and executing marketing activities. The decision process is difficult because it involves issues such as what should be branded and what relationships are desired between different brands. Aaker (2004, 13-15) defines "*the brand portfolio strategy specifies the structure of the brand portfolio and the scope, roles and interrelationships of the portfolio brands*".

There are several different approaches to categorizing brands. However, I chose a brand architecture by Capon et al. (2001, 220-224) since it is simple and clear and still captures the high tech environment in detail. Capon et al. (2001, 221) divide the management of brands in three dimensions: inter-organization,

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[3]   in Aaker (2004)

inter-brand and inter-market. They address the management questions; 'Should we do it alone or partner with other brands?'. Table 9 shows the different types of brand management dimensions, processes and themes as identified by Capon et al. (2001, 221). Each dimension is discussed in detail and opened with the help of examples in the following paragraphs.

TABLE 9   Brand management dimension, process and theme

Dimension	Inter-organization		Inter-brand		Inter-market Process	
Process	Individual	Alliance	Focus	Extend	Localize	Globalize
Brand theme	Solo-brand	Co-brand	Multi-brand	Umbrella-brand	Local brand	Global brand

Source: Capon et al (2001, 221)

Inter-organization - Solo-brand architecture

The characteristic of solo-brand architecture is that there is a strong, single master brand in which everything is unified. Customers have a clear picture of this company – its persona, its ethos and its values – and they make purchasing decisions based on loyalty. The features and benefits of the product are less important than the brand promise, because the consumers trust the brand. The visual identity and the brand name are consistent across products and services. (Wheeler 2003, 38). An individual brand, originally developed from a product or company name, has been the foundation and the base for all branding theories. It is still a relevant choice for many high tech companies. Typical high tech examples would be IBM and NOKIA and those of the traditional industry Starbucks and Mercedes-Benz.

Inter-organization - Co- brand architecture

Alliances between brands (even between well-known strong brands) have become increasingly popular. Their strength is in combining competences and leveraging favourable brand associations to both brands. The alliances can be of interest to many high tech companies, since they can be very helpful to new businesses. The founder of Calyx Corolla said that she would have never started her business without the alliance with Federal Express. The alliance guaranteed the credibility of her start-up. On the other hand, the managers must bear in mind that in co-branding situations they do not have full control over the associations linked to their co-brand partner. (Capon et al. 2001, 223).

One dimension of brand alliances is an ingredient branding strategy. Many traditional companies want to link key attributes of one brand into an-

other brand as ingredients. The host brand can create differentiation from competition, expand usage and extend into categories into which it would have difficulties to enter on its own. (Desai & Keller 2002, 73,90). This strategy can be especially important to many high tech companies since they can provide new performance, quality or health attributes to traditional products through new technology and innovations.

Desai and Keller (2002 73-93) studied two types of ingredient branding strategies. In self-branded strategy the new name, logo, symbol and so forth is the proprietary to the company marketing the host brand. The first type is a strategy when the target attribute ingredient is furnished for the brand expansion either with a new name or as a *self-branded* ingredient. When branding the ingredient with a new name, the host brand owns the self-brand, e.g. Tide with its own EverFresh scented bath soap. On the other hand, it is typical in high tech industry these attributes have not been named or branded by the technology or innovation supplier or the host brand. For example, IBERO-jewellery uses nanotechnology as a value-adding component which spreads pleasant, customized smell when wearing their necklaces. However, the attribute based on the nanotechnology is not branded.

The second type of an ingredient strategy is by branding an established, well-respected name as a *cobranded* ingredient. In such strategy, the attribute ingredients are supplied by another firm and linked with a host brand (e.g. Intel inside Dell computers, Tide with Irish Spring scented bath soap). Typical cobranded high tech examples are Intel-inside or DIARC® nanocomposite coatings. Those of traditional industry examples are GoreTex – clothes and shoes.

Desai & Keller (2002) supported the use of cobranded strategy but they also noted that brand equity can be built through self-branded ingredient products. Furthermore, it was pointed out that managerial guidelines, when and how to brand ingredients, are badly needed.

Inter-brand - Multi-brand architecture

The characteristic of multi-brand architecture is that a company uses individual brand names for each of the products and categories in which it competes. All marketing resources are focused on selling these brands to their specific target markets. (Wheeler 2003, 38-39). The customers recognize the various brands but the company owning the brands may remain invisible.

Typical high tech examples are De Light™ (bright light by Merident's) and Easy Ergo (an optimal working posture with a camera, Merident's). Those of traditional industry are Godiva Chocolates (Campbell Soup) and Pringles (Procter and Gamble).

Inter-brand - Umbrella-brand architecture

In an umbrella-brand situation a single brand name, which can be a corporate brand or family branding, is pursued for various products. The advantages are

economical: the investments in the brand benefit all the products under the umbrella, and the positive associations transfer to other product categories. However, a single brand name strategy limits the company's positioning and targeting choices. In addition to this, the customers may be doubtful about the fact that one brand can be credible in several product categories. Another great risk is that also the negative associations and problems transfer to all the products. (Capon et al. 2001, 222-223). A typical umbrella-brand high tech example is Microsoft and those of traditional industry Kellog's and Felix.

Inter-market - Local-brand architecture

When a company markets different brands for different world markets, they follow the local-brand architecture (Capon et al. 2001, 223).

Inter-market - Global-brand architecture

Several branding authorities support developing global brands. In a global-brand strategy a company possess one brand which is marketed across the world. Very often in high tech most of the products are global by nature. However, sometimes technical and legal restrictions may prohibit the use of a global brand in a single market. (Capon et al. 2001, 223-224).

To sum up, I chose a brand portfolio view to explore the complexity of a brand strategy decisions. It seems likely that a brand strategy is difficult to understand and/or to implement especially by high tech SME managers who do not possess much marketing knowledge. It is almost a necessity to learn new skills and it takes time to learn the needed skills. Thus, complexity can be a major barrier for a brand strategy adoption. High tech managers need to evaluate which brand architecture strategy will support future growth. There is no right or overriding solution. Anyway, for a high tech manager with little knowledge of a brand strategy it can be recommended to be aware of all possibilities. Brand decisions are not easy to change, and their consequences are measured in a long term.

3.2.3   Trialability and observability of a brand strategy

Trialability and observability are relatively close attributes and complement each other. Trialability refers to experiences of a brand strategy or to a possibility to try one and observability refers to the degree to which the results are visible to others.

However, a brand strategy is almost impossible to only experiment with and the outcomes can be observed only in the long run and, hence both trialability and observability impede the rate of adoption. Firstly, the business environment of the high tech companies is such that is not possible to try out a brand strategy in a short term. Starting a business even with previous experience but in a new environment can lead the manager to utilize a brand strategy incorrectly. Besides, the basic assumption in the traditional branding literature

is that a company has a product or a brand, that is, at the minimum some established constructs to start with. However, in high tech the founder of a business may only have a business idea or an idea about the technology but no idea about the tangible end-product. Founders have to invest in and commit to the development of the technology and, consequently, they need to establish a company in order to gain financial support. Most of the managers make highly long-term strategic decisions already when they take their very first steps in business. They might not be quite aware of the importance of their decisions from the branding point of view – their mind is occupied in developing the technology in order to launch the product. However, even without acknowledging the brand perspective, they may decide on the fundamental brand elements, hierarchy and the name of the company.

Secondly, since only a few SME high tech companies have succeeded in building up a strong brand, the results are not visible to others. Moreover, the available literature does not provide supportive case-examples. In high tech marketing literature branding is recommended as a marketing tool only when the company has established its technology in the market. Moore (1998) advices in detail what start-up companies should know about high tech marketing and how they should develop successful marketing strategies and tactics to "cross the chasm". However, he has excluded branding. Mohr (2001) has dedicated one sub-chapter for *"The importance of branding in High-Tech markets"*. However, branding is relegated under advertising and promotion and consequently the main message to the companies is that branding is mainly a marketing tactic, not a marketing or business strategy. Ali-Yrkkö et al (2000, 43) emphasize that Nokia's success in the market was based on investing in marketing, not only R&D. Furthermore, they note that *"the company has advanced well in selling and marketing. It has created a well-known brand."* They describe NOKIA's marketing style "revolutionary". Reading between the lines, their message to other high tech companies is that it is something extraordinary for a high tech company to create a brand. It is a relevant strategy for major companies possessing reasonable marketing resources and providing consumer products. However, it is difficult to find the literature recommending branding strategies to SME and start-up high tech companies in b-to-b markets.

To sum up, the above discussion focused on trialability and observability of a brand strategy. Regardless of the context, a brand strategy cannot be borrowed or provided for a trial. In high tech context, a high tech SME manager's personal, prior work experience in other industries may dispel uncertainty to try to a certain extent. However, regardless of the prior experience, some modification to fit a brand strategy to the organization and to the high tech environment may be needed. Although many the outcomes of a brand strategy can be easily observed or described by others, a great deal is not so apparent to observation. Strategic brand management is an internal process and difficult to imitate. Moreover, there is a relatively small percentage of good case-examples and hence effects negatively on the rate of adoption.

In the next paragraph the time perspective is being approached. The inclusion of time is a special characteristic of two concepts in the present study, namely in high tech context and diffusion research. In high tech, time as a variable is linked with new product or new feature introductions, with obsolescence of technologies and with new technology development. It holds a promise of solving problems and, as such, not quite within the aims of the present study. (Mohr 2001, 6-8; Moriarty & Kosnik 1989, 15). Diffusion is a process that occurs over time. In the diffusion theory the time perspective is involved in three areas. Firstly, it is an element in the innovation-decision process, when we look at how an individual passes from the first knowledge of an innovation through its adoption or rejection. (Rogers 2003, 20). The aim of the present study is to explore and understand this area and thus the focus in the next paragraph is in other areas.

Secondly, the time dimension is involved in the innovativeness of an individual or some other unit of adoption (the relative earliness/lateness) compared with the other members of the system. Thirdly, time is involved in the rate of adoption. It is usually a numerical measurement of how many people have adopted the innovation in a given time period. (Rogers 2003, 20). The next paragraph focuses on these two perspectives of time.

3.3   Time perspective

Unlike in much other behavioural research, in diffusion research time is included. As the matter of fact, the inclusion of time is one of its strengths and essential elements. Time perspective describes, for example, the relative earliness or lateness of an individual or other unit of adoption in adopting new ideas than the other members of a system. Hence, the degree to which an individual is ready to adopt a brand strategy is important, since strategic decisions and their timing affect significantly an organisation's ability to achieve its objectives.

The individuals can be categorized into three different groups based on the time period in which an innovation is adopted. The adopter categories are 1) innovators, 2) early adopters, 3) early majority, 4) late majority and 5) laggards. The members of each group share a great deal in common. The first to adopt the new idea are called the innovators. They are active information seekers, reaching outside their local system, and are able to cope with higher levels of uncertainty. (Rogers 2003, 21-23). Little evidence is thus available to quantify the adopter categories of branding or characteristics of potential adopters, in particular in high tech SME context. In the scope of the present study, no articles, case studies or surveys could be found. Although there seemed not to be any systematic measure of branding diffusion, it is likely that when it comes to the branding decisions the innovators may gain sustainable competitive advantage just by adopting the strategies in as early a stage as possible.

Generally, strategic decisions, such as branding decisions, within SME's are necessary elements for business growth (Reijonen et al. 2012; McGovern

2006; Zinkhan & Pereira 1994). Hence, this includes decisions which were seen as important at the time they were made and also the decisions which only in retrospect appear to have been strategic. (Bowman & Asch 1987, 3; Zinkhan & Pereira 1994). However, in a high tech environment, the significance of marketing decisions is often undervalued and managers realize their strategic importance only in retrospect. At the time of decision making, marketing issues do not seem worth discussing and drawing attention to. (Hills et al. 2008; Moriarty & Kosnik 1989; Ward et al. 1999). One example of such early stage decisions is to give a name.

> "In today's competitive world, a name must be a function as a total messenger."
> Naseem Javed, author, Naming for Power[4]

Rogers (2003, 250-251) among many other experts (Aaker 1996, 242; Keller 2008, 16,145, Knapp 2006, 6) point out that the naming of the innovation, product or company is important. Often the name of the company "strikes the roots" of the brand and is influenced by the product or technology (e.g Nanolabs, a company in the field of Nanotechnology). Brand name is one of the most constant and important constituents of a brand since it is involved in all communication. Brand name itself creates brand associations which are important elements of the brand equity. (Keller 2003; 2008, 145).

It is recommended a brand name to be distinctive when compared to other brand names in the industry (Knapp 2006, 6). Generally, in high tech industry the company name is their brand (Ward et al. 1999, 88). According to a recent report (N2 Nolla 2011), corporate brand is more important than ever in business-to-business sector. This is mainly due to Internet, since it has made companies more visible and public compared to its products. In addition, customers prefer longer "name life cycles". In other words, they prefer decades of evolution under the same name. It is true that a corporate brand identifies the corporation behind the product or service and provides stability. However, it is likely that it does not communicate the value for the customer and/or differentiate it from competition. (Aaker 1996, 242; Keller 2008, 16,145).

At the very early stages the companies also decide the visual elements linked to their company. Henderson et al. (2003, 308-309) suggest companies to emphasize more visual stimuli in order to improve quality perceptions. By doing this they can create an image that can be used internationally and overcome language barriers. Later, when high tech companies develop and name new products, they decide about leveraging the brand, its vertical or horizontal extensions (Aaker 1996, 270-301).

Time dimension can be involved also in general in branding since a brand is the nucleus of sales and marketing activities. Cases where the brand building process begins only later in the company's or product life cycle can lead to considerable conditions. The worst scenario is losing the brand totally. For example, when a high tech company develops a product that will be incorporated into

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4   Wheeler (2003, 40)

another brand as an ingredient (e.g. nanotechnology), the host brand (which is owned by another company) can enhance its own differentiation by characterizing the ingredient attribute. The competitive advantage and the brand equity of the host brand will improve, but at worst at the expense of the ingredient brand. (Desai & Keller, 2002). When the managers of the ingredient brand are aware of branding strategies, it prevents the host brand from adopting the ingredient attributes. Otherwise, the brand equity will be sold along with the product and become more vulnerable against the competitors. It is possible that the competitors soon launch a very similar product and the price will be the only competitive differentiator. To avoid this, brands can be built together in alliance, and self-branding can be an alternative way of branding the attribute ingredient, contrast with co-branding or just melt the technology into the host brand. (Kalpes & Keller, 2002).

All in all, for adoption of branding strategies to be successful it is important to understand the time perspective. Time is money in business and therefore its role as a motivator can be of significance. Furthermore, time is one of the four main elements in the diffusion theory and it is identifiable in every diffusion study. A high tech SME manager can be seen as an individual who makes a decision to adopt or not adopt a brand strategy within a given period of time. Thus, high tech SME manager may gain competitive advantage by adopting a brand strategy relatively earlier than other managers in their industry. (adapted from Rogers 2003, 20-23). Time is also dimension which can be seen from the high tech context and a brand strategy perspective. However, time dimension can also be criticized from methodological viewpoint. The major criticism focuses on the recall problem which occurs, when the respondents are asked to look back in time. This may lead to inaccuracies. (Rogers 2003, 102-135).

Summary of the Chapter 3

In Chapter 3, the perceived characteristics of a brand strategy were charted and elaborated using practical examples in the field of high technology. The Table 10 summarizes the discussion and the key issues of the perceived characteristics of a brand strategy in an adoption process as derived from literature.

First, the previous literature recognizes the link between financial success and strong brands. The emphasis is towards deeper understanding and monitoring the customers' needs. In a high technology context, the emphasis is on understanding that traditional branding literature may provide the settings, structure, direction, tools and courage to commercialize the products or innovations. Secondly, studies similar to this help in understanding the strategic importance of a brand, as well as in contexts other than the traditional markets. Due to the nature of high tech, the unfamiliarity of markets and technology highlights the strategic importance. A brand reduces the uncertainty in a customer's mind, and by reducing perceived risk it creates value. Thirdly, by enabling to convince the managers to commit to brand management, a strong

brand helps to attract skilled staff and access new markets. Moreover, the time perspective is considerably relevant in the high tech environment.

TABLE 10   Key issues of the impact of the perceived characteristics on the adoption process

Key issues of the impact of the perceived characteristics on the adoption process	High tech marketing challenge	High tech marketing tactics	Advantage - What can a brand strategy offer	Discussion
Relative advantage: Financial advantages	Commercialization	Sustainable competitive advantages	Branding provides guidance and framework Customer-relationship view	Branding is an effective way of creating a monopolistic market situation. (Porter 1980) Context-related challenges
Relative advantage: Strategic advantages	Risk	Credibility of the technology and the company Informal, non-existent or noncompatible standards	Ability to reduce perceived risk. Credible brand signals	During brand building process manager creates strong visual communication, product design, logo, graphic style and preferably brand personality
Relative advantage: Management advantages	First – mover advantages	Technological leadership, pre-emption of assets, development of buyer switching costs	Market entry barrier Brand extensions	Brand is like a contract, a promise of receiving a certain type and level of value
Relative advantage: Management advantages	Best position in the labour market	Creative job descriptions	Social status	Short term pressure
Compatibility	Recognizing the need of a brand strategy A brand strategy is an uncertain concept	The best technology is able to create new value to customers	Brand strategy guides to position the innovation and help identifying the niche markets	Customers value the fulfilment of a need, not the technology
Complexity	A brand strategy is a difficult concept	Branding choices are not clear in their meaning	The brand architecture strategy introduces all possibilities	

			and helps to choose the brand name	
Triability	It is not possible to try out branding Often the company is set up before the product is ready; the product names are influenced by the technology or the product	Managers are not quite aware of the importance of decisions from a branding point of view	Brand name is one of the most constant and important constitutions	Naming of the innovation is important
Observability	Branding results are difficult to observe in short term	Branding is relegated to a tactical role	Branding is involved in all communication	
Time perspective	Often branding decisions appear to have been strategic in retrospect			Early adopters of brand strategy in new branding contexts may gain competitive advantage

Despite all financial, strategic and management advantages, the focus of high tech marketing literature has been on other critical issues than branding. The puzzling question is how to pass the knowledge from traditional marketing literature to the high tech environment. The above discussion is noteworthy since it increases the importance of top management involvement in adopting a brand strategy. Berthon et al. (2008, 27) remind that the strategic importance of effective brand management has long been recognized by traditional marketers. Capon et al. (2001, 226) conclude that if brands are companies' most valuable assets, they should be managed from high level and therefore in most of the companies CEO's are responsible for the brands (Keller & Lehmann 2006, 749). Furthermore, brand management at a high level is inevitably a strategic concept, rather than tactical or operational.

The next chapter discusses and provides a framework for guiding managerial decision-making in a high tech environment. Diffusion occurs within a social system and its structure affects in several ways (Rogers 2003, 23-24). Creating and developing a brand in a challenging marketing environment generates various new aspects to marketing and brand management. The main components are knowledge and resources and their relationship with performance and marketing management as a path to creating a competitive advantage.

Research conducted on the perceptions of managers about branding seems relatively scarce (Centeno et al 2012). In academic research the implementation

and branding are not connected at a sufficient level. Thus, more attention could be paid to what is done to have everything qualified. Irvin and Michaels outlined already in 1989 (4) that the primary focus of management had for years been on strategic issues. However, they wanted to change the management focus from the creativity of strategies to driving corporate performance, to the superior execution of the core skills of the business. Similar developments can be discovered in brand management. Lehman & Warren (2002) outlined the top priorities for marketers and noticed that brands have steadily increased in importance over the last decade. They also noticed that practitioners put a somewhat greater emphasis on brands than academics. According to them, this is due to academics having expended considerable effort on the topic of brands and finding further studies less exciting. Furthermore, it seems that studying execution is also less exciting and therefore plays such an insignificant role in branding literature. The above considerations lead us to the next chapter in which the focus is on managers and managing the organisation.

4 THE EFFECT OF AN ORGANISATION AND A MANAGER ON ADOPTION

The *internal* social system, the organisation and the managers, in high technology companies is the focus of this chapter. Numerous scholars in strategic management have highlighted the relationship between the characteristics of managers and the performance of firms. They have examined management teams and linked managerial characteristics to performance (in Shrader & Siegel, 2007, 893). Moreover, many scholars in entrepreneurship have studied the role of human capital or an entrepreneurial team and the performance of new ventures but have failed to prove these linkages (in Shrader & Siegel, 2007, 894). However, the human capital theory supports the view that managerial characteristics should influence strategic choices and the firm's performance among technology based start-ups (Amason et al. 2006). In the Diffusion of Innovations Theory by Rogers (2003) the social system is the fourth main fundamental element. The diffusion process goes through the members, who may be individuals, informal groups, organizations and/or subsystems. Actually, the social system is a boundary through which an innovation diffuses. Firstly (section 4.1), the aim is to discuss what the high technology managers and personnel learn through others. The knowledge-based and resource-based views provide a framework for in-depth understanding of the core elements.

Secondly, the structure of the social system can facilitate or impede the diffusion or the adoption (Rogers 2003). Furthermore, Teece et al. (1997) see that managerial and organizational processes are one of the key factors that help determine a firm's competitive capabilities. Section 4.2.1 discusses the concept of marketing management. Furthermore, in the section 4.2.2 the conceptualization of strategic brand management is approached. In section 4.2.3 the discussion is narrowed to brand management in high technology.

Thirdly, adoption involves decision and the social system influences the type of decisions. A decision can be made by (1) individuals independent of the decisions of the other members of the system. Alternatively, decisions can be made (2) among the members by consensus, provided that all units must conform to the system's decision. Finally (3), the decisions are made by relatively

few individuals who possess power or status, for instance managers. (Rogers 2003, 23-31). Section 4.3 emphasizes the strategic role of those individuals who possess the decision power, the managers. According to Michael Porter (1980) a great leader has to acertain that everyone understands the strategy. Strategic management focuses on business concepts that affect a company's performance (Mintzberg et al. 2005, 43; Teece et al. 1997; Hoskisson et al. 1999, 417) and brands affect a company's success (Doyle 2001; Gromark & Melin 2010). Furthermore, the success of a brand to a large degree correlates with the decisions made by the company (Berthon et al. 2008; Doyle 2001; Riezebos 2003, 23). As a result, to understand the role of knowledge, marketing management and the manager play an important role in this study.

All in all, this chapter employs theoretical triangulation to study adoption of a brand strategy within a high tech SME context. By combining and contrasting various theories, mostly based on strategic management including SME management and high tech marketing literature, I hope to be able to illuminate specific aspects of the phenomenon. The contributions of fields and disciplines other than branding for understanding the adoption in high tech SME's are evaluated in this chapter. This chapter addresses the knowledge gap concerning the branding activities in high tech SME's by presenting critical issues that high tech marketers face. High tech marketing challenges are mainly employed from Moriarty & Kosnik (1989) throughout the present study. Then the discussion is moved to present action recommendations to overcome these challenges. Action recommendations are proposed according to Moriarty & Kosnik (1989) as high tech marketing tactics. Finally, a contribution and action recommendations suggested by branding literature is employed. The theoretical approaches considered in this chapter are summarized in Figure 5.
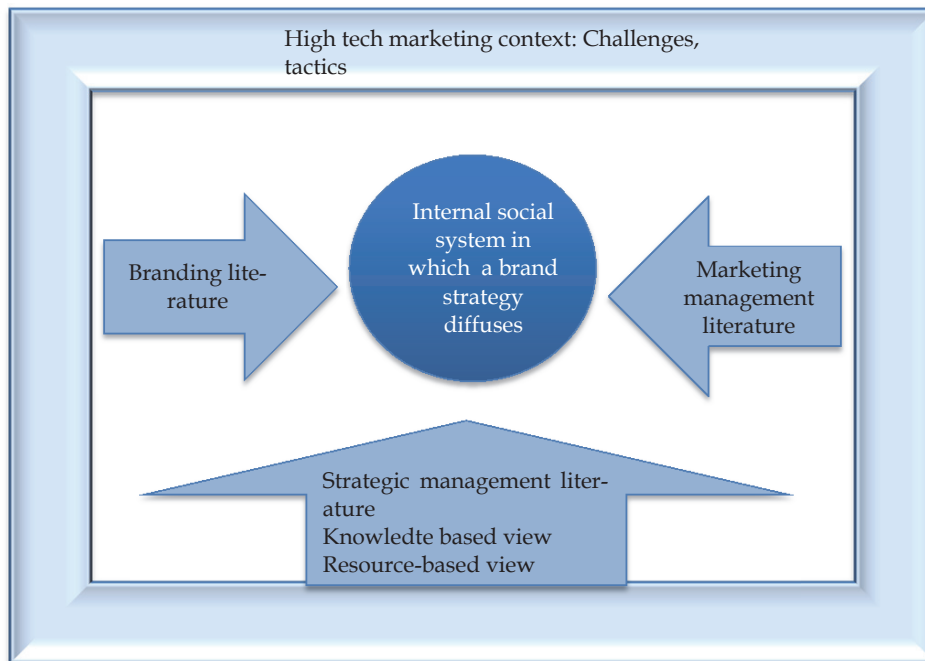
FIGURE 5   Combination of theories to understand the impact of social system on adoption of a brand strategy

4.1   The exchange of information as a source of knowledge

The diffusion process goes through the members of the internal social system, and the purpose of this section is to recognize the important characteristics of the phenomenon, in other words, what the high tech manager and personnel learn from each other. Learning enables tasks to be performed better and quicker. (Teece et al. 1997). Learning involves organizational and individual skills and communication. Rogers (2003, 18) defines communication *as the process by which participants create and share information with one another in order to reach a mutual understanding.* The essence of the diffusion process is the information exchange through which one individual communicates a new idea to one or several others. The process involves (1) an innovation (brand and brand strategy), (2) and individual or other unit of adoption who has knowledge of, or has experience of using the innovation, (3) another individual or other unit that does not yet have the knowledge or experience, and (4) a communication channel connecting the two units. In Rogers (2003) theory the communication channels extend beyond the organisation. However, in this section the emphasis is inside the company since the environment, context of the present study has been presented earlier in section 1.6.

4.1.1   Knowledge-based view

In the management literature knowledge-based view of the company is an extension of both resource-based theory[5] (Wernerfelt 1984; Barney 2001) and the dynamic capabilities approach (Teece et al. 1997). The underlying assumption of the knowledge-based view is that knowledge is the principle productive resource of the organization. (Kogut & Zander 1992).

Knowledge resources include the understanding of how to start up new organizations, how to manage people and processes, how to attain growth and a competitive position, and how to stage technology and new product development. The perspective is *within* the organization, that is, what companies do better than their competitors in sharing and transferring of the knowledge of individuals and groups. A company's capacity to innovate can be associated with the capacity to combine and exchange knowledge resources. (Kogut & Zander 1992, 383-397). While the resource-based view is more like a snap-shot of the current situation since it focuses on the existing firm-specific assets, the knowledge-based view is a longitudinal process. It focuses on knowledge as the most strategically important of the firm's resources and it is an outgrowth of the resource-based view. (Grant 1996).

Grant (1996) sees knowledge from an individual perspective, and the role of the organization is knowledge application rather than knowledge creation. All learning takes place inside an individual's head. An organization learns either by learning from its members or by investing in new members possessing new (relevant to the firm) knowledge. Transferring and integrating knowledge between the members of an organization is difficult. For example, in product development the integration of many specialists is a necessity. (Grant 1996). To be successful the companies must integrate scientific knowledge, facts and management techniques with contextual experience. The characteristic of innovative entrepreneurship are the complexity and tacitness of knowledge. (West & Noel 2009).

West & Noel (2009) have studied the relationship between new venture performance and types of knowledge that come into play in the start-up process. The context of their research was technology-based companies in dynamically changing competitive circumstances, and the majority of the respondents were founder CEO's. They chart three important types of procedural knowledge for Start-Ups: 1) knowledge about the industry, 2) knowledge about the type of business and 3) knowledge about starting up new ventures. As a result, they found out that the sources of knowledge were, indeed, in the relationships to both the previous industry and previous business model as experienced by the CEO. Furthermore, networks were the source of new information.

The other valuable research finding in West & Noel's study (2009) was the strength of the knowledge-performance relationship. The frequency of using networks had a positive correlation with both the performance and size of the company. West & Noel (2009) highlighted the importance of networking, since

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[5]   see section 4.1.2

networking activity with new information is a strong predictor of performance. Networks can be assets not only to the companies but to local communities as well. West & Noel (2009) recommend authorities to build and sponsor local networks and educational organizations to enhance communicational skills, since they appear to be important in the start-up process. They see also important to connect people with different perspectives and understandings since it can be the foundation for *new* knowledge. The dynamic nature of technology industries means that the value of knowledge gained previously erodes very quickly. The past may not be relevant in the present.

According to McGovern (2006), learning networks are cooperative associations of partner companies that share knowledge, physical resources and expertise in order to improve their current performance and to advance new business paths. Adapting to a dynamic learning network increases a company's opportunities to learn and earn, i.e. to enhance and acquire new capabilities that improve competitiveness. Furthermore, this would not be possible if the company did not participate in the learning network. Moreover, the new capabilities enable the company to learn how to compete.

To sum up, transferring knowledge between the members of an organization is difficult. In addition, the knowledge needs to be integrated across organizational boundaries. For example, in product development the integration of many people is required. The organization is the reality of the company and, therefore, one fundamental base in high tech marketing management. Organisations tend to focus on R&D and engineering, and, consequently, the role of marketing is often secondary. It is difficult to implement marketing since it requires a great deal of knowledge and understanding of how to market in high tech environment. It is essential to find the right and skilled people. The next paragraphs approach the characteristics common to high tech industries, in other words, how to broaden and deepen the skill set in the organization.

High tech challenge - Mastering the ever-expanding set of skills

Marketing tasks are becoming very knowledge intensive demanding differentiated professional skills and capabilities. Möller & Rajala (1999, 522) note that the organisations have to take on a professional role and all functions have to be staffed by specialists. As the influence of high tech is highly complex, also the marketing activities have to be spread among several organizational units. When adding to this the fact that companies are increasingly operating globally, one can notice the development of fragmenting marketing activities, such as forming complex matrix organisations, multifunctional teams, account management systems and forms of business process management. (Möller & Rajala 1999, 522-523).

Several authors (Mohr 2001, 7 ; Möller & Rajala 1999, 523-252) see that in high tech SME companies the level of tacit knowledge involved in different functions impedes cross-functional collaboration between R&D (engineers) and marketers. The challenge may be that technical people are not often market-

oriented; communication problems and barriers exist both within organizations and between suppliers and buyers. Due to the fast development, it is recommended that sales and marketing people build expertise in the key technologies. (Mohr 2001, 7; Möller & Rajala 1999, 523-252).

Firstly, it is recommended that marketing understands the market potential and communicates outside the organisation (Mohr 2001, 7). Furthermore, according to Kofking (2008), marketing is about building new businesses in future. He recites the list of characteristics needed for future marketers: think global and act local, lead by example, be a great team player and yet independently-minded, be a creative thinker who understands how to interpret and act on data, be a strategist, a tactician, a communicator and a born networker all-in-one. Kofking (2008) highlights the marketers' capability of applying both the left and right hemispheres of the brain in their thinking.

Secondly, credibility is built inside the organisation. Mohr (2001, 24-25) sees that the considerations a company undertakes are dependent on its size. Large high tech companies struggle with the "liability of bigness", i.e. how to remain innovative despite the high bureaucracy. The small high tech companies struggle more with the "liability of smallness", i.e. how to move on from the engineering mind-set to a marketing mind-set.

Managing change is challenging. Even if the realities of the world of high tech companies are very different from those of the traditional companies, the organisational categorisation of people seems to live on very persistently in managers' minds. Möller & Rajala (199) see that the marketing organisation in industrial companies differs from that in consumer goods companies. The traditional literature recognizes that three units are primarily responsible for carrying out the marketing activities, product management, field sales and customer service. However, the importance of organizational arrangement is overlooked in literature. Several researchers (Vargo & Lusch 2004; Kofking 2008) point out that the entire world of marketing is changing. Whilst marketing is becoming more important as companies need to develop customer-centric products and services and become highly differentiated. Managers struggle because they really do not know what their marketing spending is achieving. Hence, they do not trust those who they have hired to do the job.

The perspective of "broadening and deepening the skill set" and branding in high tech

Basic understanding of the technology is needed in order to be successful in high tech marketing and therefore companies often hire young people with technology degrees for sales and marketing jobs. Naturally, the needs for technical skills are then satisfied, but it leaves a gap in understanding the customers industries and business functions. The leading companies have recognized this and started to hire fast learners with experience in their customers' business functions. (Moriarty & Kosnik 12, 1989).

Another solution is that companies train their people. They may use creative trainers who can bring the sales and marketing professionals closer to the customers. One creative training solution is, for example, "walking in the customers' shoes". Sales people live in the customer's organisation for a while and learn matters that would not be easy to find out through other methods, like interviews. However, the most enduring method is to give people creative work assignments. Hence, the assignment provides a sense of the big picture, i.e. all the edges of business from winning to losing a sale. (Moriarty & Kosnik 12, 1989). This will lead us to an idea that a brand strategy can be learned. It can provide a sense of the big picture to high tech managers and help them broaden the brands towards a holistic view and extend them into new categories.

High tech managers may take a holistic view of brand building in the organisation. In such a view, the central organising principle of an organisation is a brand. (Urde 1999; Smith 2003, 97). From customer viewpoint, the main distinction between the traditional and holistic approach is whether a consumer, in her/his perception of the brand characteristics, makes a distinction between the characteristics related to the product and those associated to the brand. (Vázquez et al. 2002, 27-28). A common factor appears to be that brand positioning and proposition are not based on the product or technology. Instead, the attention is given to the clarity of vision and the overall values and positioning. In the over-communicated world lack of clarity may reduce effectiveness and efficiency. A brand can be seen as a total experience, and as central organising principles, rather than just products and logos. A brand explains its wider benefits and moves from the basic product-level to the more emotional levels of creativity, values and core social contribution (Clifton 2003, 234-237, 239).

Ulrich & Smallwood (2007) introduce a new concept, building a leadership brand, in which the focus is on managing a brand on a long term. They encourage technology companies to participate customer assessments of the company's leaders through surveys, interviews and focus groups. (Ulrich & Smallwood 2007, 93-107). Continuity as such is nothing new in traditional branding literature. However, the strong emphasis of all functions collaborating towards the customer's point of view is noteworthy. The organisation aligns its people, processes and products with its proposition in order to deliver its promise and create value for the target customers. (Smith 2003, 97).

The valuable notification for studying knowledge-based view for the present study is to understand the role of individual behavior. The behavior can generate knowledge resources which can be of benefit for the company. In addition, knowledge is the first stage of the Innovation-Decision Process (Rogers 2003, 170) and therefore an important element as such of the adoption process.

To sum up, high tech SME companies can invest in brand building by hiring new personnel possessing knowledge about brand management. Alternatively, the company can join networks and gain new knowledge. The condition for success is, however, that organizations manage and build effectively so as to enhance the flow and integration of knowledge throughout the company. As a consequence, these contribute to the composition of the management of the

company and the brand management execution skills. It is possible for high tech industry to yield entirely new global brands in the future. However, it is equally possible that an existing, trusted brand may extend or cross into new categories.

4.1.2   Resource-based view

The resource-based view provides a framework to focus on internal analysis of a company's competitive advantages. The value of the resource-based view in the present study is that it increases our understanding of the influence of a company's environment (high tech) on its competitive position and on its performance. Since the early 1980's, researchers have been developing and defining resource-based concepts, and seeking to relate how resources can give rise to firm competitive advantage. Wernefelt (1984) suggested that evaluating firms in terms of their resources can lead to insights that differ from the traditional perspective. The basic idea is that the resources are heterogeneously distributed across competing firms and that they are imperfectly mobile. (Barney 1991, 99-120).

A firm's resources are defined as tangible and intangible assets which are tied semi-permanently to the firm (Hoskisson et al. 1999, 439-443). Wernerfelt (1984) notes, that a resource means anything that could be a strength or weakness of a given firm. Valuable, rare and inimitable resources are usually intangible in nature, and intangible resources are more difficult to measure. (Hoskisson et al. 1999, 439-443). According to Rao (2005), there is a clear shift towards the growing importance of intangible capital. Rao (2005) devides the intangible capital into two, the intellectual capital and marketing capital. He sees that the importance of intellectual capital, e.g. R&D capability and human capital has been well established. However, the importance of marketing capital, e.g. brand name and other marketing assets needs a wider understanding. The challenge of high tech companies is that they need to turn their technological competencies into a sustainable competitive advantage.

The manager as a resource of the company can be the source of a sustainable competitive advantage e.g. brands. In order to hold the potential of sustained competitive advantages, the company's resources must have four attributes: 1) they must be valuable, in the sense that they exploit opportunities and/or neutralize threats in a company's environment, 2) they must be rare among a company's current and potential competition 3) they must be imperfectly imitable and 4) there cannot be strategically equivalent substitutes for these resources that are valuable but neither rare nor imperfectly imitable. (Barney 1991, 99-120).

Barney (1991) suggests that a manager or a managerial team has potential to generate sustained competitive advantages and in such a case they are company's resource. These resources cannot be purchased, rather they need to be identified and controlled by the company. Every company has potential strengths and weaknesses. However, the company's success and development lie in its ability to create competences that are truly distinctive. Unfortunately,

the theory fails to identify or to provide a systematic framework for analyses (Teece et al. 1997) and it focuses on large, established firms where the challenges of acquiring resources are significantly different compared to new ventures (West & Noel 2009).

Doyle (2001) published a paper in which he illustrates brands within the resource-based theory of the firm. He sees that the resource-based model of the firm suggests insights into the role of brands, especially from the value-creation viewpoint. In order to understand how brands create value, the model helps in understanding the bigger framework, how a firm creates value. He also points out that brands as intangible assets are part of a firm's core business processes and thus, brand management is an integrated part of the total management process.

The valuable notion of studying the resource-based view in the present study is based on the idea that managerial learning can become a fundamental strategic issue. Branding in high tech is still a scarce resource, and consequently skill acquisition, the management's knowledge and know-how can be intangible firm-specific assets. Defining a firm in terms of its assets and capabilities suggests a more sustainable basis for strategy. (adapted from Doyle 2001 and Teece et al. 1997). This view supports also the discussion in section 2.3 of the strategic importance of brand. Furthermore, this will lead us to think that the intangible assets and resources in a company begin to grow when the manager gains knowledge and know-how about a brand strategy, in other words when learning begins. Consequently, from the resource-based view the investment in creation of a brand strategy begins to pay off at the very early stages of brand building, the day that the company even considers developing new capabilities. This viewpoint is interesting by contrast to an idea which seem to be fairly common that brand building takes time and is expensive. The company does not have to wait for years for the returns of the increased value of brand equity. Each day when the knowledge and know-how in brand building is increased, the company differentiates its offering and provides a competitive advantage.

4.2   The impact of the structure of the social system to adoption

The impact of the social system can be seen in the light of the established behavior patterns of its members. A social system has a structure which can consist of a set of interrelated units. However, these units are engaged in joint problem solving to accomplish a common goal. Moreover, the structure itself and the communication in the system have impact on the diffusion of innovations and thus, they are important to understand. (Rogers 2003, 37-38). In the beginning of this section, the formal social systems in marketing were identified. In the present study the conception of marketing management is approached from a Marketing Management School of Thought view since it is characterized by a decision-making approach (Lagrosen & Svensson 2006; Vargo & Lusch 2004).

The discussion is then moved towards the context of the present study with a focus on marketing in high technology.

4.2.1 Conception of marketing management

Vargo & Lusch (2004, 1) see that the leading representative of Marketing Management School of Thought is Philip Kotler, who, for example, published the leading textbook in marketing in 1970's. According to Kotler et al. (2009, 38-72) the modern marketing management consists of four elements: planning, organising, leading and controlling. The importance of strategic planning is highlighted since failures even among experienced marketers are high. The focus of marketing planning is on the customer, and the marketing managers are responsible to the organisation for the execution of the strategic plan.

The fundamentals of organising are a) How to organise a marketing department and b) How to organise other staff and stakeholders, i.e. internal marketing. Kotler et al. (2009, 38-72) recommend and point out the importance of a marketing department. It strengthens the long-term market-oriented attitude within the organisation. Depending on the definition, market orientation (later MO) can be understood as a behaviour or as a resource:

Kohli & Jaworski (1990, 3) define MO from a behavioural perspective; "*the organization-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization-wide responsiveness to it*" Hunt & Lambe (2000, 18) define MO from a resource-based view. "*MO is an intangible property of the firm that enables it to manage market information and deliver value to its customers*" Armario et al. (2008, 488) conceptualize MO also from a cultural perspective. They, among others understand MO to be a business philosophy that highlights inter-functional coordination and organizational culture delivering superior value to its customers.

However, the marketing department has to have the authority to coordinate implementation and manage the activities of all the departments, including the processes and activities aimed at the customer. To ensure the full exploitation of the market opportunities, the marketing manager's role is essential. He/she has to have the competence to run a department, hire competent staff, set high standards for marketing planning and implementation and improve the marketing staff's skills in research, forecasting, analytics, communication and other related activities. In addition he/she needs to build new marketing skills, because of technological development (e.g. the Internet) and globalisation. In practise the work is challenging since so many day-to-day issues overcome and take the long term strategic needs of the company. (Kotler et al. 2009, 38-72).

Managers delegate responsibilities to people, and it requires leadership skills. These skills are crucial since the desired results have to be ensured. Therefore, the focus of control is on the outcomes or returns from the marketing mix activities. (Kotler et al. 2009, 38-72).

The entrepreneurial marketers, such as SME's, may use marketing as a path to create competitive advantage. They recognize the importance of market-

ing to their success. However, they often position it only after product development and innovation. The characteristics of entrepreneurial marketing (later EM) and their implications for EM firms are charted by Hills and co-workers (2008) as follows:

- Entrepreneur, owner/manager is the Chief marketing officer (CMO) as well as the Chief executive officer (CEO)
- Opportunity recognition that is both intended and emergent is a central and unique component of EM
- Everyone in the company is a marketer
- EM uses innovation, product, process and strategy to create new value propositions for customers and thereby generate competitive advantage for the company
- Social networking and relationships with the customers and other stakeholders are at the foundation of EM. It is often the capability that allows EM companies to gain advantage

The above characteristics are compared against the traditional marketers (later AM). EM firms differ from AM firms in terms of their strategic orientation, commitment to opportunities, opportunity recognition mechanisms, control of resources and management structure so that EM firms:

- focus on the creation of new wealth or value and often create new primary demand for an innovation
- tend to be more tactically flexible and focus their marketing efforts on promotion and selling
- tend to rely on experience, immersion and intuition
- tend to be less constrained by budgets and have strategies that are often very adaptive (Hills et al. 2008).

To bring a customer-oriented mindset to the firm's operations is one of the major challenges in many high-tech firms. The need for funding and additional resources is significantly less obvious to high tech SME firms than to firms in traditional industries which highlights the challenge. The aim in the next paragraphs is to elaborate, why the need for firms in high tech to be customer-oriented and market-driven is seen important. Moreover, an effective focus on the customer requires effective interaction between the marketing and R&D personnel. Intra-firm collaboration and communication between marketing and R&D is a key driver in diffusing market and customer knowledge among all the members of a project team.

High tech challenge - Organising different functions in high tech

Grønhaug and Möller (2005, 100) remind that a marketing organisation in the traditional marketing literature has been seen as a business function. Usually marketing function means a separate department focused on a product or market area. However, high tech performance requires coordination and adjustments within the whole organization. The unclear needs of marketers (Moriarty & Kosnik 1989, 13) as well as rapid external changes influence on all marketing activities. (Grønhaug & Möller 2005, 100).

When the customer's needs are unclear, intensive interaction between people inside as well as outside the company is needed. Business tasks have become more knowledge intensive and a single person or department does not possess the required knowledge. In addition, the organizations need to be able to analyse, understand and respond to a range of market information. In other words, they need to learn to learn. Networking eases the flow of information and therefore becomes increasingly important (Day 1994, Grønhaug & Möller 2005, 100; Moriarty & Kosnik 1989, 13).

The perspective of "intra-firm collaboration and communication" and branding in high tech

It has been suggested by several authors that good communication between marketing, sales, manufacturing and R&D stimulates new product ideas (Mohr 2001; Moriarty & Kosnik 1989, 13). Moreover, successful products provide value to the customer and therefore communication between different functions in the company is essential. It has been considered important that all functions understand the customer's needs to be able to design, make and market products. For example, if the customer wants to buy a sports car (intangible), this wish is directly linked to specific product attributes. These attributes are then linked to product's design, technologies, components and/or engineering specifications. (Moriarty & Kosnik 1989, 13).

Möller & Rajala (1999, 533-534) argue based on their research results that competent management of the internal marketing network is a prerequisite for the successful management of the portfolio of customer relationships. Nevertheless, they conclude that more research is needed to identify efficient organizational structures for high tech companies. When the technology is unproven, the skills of R&D, the manufacturing and field service personnel are more critical than when improving a mature product or technology. All in all, crossfunctional interaction allows marketing with the best customer information. Moreover, it also allows the R&D personnel to gain the best understanding of the limitations of the technology.

Traditionally, companies developing strong brands go through cultural changes. In their organizations the process of brand building becomes a priority. (Aaker 1996, 342-343; Keller 2000). A similar organization is possible when attempting to meet the challenges of internal communication in high tech companies. Krake (2005) highlights the internal role of brand management in SME's.

The entrepreneur can have a very important role in initiating passion for the brand throughout the company. It does not cost anything and the impact has appeared to be significant. Traditional branding literature offers a great deal of advice on how to overcome the challenges and help to create successful strategies. Keller et al. (2002, 82) emphasize that the more innovative the product, the greater the difficulty of fitting it into an established frame of reference, which signals to consumers the goal that the consumers can expect to achieve by using a brand and meeting the frame's minimum requirements. It is not quite sufficient to be different because being different is not synonymous with being successful.

According to Keller (2002) brand positioning should also mean identifying the points of parity. In other words, identifying what the minimum requirements for being in the market are in the company's frame (often it is the category). If customers are not sure why they should buy the product, the product and the brand will fail. On the other hand, if the brand can claim to belong to a certain frame and offer reasonable points of difference by creating a competitive point of parity with the other products, it is likely to be successful. Brand management helps to remember what business the organisation is in. (Keller et al. (2002), 81-86). Creating brand positioning makes the whole organisation work together towards the shared goal. According to Keller et al. (2002), an effective brand position requires that the frame of reference, points of parity and points of difference are internally consistent at any point, both in time and over time.

To sum up, successful brand management supports cross-functional communication and leadership. An equal amount of effort and training must go into marketing internally as into marketing externally. Brand proposition and positioning create a framework, clarity and direction in the organisation. Attention can be paid to the same dimensions as what the customers perceive.

4.2.2 The role of marketing in high tech SME companies

The high tech SMEs provide an interesting marketing context. Marketing in SMEs is seen as having unique characteristics that differentiate it from traditional marketing. SMEs are usually characterised by flat and informal organisational structures, innovation, creativity, ad hoc planning and lack of financial resources and experience. (Gilmore et al 2001; Centeno et al 2013). In addition, several recognized experts (Grønhaug & Möller 2005; Mohr 2001; Moore 1998; Moriarty & Kosnik 1989) see that high tech marketing is different from traditional marketing. Marketing in high tech companies is very complicated due to internal and external factors, for example, due to the influence of rapid changes and high uncertainty. The main characteristic of high tech marketing is uncertainty, which can be divided into two main categories: market uncertainty and technological uncertainty.

One of the typical SME's limitations is the lack of marketing knowledge and limited impact in the marketplace (Gilmore et al. 2001). The Figure 6 below illustrates the complexity of the high tech marketing environment. Market uncertainty refers to customers and their unclear needs. People cannot often artic-

ulate what they need. For example, it is difficult to explain what needs might be met by the new technology. The technological uncertainty refers to whether the technology or the company providing it can deliver its promise to meet the needs. The puzzling question for many prospective innovations is if the new product will function as promised. Competitive volatility refers to the competitive situation. One implication, also frequently addressed by research, arising from competitive volatility is that because new innovations are introduced by actors outside the threatened industry, a firm must be willing to proactively develop the next best technology. (Mohr 2001, 6-10; Moriarty & Kosnik 1989).
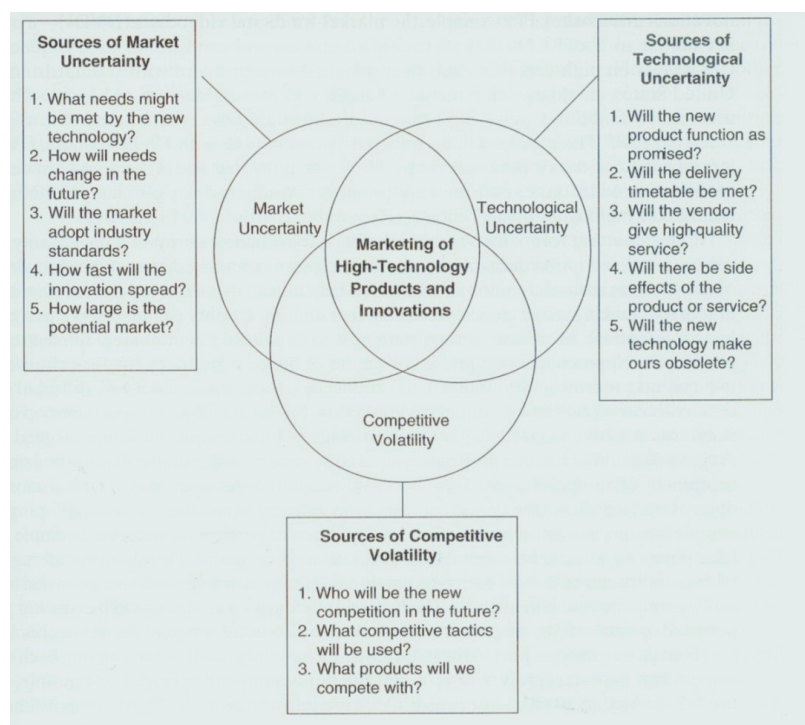
FIGURE 6   Characterizing high tech marketing environments

Source: Mohr (2001, 7)

Many of the challenges encountered by high tech marketing are connected to high tech management in general. Uncertainty creates excitement and innovation but also a great deal of stress and feelings of disposability with the people who work in high tech companies. The reality has proven that also "old dogs" can be successful due to the managers who have been able to build continuity in rapid change. (Moriarty & Kosnik 1989, 15). This notion is somewhat inconsistent with the typical characteristics of a SME manager. Gilmore et al (2001, 6) report that often an owner-manager of an SME makes most of the decisions on

his own and, consequently, decision making is informal and incidental, sometimes even chaotic. Decisions may also be highly influenced by personal and business priorities.

In high tech the rate of change has a span of months instead of years. In the midst of this chaos, some form of stability is needed if both people and companies are to achieve sustained success over the decades that mark the life cycles of organizations and marketing careers. The first fundamental element to provide continuity comes from setting company values. The company values are recommended to be widely known by employees, customers and others in the market place. However, many companies have trivialized many of their values and therefore they do not really differentiate the company from its competitors. Values that are both memorable and meaningful for decisions are those that provide continuity. (Moriarty & Kosnik 1989, 15).

The second element of focus is targeting market segments and customers. Many technology companies believe that the key to success is to create great products and then to sell them to anyone who has the money. However, the faster the technology and markets change, the more impossible it is to be everything to all customers. (Moriarty & Kosnik 1989, 16).

The third element of focus is in the area of product policy. If a focused market selection suggests that we cannot be everything to all customers, a focused product policy implies that most high tech companies cannot even be everything to *some* customers. Specific decisions have to be reached in order to make a company's product policy range from a number of different product categories and models to the level of customization. (Moriarty & Kosnik 1989, 16).

Companies also need to know when the time comes to give up. They need to recognize when the world has changed enough, and knowledge has outlived its usefulness. It is a paradox that although people have to know more (about technologies, markets and applications), the useful life of their knowledge is shorter. (Moriarty & Kosnik 1989, 13). It is recommended that the most powerful way to solve this problem is to link strategy, science, technology and organisation. The focus should be on the future, adding value to the future. Marketers describe the future as though it already existed, in the spirit of a quote from the famous hockey star Wayne Gretsky: "I don't go where the puck is - I go where it is going to be!". (Moriarty & Kosnik 1989, 13).

"The best way to predict the future is to create it." Alan Kay, computer scientist[6]

The above discussion has focused on marketing characteristics in high tech SMEs. It seems that marketing, including branding needs to be understood in its context and to some extent conformed into industry norms and limitations. In high tech SMEs it is likely that decision making is informal, loose, unstructured and spontaneous and thus, implies that creating some stability in the rapidly changing environment can be beneficial for high tech SME marketers.

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[6]   Wheeler (2003, 16)

Based on the literature review in this study, having a brand strategy may facilitate the creation of strong brand equity and serve as a contribution to building continuity. This thought will lead us to the next paragraph in which the brand management issues are approached.

4.2.3 Conception of brand management process

> Creating a brand is a strategy, but actively manage brand-building is a program[7]

According to Keller (2008, 38-39), strategic brand management involves the design and implementation of marketing programs and activities in order to build, measure and manage brand equity. He defines the strategic brand management process *"as having four main steps 1) identifying and establishing brand positioning, 2) planning and implementing brand marketing programs, 3) measuring and interpreting brand performance and 4) growing and sustaining brand equity."* The definition implies that the process starts with an understanding what a brand is, which is not self-evident in a non-traditional marketing context.

Effective brand management is critical and has an important role in developing long-term profits for companies (Doyle 2001; Keller 2008, 673). Maddock & Vitn (2008) point out why companies lack of successful innovation is due to not having the right processes in place. Managers need to move from an idea or strategy to execution, and that is where the majority of companies struggle.

Attention towards to the brand management process has not been completely absent in branding discussions and research. The most respected brand researchers do acknowledge the process (See e.g Aaker 1996; Kapferer 1997, Keller 2008, 37-42, Ward et al. 1999, 91). Timm F. Crull, the retired Chairman and CEO of Nestlé, is quoted in Aaker's (1996, 339) book *"Long-term brand equity and growth depends on our ability to successfully integrate and implement all elements of a comprehensive marketing program."* Aaker (1996, 339-358) gives ten guidelines for building strong brands, starting from having a brand identity to investing in brands. He also emphasizes the role of brilliant executions by committed, disciplined organizations. Krake (2005) suggests that managers should place brand management in a top position in their daily mind set since brand recognition starts inside the organization itself.

Based on the literature review conducted for the present study, we can draw conclusions that the branding process begins inside the organisation, and that it is an unconditional necessity for brand birth and development. However, it is important to distinguish the differences between two concepts: brand management and building up a brand. Brand management can be seen as an internal process involving the whole organisation. However, it is not visible to outsiders and therefore difficult to imitate by competitors. As an outcome of successful brand management a strong brand is built up. Brand building's function is to create brands that communicate, are visible and attractive outside the organisation and thus, extremely extrinsic concepts. This type of categorization

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[7]   Aaker (2007, 23)

highlights the impact of the managers and organisation as initiators of new, not yet existing brands.

The aim of the present study is not to ignore or question the brand management process described in the existing literature, but to concentrate on identifying what might be absent in literature. As a summary of the above discussion I have outlined a five-step brand management process as illustrated in Figure 7 below.

1. Adopting and committing to a brand strategy (not yet discussed in branding literature)

2. Identifying and establishing brand standards (adapted from the traditional brand literature e.g Keller 2008, 38-39)

3. Incorporation in organisation: Plan and implement, programs, workshops (adapted from the traditional brand literature e.g. Keller 2008, 38-39)

4. Integration; measure and interpret, all marketing activities and tactics (adapted from the traditional brand literature e.g Keller 2008, 38-39)

5. Consistency; grow and sustain (adapted from the traditional brand literature e.g. Keller 2008, 38-39)

FIGURE 7   Steps of a brand management process

Overall, based on the research found for the present study, the description of a brand management process is inadequately recognized by prior studies. Although definitions of the process can be found, models providing relations between the stages and characteristics and factors that have an effect on the model are missing. Figure 7 is an attempt to describe the process which consists of five (5) steps[8]. The present study suggests that prior literature has inadequately rec-

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[8]   compare with Keller's (2008, 38) definition that a strategic brand management process having four (4) main steps

ognized the beginning of the process, i.e. the first step. This study suggests that for a brand management process to be successful, the order of the different steps is of significance. Those responsible for branding decisions are recommended to adopt and commit to a brand strategy before moving to the next steps.

Two important factors emerge from the description of the brand management process. Firstly, brand management and its building process begin much earlier than what is stated in the existing literature. Secondly, an important factor that emerges from description is to identify the circumstances that would contribute to the emergence of new, not even existing brands. The brand perspective can be holistic i.e. brands are marketing concepts and new products and extensions are launched according to brand terms. Holistic brands do not emerge from products. Thus the origin is in the customer needs, not in the product functionality. Description of the brand management process is useful especially to high tech companies since it helps to identify the current position of the company as well as suggests the most appropriate branding strategies and tactics at the time.

4.2.4 Strategic brand management in high tech SME companies

Based on the literature review conducted for the study an assumption is proposed that high tech SME branding is different when compared with traditional branding. Moreover, it is assumed that high tech SMEs are not very brand oriented and, consequently, do not focus on brand management activities. The aim of this section is to expand and elaborate on the discussion.

Prior research suggests that some brand models and relationships may perform differently in other contexts. For instance, Wong and Merrilees (2005) have identified SME brand orientation typologies. In addition, Berthon et al. (2008) study on SME brand management revealed that from the 10 brand management dimensions in Keller's report card (2000, 9) registered significant differences. A recent study conducted by Centeno et al (2013) aimed to examine how brands are built in SMEs. Their findings support the previous findings that SME brands are built in a non-traditional manner, with limited resources and minimum planning. As a result, they propose a model of how brand building is developed in SME's. They categorize the phenomenon into two main groups: the starting and consequential conditions. Furthermore, the starting conditions were grouped into positive and negative conditions. Positive conditions affecting brand building were the owner's tacit knowledge, creativity and intuition. The negative ones were complexity, uncertainty, minimal resources and planning. The consequential conditions were order, long-term planning, proactivity, brand recognition and trust.

Temporal & Lee (2001, 54-55) identify two main reasons for technology companies non-branding strategies. Firstly, many of the top managers are not marketing specialists and therefore do not have branding skills. Secondly, the companies have too many, other more fundamental problems, which moves brand development to a second class priority. This view is supported by Krake

(2005) who has suggested that brand management activities are not on the top priority list of SME owners.

Mark Logman (2007) introduced a concept of brand management in a dynamic context of growth and innovation. He provides a framework for managers to detect innovation and growth opportunities and risks. However, the starting point in his research is also the assumption that the company already possesses a brand and uses the principles of the logical brand management model to introduce options for brand management.

Brand building aims at a strong brand equity which can be measured by how customers think, feel and act (Keller 2008). One way of illustrating how high tech brands build equity is through a five level brand pyramid developed by Larry Light (Ward et al. 1999, 91). The brand pyramid by Larry Light is presented in the Figure 8. In order to build a strong high tech brand, managers need to answer the questions at each level. The bottom level of the pyramid is the starting point and it represents the core product. The highest level of the pyramid illustrates the consistency (Ward et al. 1999, 91).
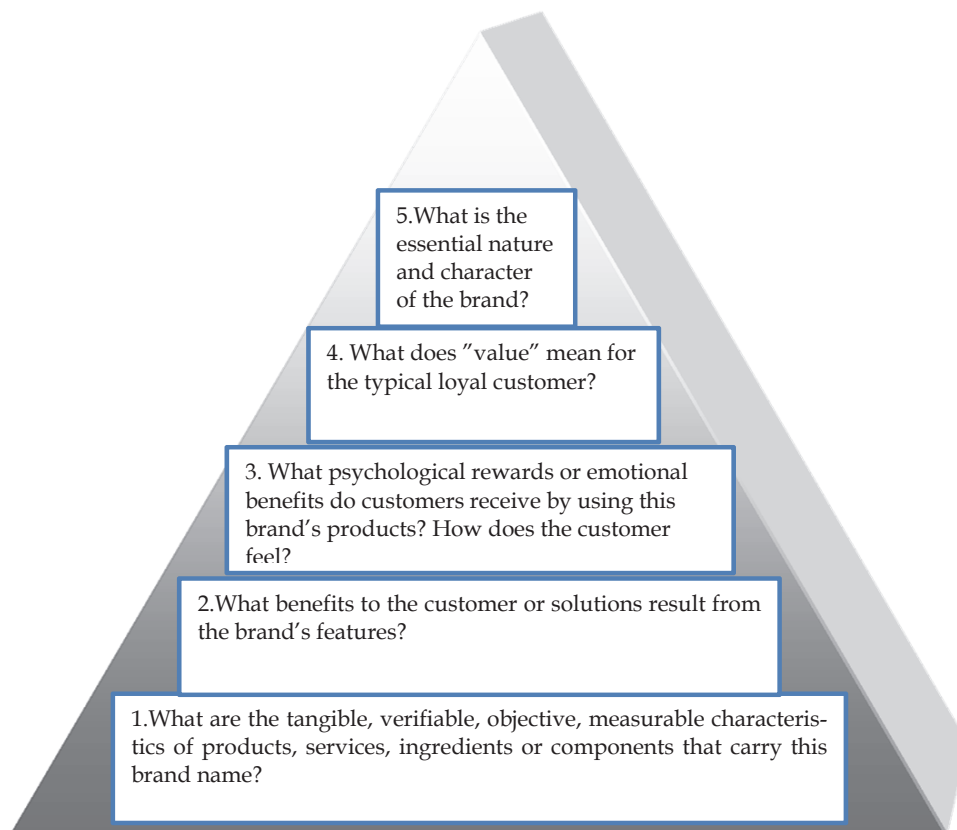
FIGURE 8   The high tech brand building process by Larry Light
Source: Ward et al (1999, 91)

Based on the literature review for the present study, it seems that branding can be different in high tech SME companies compared with traditional, large consumer companies. Technology products are influenced by the constant change and short life-cycles and, thus, it is difficult to differentiate and provide sustainable added value based on product features. Building up a brand requires time and resources and the risk of investing in an innovation is great due to many failures by other high tech companies. (Ward et al. 1999, 89; Temporal & Lee 2001, 55-73). However, even if the roots of a brand are in technology, it can be managed. Brand management involves effective brand-building activities guided by a brand vision. However, building an innovative reputation requires an understanding that an image is an accumulation of everything associated with a brand over a long time period. It is likely that fostering and enabling innovation in the organization or even launching novel products is not sufficient. (Aaker 2006, 24).

Knowledge, in the present study knowledge about the branding, is an essential factor, and a challenge is whether a high tech manager recognizes the value of new, external information before (s)he can apply it in the organisation. After all, choosing a brand strategy is a fundamental change in the company policy. However, even if the process begins inside the organisation, the influence may also come from outside. The society can enrich the individual's knowledge and enhance the commencement of branding process.

Therefore the present study suggests that more attention should be paid to what has happened before the first level in Larry Light's (Ward et a l 1999, 91) brand building pyramid (see Figure 8). The absent level, foundation, can be seen as the first stage of brand management and the brand building process. The foundation, i.e. the adoption process of a brand strategy, of the brand building pyramid is crucial. It can be a launch pad for new types of holistic brands whose origin is not in the products and whose strength is not in a long history or in high awareness. On the contrary, high tech brand equity may consist of the innovation, creativeness and the benefits that they deliver to customers.

4.3 The strategic role of the manager

> The brand can be likened to a ship in a fleet facing an upcoming battle. This metaphor provides some insight into the brand management problem and cast of characters. The brand manager is the captain of the ship, who must know where his or her ship is going and keep it on course. The other brands in the firm, like other ships in a fleet, need to be coordinated to achieve the maximum effectiveness. Competitors correspond to enemy ships; knowing their location, direction and strength is critical to achieving strategic and tactical success. The perceptions and motivations of customers are like the winds: It is important to know their direction, their strength, and possible changes.[9]

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[9]   Aaker (1996, 21)

The importance of the role of the manager in the strategic process is undisputed (see e.g Hoskisson et al. 1999, 440-441; Bowman & Asch 1987, 3; Porter in Mintzber et al. 2005, 43). However, not all marketing managers play an important role in strategic decisions because not all the companies are market-oriented (Walker & Mullins. 2008, 13). Strategic decisions affect the organisation's ability to achieve its objectives (Shrader & Siegel 2007; Bowman & Asch 1987, 37) and an effective and successful marketing strategy is likely to enhance its possibilities of success (Berthon et al. 2008, 27). However, it is the manager's responsibility to acertain that everyone understands the strategy. Thus, great leaders teach the organisation (Porter in Mintzberg et al. 2005, 44). An important feature of a manager is the ability to see the big picture (Capon et al. 2001, 226).

Bowman & Asch (1987, 4) emphasize the content of the strategic decisions since the process of decision-making can have a considerable impact on the subsequent implementation of those decisions. Wheeler (2003, 55) points out that the process itself can be a competitive advantage but that it can be context specific. It means that the managers at high level, who are responsible for strategic issues, often delegate the responsibility of brand management to the lower organizational levels. Their expertise and motivation is elsewhere since most likely they lack the knowledge and skills to manage brands. (Capon et al. (2001, 226).

Maidique & Hayes (1985, 45) emphasize strong leadership as a major explanation for high tech companies' success. Their study goes beyond the concept of leadership by providing guidance on how strategies and management practices can reinforce strong leadership. They group their findings into six themes of success 1) business focus, 2) adaptability, 3) organizational cohesion, 4) entrepreneurial culture 5) sense of integrity and 6) "hands-on" top-management. A high-performing high tech company tends to score high in most, but not necessarily in all, of the six categories. As a result of their study they recommend different types of management at different times in the evolutionary cycle of the company, even if it can lead to dramatic changes in the strategies, structure, controls and distribution power. "*A little revolution now and then is a good thing.*" (Thomas Jefferson 200 years ago). (Maidique & Hayes 1985, 61). The next paragraph approaches one of the typical high tech management challenges, namely building up strong supplier-customer relationships in which the manger's role is emphasized.

High tech challenge - Building up strong supplier-customer relationships

Building up alliances can be viewed as the relationships of individuals or communities embedded in networks. The dominant view of network research is that the networks and social capital embedded in these relationships are positively associated with SME performance (Gronum et al. 2012, 258). Although the amount of network research is fairly robust, only a little literature can be found on SMEs and/or the high tech context. According to Gilmore (2001),

SMEs may utilize a variety of networks from personal, social, business, industry and marketing networks. Gronum et al. (2012) explore in their paper the contribution of networks to innovation and firm performance. McGovern (2006) studied networks from the learning perspective in order to develop current performance. From the network marketing perspective, Gronum et al. (2012) aimed to examine how owners/mangers use networking in their marketing activities, and Jones et al. (2013) studied the value generated by the strategic groups of network actors.

Several authors (Armario et al. 2008; Doyle 2001; Moriarty & Kosnik 1989) see that a company's processes have to be linked to its environment, and that managers play an important role by promoting this so called market-oriented culture. Relationships, like any intangible assets, are hard to replicate and, therefore, they are a valuable advantage to their owner. By enhancing relationships with their company's suppliers, customers and distributors the managers can promote competitiveness. Detailed information about the customers, such as about their buying needs, can be used to maximize the sales. Distribution networks, on the other hand, can be used to reduce the cost of a new product-launch. (Armario et al. 2008; Doyle 2001; Moriarty & Kosnik 14, 1989).

Developing strong relationships is an important way of building trust. Relationships also facilitate the flow of information and encourage the customers to accept a new product. In particular, relationships can facilitate entry into new industries. Moreover, research shows that many product innovations originate from the customers, not marketers. A company that adopts a market-oriented culture will be in a better position to identify and exploit new market opportunities. However, literature highlights the essential role of committed and proactive managers in identifying and exploiting these opportunities. (Armario et al. 2008; Baghai et al. 1999, 100-13; Moriarty & Kosnik 14, 1989).

Alliances are very common in high tech markets. Each party brings something to the co-operation and the companies involved must assess the strengths and weaknesses of the partnership. The partnership benefits from the mix of resources, relationships, reputation, capabilities and chemistries and cultures. In addition, they need nurturing since opportunities may be introduced by some powerful people that would otherwise be excluded. (Baghai et al. 1999, 100-13; Moriarty & Kosnik 1989, 14). Traditionally, along with the CEO, the sales department has been responsible for developing and maintaining alliances. Recent management research indicates (N2 Nolla, 2011) that marketing, especially with strong corporate brands, is taking room from sales and playing a bigger role in strategic alliances in the future. Therefore, in the next section the discussion is forwarded to how a brand can support a manager's role in building up strong relationships in high tech environment.

The perspective of building up alliances and branding in high tech

Network research in SMEs highlights the role of the manager in building up and using the networks (Gilmore et al. 2001). However, Baghai et al. (1999, 107)

point out that a world class brand may go beyond individual capabilities. A strong brand will continue to bring advantage to its owner. On the other hand, these features can be combined. Centeno et al. (2013, 450-451) argue that they found clear indications of the close relationship between the personality of the brand owner and the personality of the brand. Their study was in line with some prior literature (see, for example, Krake 2005) that a brand is the personification of the brand owner.

Traditionally, the best person to build up long-term customer relationships is the CEO. Some high tech SME leaders are very charismatic persons because it takes courage and intelligence to establish an innovative company. Therefore, one choice for a branding strategy is to place the company's founder/leader on the frontline. This means that the leader him/herself can be branded. Media attention is often guaranteed, and with inexpensive exposure. For example, if Bill Gates is invited to give a speech about a new Microsoft product, the speech can be seen on international news channels. (Aaker 1996, 127). Ulrich & Smallwood (2007, 98) report about a survey in which technology companies customers were asked whether they would buy more from a firm if its leaders behaved according to their expectations. The answer was YES. If the leader of the firm then started to implement the customer's wish, company's sales rose 20% annually compared to the previous year.

There are other alternatives of branding than branding-the-leader. An international study by a Finnish consulting company N2 Nolla (2011) recommends business-to-business companies to build up corporate brands as opposite to product brands for several reasons. The Internet has made companies more visible, they gain a great deal of publicity in the form of news, they are more constant constitutions, and the customers rather have relationships with companies than products. Salespeople prefer to represent a strong brand, since they enjoy the confidence that a uniquely positioned brand delivers. Moreover, it is important that differentiation is genuine, in which case the story to tell dissipates the competition.

Ward et al. (1999, 86) see that those leading high tech companies do not truly understand what the challenges and advantages of good brand management are for the company because the executives usually have no marketing background. Instead most of them have technical education and experience. For this reason they might even reject the idea that their business should be focused on brand management. (Temporal & Lee, 54; Ward et al., 55-95). Despite the general assumption that most of the companies have positive attitudes towards branding, the reality is more complex. Instead, most of the managers do not even have an intention of brand management. Changing long-held attitudes and believes is not easy.

Managers in high tech SME's have to find innovative ways to develop strategies and manage marketing, i.e they have to see to it that the performance of a new venture is based upon knowledge resources. The marketing personnel, because of possessing global awareness of business and being able to collaborate inside and outside the company as well as being able to adapt and imple-

ment the best practices, is in an essential role in future success. (Temporal & Lee, 54; Ward et al., 55-95).

To sum up, this chapter 4 has reviewed organizational learning and challenges that can arise around management issues. The first area covers knowledge aspects linking managerial and organizational learning to brand strategy adoption. The second area focuses on the impact of the social system in which the adoption occurs from two perspectives. The first perspective is external as it is related to the environment of marketing. The second one is internal as it deals with the brand management processes. The third area is about understanding the strategic role of the manager in the process of decision-making. More specifically, the manager is a firm's resource and s/he has potential for generating, building and managing brands. Table 11 summarizes the key issues and the effect that an organization and a manager may have on adoption as derived from literature.

TABLE 11   The effect of an organization and a manager on adoption

The key issues of an organization or a manager	High tech marketing challenge	High tech marketing tactic	Advantage - What can a brand strategy offer	Discussion
Knowledge-based view	Mastering the ever-expanding set of skills	Broadening and deepening the skill set	A holistic view of a brand supports leadership	People can join networks and learn branding
Resource-based view	High tech environment influences on its competitive position and its performance	The manager is a resource and can be a source of sustainable competitive advantage	Branding knowledge can be an intangible, firm-specific asset	Intangible assets, such as brands, grow when the learning begins
Structure of the social system	Organising different functions in the company	Building cross-functional collaboration and communication	Strategic brand management guidelines internally consistent frame	Brand management helps to remember what business the firm is in.
Marketing environment	Ability to build continuity in constant change	Focus on fundamentals	Brand equity concept	Are the users/customers able to assess and evaluate the (assumed) advantages?
Marketing environment	Shorter life cycles for products and technologies	Abandoning knowledge that has lost its relevance	Continuity Corporate brand Branding a	Challenge: structure of the brand portfolio and the scope, roles, and interrelationships of the port-

			feature, component or service to provide the benefits	folio brands
Brand management in high tech	A brand strategy adoption has not been identified	Choosing a brand strategy is a fundamental change in the organisation	Provides guidance to the right process	Inadequate literature on how to brand an idea or innovation? Potential to yield and create entirely new brands
Brand management in high tech	Not all companies are market-oriented, they have too many other more fundamental problems	Managers are not marketing specialists, background in technology	Managers can learn to manage a brand ; plenty of literature available	Choosing the appropriate strategies and tactics
Brand management in high tech	Uncertainty and hesitation towards branding	Measure the returns from marketing (branding)	Brand equity can be measured	Demonstrating the competitive advantage
Social system; manager	Building up strong supplier-customer relationships	Using inter-firm alliances effectively	Brand creates loyalty and credibility	Brand the leader -Customers must recognize that one stands for something

All in all, the chapters 2, 3 and 4 have reviewed three key areas of brand strategy adoption in high tech SME companies. The first area, the concept of the adoption of a brand strategy has been identified and high tech environmental factors explain and address the prior conditions in which the companies operate. The second area approaches a brand from a strategic perspective and discusses the perceived characteristics of a brand strategy that are linked to its adoption by high tech SME managers. Finally, the manager's strategic role is discussed in the context of high tech providing further understanding of the prior conditions of the adoption process. The studies and literature presented here serve as basis for the dissertation framework of the present study provided in the next chapter.

5   RESEARCH FRAMEWORK AND DESIGN

A framework model, based on the literature review in Chapters 2, 3 and 4, concludes the theoretical discussion. The purpose of the chapters has been to define and clarify the complex nature of a brand strategy adoption in order to create more profound understanding of it. The theoretical framework provides a conceptual foundation and understanding of the basic processes of the present research phenomenon. It also acts as a foundation for organizing and interpreting the findings in the empirical data. In Figure 9 the structure of the framework is clarified by visual presentation. The context related factors that affect a brand strategy adoption are presented by using boxes and the links, influence and the direction of the main factors are illustrated by using arrows to connect the boxes. Based on the literature review, the factors are also verbally described in the following paragraphs.

The role of the theoretical basis is essential in the present study. The chosen research approach is abduction (discussed more in detail in the section 5.2) which begins with the existing interpreted knowledge. Its strength is in the presentation and introduction of new elements. The abductive approach aims to develop new knowledge by considering earlier theories as a background for research, but during the research process it aims to formulate a research framework with empirical phenomena. The fundamental prerequisite is that the researcher has a broad and deep theoretical basis and good knowledge of her/his field of research. I assume that the aimed new knowledge developed by the present study is the description of a brand strategy adoption in high tech SME's. In the Figure 9 this area is highlighted in grey.

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┌─────────────────────────────────────────────────────────────────────┐
│  Approach towards a brand strategy                                    │
│        -   Holistic viewpoint                                         │
│        -   Importance                                                 │
│        -   Conception of a brand strategy                             │
└─────────────────────────────────────────────────────────────────────┘

┌──────────────────────────────────┐    ┌───────────────────────────────┐
│  Context related factors affecting│    │  Organizational and managerial│
│  on a brand strategy adoption     │    │  related factors affecting on a│
│        -   Specific prior         │    │  brand strategy adoption      │
│            conditions in          │    │        -   Strategic importance│
│            high tech SME's        │    │            of a manager       │
│        -   Perceived              │    │        -   Content of strategic│
│            characteristics of     │    │            decisions          │
│            a brand strategy by    │    │        -   Conception and     │
│            high tech SME managers │    │            responsibility of  │
│        -   Time perspective       │    │            brand management   │
│        -   High tech organizations│    │                               │
│            and managers effect    │    │                               │
└──────────────────────────────────┘    └───────────────────────────────┘

┌─────────────────────────────────────────────────────────────────────┐
│  Adoption process in high tech SME's                                  │
│        -   Consist of stages: focus on early stages; knowledge,       │
│            persuasion, decision                                       │
│        -   Decision, either adoption or rejection, is seen vital      │
└─────────────────────────────────────────────────────────────────────┘
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FIGURE 9   The theoretical framework for a brand strategy adoption by high tech SME managers

5.1   Elements of the framework

5.1.1   Approach towards a brand strategy

As the new idea to be adopted is a brand strategy and as the definitions of a brand from a strategic viewpoint are absent in the literature, I am referring to the literature on strategy in order to define the dimensions of this construct. I provided literature review on previous research definitions on brands in paragraphs 2.1 and 2.2. Moreover, I provided a proposition of the strategic role of a brand in paragraph 2.3. Based on the literature, I assume that a brand strategy is comprised of both; brand equity and a strategy. In the present study a brand strategy is the objective of adoption and its characteristics are being assumed as follows:

1) *Holistic viewpoint.* The dominant approach to a brand strategy is the holistic viewpoint and this viewpoint has been chosen based on competence based

theory by Hunt & Lamber (2000, 22-24). A holistic approach is also support-
ed in branding literature (Doyle 2001; Kotler et al. 2009, 426; Vázquez et al.
2002, 27-18). A long term brand strategy viewpoint depends on making a
critical distinction between a product- or brand-centered orientation. Prod-
uct orientation emphasizes the product plus-viewpoint whereas brand ori-
entation emphasizes the setting of a brand strategy that guides the decision
making and contributes to the business strategy. The origin of brand orien-
tation is in the customer needs, not in product functionality. I see the brand-
centered orientation vital in high tech SME context, since a brand strategy
can be created already before the product or innovation is ready for launch-
ing to the market.

2) *Importance.* I assume that a brand strategy is important in achieving a com-
pany's profitable performance and competitive advantage. The reasons were
reviewed in paragraphs 2.3 and 3.1. As an outcome of a successful brand
strategy implementation, a sustainable intangible asset can be achieved. In
order to hold the potential of sustained competitive advantages, a brand
must have four attributes: 1) it must be valuable in the sense that it exploits
opportunities and/or neutralizes threats in a company's environment, 2) it
must be rare among a company's current and potential competition 3) it
must be imperfectly imitable and 4) there cannot be strategically equivalent
substitutes. (adopted from Barney 1991, 99-120).

3) *Conception of a brand strategy.* Based on the literature review in paragraph 2.3,
I assume that there is a clear link between branding and a strategy. Branding
can even be seen as a business strategy if the company does not possess
multiple brands. In the form of skills and resources it allows a company to
implement a brand strategy superior to its competitors. (adapted from Hunt
& Lambe 2000). I see that conception of a brand strategy can be character-
ized by integrating theories of business strategies. The discussion in para-
graph 2.3 is summarized by proposing that a brand strategy consists of five
different definitions of strategy by Mintzberg (2005, 26-28): plan, perspective,
ploy, pattern and position and they are summarized in Table 12.

TABLE 12   Conception of a brand strategy

Strategy according to Minzberg (2005, 26-28)	My proposition for the conception of a brand strategy
Plan	Consciously intended course of action
Perspective	Internal process, a way of perceiving the world
Ploy	Actions to gain advantage over competitors
Pattern	Consistency in behavior, either intentional or unintentional. It is possible to implement.
Position	Viewpoint in the brand in a context, especially in competitive environment. Decisions about products, markets and how to protect them and the brand.

5.1.2   Context-related factors affecting a brand strategy adoption

I have provided the proposition of context-related factors affecting on a brand strategy adoption in paragraphs1.6, 2.4, 3.1, 3.3 and in Chapter 4. These are summarized in Tables 7, 10 and 11. In Table 7 the specific prior conditions and key issues of a brand strategy's impact were reviewed. In Table 10, key issues of the impact of the perceived characteristics and time perspective were summarized. Table 11 summarizes the effect of a high tech organization and a high tech SME manager on adoption as derived from literature. Based on the literature, I assume that context-related factors may influence the adoption of a brand strategy.

5.1.3   Organizational and managerial related factors affecting a brand strategy adoption

The strategic importance of the manager is discussed in Chapter 4, paragraph 4.3. The resource-based view (discussed in paragraph 4.1.2) sees a manager as a source of sustainable competitive advantage and consequently, managerial learning can be a strategic issue. On the basis of the strategic management literature, the manager affects the strategic process by synthesizing his learning into a vision towards a specifically targeted goal. The strategic management literature firstly emphasizes the importance of a strong leader and leadership. The focus on a leader emphasizes the personal qualities of the individual, and when the focus is on leadership, the emphasis is on methods.

Secondly, the strategic management literature emphasizes the content of the strategic decisions (Berthon et al. 2008, 27: Bowman & Asch 1987, 4-37). The

foundation of a manager's learning is a combination of her/his and the organization's other members' previous experience and hard data, such as market research. The studies on technology-based companies also highlight the importance of networking as a source of new information and a strong predictor of performance. (West & Noel 2009; McGovern 2006). The present study sees that the manager in an SME high tech context is in the key role of making the strategic decisions including the decisions concerning branding (Doyle 2001; Gilmore et al. 2001). Prior conditions affect the manager's knowledge and he forms an attitude towards a brand strategy. Finally, without the manager's acceptance, a brand strategy will not be implemented in the organization.

Based on the theoretical view, I see that brand management consists of five stages. The stages are described in paragraph 4.2.3 and illustrated in Figure 7. I propose that the branding process begins inside the organization and that it is an unconditional necessity for brand development. This can be seen as the first stage, i.e. adoption process of a brand strategy. I propose that branding is slightly different in high tech companies compared to traditional ones due to context related factors. High tech brand equity may largely consist of innovation and creativeness and they need to be turned into customer benefits. Consequently, I assume that brand management as a framework for high tech SME managers to detect innovation and growth opportunities is inadequately recognized in the literature. However, even the roots of the brand are in innovation or technology, high tech brands can be managed as the traditional brands.

5.1.4 Adoption process

The concept of adoption is a leading aspect of the present theoretical framework. In the present study adoption is seen as a process. This viewpoint is supported and adapted from Rogers (2003, 170) model presented in Chapter 1, paragraph 1.2. Moreover, the process view is supported by a knowledge-based view (discussed in paragraph 4.1.1) which emphasizes the longitudinal learning process within the organization. Adoption includes dissemination of a new idea which requires change in human behavior. On the basis of the innovation diffusion literature (Moseley 2004; Murray 2009) and strategic management literature (Mintzberg 1994; Teece et al. 1997) the main early stages of the adoption process are suggested to be knowledge, persuasion and decision. The knowledge stage is influenced by prior conditions. Knowledge as such is seen as comprising both information and know-how (i.e. the ability to use the knowledge) (Kogut & Zander 1992). The perceived characteristics of the brand strategy affect the persuasion stage. Decision, whether it leads to adoption or rejection of the brand strategy, is seen vital in the process.

This dissertation framework evolved during the research process towards a model similar to what was developed by Dubois & Gadde (2002). It means that the emphasis was largely on the earlier theories although empirical observations in the course of time were part of the framework development. The present framework presented anomalous phenomenon i.e. phenomenon which was somehow disturbing in the light of what I would have anticipated with

regards to my previous knowledge and experience. The major problem was the absence of branding in the high tech environment. However, through re-contextualizing the research questions new perspectives and meanings were discovered. The discovery of the strategic role of a brand and the relative scarcity of the attention towards its adoption process signified that the phenomenon could be viewed in a different light. These new perspectives and meanings will enable a better and more profound understanding. (adapted from Råholm 2010, 267). The research process now continues by introducing the chosen research approach, method and empirical analysis by considering which part of the prior theories match the empirical observations and which do not.

5.2 Research philosophy and approach

According to Gummesson (2000, 172-185), the adopted paradigms affect the researcher's actions. In the context of marketing research ontology is seen from the philosophical viewpoint as beliefs about the nature of reality and as the relationship between theory and reality. Epistemology consists of beliefs about knowledge. There are three views about the way in which knowledge is developed and judged as being acceptable: positivism, realism, interpretivism.

There are three paths of research logical approaches that connect theory and data: deductive, inductive and abductive. Deductive research examines the subject field in order to reveal the variables and suppositions stemming from an existing theory. It can be stated that deduction is an instrument for checking theories. The dominant research paradigm is referred to as positivism. The central belief is that the study of marketing phenomena should be scientific in the manner of natural sciences and that the reality is "out there" waiting to be captured. Objectivity is emphasized and reality is seen as an observable entity which is independent of those involved in it. The existing literature is used to help to identify theories and ideas that are tested by using data. Specific variables are identified and the researcher sets the hypotheses accordingly. The researcher tests theory according to whether their hypotheses are accepted or rejected. The main purpose of a scientific approach is to establish causal laws that enable the prediction and explanation of marketing phenomena. If respondents are used in the research setting, they are seen as objects who can be measured in a consistent manner. Moreover, the researchers own personal values are set aside so as to remove any potential bias. The researcher assumes the role of an objective analyst and conclusions are based upon agreed and measurable facts. Deductive logic is the opposite of the logic used for the present study. (Malhotra & Birks 2005, 136-139; Tuomi & Sarajärvi 2009, 96-115; Daymon & Holloway, 2002. 3-14).

In the inductive approach the data is explored and theories are developed from it. The researcher identifies the area of enquiry, but with little or no theoretical framework. The dominant research paradigm and perspective is referred to as interpretivist. Interpretivists stress that there can be many interpretations

of realities. The respondents are seen even as "peers" seeking the shared means of observing and questioning from the point of view of those in it. Such view requires a great amount of interaction as the researcher learns about the best means to elicit information, and an evolving research design can be adopted. The researcher develops his/her theory by searching for the occurrence of the phenomena and seeks to develop a model based upon his/her observed combination of events. This means that concepts and theories emerge during the data collection process. In other words, the models or theories one finds in the literature before the investigation, do not determine what one discovers during the data collection. Interpretivists seek to evaluate the strength of the theory that they develop. Such a process means that interpretivists reach conclusions without complete evidence. Inductive reasoning allows for the possibility that the conclusion is false, even if the evidence is true. (Malhotra & Birks 2005, 136-141; Tuomi & Sarajärvi 2009, 96-115; Daymon & Holloway, 2002. 3-14)

The chosen research approach in my study is referred to as "abductive" since abduction is powerful and effective in constructing and validating explanations of new phenomena, especially in new environments as it is the case in the present study. The abductive approach differs from deduction and induction mainly in two different ways: by introducing the concept of intuition into a scientific approach and by its research process, which is more flexible and evolving compared against inductive or deductive approach. (Kovács & Spens 2005, 135-138).

The idea of abduction was introduced by Charlers Sanders Peirce[10] (1839-1914). In contrast to the two conventional procedures used in research, namely deduction and induction, abduction combines the principles of these two approaches. By systematically combining theoretical and empirical findings the research process takes on a character that is different from both the deductive and inductive approaches. Abductive reasoning emphasizes also the search for suitable theories to an empirical observation, going back and forth between the framework, data sources and analysis is one of the elements in systematic combining, and it is also the tool for the researcher to generate new hypotheses. (Dubois & Gadde 2002 ; Kovács & Spens 2005; Råholm 2010, 260).

Kovács & Spens (2005, 139) proposed a framework for investigating the abductive approach. In Figure 10 their framework is adapted in order to illustrate the abductive research process in the present study and summarize the essential points during the process.

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[10]   American philosopher and founder of the Pragmatic School of philosophy

The abductive research process

Theoretical	(0) Prior theoretical knowledge → (2) Theory matching → (3) Theory suggestion (Final conclusions: H/P)
Empirical	(1) Deviating real-life observations → (4) Application of conclusions

(Part of the research)

(0) At first, literature on branding and strategic management, evolved during the whole process, chapters 2-4
(1) Need to understand change in human behavior arouse after first interview
(2) Integrating Roger's diffusion of innovations theory, data collection continued
(3) Conclusions in chapter 7
(4) Empirically grounded framework, research suggestions sections 7.1 and 7.2

FIGURE 10   The abductive research process adapted from Kovács and Spens 2005, 139

The dominant research paradigm and perspective is referred to as realism. Realism is based on the belief that there are large-scale social forces and processes that affect how people perceive their world, whether or not they are aware of such influences on their interpretations and behavior. Realism recognizes the importance of understanding people's socially constructed interpretations and it sees the reality as subjective. It is drawn on social constructivism which begins with the premise that the human world is different from the physical world and therefore must be studied differently. Guba and Lincoln (in Patton 2002, 98) summarize the constructivist perspective as being ontologically relativist, epistemologically subjectivist and methodologically hermeneutic and dialectic. Reality is what is shared, perceived and understood. Moreover, social constructivism acknowledges that human behaviour depends on how individuals interpret the conditions in which they find themselves and accepts that it is essential to have a description of the social world on its own terms. Constructivists study the multiple realities constructed by people and the implications of those constructions for their lives. It is the task of the scientist to discover and describe this world from the insiders view, individual's *knowledge* about reality, not reality itself. The principles of abduction are based on the notion that there are no prior hypotheses, no presuppositions, and no advance theorizing. Those principles manifest themelves in the present study. (Tuomi   & Sarajärvi 2009, 96-115; Daymon & Holloway, 2002. 3-14; Patton 2002, 96-97)

5.3   Research method

The most common methods used in branding research have been causal and descriptive ones devoted to controlled experimentation, such as structured questionnaires and statistical analysis of data. (Berthon et al. 2008; He & Li 2011; John et al 2006; Keller & Lehman 2006, 754; Klink 2003; Reijonen et al. 2012; Wong & Merrilees 2007; Yoo & Donthu 2001;). Quantitative methods are also common within the field of adoption (Reijonen & Komppula 2010; Powpaka 1998). However, a literature search reveals some amount of qualitative research in the field of branding in SME's. Ho Yin and Merrilees (2005) used a qualitative case research approach when they discussed the role of brand strategy in SME's. An exploratory study was conducted by Spence & Essoussi (2010) on SME brand building and management. Krake (2005) and Centeno et al. (2012) conducted a qualitative study based on in-depth or semi-structured interviews. In some studies dealing with brand-management decisions, qualitative measures are combined with quantitative measures (Baldwin et al. 2011; Kneesel et al 2010). Moreover, plenty of qualitative studies can be found in the SME context (Centeno & Hart 2012; Schindebutte et al. 2008; Vermeulen 2005). Qualitative methods have been used in marketing studies especially when the focus has been on user perceptions (Maceli et al. 2011; Van Wezemael et al. 2010) or on understanding strategic decision-making (Lieberman-Yaconi et al. 2010).

In order to investigate how branding strategies are adopted in high tech SMEs, I chose an exploratory methodology out of the three alternatives of methodology; exploratory, descriptive and causal study (Malhotra & Birks, 2006). The nature of the subject is such that it cannot be yet measured in a quantitative manner, since there is only a little theory relating to the adoption of branding strategies, especially in the high tech SME environment. Furthermore, the characteristics of individual respondents helped to choose the optimum research techniques. This is based on understanding that the respondents may have not been able to conceptualise or articulate brand related questions due to the fact that their background was not in marketing. In addition, the assumption was that most of the high tech SME companies had not fully adopted a brand strategy and therefore would not have to think through such issues. Consequently, the managers would not have been able to answer structured questions.

I chose qualitative research since the intention was to approach people and the way they construct the world around them. (Gibbs 200, x-xi). Qualitative methods are associated with exploring the social reality from the point of view of those in it. The aim of qualitative methods is not to create statistical generalizations, but, instead, study issues in depth and detail. In the present study the aim was to take a holistic and detailed approach to the description, understanding and interpretation of an SME manager's perceptions of brand strategy adoption in the high tech context. Approaching fieldwork without being constrained by prior analysis contributes to openness. Qualitative methods

thus leave room for the respondents' subjective experiences, for hearing their own voices and enabling them to raise those issues that they consider being the most important. (Daymon & Holloway, 2002. 3-14; Patton 2002, 14).

5.4 Research implementation

5.4.1 Data collection

Data collection procedures in the market orientation literature have included large sample surveys but also case studies (Harris & Ogbonna 2001) and in-depth interviews with small samples (Kohli & Jaworski 1990; Kennedy et al. 2003; Martin et al. 2009). Patton (2002, 4) recognizes three kinds of qualitative data: interviews, observations and documents. Since the aim of the present study was to understand SME managers' experiences, opinions and knowledge, I chose to collect the data primarily from interviews. The qualitative research techniques are classified as either direct or indirect, based on whether the true purpose of the problem is known to the respondents. In this study the direct approach was employed, since it was not possible to disguise the true purpose of the research. However, the objectives and focus of the study were not revealed to the respondents before the interviews or even at the beginning of the discussion. I did not want to narrow their thoughts and to endanger the success of the discussion.

Personal face-to-face in-depth interviews were selected as the most applicable means of collecting the primary data for this study. The face-to-face method was chosen because these are usually open and informal situations where respondents are more likely to discuss their experiences more in detail than when using, for example, more impersonal phone interviews. The benefit of the two-way communication in the interview situation is that it allows the instant clarification of any misunderstandings on either part and the posing of additional questions. The possibility of further inquiries after receiving answers to the initial questions enables the researcher to reach the relevant information more in depth and helps in understanding better the underlying motivations behind the respondent's answers. This deeper insight into the respondents' thoughts helps in guiding the analysis and interpretation of their interviews to the right direction and reinforces the validity of the study. (Malhotra & Birks, 2006, 206-230).

I also collected secondary data from brand touchpoints, in other words from visual expressions of a brand strategy, such as business cards, leaflets, advertisements, annual reports and websites. According to Wheeler (2003, 3) a brand touchpoint is an opportunity to strengthen a brand and to communicate about its essence. When a brand strategy is visualized and tangible, it communicates and appeals to the senses. Therefore brand touchpoints imply the rate of adoption. The documentary records provided me further insights of the companies and their branding issues. Moreover, in order to fully

understand the visual communication, one must see the outcomes. Some of this material was referred to by the respondents during the interview. For the most part, I did not search or choose the written documents. Instead they were given me or I asked for them from the respondents. The list of secondary data can be found in Appendix 2.

5.4.2 Developing a discussion guide

Following the guidelines of research literature, I designed a discussion guide for choosing the appropriate type of questions before conducting the interviews The aim of the discussion guide was to organize the interview in such a way that it covered all the topics of interest and, when necessary, helped me to move the discussion into a desired direction by providing me the opportunity to check if I had asked most of the questions. Conducting interviews is a complex process and not easy to carry out. Hence the value of the discussion guide was that it allowed flexibility in the discussion. As a researcher, I took the freedom to prompt for more information if something interesting emerged, because the guide does not restrict the interviewer. I gave the priority to the respondents own ideas and provided them an opportunity to explore their own thoughts. They were able to use their own jargon and speech style that were meaningful to them. Sometimes I asked additional questions to clarify the meanings of words and phrases that the respondents used. Similarly, I followed up the discussion guide to ascertain that all the topics were covered, and the guide helped me to keep focus throughout the interviews. (adapted from Daymon & Holloway, 2002, 166-171).

I decided to employ a semi-structured interview out of the range from the unstructured to the structured continuum of interview types. Although unstructured interviews might have generated the riches data, I decided to conduct structured interviews, since specific, pre-defined themes were within the scope of this study. In addition, since the time of the interview was limited to a maximum of 2 hours, I needed to ascertain that I would obtain as much useful material as possible for the present study. Moreover, semi-structured interviews are commonly used in qualitative research when there are time constraints because in unstructured interviews the rate of dross is higher. The focus was on the topic areas that emerged from the theoretical frame and ensured that a similar type of data was collected from all respondents.

At the very beginning some background questions were developed. The respondents were asked to characterize their work and how much it involved marketing in order to ascertain that they knew as much as possible about the research phenomenon and were thus qualified to be part of the sample. In addition, some background questions were drawn based on the theoretical frame. Since previous practice is one of the prior conditions that have an effect on the knowledge stage in Rogers (2003, 170) Innovation-Decision Process Model questions regarding the respondents' age, education, work and international experience were asked.

The other type questions were dived into three groups: questions about experience, feelings and knowledge. These categories were identified when studying the research literature (Malhotra & Birks 2006, 352). The interviewer kept an eye on the discussion guide to ensure that the interviews covered all these three categories of questions, but the specific wording of the questions and the order in which they were asked were influenced by the respondents' replies.

Finally, the interview was closed up by asking a few concluding questions. The objective was to give room to respondents' own ideas and perspectives that had not yet been covered under the given themes. The general discussion guide can be found in Appendix 1.

5.4.3 Data description

Past studies have varied considerably in terms of number of respondents for in-depth interview studies. For example, Kennedy et al. (2003) conducted 65 interviews within a single organization. Gebhardt et al. (2006) used sample sizes of six firms and Martin et al. (2009) of 21 firms both with relatively long interview formats. Jones et al. (2013) conducted 12 qualitative interviews in software SMEs when exploring their strategic networks. As we can learn based on previous research, the size of the sample seems to be less critical for this type of research. Methodological reasons appear to determine the composition of the data.

The companies were selected on the basis of four determinants. The first two criteria were drawn from the EU definition (European Commission 2005). Companies needed to be small or medium size enterprises (SMEs) and they needed to be growth oriented. The third criterion for selecting companies was that they can be characterised as high tech companies, either at the moment or in the future (definitions in section 1.6). The fourth criterion, the nationalities of the companies, was also of significance. The United States has been the leading producer of high tech products for the past decade (TEKES, Eurostat), and the growth of the Finnish GDP comes mainly from high tech (TEKES publications 2008). The description of the companies can be found in Table 13 in the order in which the interviews were conducted.

TABLE 13   Description of the selected companies

The origin of the company	Size	Industry	Customer base	Stage of the product
Finland	Start-up	IT, mobile app	b2b and b2c	Idea
Finland	Medium	Graphic	b2b	Product in the market, developing relationships and supply chain
USA	Medium	Physical therapy products, manufacturer	b2b	Product in the market, developing new features
USA	Small	Engineering, IT	b2b	Customized projects
USA	Start-up	Energy	b2b	Prototype
USA	Start-up	IT, Entertainment	b2b, b2c	Prototype
Finland	Medium	IT, Information management	b2b	Several products in market
Finland	Medium	IT, Well-being	b2b, b2c	Several products in market

The emphasis in the selection of the respondents for the present study was upon quality. The respondents (5 from Finland and 4 from the USA) were chosen based on their ability to provide rich information on the subject of interest and on their representativeness in relation to the studied phenomenon. In other words, both the managers and nationalities of the companies represented high tech well, but so that any extremes in this category were excluded. The productivity of this kind of sampling of respondents is said to depend on the researcher's ability to build a strong theoretical basis for the study, which this study has attempted to do. (Eisenhardt 2007).

Eisenhardt & Graebner (2007) point out that even a small number of informants is sufficient when the purpose of the study is to understand the world as experienced by the subjects. Furthermore, as the aim of this study was more at the credibility and quality of the conclusions and not at the generalizability of the findings, it was sensible to select only a small number of relevant respondents. When the sample size is small, it enables the researcher to question and probe in great depth and to elicit profound understanding of the respondents' feelings. In the present study the main goal was to collect data which was sufficient to provide answers to the research questions.

According to Tuomi & Sarajärvi (2009, 85), it is an important principle in qualitative research that the selection consists of people who know as much as possible about the research phenomenon and/or they have a great deal of experience. The respondents in the present study consist of those high tech SME managers, who are at the moment, or have been responsible for marketing decisions. More precisely, they were individuals, who were willing to open up and reveal their thoughts and experiences of the marketing decisions they had made.

The process of finding these respondents started in the autumn of 2008. All interviewed managers had been in co-operation with either of the two organisations: Arizona State University or JAMK University of Applied Sciences and had had some consulting and training on marketing issues. It is important that they had some level of marketing expertise, since only then it was possible to gain insightful information from them. Furthermore, due to the co-operation it was possible to gain access to the respondents. The staff members of the above mentioned organisations helped to choose the respondents but also encouraged the managers to arrange the time for the interviews. However, the most important aspect was that the prior collaboration contributed to gaining the confidence and having the managers express what they really felt. It might be worth mentioning that nobody refused to participate or retired in the middle of the process. (Malhotra & Birks 2006, 179-193).

All in all, the selection of respondents consists of 8 companies, 5 interviews made in Finland, 4 in Jyväskylä and 1 in Oulu, and 4 in Phoenix, Arizona, the USA. The interviews were conducted personally by the researcher during December 2008 – January 2009. Each interview lasted from 1,5 hours up to 2 hours.

According to Malhotra & Birks (2006, 223) the major contribution to the success of in-depth interviews comes from the right context of questioning. The context consists of two major components, location and the protocol of conducting the interview. The location helps the respondent to relax and feel comfortable and therefore all of the Finnish managers were interviewed in their own facilities. However, due to the limited timetable, the American managers were interviewed in an Arizona State University's meeting room. Nevertheless, the ASU facilities were familiar to the participants since they all had had training and coaching there earlier.

The protocol of conducting the interview includes everything that helps the interviewer to obtain the most out of the participants. This aspect was extremely valid in the present study since the quality of the data was dependent on how much the respondents were willing to open up and reveal their companies highly complex and sensitive strategic processes. Utilizing my own networks built over my working career and help from others, especially from Mrs. Sharon Ballard, the CEO of Enable Ventures, helped me to gain the confidence of the participants. The skills gained in working in the international field of sales and marketing helped me to conduct the interviews in a manner, which I believe prevented me from stumbling on cultural boundaries.

All of the respondents were interviewed according to the same general themes. The themes were derived from the theoretical framework and thus it can be considered as a set of roots for the present study. The session began by explaining the general purpose of the interview, meaning that the interview was for my doctoral thesis and the purpose was to study the respondents' perception of the marketing decisions in their companies. The researcher's own experience, motivation and interest in the subject area were also emphasized in order to develop an empathetic relationship with the respondents. However, at

this point it was not revealed, that the main interest of the study was in their branding knowledge, decisions and management. The specific interest in branding became apparent only through interview questions.

The interviews started with easy, background questions in order to enhance a more comfortable and relaxed atmosphere. My main role during the interviews was listening. The interviews were loosely structured in a way that allowed probing into any additional issues that emerged. I followed the recommendation that probing is of critical importance in obtaining meaningful responses and uncovering hidden issues. Anyway, the possibility of further inquiries after receiving answers to the initial questions enabled me to reach more relevant and in-depth information and helped in understanding better the underlying motivations behind the respondents' answers. This deeper insight into the respondents' thoughts also helped in guiding the analysis and in the interpretation of the interviews to the right direction. Moreover, it reinforced the validity of the study. Furthermore, as mentioned before, the general discussion guide for the interviews was developed in order to ensure that all the important issues were covered. The guide can be found in Appendix 1.

Recording and transcribing interviews enables the maximum use of relevant data (Partington 2002, 144). The interviews themselves were recorded with a digital recorder, except for one that was videotaped. After this the whole interview was transcribed word for word by the researcher or by an assistant depending on the language. The researcher's native language is Finnish and she transcribed the interviews conducted in the Finnish language. However, the interviews that were conducted in English were interviewed by the researcher but transcribed by assistants, Kirsti Earl and Mia Helin, whose native language is English. In total there were 208 transcription pages and the description how they were distributed between the respondents can be found in the Table 14.

TABLE 14   Description of the interviewees

Data transcription pp	Educational background	Work experience	Participation in marketing activities	Owner or professional manager	Job title
HS 6	Master in Business Administration	1 year	100%	Professional manager	Business Development
JA1 12	BBA	8 years before starting his own business	15 %	Owner	Managing Director
AR 15	BBA	2 years in sales	100 %	Professional manager	Sales manager
EK 36	Degree in robotics and manufacturing	28 years	50 %	Owner	Chief Operating Officer
MM 54	Engineering	30 years	75 %	Owner	CEO
JC 28	Electronics and product development	20 years	50 %	Owner	CEO
KP 25	Bachelor's of Arts and Psychology	8 years	10 %	Owner	Entrepreneur
JA2 17	Engineer in construction	35 years	30 %	Owner	Director
JK 15	PhD in Psychology	15 years	50 %	Owner	CEO

As Table 14 shows, the respondents estimated the proportion of participation in marketing activities to occupy between 10 – 100 % of their total working time. This usually included meetings with the customers and daily contacts within the company in order to develop the product from a customer viewpoint. Furthermore, most of them participated in sales and Public Relations. Therefore, it can be stated that the respondents are responsible for marketing decisions.

5.4.4   The process of qualitative data analysis

Data analysis and writing the report in the present study cannot be seen as separate stages. On the contrary, the analysis was an important part of the data collection and writing the report. Abductive research logic was applied in the analysis of the data. According to Levin-Rozalis (2010, 3), this can lead to more profound and context-related findings and therefore also to a greater contribution to scientific knowledge. The methodology applied in the data analysis was content analysis. According to Tuomi & Sarajärvi (2009, 91), content analysis

can be considered a theoretical frame which can be incorporated into other types of analysis. All in all, in the present study two different types of analysis were conducted, all within the frame of content analysis.

At first, the data was analyzed from a homogenous viewpoint. The aim was to understand and find congruent information with the help of the previous literature and find an answer to the research questions beginning with the word *"what"*. The links between the theory and empirical data were identified. According to Patton (2002, 439), analysis can be organized to illuminate the key issues often equivalent to the primary theory. Following this guideline, I derived the themes and concepts from the theoretical frame although the emphasis was in Rogers's (2003) diffusion research. Rogers's theory guided me to understand, which questions I could "ask" from the data. I chose to focus on Rogers's (2003, 170) model of five stages in the Innovation-Decision process because 1) it is compatible with the aims of this study since it portrays the whole decision process from non-awareness to the decision, 2) it has been extensively validated (Moore & Benbasat 1991) and 3) it can be applied to many contexts. According to Rogers (2003) *"diffusion research has a pragmatic appeal in getting research results utilized"*.

I relied on the three first stages of the theoretical model for identifying and describing the studied phenomenon. In other words, when examining the data the attention was paid to how the data described the phenomenon. For example, attention was paid to the previous knowledge and experience of the managers and what they actually did. Furthermore, the focus was on what motivated them and what kind of meaning they gave to different themes and concepts. This part of the analyses was initiated immediately after each interview. Following the abduction logic, I went back and forth between the framework, data sources and analysis. The advantage of using this procedure was also that I learned to probe for more detailed descriptions of the phenomena during the following interviews. One indicator of such learning is the number of the transcription pages. The total amount of transcribed data in the first interview was 6 pages and the following interviews were between 15-54 pages.

According the Alasuutari (1993, 71-76), awareness means how the data can be described and explained from different points of view. During the second round of the analyses, a holistic perspective was aimed at. I tried to understand the phenomenon as a whole. The basic assumption in a holistic approach is that a complex system is greater than the sum of its parts. Therefore it is essential for overall understanding of what has been said in an interview that the person's social environment and/or the organization's external context has been described and interpreted. Therefore my awareness of the context of the present study, that is high tech environment in two different nations, led me to use it as a means to think of and analyze the data holistically. (Patton 2002, 59). The data was divided into two according to the origins of the SME companies. The physical, geographic, historical and economical setting, within which the action takes place can be seen as a context. Patton (2002, 61-63) emphasizes context sensitivity and sees it critical to understanding. The aim was to try to under-

stand the phenomenon by placing the respondents according to their nation and identifying differences between the perceptions of the Finnish and American managers.

In order to produce clues for interpreting the experiences of the respondents in the national context, the impact of previous literature was limited. The aim was to try to find issues that were not apparent in the first round of analyses, and instead of only trying to find an answer to the "what"-question, the aim was to try to find answers to the "why" and "how"- questions. (Alasuutari 1993, 71-76; Patton 2002, 61-63).

In addition, qualitative data analysis involves deciding the practicalities that assist in the examination of the data (Gibbs 2007, 2-4). The data in this study was rather simple since it consisted of interview transcriptions and documentary records. Qualitative data analysis techniques are focused on how to deal with large volume of data. However, I decided to analyse the data of the present study manually since it was at a manageable level.

The first stage of the process of analysing qualitative data is assembling. It means that the data is collected from a variety of sources. In this study these would include: 1) Notes taken during the interviews 2) Observations 3) Notes taken after the interviews 4) Reflections of the researcher on the data collection process 5) Theoretical support from literature sources 6) Audiotape recordings and the transcripts of those recordings 7) Videotape recording.

The second stage in the analysis process is data reduction in which the data is selected, focused and simplified. In this study the interview analyses began by giving codes to the transcribed data and dividing them into general themes according to Rogers's (2003, 170) Innovation-Decision process model. The results of the analysis on these themed pieces are discussed in the following section of the study. The analyses comprise numerous extracts that were chosen from the interview in order to illustrate and to support the findings of the present study. If the original language of the interview was Finnish, then I translated the answers into English. The writing process was a helpful tool for reducing and displaying the data. Finally, in drawing conclusions I used all the material: the interviews and the original documents. The documentary data was used mainly to support or question the analysis of the interviews. In the empirical analysis in chapter 6 the sources are mentioned in due course.

6   EMPIRICAL ANALYSIS

The empirical analysis of the present study is presented under two general headings. The first, and the most extensive, section consists of data relating to the description of factors that enable a high tech manager to become aware of a brand strategy and gain understanding of how it works. This makes him/her begin to search for information. Moreover, the interest was to characterize how the high tech SME manager moves to a persuasion stage and forms a favourable or unfavourable attitude towards a brand strategy. The characteristics of a brand strategy, as perceived by the high tech SME managers, are also discussed since they affect the persuasion. At the end of this section the activities that lead to a choice to adopt of reject a brand strategy by high tech SME managers are discussed. Section 6.1 presents the findings relating to these issues.

In section 6.2 I explored the data on the national differences between the USA and Finnish companies. These two sections present the evidence from the present study for understanding brand strategy adoption by high tech SME's.

Following the abductive research logic, the analysis began by going back and forth between the framework and data sources since it is one of the elements in systematic combining. At first, the themes derived from Rogers's (2003) Innovation-Diffusion theory enable to understand the occurrence of certain themes between the theory and the empirical data. According to Rogers (2004, 16) the innovation diffusion is *"a general process, not bound by the type of innovation studied, by who the adopters are, or by place or culture"*. Moreover, this chapter discusses relationships by linking the findings with the relevant theory on branding and high tech marketing challenges. As a result, I describe the first three stages of the brand strategy adoption process as perceived by high tech SME managers. The general attributes are identified and the characteristics which affect the rate of adoption of a brand strategy are described. (Rogers 2003, 221).

In section 6.1 the first three stages of Rogers's Model of Five Stages in Innovation-Decision Process (2003, 170), namely the knowledge, persuasion, and decision stage are expanded and the implications of each stage for a brand strategy adoption decisions are addressed in the high tech context. The relations

to the earlier set of factors: the high tech SME environment, branding literature, the perceived characteristics of a brand strategy and the effect of organisation and manager, are identified. However, the analysis is built on the primary data, the in-depth interviews.

Brand strategy adoption can be seen from the individual or organizational viewpoint. In the present study, the focus is on the individual, for example, on the subjective perceptions of the high tech SME managers on the adoption process. With the help of Rogers's model we can assume where a high tech SME manager may be on the adoption continuum (the stages explained earlier) and this allows us to better understand the mechanisms behind the changes that may need to be made in order to facilitate the rate of brand strategy adoption. Moreover, the model helps us to understand the speed of adoption by high tech manages. As a consequence, the model does not only help us to understand the process of change, but also how to potentially affect the change.

6.1 Becoming aware of branding strategies in high tech SME's

The Innovation-Decision process (Rogers 2003, 170) can be divided into two main parts: the information-seeking and information-processing parts. During the information seeking the individual assesses the characteristics of an innovation and during the processing the individual decides whether to adopt the innovation. Hence, the presentation of the analysis begins by discussing the information-seeking by a high tech SME manager.

6.1.1 The knowledge stage

Prior conditions

In this study a brand strategy is considered something that all managers in all industries are aware of. Brands are globally established constructs and everyone has personal experiences about them. However, it is possible for a high tech manager to select perceptions. In other words, (s)he avoids messages that are in conflict with his or her existing experiential knowledge (adapted from Hassinger 1959 in Rogers 2003, 171). As a consequence, the individual when (s)he is in the role of a high tech manager, can avoid marketing and/or branding messages because they are in conflict with his/her previous practice. According to Rogers's (2003, 171) theory, the knowledge state commences when an individual is exposed to an innovation's existence and gains an understanding of how it functions. If a high tech manager is at the knowledge stage, (s)he has to be first exposed to awareness-knowledge about brands. The themes below are derived from the Rogers's (2003) theory.

Previous practice

> Respondent MM: "My education is engineering…electronic engineering. And I picked up the business side of product development and marketing and sales just through work experience"

The result based on the data at hand can be compared with some diffusion scholars' claim that individuals play a relatively passive role in the beginning of the innovation-decision process (Rogers 2003, 171). The respondents' answers in general suggest that as a high tech manager (and not as an individual consumer) (s)he selects only those messages that are consistent with his/her existing, professional attitudes and beliefs. Respondent AR's comment *"koko ajan peilaat sitä oman kokemuksen kautta""you reflect it all the time through your own experience"* depicts well the assumption that the issues he/she considers worth discussing and drawing attention to are somehow related to or important to his/her own experiences. Overall, the respondents in the present study generally had previous experience in other fields than marketing. Usually the background was in engineering, but some had other education, such as arts and psychology or business studies in general. Some respondents highlighted their private life experiences such as being a mother or having science as a hobby. The educational and previous work and life experience may influence on the focus of a manager's work and priorities.

The general opinion among the respondents despite the fact that they all were responsible for marketing decisions was that their primary focus was in other tasks than marketing. This is in line with the majority of the earlier studies (see section 4.3). Often the justification is that the primary focus is in designing or developing a prototype or a product. However, what they say and how they behave is somewhat contradictory. The results of the present study highlighted the respondents' unawareness of the content and meaning of marketing. At first, when asked how much they participated in the marketing activities, most of them struggled answering with their answers. For example, one respondent (JC) said that only 5 -10 % of his daily activities involved marketing. Nevertheless, when I asked him to describe his typical working day, the description, involved a great deal of marketing activities, such as trying to identify potential customers, trying to find out their needs, trying to network and gain support from experts, trying to collaborate with other organisations in promoting their product (also called indirect promotions), trying to sell the product, build up the awareness etc. However, in the beginning of the interview, the manager seemed to have a different idea of marketing. One example of the interview dialogue depicts the misconception well:

> Interviewer: "How much and what kind of marketing activities are included in your job?"

> Respondent JC: "Uh (little chuckle) we are (pause) right now we're not doing a lot of marketing activities. Hate to say we are not. … probably be pushing 5 % right now"

.... (other discussion)

Interviewer: "If you have to give a name to that process, what would that be?"

Respondent JC: "Um (chuckles, pauses) well (pause) see in a way that is our marketing if you will. Sure that is our marketing. And again the way that we do it's .... see that's ... but for me that's not what I see as marketing um...."

Interviewer: "But are you involved in that?"

Respondent JC: "Yes, that's me. That's me doing that so. See again I...it's hard for me to see it that way because I generally think of marketing as you know brochures and that kind of thing. Um, but uh, a lot of the marketing that we do is not like that at all. It is talking to people and saying "hey this is what we're trying to do you know..."

... (other discussion)

Interviewer: "So um (pause) so now how much resources you have for marketing?"

Respondent JC: "Um (pause) I would say from this new perspective of marketing... I would say that I'd probably spend (pause) at least 50% of my time working on these connections these you know... pushing this idea out there. Uh, which is much higher than I originally expected um because I think that uh as far as resources a lot of it's not spending. It's more about spending time than money for us...."

It seems that high tech SME managers are involved in marketing even though they might not quite be aware of it. Their working day involves a great deal of marketing activities and they understand the importance of knowing the customer needs. Interestingly, some of the managers did not perceive it as marketing. They called it product development or managing and, consequently, they do not see their activities as marketing activities. In addition, they seemed to confuse marketing with one of its core concepts, promotion. This notion raises an interesting viewpoint. In the long run, if the high tech SME managers do not understand that the key success factor can also be marketing, it is possible that their focus remains on the product instead of the customer. Background and previous experience do not only prevent the managers from understanding what they are actually doing, it may also direct to allocating too much future resources on product development instead of creating added value to the end user by using marketing tools.

According to the respondents' experiences in the data, the managers "shut" their eyes and ears from new marketing ideas, unless they felt that they needed them.

Respondent JC: "Um but as far as marketing, most of what I've done is to um search the internet when I need information regarding how to present something or what I need to do for specific uh… (small pause)"

The above quote of JC's in general suggests that in spite of the growing information that is available about marketing and/or branding, the respondents tend to search specific marketing tools to solve their operational needs rather

than to develop a strategy. This has also been revealed in Rogers's (2003, 171) Innovation-Decision theory. Some individuals' awareness of an innovation is due to the behavior that they initiate. They expose themselves only to ideas that are in accordance with their interests, needs and attitudes.

All in all, the findings seem to suggest that first barrier to adopting branding strategies is that fact that a high tech SME manager's mind is not receiving those messages of branding which could be a relevant strategy for their company. It seems that managers are involved in marketing actions without being quite aware of doing so. The reason for this might be that high tech people live more or less in the middle of a chaos since the rate of change is rapid and the environment is complex (see also section 4.3.). Their mind is occupied by other, in their opinion, more important issues. They are willing to invest time and money in research and development and producing innovative products, rather than building up a brand. The data at hand overflows with descriptions of product development but lacks descriptions of marketing innovations. This finding speaks for impeded brand strategy adoption since the recent strategy and innovation literature emphasizes the importance of the external sources of knowledge, the knowledge from the environment in which the companies operate (Molina-Morales & Martinez-Fernández 2010, 261).

Figure 11 illustrates a high tech SME manager's own perception of the reality. The two circles below, which are connected with a line to the manager, are those elements that the high tech SME managers see as the most important areas of focus in their everyday work. The circle above, which is connected with dotted line to the high tech manager, illustrates the area that (s)he is not quite familiar with. According to the descriptions in the in-depth interviews, a manager's work included a great deal of marketing activities. Nevertheless, they often gave a different meaning to those activities and did not consider them to be marketing.
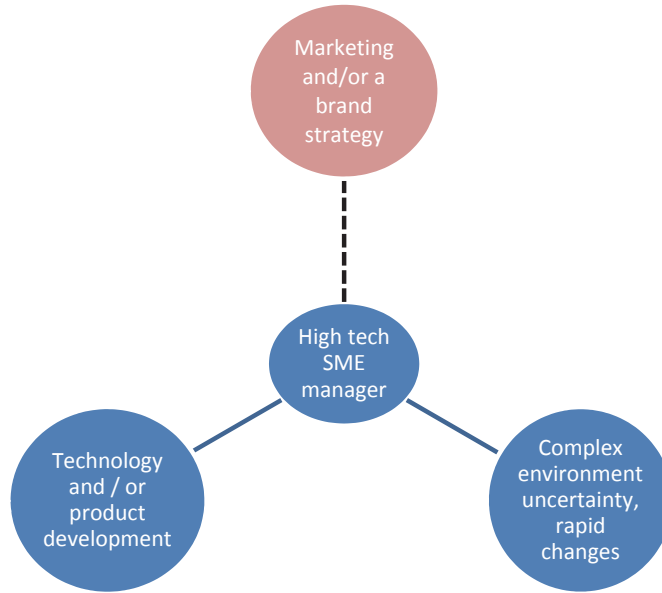
FIGURE 11   High tech SME manager's perception of the elements of focus

Table 15 summarizes the key issues and the effect of previous practice that it may have on the adoption of a brand strategy. Based on the data, it is likely that previous practice impedes the adoption. In general, previous practice raises and highlights an issue of general unawareness of a concept of brand strategy.

TABLE 15   Previous practice – A summary of factors that are involved when a high tech SME manager is exposed to a brand strategy's existence

PRIOR CONDI-TIONS	Description	RESULT of the study in bold text = new information revealed by this study	Facilitates or impedes the adoption Researcher's interpretation either - based on data *) or - based on literature
Previous practice	Own experience is important, it is in other fields than marketing	Mind is not receiving brand strategy messages	Impedes (West & Noel 2009, 16-17; Rogers 2003, 171) Experience of type of strategic approach may enhance (West & Noel 2009, 16-17)

	Perception of marketing is close to promotion	**Not quite aware of the meaning of marketing and/or of the fact that they already are involved with marketing**	Impedes *)
	Managers initiate tactical marketing operations	**Tend to search specific marketing tools rather than develop a strategy**	Impedes *)

Felt needs/problems

> Respondent HS: "Suunnitelmallisuus puuttuu ja ehkä se että mikä on oikeesti se mielikuva mitä me haluttas brandin viestittävän. Että jos me nyt rakennettais brandia niin me ei tiedettäs, että mitä me halutaan sen viestittävän."

> "There's lack of planning and maybe the real image of what we would like the brand to communicate. If we were building a brand at the moment, we wouldn't know, what we'd want it to communicate."

In the present study the respondents do not spontaneously express the need for branding. However, the results are in line with Rogers's (2003, 172) notion, that a need is a state of dissatisfaction or frustration that occurs when an individual's desires outweigh the individual's actualities. The relative unfamiliarity with marketing or a brand strategy can be frustrating and cause dissatisfaction.

> Respondent JC: "Um but (small pause) again it's… I foresee that it's being further down the line. Uh something we we've had to think now cause it's something we know we're going to need to do some point in the future. But because it's not a pressing issue right now it's not as important. I think that once the prototype is finished then we'll see an increase in that need to be able to market what we are trying to do. Uh but right now we're…

> Interviewer: "What are you going to do then?"
> Respondent JC: Panic. We're going to panic mostly. (laughter) How do we get this out here? Um…to be honest I don't know. I wish I did know at this point. Um but…"

As the above extract suggests, it is very difficult to implement marketing. In fact, the desire is to commercialize the innovation but the actuality is that the managers seem to put forward implementation. What is significant is that the respondents know their own limitations in marketing skills. Therefore it is surprising that they seem to avoid the cause of frustration rather than begin to find solutions. Overall, it can be said that although the respondents do not express spontaneously the need for branding, the need for money arises in all answers, for instance:

> Respondent EK: "Well, our biggest challenge is money."

The need for money arises throughout the interview in many other contexts as well and it seems to be in connection with time. The respondents are aware that brand building takes time and time is considered to be a cost.

> Respondent HS: "vaikka uskotaan brandin voimaan ja sen tuomiin hyötyihin niin sen brandin rakennustyö maksaa niin paljon, alkuvaiheessa koetaan kustannuksina eikä nähdä tulevaisuuden tuottoja" "even though we believe in the power of a brand and the expected advantages, of brand building, however at the early stage it is perceived as costs, and we fail to see the future revenues"

As the above remark suggests, time increases uncertainty since the future revenues contain more risks than short-term revenues. Besides time, the respondents seem to be aware of other types of costs, such as media and marketing material costs, planning costs and external services.

However, only a few of the respondents were aware of low-budgeting alternatives in brand building. It seems to be a deeply rooted impression, and probably due to the experiences in consumer goods industry, that branding is always expensive and takes a great deal of time. This perception arouses wondering in particular since the examples of the most successful and fastest built up brands today come from the high tech context, such as Google and Facebook. It is possible that the unfamiliarity with the content of a brand strategy leads to passive behavior and thus more information may facilitate the adoption.

The data indicates that knowledge about branding strategies may come first from outside and can raise the motivation to learn more. A high tech manager can be active and seek for information from communication channels. He/she wants to gain information in order to be able to reduce uncertainty about the advantages and disadvantages. This result is thus in line with Rogers's (2003, 171) statement that the knowledge of an innovation is important because knowledge can lead to a need.

> Respondent JC: "Um (pause) some of it is probably… (pause) I must have picked it up from somewhere I'm sure. Um but a lot of it is probably just interaction with other groups. I find that um when I go to conferences; that kind of thing, I kinda get an idea of what people are doing and then try and emulate those things."

> Respondent EK : "We get it from a lot of different sources. Um we understand the science by reading the technical journals. We understand the industry by reading our trade journals. But really you have to go out and talk to people."

As can be seen from the above examples, the respondents appear to regard networking as the primary source of marketing information. The findings also suggest that by networking, they can reach many industries, not just the industry that the company is in. It seems that they value all types of knowledge gained in the communication situation. In other words, although networking takes plenty of time, and the results are difficult to show, they want to take the time and effort in order to communicate in other contexts. Managers can be very creative with how to build a network. To whom ones talks seems to be more important than where the discussion takes place. Preferably, one should have an interest in or have something to gain through what the company is try-

ing to do. However, managers are conscious of how much they ask of people. Finding the right people is not easy and building up and maintaining networks take time. Moreover, they require personal communication skills. The most common networking places are trade shows and exhibitions. In addition to knowledge, networking enables personal experiences. One respondent described a trip to the USA as a turning point of their marketing. By observing the presentations of other companies, more advanced in terms of branding, he understood the advantages of a brand strategy more clearly.

However, as with silence, some respondents do not tend to see other people or networking as the source of marketing information at all. What is not apparent is whether they do not realise what the impact of others is or whether they tend not to utilize the information from others. One respondent referred to travelling as a source of information, and it can imply that information from informal settings is regarded as overall experience rather than networking.

In the present study some respondents highlighted the feedback from experts. Rogers (2003, 172) calls these outsiders as "change agents" as they can create a need among the high tech managers.

> Respondent KP "So, I actually presented to a group of people and they gave me feedback. And immediately they thought that um I did not have enough money or um (small pause) or as much of a marketing plan as I needed. Well that's what I realized…that's exactly why I wanted someone with marketing um expertise."

On the whole, the interviews indicate that many parties fit into the definition of a change agent. When asked to name sources of advice, the respondents mentioned the following: universities, universities of applied sciences, private consulting companies, public organizations (such as Tekes and Ely in Finland), business mentors, other companies in the supply chain, other entrepreneurs (sharing the same attitude) and advertising agencies.

Not all respondents agreed with what the change agents recommend or think that the managers needed. The attitude towards and sufficient knowledge about marketing and branding, their relevance to the company's situation and potential usefulness compared to the investment, seemed to have influence on the perceived need of a brand strategy.

> Respondent JK "näkemys on kehittynyt oman toiminnan kautta, että mikä toimii ja mikä ei toimi… ollaan oltu vaan joissakin keskusteluissa mukana, mutta ei hirveesti rohkassut – ne lähestymistavat ollut niin heikkoja et ei oo voinut niinku sanoo että.."

> "the vision has evolved through our own action that what works and what does not work …we 've been involved in some discussions, but not terribly encouraged - the approaches were so weak that you could not say that…"

Moreover, the respondents told that they gained information from written documents. Technical and trade journals were regarded as more important than books. However, online websites and other material available on the Internet seemed to take over. In particular, the respondents searched on the Internet

when they needed information to do something for a specific occasion, for example how to give a presentation.

The development of online materials has noticeable altered the use of written documents. The value of the online materials is in their ability to provide topical, exact information at once for a need at hand. However, not all information from the Internet is relevant and sufficient. The managers just get enough to get by. Moreover, the need for practical tools arises but good text books focused on branding guidelines for non-marketers are not available. Therefore, it can be assumed that trying to manage a brand on one's own, under these circumstances, is very difficult.

The knowledge of the existence of a brand strategy can create a motivation to learn more (adapted from Rogers 2003, 172). The only prerequisite for high tech SME managers is to recognize that they have a problem or that they could benefit from branding strategies. In fact, high tech industries employ high proportion of highly educated people. Education cultivates an individual's skills, especially so called meta-skills that enable the gaining of more skills.

> EK : "Well in…I've always liked to learn and learning can sometimes be painful because you make mistakes. Or learning can be from someone else's mistakes and incorporating that into um your knowledge. So um I always think that my biggest strength is my willingness to learn. I'm always trying to find out information on everything. And that actually can be distracting because I will learn one thing about something and I'll spend an hour researching a totally unrelated to what I was working on. Just because it was interesting. And so the uh I think that's one of my traits to success is that I always want to learn more. And my mother says I was always like that so ever since I was…"

Based on the respondents' answers it seems that their attitude towards learning is favourable and generally the ability to learn quickly even highly theoretical issues is high. The interviews confirm the assumption that high tech managers are curious by nature (Mohr 2001, 7). From the heart they want to see how products are made and how they work and they have a commitment to solve problems no matter how long it takes.

Nevertheless, the respondents' comments also revealed barriers in this particular area. Marketing experts and public organizations can play a vital role in communicating about brand strategies and the effects they are likely to have. Unfortunately, the respondents seemed to lack competencies to evaluate the quality and the relevance of the advice compared against the cost. Some respondents had discovered a very innovative solution for this challenge. They had formed relationships where some of these advisors were unpaid. They called these people *"a supportive group of people"*. Perhaps the motivation of this group of people to help the companies lies in their conscience. It is often the case that the innovations that high tech companies are trying to commercialize can improve the standard of living or ease the lives of many people. For example, people can recover faster and better from a stroke. In fact, the companies have a very true and good story to tell about what their products can do. This story can make such a great impact that some people are willing to share their expert knowledge just to help and do not expect any money in return.

Respondent JK "Meillä on paljon niinku sellaisia- maailmalla on sellaisia ei nyt voi sanoa uskovaisia, on väärä sana, mutta tämmösiä ihmisiä , mutta uskoo meidän juttuun ja mitä me tuodaan sille""We have a lot like those – in the world there are people, cannot say believers, it is the wrong word, but people who believe in our case and what we can give to them."

Table 16 concludes the empirical analysis concerning felt needs and problems by high tech SME managers and summarizes the key issues. Based on the data, it is likely that a perceived need for branding facilitates the adoption and vice versa. The active high tech managers begin to search for information from different communication channels. The managers want to find information cost-effectively and quickly. Financial factors raise concerns since it seems that high tech SME mangers are not aware of other, less expensive alternatives.

TABLE 16   Felt needs/problems – A summary of factors that are involved when a high tech SME manager is exposed to a brand strategy's existence

PRIOR CONDITIONS	Description	RESULT of the study in bold text = new information revealed by this study	Facilitates or impedes the adoption Researcher's interpretation either - based on data *) or - based on literature
Felt needs/ problems	Managers do not express the need for branding spontaneously	The unfamiliarity of a brand strategy can cause frustration	Impedes (Rogers 2003, 172)
	Difficult to implement	Put forward the implementation	Impedes *)
	Know their own limitations in marketing	**Avoidance rather than finding solutions**	Impedes *)
	Feel that they do not have enough money	The expected revenues are too far away in the future	Impedes *)
		Not aware of low-budgeting alternatives	Impedes *)
	Knowledge can lead to need	The source of current knowledge is from technology industry and business models	Impedes (Temporal & Lee 2001)
	Active ones seek information from communication channels	Information reduces uncertainty	Facilitates (Rogers 2003, 171; McGovern 2006)
	Primary source of information: Networking	Creative in building	Facilitates *) (Gronum et al. 2012)
		Finding the right people	Facilitates *) (Gilmore et al 2001)

		Can reach many industries	Facilitates (West & Noel 2009)
		All types of information are valuable	Facilitates (Gronum et al. 2012; West & Noel 2009)
		Requires communication skills	May impede (Gilmore et al. 2001)
		Takes a great deal of time, and the results are difficult to show	Impedes *) (Gilmore et al. 2001)
		Enables personal experiences	Facilitates *) (Gilmore et al. 2001)
		Some tend not to utilize the information from others	Impedes *)
	Source of information: Change agents	Can create a need among managers	Facilitates (Rogers 2003, 172)
		Not all agree with what they recommend	May impede *)
	Source of information: Written documents	Internet seems to take over. Information at hand	Facilitates *)
		Need for good text books arises	Impedes *)
	Source of information: supportive group of people	**Experts help you for good reasons of conscience; need of a good story**	Facilitates *)
	Knowledge can create motivation to learn more	The manager's attitude towards learning is favourable	Facilitates (Rogers 2003, 172)
		Ability to learn is high	Facilitates *)
		Managers are curious by nature	Facilitates *)

Innovativeness

The level of innovativeness, that is how the high tech SME managers perceive a brand strategy's innovativeness, is characterized in this section through three types of knowledge about the innovation. The three types of knowledge are derived from Rogers's (2003) theory. "What is the innovation?" question represents the first type, the awareness-knowledge, where the individual has information that an innovation exists. The other two types of knowledge are discussed in due course. (Rogers 2003, 172 - 173).

Awareness-knowledge: "What is a brand strategy?"

In the present study the basic assumption is that all managers in all industries are aware of brands. Brands are globally established constructs, and everyone has personal experiences about them. However, the respondents give different meanings to brands and to the role of a brand in their company. The managers can be identified and divided into different groups by characterising their perception of a brand strategy: the insecure, the postponers and the committted. The identification is based on the researcher's examination of the extent of 1) the individuals' own perceptions of their commitment to a brand strategy and 2) the visible outcomes (documentary records) and the level of implementation of a brand strategy in the company.

Group 1. The Insecure– the characteristics of group 1

The managers in group 1 are insecure about their commitment to brand building. The respondents appear to think that in theory a strong brand is an asset to a company. However, building one in their company alone, even if they had the opportunity, is not considered self-evident. They see that due to the nature of high tech environment there are too many other issues they need to focus on and prioritize. They focus on developing the product and a brand is created afterwards. Clearly the viewpoint is that the roots of the brand are in the products. The advantages compared against the resources needed for the brand building process raise doubts among the managers. They seem to fear the waste of time and money in brand building since there are so many factors that cause uncertainty and may cause the failure in commercializing the product. The insecurity shows in the communication. The innovation may not even have an established, commonly agreed name and therefore the visual elements of a brand either do not exist or they are being drafted casually.

> Respondent HS "Ajoitus – tulevaisuudesta ei ole varmuutta, on riski lähteä panostamaan jos tuote ei lyökään läpi. Muna ja kana monesti." " Timing - the future is uncertain, there is a risk to invest if the product does not hit through. The hen and the egg often."

Group 2. The Postponers– the characteristics of group 2

The managers in group 2 understand that brand is more than just a logo, an advertisement or name of the product. They also understand that they have problems in implementing brand management in their organisation. However, they have a very positive attitude towards brands and they see brands as one of the success factors of companies generally. Nevertheless, they postpone their own attempts until they have more time and money. Often they are under the assumption that they can hire a marketing person who knows how to build up a brand. They underestimate their own participation and commitment to brand building. They have developed some commonly agreed methods of visual communication, for instance graphical instructions. Moreover, they may have used outsourced services for designing visual elements. However, their briefing about their decision is rather based on intuition and not so much on the brand identity.

> Respondent AR: "Se varmaan on yksi mun kehitettävistä alueista….. mun pitää varmaankin heti tämän jälkeen – ihan oikeesti rupesin miettimään että nyt täytyy varmaan ihan oikeesti. Se on oikeesti ihan hyvä juttu tästä (haastattelusta) että se tulee (se paine). Että nyt pitää käydä vähän tsekkailemassa" "It is probably one of my areas to be developed ... .. I need to probably soon after this - I really began to think that now I really have to think. Really it is a good thing that this (the interview) that it causes (the pressure). That now I have to check it out "

Group 3 The Committed – the characteristics of group 3

The managers are committed and motivated to building a strong brand. Respondent MM said, "*You have to, otherwise it's your reputation at stake*". They see brand strategy as a relevant marketing strategy also in high technology industry, and their marketing is focused around brand building. *Respondent KP: "Um what do I think the role of brand is in my company? I think it's very crucial.*" Interestingly, they do not necessarily allocate much money to brand building. They find their own way of building a brand. Innovativeness and creativity are in the core of their business, and at the best it is in the core of branding. They use creativity in order to save costs. Respondent MM "*Well you make it so it doesn't take a lot of resources*". However, they have allocated resources to brand building including visual communication. They appreciate the value of marketing expertise and are motivated to utilize outsourced services.

These characteristics can also be considered to create a scale of commitment to a brand strategy. At the lowest level, in group 1, we have the doubters and those who are uncertain. In the middle, in group 2, we have those who are good candidates of committing themselves to building a brand. At the highest level, in group 3, we have those who have adopted a brand strategy. They are the ones who have potential to be benchmarked by other managers and prove by example that the vision can be real. Based on the data, the interpretation of the scale of commitment to a brand strategy as perceived by respondents is illustrated in Figure 12.
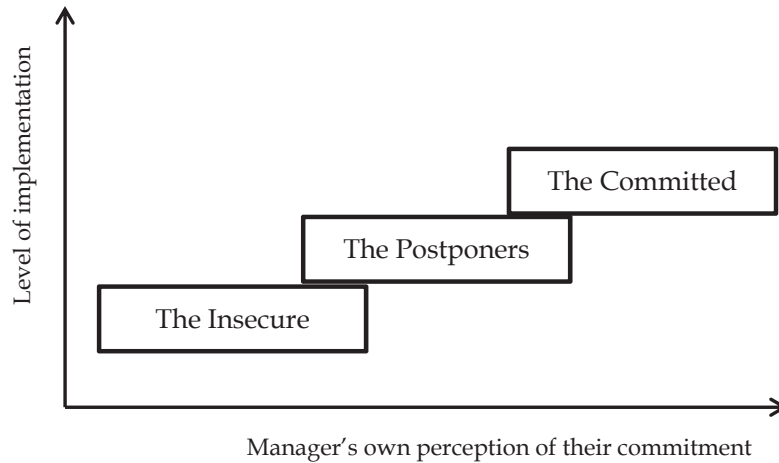
FIGURE 12   The scale of commitment to a brand strategy

How-to-knowledge: "How does a brand strategy work?"

Awareness-knowledge may motivate high tech managers to seek the other two types of knowledge. How-to knowledge consists of information necessary for using the innovation properly. Rogers (2003) points out that the "how-to" variable is fundamental in the innovation-decision process. The "How does it work?" question represents the second type, the how-to-knowledge, in the present study if the manager has the knowledge to use branding properly (Rogers 2003, 172 - 173).

At first, during the analyses process, I tried to use the previously identified groups for characterizing the managers' own perceptions of whether they knew how to build a brand. However, the relatively low level of marketing experience and education could be seen in all respondent's answers regardless of their commitment to a brand strategy. As a consequence, I used the whole data (transcriptions and documentary records) in describing the respondents own perceptions of how they implement brand building in their organizations.

According to the respondents on the whole, the first attempts to build a brand were remarkably similar. At first, brand building was not a conscious issue. What they wanted to do first was to build a product. However, when the company grew, the need for more arose. The next step was usually to design the visual elements, for example a logo. Respondent MM described their first attempts to build up brand as follows:

> "Nothing really. What it was, was ESA, okay looks good. That was it. Then we realized that branding is big so you want people to remember you now. So when we were in Phase 1 of our SBIR I got Kathy to design a Squid logo so she gave me all the logos and I said "Okay this one is kind of neat"

During these first steps the managers seemed to make the branding decisions intuitively. For example, what looked good, what sounded nice or what was within their field of experience as remarked by respondent EK;

> Respondent EK "we came up with our logo and it was very blocky, it was very engineering. It was created by a bunch of engineers you could tell."

The majority of the respondents also saw that the emphasis was on the mandatory steps. According to their experiences, naming the innovation, creating a logo, calling for a trademark and in some cases applying for a patent were the most common first mandatory brand building steps.

> Respondent JC "Well the first steps were probably legal. I mean I uh applied for a patent and um then I went to a couple of different people for the logo. That's really where I started off and then um after that it was you know calling for um a trademark. That's my initial steps on the branding"

One common piece of information that they all also shared was that giving a name to an innovation was important. The process of giving a name to a company or to a product is a combination of intuition, creativity and rationality. The respondents described the aspects of a good name from subjective viewpoints. None of the respondents had used an outsider during the naming process. The interviewees listed some requirements or ideas for a good name. The name had to display what the company/product/innovation was about. Moreover, the sound of the name was important. Respondent JK described the name as something that "*seemed to swing pretty well*". The name had to be credible, sensible and the customers should remember the name quite quickly. This implies that the respondents were aware of the power of the brand name communication. They seemed to realize that the name communicates about the whole company, its values and its business idea.

> Respondent KP "I just think the name has to (small pause) the name has to really, has to display what the company is about."

> Respondent JC "when the name originally came up… we were still looking to patent the idea. So I wanted to be able to talk about it without having to (small pause) talk about it. Does that make sense?"

In addition, the name can be used to protect an innovation. When the company is at the early stages of developing the innovation and still looking to patent the idea, there is a constant need to discuss about the idea with several stakeholders, partners and public organizations. When naming the innovation, they can discuss the idea without having to reveal the core of the innovation. This implies that the name can be used as a code and that it can be crucial in the company's future success. Giving a name to an innovation is an important part of the product development process. Moreover, the need for a name arises considerably soon after an idea is born. One respondent also described a situation in which they co-operated with a partner. They did not name their know-how and, as a consequence, today their know-how is integrated into another brand but

only the partner's brand is communicated to the end-users. This result has been confirmed also in previous research (see Desai & Keller 2002, 73-90).

Customers appear to influence the brand name in retrospect. The following comment from respondent JA2 illustrates the reality:

> Respondent JA2: "Silloin puhuttiin jo brandista ja nimeämisestä ja sellaisesta ja tämähän on johtanut siihen että [brand name] brandin ja nimen toitottaminen että meidän tuotteet eivät ole tahtoneet saaneet nimeä. Ihmiset puhuu että [brand name]iin laittavat ne tavarat ja mikäs siitä, että jos me kysytään että onko teillä [product 1 name] vai [product 2 name], niin ei ne tiedä sitä mutta ei meidän kannata loukkaantua siitä." "Already then a brand and giving a name to a brand was talked about and it has led to a situation that our products have not been able to make a name. People talk about the brand and if we ask whether you have (product 1 name) or (product 2 name) they do not know, but there's no reason for us to take offence to it"

Customers want to keep the reality simple and plain. They may adapt only one name, which, in most cases, is the company name and regardless of the company's attempts to communicate product names separately. The hands-on experience shows that customers stubbornly use only one brand name. Enlightened managers understand their behavior and learn from it.

Despite the importance of the brand name, the final decision seems to be based rather on emotion than on reason. The general tendency is to give time for the best name to evolve. Occasionally, several alternatives are listed through brainstorming session by a manager or with the help of a group of people. Sometimes, the process, for the most part, appears to be silent, located only in the manager's mind until a suitable name "pops up". Respondent JC describes the decision as follows: *JC "an inspiration that hit me one afternoon"*. Respondent MM selected the brand name because; *"You have to have something for people to remember you by"*. However, the criteria for choosing a brand name were based on subjective interpretation. None of the respondents in the present data had tested or conducted a study of the name before or after the decision. Sometimes the opinion of stakeholders, such as partners and customers, was asked. However, the managers did not evaluate the effect of such opinions on their decision making.

However, although the respondents appreciated the creation of a good name for their innovation, they did not see the possibility to create differentiation based on a brand name. They seemed to think that differentiation was achieved most often by technology/product features. In general terms this leads to technology/product oriented communication. Hence, the given names in the industry or in a certain technology are remarkably similar. Brand names tend to imply the industry and technology not the customer need or want the innovation is developed to solve.

The exception to the fact that the managers were not quite aware of the importance of the name from a brand viewpoint was respondent JC. His answer reflected the stereotype of a manager living in a market-oriented reality. His background was in semiconductor industry, and according to him everything in that industry was about the brand. Through his work experience, he had gained understanding about the importance of the brand architecture decisions

although he did not admit consciously to thinking about them. Ideally an exit-plan should already be in place when planning the brand architecture.

> Respondent JC: "Um so that the company who buys us has…still has the brand. They can still market the brand. They still have all of these things that um and this comes from the semiconductor industry experience".

Consequently, the point of looking into the process of giving a name is not to describe the process as the objective guidelines for how to find a good brand name. It is unwise to think that there would be one best way of deciding a good name. A good name can be viewed as a subjective interpretation and it can be seen in the industry's own frame of values. However, what is noteworthy is that giving a name is a strategic thinking process and that the name is an outcome of it.

However, as discussed in the theoretical part (section 3.2) the results of this study indicate that managers might not be quite aware of the importance of giving a name from the branding point of view. Among the respondents, the brand architecture decisions seemed in particular to be overlooked, although they are important since they are closely related to positioning and executing marketing activities. Especially, the challenges of designing a brand portfolio were apparent when analyzing the documents, such as in product brochures, annual reports and websites.

> Respondent AR "Mutta kyllä nyt kun tulee uusia tuotteita – ei sitä oo niin kuin mietitty että miten se pitäisi fiksusti tehdä.""But now that we launch new products – we have not given enough thought to how it should be done smartly"

For the most part the respondents did not give explanations for why they had so many different names in the portfolio. Usually the name architecture consists of the company name, the name of the product and the name of the project or process, technology or software. In some cases, all the products have different names and they are not related to each other. Moreover, in case of partnering with other brands, only the partner's brand is often communicated to the end-users.

Some respondents stressed that in order to be able to move forward in the brand building, more information, which is based on something more relevant than just one's hunch about branding, is needed. The respondents' answers also highlighted the need to get the messages across to the customers so that they would remember them immediately and automatically. In addition, they also stressed that all marketing tools, including personal selling, should communicate consistent message. All this had awakened them to realize that specific marketing knowledge had to be utilized. At this point, many search for help from their existing networks. The managers can actively benchmark or follow up others' processes and in this way copy what someone has successfully done before. Two respondents said that they would look up the needed information from the textbooks.

Overall, when comparing the findings of the present study with Keller's (2008, 38-39) definition of a strategic brand management process, one can state that brand building is at a tactical level. As a matter of fact, only one respondent said that their brand strategy was integrated with the business strategy. According to Keller (2008, 38-39), the strategic brand management process begins by identifying and establishing brand positioning. Indeed, the importance of positioning was stated by a few respondents, and the comments below suggest that it seems to be in the core of marketing activities in many ways.

> Respondent EK: "We learned this very early on so we always focused on our position"

> Respondent JK: "Kuitenkin pitäisi olla hahmotettavissa että mikä osa on se ydin ennen kuin se leviää maailmalle, käärepaperia ja muuta mukana. Ett tää on se yksi juttu kuitenkin mistä me on ajateltu että meidät tunnettaisi" "However, it should be outlined what is the core before it spreads to the world, wrapping paper and other things involved. So, that this is the one thing, however, that we have thought that we would be known for"

The next steps in strategic brand management process are: planning and implementing brand marketing programs, measuring and interpreting brand performance and growing and sustaining brand equity (Keller 2008, 38-39). For the most part, these activities were absent in the experiences of the managers. The preference of learning through trial and error was emphasized but at the same time noted that it could be a very expensive way of learning. All in all, it is likely for the high tech SME managers that they would reject the branding strategies just because how-to knowledge is difficult to obtain before the adoption.

Principles-knowledge: "Why a brand strategy works?"

The "Why does it work?" question represents the third type, the principles-knowledge. It means that the individual understands the functioning principles, it is about gaining information about how an innovation works. It is possible to adopt branding strategies without this knowledge, but the danger is misusing the idea. The competence of individuals to judge the effectiveness of branding strategies lies in their understanding of know-how. (adapted from Rogers 2003, 172 - 173). The respondents of this study are at the heart of the know-how-issue by their primal nature. Usually, people such as our respondents are the most creative people who have decided to become entrepreneurs, just to find a solution to a problem. In other words, they seek the answer to the question, why and how an innovation or the technology works, in order to solve a problem. This kind of natural curiosity may result also when seeking information about branding.

The data concerning the principles-knowledge, i.e the respondents understanding of why a brand strategy works, varied considerably. At the other extreme the respondents did not want to consider a brand strategy related matters yet and thus their tendency seemed to be to postpone the strategic marketing decisions. Their behavior suggests that both the timing and the available re-

sources for marketing may influence their principles-knowledge. Their status quo is more feeling-based than rational. The feeling of not handling the situation today may be reflected by the doubts of what the benefit of spending time and money really is. Moreover, they may have a lack of knowledge of why to do it.

> Respondent JC: "I find that uh I'm more reactive than proactive. Ok this has happened so how do we handle this situation and make it work for us so… I'm sure that will be very much the way it's handled when we get to the point where we need to do our marketing so…"

One step forward was that despite the acknowledgement of brand strategy absence, the respondents seemed, however, to feel that their way or working was strongly rooted in an unwritten definition of a marketing policy. The respondents stressed that their way of working was consistent and well aligned and that it had formed over a long period of time. For the most part the respondents did not give explanations for why they thought that well organized marketing results in financial success. However, the strong commitment implies that this kind of operational organization gives competitive advantage.

> Respondent HS: "niin tota meilläkään varmasti sellasta varsinaista markkinointistrategiaa ja ei vielä kukaan osaa sellaista kokea, että ois markkinointistrategia. Mutta henkilökohtaisesti kyllä koen sillä lailla niin että sellainen tavallaan, sellaiset linjaukset, ohjeet ja johdonmukainen tällainen tapa toimia on muodostunut ja muodostettu ja siitä aika tiukasti yritetään pitää kiinni." "so, we certainly do not have an actual marketing strategy, and no one experiences that we would have a marketing strategy. However, personally I feel that the way of work, such policies, guidelines, and consistency with such a course of action is established and constituted, and we try to hold on tight to it."

What is noteworthy is that the tacit knowledge stems from the managers' previous experiences. From the principles-knowledge point of view, the understanding of why a brand strategy works is based on previous learning. The respondent's understanding is also based on previous knowledge about the industry or the type of business. In the present study a brand strategy as a whole was new information for some of the respondents. This is because their background is in technology and science, not in the branded industries, and, therefore their marketing experiences are limited by contextual experience. It could be stated that these managers are trying to apply their previous marketing knowledge in a much more complex marketing environment without formal marketing education. They deal with a brand strategy on the basis of the familiar. Previous experience provides a standard against which a brand strategy is being interpreted. West & Noel (2009) noted in their empirical study that a foundation for new knowledge can be created by connecting people with different perspectives and understandings. The networks are the source of new information. Although the respondents appreciate the power of brands, they are repeating their old behaviors and using old tools instead of trying to create new ones. The following comment from respondent HS illustrates the non-awareness on this reality.

> Respondent HS: "Meillä on sillai niinku tietty vanhempi ja kokeneempi kaarti jotka on alalla toiminut riittävän pitkään niin ymmärtää näitä alan lainalaisuuksia ja ne ymmärtää mikä tällaisen välineen viesti voi olla" "We have like a certain group of some older and more experienced staff who have worked in the field long enough to understand these laws of the industry and they understand what the message of such an instrument can be "

One respondent, who worked alone in her company, thought that, as she did not possess the required marketing knowledge, it could be brought into her company. In other words, she needed to find a reliable marketing expert. In cases such as this the marketing expert needs to know why and how the marketing strategy works for the company. The threat from this high tech manager's viewpoint was that she had no competence to evaluate the quality of the expert´s recommendations.

> Respondent KP: "Well I felt like I just needed um (small pause) you know I could perhaps learn it on my own but it's probably gonna take me a lot longer and it's gonna take probably a lot more um it would be a lot more cost efficient if I really had someone who just already had…was knowledgeable about that. Well I think that he has brought me a solid plan to follow"

Respondent JA1's description of his own brand experience as a consumer suggests that his own behavior impacts his perception of brand as high tech manager. The respondent hints that despite a higher price the brand is worth it, which seems to be to the respondent an indication of why the brand strategy works.

> Respondent JA1: "Henkilökohtaisesti mä olen brandin uhri aina. Sellainen lojaali. Jos mä tykkään jostakin brandistä niin mä olen valmis maksamaan enemmän. Brandi ei ole se imago vaan se laatu. Ollaan me mietitty että miten me tästä saadaan tehtyä se brandi. Kuten jos esimerkiksi jopa patentit loppuu, se on joku 20 vuotta ja se on sitten siinä, mutta mikä jää niin on se nimi." "Personally, I'm always a victim of the brand. Such loyalty. If I like one brand, so I'm willing to pay more. Brand is not the image but the quality. And then we've thought that how to make a brand in our case. Such as, for example, even if the patents run out, it is somewhat 20 years and it is there, but what is left is the name."

One respondent appears to think that through their own consistent and committed work their brand is considered to demonstrate the standard way of operating in the field. Their brand owns a category which is similar to Hoover and vacuuming as on the consumer side when it comes. This leadership position of a category provides a sustainable competitive advantage.

> Respondent JA2: "Että kaikki niin kun totee että tämmönen toimintamalli mikä meillä on tässä kaaviokuvassa on niinkun on [Brand name] standardi""When everyone states that this operation model that we have in this diagram is (Brand name) a standard in the field."

The above examples are some of the characteristics based on which the respondents seem to be evaluating why their brand strategy works. The interesting aspect here is that the respondents seem to be aware of and some of them even familiar with the advantages of a brand strategy. However, the answers of the respondents on the whole reveal that they evaluate the consequences based on their own, very

limited experiences. This is natural due to their background although the risk here is that they might fail to realize that their knowledge does not necessarily correspond to the recommendations of experts or prior studies.

Table 17 summarizes the analysis of the level of brand strategy innovativeness as perceived by high tech SME managers. The level of innovativeness is characterized through three (3) types of knowledge about brand strategy.

TABLE 17   Innovativeness – A summary of the level of brand strategy innovativeness perceived by high tech SME managers

PRICE CONDITIONS **Innovativeness** The level of innovativeness characterized through three types of knowledge about the brand strategy	Description	RESULT of the study in **bold text** = new information revealed by this study	Facilitates or impedes the adoption Researcher's interpretation either - based on data *) or - based on literature
Awareness-knowledge; "What is a brand strategy?"		**Managers can be identified and divided into three groups by characterizing their perceptions**	
	Group 1, the insecure	The commitment raises doubts	Impedes *)
	Group 2, the postponer's	Favourable attitude. However, postpone their own attempts	Impedes *)
	Group 3, the committed	Committed to and motivated by a brand strategy. Moreover, use innovativeness and creativity in brand building	Facilitates *)
How-to-knowledge; "How does a brand strategy work?"	The first attempts are not conscious	**The perceptions of a brand strategy do not influence on the how-to-knowledge**	Based on the data, difficult to interpret the consequences, i.e if it impedes or facilitates adoption *)
		Branding decisions are made intuitively	Depends on the content of decisions; May impede or facilitate *)

PRIOR CONDITIONS
Innovativeness
The level of innovativeness characterized through three types of knowledge about the brand strategy

		Intuition is based on one's experiences within one's own field	Depends on the experience; may impede or facilitate *)
	The first steps are to build a product and to design visual elements	The mandatory steps (legal) set limits	May impede *)
		The process of giving the name is a combination of intuition, creativity and rationality	Facilitates *)
		The need to communicate consistent message creates the need	Facilitates *)
	Giving name to an innovation is a strategic thinking process	Highlights the importance	Based on the data difficult to interpret *)
	Awareness that more information about branding is needed	How-to-knowledge is difficult to obtain before the adoption	Impedes (Rogers 2003, 172-173)
	Brand building is at a tactical level	Managers are curious by nature	Facilitates *)
Principles-knowledge; "Why does a brand strategy work?"	A great deal of variance in the data	Timing and available resources influence	Facilitates or impedes (Rogers 2003, 172-173)
	Why to do it now? Way of working is rooted in a successful operational organization	Understanding is based on their previous knowledge; may not work in a new context	Data indicates that it impedes. However, it is also possible that it facilitates *)
	An expert would know, need to find an outsider	The manager has limited competence to evaluate the quality of the recommendations	The majority of the data indicates that it facilitates. However, in one case it impeded *)
	One's own experience from another industry	**The viewpoint and the meaning of a brand strategy raises from experiences as an individual not as a manager**	May facilitate or impede *)
	One's own experience from this industry	Possibility to lead the way and set an example within the industry	May facilitate *)

Norms of the social systems

The effect of social systems

The diffusion of a brand strategy occurs in a social system. A social system is defined by Rogers (2003, 23) as *"a set of interrelated units that are engaged in joint problem solving to accomplish a common goal"* and in the present study the high tech SME context can be defined as such. One aspect of a social system is structure which affects brand strategy diffusion in several ways. Firstly, the structure gives stability and regularity to individual behavior in a system, in the present study to the behavior of high tech managers. The social and communication structure of a system facilitates or impedes the diffusion of a brand strategy in the high tech SME context. (adapted from Rogers 2003, 23-38).

Secondly, the social system constitutes a boundary within a brand strategy diffusion and it involves relationships between the high tech SME context and the brand strategy diffusion process that occurs within it. The themes derived for the present study are the effect of the norms of diffusion and the roles of opinion leaders and change agents. (adapted from Rogers 2003, 23-38).

Social structure and diffusion.

The social structure consists of formal and informal structure (Rogers 2003,24). For the most part in the data at hand the formal structure is not well-developed. The level of hierarchy is low and highly ranked positions are rare. Only one of the respondents considered that the branding guidelines would be issued inside the organization from the top downwards. Even so, the low level of hierarchy and possibility to give feedback from the lower levels to the top was emphasized.

However, the informal structure, also called the communication structure, was vivid and could be well recognized. According to Rogers (2003, 24), studying the structure allows to predict the behavior of high tech managers with some degree of accuracy. The predictability is possible due to the regular patterns that begin to occur in the communication network of the system.

Overall, majority of the respondents felt lonely at some point in their situation. Respondent JA1, for instance, gave the following response when he was asked about his experiences in managing the marketing:

> Respondent JA1 "Alussa se oli minun suuri suru, se yksinäisyys, Se epävarmuus. Alussa mä muistan kun mä hain, mentorit ja muut huomas kun mitä yrittäjillä on – kävin keskustelemassa aika monien kanssa, mulla ei ollut kynnys mennä keskustelemaan ongelmista muiden kanssa" "At first it was my great sorrow, the loneliness, the uncertainty. In the beginning I remember when I was searching, mentors and others I noticed what the other entrepreneur's got- I went to discuss with many people, I did not have a threshold for going to discuss problems with others"

The feeling of loneliness drives the high tech SME managers to create interpersonal networks which links them with various stakeholders. The importance of networks was discussed already in connection with the felt needs. However, by

networking the managers do not necessarily seek only for information. They feel relived for a chance to discuss with someone they trust. Sometimes they just want to test their idea through discussion and want someone's opinion to confirm it. Thus, the expertise, the experience and the information from others decreases uncertainty and builds a manager's self-assurance. Moreover, it was emphasized that the social networks such as Facebook and Twitter cannot replace the personal face-to-face communication. The managers need to be able to ask a question and have live, interactive conversations. The settings can be informal, for example breakfast or lunch meetings work very well.

The challenge with a network is how to fully exploit it. Generally, the managers struggle with demonstrating their links and to some extent everyone in the organization have their own networks. It is unwise to think that there would be one best way to build and manage networks. However, it might be useful for high tech managers to try to document some parts such as contact information and the area of expertise as they may provide crucial information for the development of a marketing and business strategy in the future. Recent studies indicate that networking provides useful information for firms. However, the managers need to know how their particular relational networks must be designed. (Molina-Morales & Martinez-Fernández 2010).

One respondent described an informal structure that they had developed in order to facilitate their marketing. They have been most successful in integrating the customer and other stakeholders into their marketing development process. Sharing a common objective, the motivation to help patients, binds the system together. At the same time the story is an example of a creative communication structure.

Creative communication structure

Informal settings enable informal communication. The office facilities and interior design contribute to the interaction between the people. The entire staff can contribute to the marketing plan and everyone's opinions are respected. In the daily informal meetings all staff members are encouraged to discuss what the company should be doing. The discussion topics are based on outside marketing influences. These influences may at first come from magazines, journals, clubs or direct feedback from the customers. The customers may send a postcard or come into the office personally and share their view with the engineers and designers who are responsible for product development. The feedback can be very emotional and informal, for example, "I want this to feel like a big hug" or "This has to convey a message of trust". When the staff members communicate with the customers, they create deeper understanding about the needs. Through discussion the staff members understand what is going on with the stakeholders and are able to apply the information.

System norms and diffusion.

System norms also impact the diffusion of a brand strategy. Norms are defined as *"a range of tolerable behavior and serve as a guide or standard for the behavior of members of a social system"* (Rogers 2003, 26). In other words, the norms of the system tell high tech SME managers how they are expected to perform. In the data at hand no behavior which depended on the norms could be identified off-hand. However, several respondents characterized typical behavior of the individuals in the high tech context. The individuals are not expected to behave as described below. Anyway they tend to do it. The influence on how people behave does not depend solely on the high tech context but also on one's personal character and educational background which are typical in the industry.

Firstly, it is possible that the lack of communication skills impedes diffusion. The ability to communicate is not readily found in the engineering community. Several comments indicate that engineers tend to associate with other engineers. Instead of broadening their networks the tendency is to deepen them and keep to the field of their own interest.   Engineers are characterized as "geeks and nerds" who like to sit at their desks in a dark room by their computer and design mechanisms and write software. These are strong indicators of non-communicative behavioral practices. This behavior may impede the communication within the organization and with the customer. The needs of the customer are understood through communication, and the customer needs are in the core of a brand strategy. The danger is that without this understanding technology may be developed from the "what it does" viewpoint instead of "what it is going to be used for" viewpoint.

Secondly, the respondents also indicate that people who work in the high tech context are typically very concrete thinkers. Engineers need to have something concrete to work with. Marketing is characterized as a very abstract concept including emotional dimensions. Moreover, especially when marketing new innovations, there is nobody to show the way or set an example. One respondent described the situation as if they were *"umpihankeen käveliöitä"* *"walkers in unbroken snow"*. Resistance to new, abstract ideas can be found in the high tech context and it may impede brand strategy adoption. Respondent JA1 depicts: *"Kun sitä ei voi koskettaa sitä ei voi hahmottaa, niin täällä sitä ei arvosteta.""When you cannot touch it, you cannot perceive it, so here it is not appreciated"*

Opinion leaders and change agents

Such high tech managers who provide information and advice for others about the brand strategy are called *"opinion leaders"*. Some managers possess an informal leadership position or status since their way of operating and a strong brand are able to influence and impress others, even professors at Universities. This is possible due their long term commitment and consistency in brand management.

Respondent JA2 "Joo, ensimmäinen postiviinen kokemus siitä brandäyksestä jota hyvin mielellään kerron niin Suomessa on yksi ihminen jota koko toimiala pitää jonkinlaisena kaikkein kovimpana guruna, tässä rakentamisen maailmassa, kustannuslaskennassa sellainen kun professori Juhani Kiiras niin sanoi yhdessä tilaisuudessa että "nyt kun tuosta [Brand name] järjestelmästä on muodostunut de facto standari toimialalle". niin sen jälkeen olen katsonut että nyt on mennyt putkeen tää homma."

" Yeah, the first positive experience of branding, which I like to tell about in Finland, is this person whom the entire field considers to be the number one guru in this world of construction, in cost accounting, that's Professor Juhani Kiiras, who said on one occasion that 'now that this [Brand name] system has become the de facto standard in the field'. So, after that I have been thinking that we have done a great job here".

Besides opinion leaders, based on the experiences of the respondents, so called change agents can influence a high tech manager's behavior. As discussed earlier, change agents are usually professionals in their own field (often in technology) and they can help managers to gain new information. In addition, they may either seek to obtain the adoption of a brand strategy or prevent it through the process of mentoring. Change agents in the role of a mentor do not provide ready answers but instead listen, ask further questions and seek for inconsistencies from a manager's ideas. They let managers to take their time to think but they also encourage them to demonstrate, mainly to themselves, how much they already have accomplished.

Based on the data, change agents can also have a role of a strategist. A high tech manager possesses the content and the substance and the strategist provides a solid plan to follow. Brand strategy formulation is mainly a joint process from an idea to a concrete brand strategy where the substance and marketing experts come together and create it together. The process requires mutual trust and respect for the expertise of both parties.

From the above examples we can learn that companies are not all identical in their behavior. The social relationships of the respondents constitute a social structure and its impact on brand strategy adoption is of interest in the present study. However, it is a rather complicated matter to evaluate the effect of the structure compared to the effect of the characteristics of individuals that make up the system. Consequently, it does not allow us to predict brand strategy adoption with any degree of accuracy. Thus, one can only state that it is likely that a certain kind of behavior impedes brand strategy adoption, and another kind facilitates it.

Table 18 summarizes the analysis of the influence on the social system on adoption of a brand strategy by high tech SME managers. Based on the data, different types of social relationships can be identified and it is likely that the impact of a social system is significant.

TABLE 18   A summary of the factors concerning the social system when adopting a brand strategy by high tech SME managers

PRIOR CONDITIONS	Description	RESULT of the study in **bold text** = new information revealed by this study	Facilitates or impedes the adoption Researcher's interpretation either - based on data *) or - based on literature
Norms of the social systems	Formal structure	Not well-developed	Facilitates or impedes (Rogers 2003, 23-38)

	Informal structure	Key drivers facilitate networking
		
		Interactive communication with customers and staff members
		   Creative
		   Carefully designed
			How to fully exploit it?
			
			Facilitates (Molina-Morales & Martinez-Fernández 2010)

	Typical behaviour	Lack of communication skills	Impedes *)
		Tendency of concrete thinking	Impedes *)
	Role of opinion leaders and change agents	Mentor Strategist	Facilitates or Impedes *) Facilitates *)

6.1.2   The persuasion stage

In this section the presentation of the results is moved from cognitive (the knowledge state in Rogers's model (2003, 170) to a more affective or feeling based stage. At the persuasion stage a high tech manager becomes more psychologically involved and forms a favourable or unfavourable attitude toward a brand strategy. Rogers (2003, 174-175) defines attitude as " *a relatively enduring organization of an individual's beliefs about abject that predisposes his or her actions".*

On the whole, all of the respondents have reached the persuasion stage since they have developed a general perception of a brand strategy. The perception is not necessarily to any particular direction (positive or negative) or to the direction intended by experts or other sources, such as financers. When the respondents were asked to describe their feelings in the situation, two major themes, uncertainty and learning is fun, could be identified from the data.

Relative advantage

The respondents expressed the relative advantage of a brand strategy as the ratio of the expected benefits and the costs of adoption. Thus, the data is in line with Rogers's (2003, 229) theory. On the basis of the data, the expected benefits are primarily evaluated as strategic and managerial advantages. The following descriptions of strategic advantages were charted:

- a well-defined concept to sell and purchase
- a global concept by nature
- a brand perspective facilitates a strategic vision
- a competitive advantage
- a brand enables entering global markets
- a brand enables global leadership
- a brand is a protection against competition
- a brand is easy to remember
- a brand can deliver a complex message
- a brand helps to convince stakeholders.

In addition, the following descriptions of managerial advantages were charted:

- supports consistency across organisation
- supports the customer relationships
- helps to direct the operational activities towards a shared target.

Compared to prior studies (can be found in chapter 3) the respondents did not mention the following strategic or managerial advantages:

- sustainability achieved through unique and superior brand associations
- brand associations help to establish a category membership and have greater protection against indirect competition
- more favourable negotiation position against the retailers
- better position in the labour market to attract the best employees
- gain social status
- helps to reduce perceived uncertainty in end-users mind

The financial advantages were also mentioned, but with less weighting. This is interesting, since many studies (Berthon et al. 2008; Keller 2008) show evidence that the financial advantages of a brand strategy are considerable. All respondents agreed that a brand supported the sales and helped to increase the revenue. However, only a few mentioned that a brand would possibly increase the value of the whole company in the minds of potential investors. However, the findings did not give any indication of that a brand may help to earn higher margins and long-term profits which are emphasized by prior studies (e.g Ward et al. 1999). This implies that the fundamental of branding, the creation of added

value is not quite apparent to the respondents. Moreover, the findings of prior studies (Capon et al. 2001, Riezebos 2003) about customer loyalty and its link to a certain level of future income were missing from the data.

> Respondent HS: "kasvattaisi mahdollisesti exit lisäarvoa. Nostais firman arvoa ainakin jollain tasolla investoijien silmissä totta kai""Would increase the potential exit value. Would increase the company's value, to a certain extent anyway, in the eyes of investors, of course."

The advantages are then weighted against the costs of adoption. The biggest challenge seems to be money. Brand is seen as a long-term investment for the future and not as a short-term revenue accelerator. As to the brand-building costs as such, outsourced services, personal selling, marketing materials and travelling costs were considered to take the majority from the marketing budget.

> Respondent KP: "Well I had actually, I had actually called uh when I was designing the logo before I even…um I had spoken with several companies that you know were willing to help me brand it for forty thousand dollars. (HN: Yes) Um (HN: generous) yeah I know that was so nice. And so that's when I was like well um you know."

> Respondent MM: "I prefer to keep it way lower, I would love to but sometimes you just don't have a choice. Also, you can cut corners, if you will, you don't have to print all these brochures right because you're not going to go out and hand them out at a parade because nobody will know what you're talking about. You do find ways to cut corners or do clever ways of handling it."

Managers had experiences on leveraging free resources and paid resources. They thought that they could accomplish some of the marketing actions on their own in order to save money, although it would take time. Some respondents felt that they sometimes needed to spend money in order to make money. According to them, some of the ways to spend money were not very useful. Despite the fact that brand element decisions are difficult and expensive, if not impossible to change later in the company's life cycle, managers do not really see at the time what in their specific situation spending on branding would achieve. Respondent EK depicts this as follows: "*So those are hard lessons to learn, but necessary*".

> Respondent HS: "Vaikka uskotaan brandin voimaan ja sen tuomiin hyötyihin niin sen brandin rakennustyö maksaa niin paljon, alkuvaiheessa koetaan kustannuksina eikä nähdä tulevaisuuden tuottoja.""Although we believe in the power of brand and the benefits, anyway the brand building process costs so much, at the early stage we seem them costs and fail to see the future revenues."

Apart from money, some of the respondents do not even see other challenges as exemplified by respondent EK: "*we are small and we know what we do*". Despite the fact that the other needed resources were not mentioned out loud, the need for knowledge and time rises in silence from the data. As it was the case of worthless money spending, the hard lessons to learn may diminish if the company possesses an adequate level of knowledge resources. Moreover, the time perspective is important in order to understand the high tech SME manager's

state of mind regarding the relative advantages. The challenge for the high tech SME manager in today's busy working day is how to allocate time resources. The two examples below imply that the respondent's thinking seemed to be in the future advantages rather than in the current state of affairs.

> Respondent JC: "Those are probably the two primary things that I guess come to mind is the idea of the next step of the companies stage where it's purchased by someone else and the ability to line those products up and discuss them as a single process rather than individual systems."

> Respondent AR: "Kyllä mää uskon että, mää lähden tekemään se ei ole valmis kun valitettavasti se on semmonen asia mikä ajan puutteen vuoksi sitten yleensä jää sitten vähän. Se ei niinku ole ykkösprioriteetti.." " Yes, I believe that I am going to start the… it's not yet ready, it is unfortunately not completed due to the lack of time, since it is not our number one priority."

All in all, a brand strategy in general is perceived to provide a greater advantage than a product strategy. In the present study especially the strategic advantages were emphasized. However, the advantages of branding are realized only after some time, and the managers have to decide whether they are worth the effort, time and money. It is difficult to estimate if the managers actually believed that a brand strategy adoption would be better at the moment than their existing practices. Hence, it is difficult to estimate based on the data, whether the relative advantage affects the rate of a brand strategy adoption.

Compatibility

Compatibility refers to the degree to which a brand strategy is perceived as consistent with the existing values, past experiences and needs of high tech SME managers (adapted from Rogers 2003, 240). Prior studies (Temporal & Lee 2001, 54-55; Ward et al. 1999, 55-95) emphasize that high tech SME managers struggle with brand management. This is evident on the basis of the present study as well. Most of the respondents are not in their element when it comes to brand strategy issues. They find it difficult to understand what marketing is and conduct it at a rather higher level than ground level. Some respondents describe their specific situation that they need to do something that they would not choose to do. In order to move the company forward they find themselves doing the *"evil things"* that they do not even want to do. They bend only because they understand the importance of marketing actions. Sometimes the solution is to outsource marketing, since a natural tendency of people is to concentrate on issues that they want to do.

> Respondent JC: "I'm out of my element. It scares the bejesus out of me because I don't know anything about marketing. I'm not a marketing guy. Um when it comes to machines, comes to design, engineering that's my element."

> Respondent KP: "Right I just… Well I felt like I just needed um (small pause) you know I could perhaps learn it on my own but it's probably gonna take me a lot longer and it's gonna take probably a lot more um it would be a lot more cost efficient if I really had someone who just already had…was knowledgeable about that."

In general, a brand strategy is not perceived as consistent with the sociocultural values and beliefs of the high tech SME industry. The managers seem to gain social status in their community by creating new innovations and technologies, not by creating innovative branding strategies. Temporal & Lee (2001) also state that sometimes high tech managers find it difficult to accept that consumer values are often based on intangibles such as emotional associations, as opposed to hard, tangible facts like product features. It is difficult to say based on this data whether the emotional reactions in general are based on the product features or other emotional associations. However, the present study implies that managers are willing to accept also intangible values as a core of brand identity.

> Respondent EK: "My mother and my wife and my kids, they all understand what we're doing. Even my kids, they understand I'll come in and I'll talk to their classes. I'll talk to them at first grade or third grade levels and I'll say "you know do you understand that when someone hurts their brain, that part of their body doesn't work anymore?" And this is what we do to help them."

In addition, most of the high tech SME companies have not emerged in a branded industry. However, the following comment by respondent EK reveals that when benchmarking other companies, potentially from other industries, commitment to a brand strategy does not necessarily lead to the adoption of a brand strategy, but it helps managers to evaluate and judge their own decisions. Moreover, the example of other companies may facilitate the adoption. The logic of the process is not the same, but the outcome, creating a brand identity, is, nevertheless, a branding achievement.

> Respondent EK: "Um there's another company here in town that we work very closely with and they are very good at branding. They have a parent company and they have three different brands under this parent company and uh they're small like us. But their focus started with this brand identity whereas our focus a product and market based focus that developed into a brand identity. We make different decisions that are better for either company but it works."

> Interviewer HN: "Why do you think actually that this model works better for you? What are the factors that actually you think are different compared to yours?"

> Respondent EK: "I think it's our personalities. That we're engineers the majority of the…and even still the majority of our company is still engineers"

A brand strategy is evaluated in comparison to the existing practice, and if the managers perceive that their needs are met, the rate of adoption is usually faster (adapted from Rogers 2003, 240-257). Based on the data, it is likely that compatibility impedes brand strategy adoption in many high tech SME companies. The high tech SME managers are in a "discomfort" zone in the abstract and complex world of brands. On the other hand, this may provide an opportunity to some pioneer companies. Based on the data, the commitment to a brand strategy by other companies may trigger high tech SMEs on the condition that they have developed confidential personal relationships with companies outside their own industry. In addition, some conscious managers may learn from the failures and success stories of other companies and understand the strategic role of

marketing. This may trigger them to learn more, which facilitates a brand strategy adoption and hence improves their competiveness.

Complexity

Complexity refers to the degree to which a brand strategy is perceived to be difficult to understand or use (adapted from Rogers 2003, 257-258). As to the implementation of a brand strategy, numerous studies (Aaker 1991; Keller 2000; 2008; Capon et al. 2001; Clifton 2003; Deloitte 2005; Martin et al. 2009) confirm that it is difficult for any organization. Needless to say, the implementation is especially difficult in high tech companies when the organization usually does not possess the necessary knowledge and skills due to their previous work experience and/or education. Brands require also deep understanding and knowledge of marketing, customers and competition. Respondent JA described that he had a vision of a brand strategy but that the staff members found it difficult to implement it. This implies that a brand strategy is difficult both to understand and to use.

> Respondent MM: "That's just it, you need to make yourself stand out somehow, be it business cards, brochures, your name, your reputation of course and any other kind of marketing you get in there so people can hear your name every time. That's how it all works, that is how it works. It's tougher for high-tech companies, it just is, small high tech companies."
>
> Interviewer HN: "Why?"
>
> Respondent MM: "Well because you have to come up with something that the common person can relate to you know what I mean?"
>
> Respondent EK: "Yes. And crafting your story in such a way that people can very quickly understand what you're trying to do."

The above answers by respondents MM and EK provide further understanding of the complexity of a brand strategy and how it takes a multi-dimensional shape. At first, the word choices used by the respondents reveal that a brand strategy is not necessarily difficult to understand or to use by the manager. Instead, the difficulty lies in the company's limited resources. In the opinion of respondent MM, the best choice for the company is to maximize the marketing efforts by allocating the limited amount of money to visibility and to a brand message that helps the company to stand out. Nevertheless, when probed by the interviewer, the preference seems to change. Now the underlying difficulty seems to be in how to formulate a simple brand message that would deliver the core competitive advantage of the innovation/product/company. *"The common person"* as the respondent MM says it, has to understand the benefits of their offering, and the message creation process can be extremely difficult, since the technology itself can be very complicated. The complex phenomenon is difficult to describe and communicate in short. The multi-dimensional complexity of a brand strategy as perceived by respondents is illustrated in Figure 13.
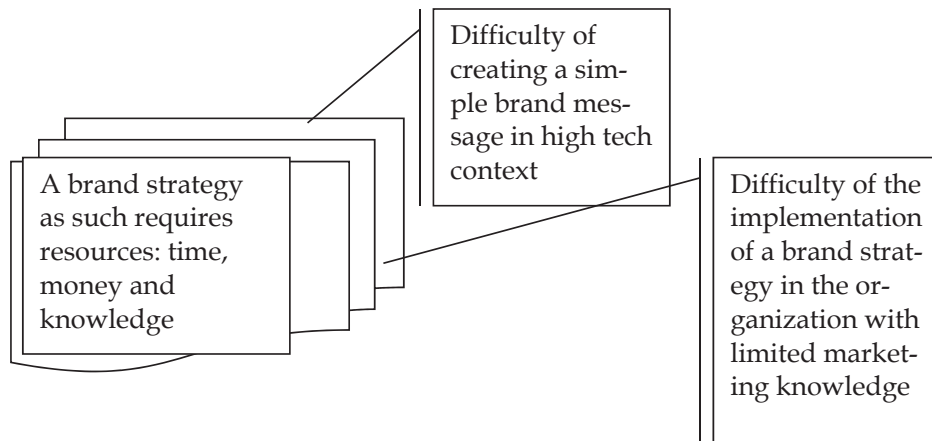
FIGURE 13   Multi-dimensional complexity of a brand strategy

> Respondent KP: "And then Bob took all three of them and um and kinda came up with a…kinda put them altogether and came up with our messaging plan which was great. "

The complexity of a brand strategy can also be, at least partly and pro tempore, avoided by outsourcing the creation of the strategy and message. Some of the respondents found it a suitable solution in their specific situation although they thought that some involvement was needed when moving from strategy to execution. The extract above by respondent KP exemplifies the viewpoint. However, based on the data it can be said that due to a brand strategy's multi-dimensional nature, complexity can be a major barrier of adoption.

Trialability

Many of the respondents appeared to have experiences in trying a brand strategy in their previous or current position. This is positive from the adoption point of view, since it is more likely that high tech SME managers make a decision when having experience of a brand strategy. However, when interpreting the data, the low level of the implementation of a brand strategy in the case companies was eye-catching. As emphasized in the literature review (see section 4.6.), in order to fully exploit the advantages of a brand strategy, the whole company should be focused on brand management. When implementing the strategy, the most important matter is that decisions lead to a change in the organisation, since all functions of the company create value to the brand. The top management should have a clear vision of the direction; by combining intuition and creativity they can lead the company to success. Branding strategies must be adopted or rejected in total. All in all, lack of trialability as such may impede

adoption, since adopting a brand strategy means a long term commitment, and it is almost impossible to try it out in the organisation before the decision.

Observability

If high tech SME managers see the results of a brand strategy, they are more likely to adopt a brand strategy (adapted from Rogers 2003, 258-259). Often in consumer markets the companies reflect their performance against the competitors. Hard competition drives the companies to create strong brands in order to maintain or increase their market share. (Aaker & Joachimstahler 2000). In the present study, when the respondents were explicitly asked to characterize their marketing challenges, nobody was concerned about the competition. This implies that the high tech industry is not yet as cluttered as the consumer goods industry. Prior studies (Moriarty & Kosknik 1989, 15; Mohr 2001, 7) also state that one of the main characteristics in high tech marketing is the volatility of competition but not competition as such. Sometimes the market does not even exist yet, which also postpones the competition to the future, as remarked below by two respondents.

> EK: "And so the timing was that here's this emerging science and nobody was addressing the needs of the stroke patients yet. And so um we had the timing opportunity to say "This is a market that doesn't exist yet."…. because it was a very, very large market that there were no competitors, no large competitors…"

> Respondent JK: "että oon ihan varma että semmoselle on paikka. Ja siinä ei ole vielä brandiä ja me ollaan siihen ehdolla." "that I'm pretty sure that there is a place for somebody. And there's no brand yet, and we are the candidate for it."

The above extracts imply also that until the recent time the features of a product or an innovation have been sufficient sources of differentiation. Temporal & Lee (2001) agree with this result and point out that it may prevent high tech managers from fully understanding the results that brand strategies have to offer. For the most part, branding as a strategy has not penetrated the industry and the strategic role has not been fully adopted. As a result, the lack of observability may also impede a brand strategy adoption. Nevertheless, the importance of networking outside the high tech context becomes evident when interpreting the data. When observing the courses of events in other industries, the managers may become aware of the differences compared to their own state of affairs. Thus, it provides them a basis to determine the usefulness of a brand strategy in their own situation and they may learn a new way of approaching a brand strategy. Through observation the germ of an idea may be planted as described below:

> Respondent EK: "Because I know as a product designer that as an engineer there are some very good products that failed because of their marketing program. And then some very poor products that succeed because of a very good marketing program. And as an engineer that's very frustrating. And so being able, yeah being able to learn about why that happens was very interesting to me."

The example above indicates perception that without a good marketing program, which goes back to a good marketing strategy, even high quality products may never break through. The engineer's fondness of developing only the product qualities seems inadequate when observing the phenomenon from the other industries viewpoint. Failing to communicate the customer benefits leads to ignorance, which can be as disastrous as hard competition.

6.1.3 The decision stage

This section provides further understanding of the decision stage of a brand strategy adoption. In the present study the presentation of the results highlights the activities that lead to a choice to adopt or reject a brand strategy by a high tech SME manager. According to Rogers (2003, 177-178), the innovation-decision process can lead to a rejection decision as well as to adoption. This approach was also used in the present study. Firstly, two types of rejection which represent two different kinds of behaviour, active and passive rejection, are being identified and described. The discussion is then moved towards describing the activities that lead to the adoption of a brand strategy.

On the whole, the descriptions of adopting a brand strategy reveal that all respondents have considered the adoption of a brand strategy at some point. However, a few respondents decided not to adopt it. According to Rogers (2003, 177-179) this represents the active rejection type, which consists of considering the adoption first. The present study did not reveal any examples of the other type of rejection, the passive rejection, which is also called non-adoption. The difference between these two types of rejection is that in the passive rejection the person never really considers the use of a brand strategy.

> Interviewer HN: "Onko sellaista päätöstä mielestäsi tehty että olette sitoutunut rakentamaan brandiä?
>
> Respondent HS: "EI jos sellainen tehdään, niin toiminta on varmasti suunnitelmallisempaa, tähtää .. vaikka päätöstä ei tehty niin se tullaan tekemään Tai luulen että se on järkevää. Ensimmäinen merkki siitä olisi selkeä strategia, mitä toimenpiteitä, jonkinnäköinen ohjeistus, mitä pitää sisällään."
>
> Interviewer HN: "In your opinion, have you made a decision to commit to building up a brand?"
>
> Respondent HS: "NO, if we make such a decision the activities are more planned, aims at….even if we have not made such decision, we are going to make it. Or I think that it would make sense. The first sign of it would be a clear strategy, what actions are involved, and some sort of instructions about the content."

The above example from respondent HS reveals a clear decision not to adopt a brand strategy, at least for the moment. However, a certain amount of willpower to commit to a brand strategy indicates that the decision has not been totally rejected. The decision is only on hold and postponed to the future. When interpreting the data the rejection of a brand strategy adoption can be seen in line with the status of product development. The more abstract the idea of the

product still is, the less the managers have considered a brand strategy adoption. The tendency is to postpone the marketing decision until the product is completed and the company financially solvent enough. Nevertheless, the rejection responses also seem to reveal difficulties in knowing the implications of the decision. This implies that it is easier and more comfortable for a high tech SME manager to actively reject the decisions concerning branding. However, they do not seem to be aware that it is also a decision not to decide. They postpone strategically important decisions without quite being aware of it, as described by respondent JC below.

> Respondent JC: "Yes. See there's still that interim period before we're financially solvent enough that we can hire someone to do that that I still have to maintain that role. Um and uh it's a challenge. That will be the challenge…being able to persevere. Uh knowing that I'm lacking in a lot of those areas and understanding what I should be doing you know. But I find that as I move forward I tend to make a decision ok so now I've found something that kinda works so I kinda stick with it. I'll end up aligning myself to be able to do those things whether I want to or not so… but it will be challenging."

However, it was difficult to place a certain respondent in either, the rejection or adoption group. During the interview and when I went through the marketing materials of the company, its marketing, seemed to be focused on their brand. Therefore, I was sincerely surprised when he stated that, "*It's definitely product oriented.*" (Respondent EK). In order to fully understand the situation I needed to reanalyze his whole interview several times. The respondent's subjective perception was that branding was a relevant marketing strategy although it was not in the primary focus. In his comment below he tries to explain that a brand has its roots in products. By managing the products successfully and by integrating all other processes to the marketing program a brand will automatically be created. He also emphasizes that they have consciously changed their behavior according to what they have learned or read but that it is not directly linked to brand building. The respondent seems to value very concrete activities, leaving the brand building process to be some kind of an unconscious outcome of the right decisions. He may have started to build up a brand even before having formulated an attitude towards it. For an engineering mind-set this kind of behavior seems appropriate.

> Respondent EK: "Ok so we started out with a good solid product base and a good solid science and we knew that the marketing program would then be successful. And we never really consciously thought about the brand identity but that um the founders of the company would be perceived as being the company's identity. And in effect that's branding. And then as you release it to a national market you have to be even more conscious of what you write down, um the art, the presentation of your literature, um that's all part of branding. Um and I think a lot of our branding is coming from our scientific activities."

> Respondent EK: "I think that the brand building comes as a by-product to your marketing efforts. If what you're doing is you're learning about your market, you're asking the right questions, you're formulating your sales process to to uh uh your marketing program that the brand identity will come out of that. Yeah and the brand strategy has been secondary. It's been on track and on target. And I don't think we've

> missed the message but it hasn't been the focus. We didn't set out to say "I'm going to create a brand."

It also shows in the respondent's interview that defining and explaining what it exactly means to focus on branding is difficult. The respondent, in fact, uses different terms, such as a platform, to describe a brand. This implies that there is confusion between engineering and marketing terms. On the other hand, the terms as such are not significant among practitioners. It is only natural for engineers to use engineering terms as long as the meaning remains the same. However, the danger of misinterpreting the data is greater unless one bears in mind the background of the respondents. All in all, the findings imply to a possibility that brand building has to take new forms and be adapted to new contexts.

> Respondent EK: "If your stroke patient is typically impaired all up and down one side of their body: hand, foot, knee, elbow, everything. And so, our product line moves from the hand to the foot to the knee to the elbow to the hip and so we've got a line of products planned out as under this one platform that we're calling the Mentor Pro."

> Interviewer HN: "So then would you describe that platform as a brand?"
> Respondent EK: "Yes."
> HN: "But you use the term platform."
> EK: "Platform is an engineering term"
> HN: "And brand probably is a marketing term."
> EK: "Yes"
> HN: "Does it basically mean the same thing?"
> EK: "Yes"

The majority of respondents agree that they have decided to adopt a brand strategy. Adapting Rogers (2003) theory, this study suggests that a brand strategy is adopted when the marketing management is focused on branding and that the process is different when the managers know how to build up a brand and when they do not. Overall, the respondents seemed to agree with this. On the other hand, Ward et al. (1999) say that the fundamental difference between a product-centric and a brand-centric company lies in the attitudes of the people throughout the organization – not just in the marketing department – in other words, in their understanding of what it means to shift from selling products or services to selling a promise of value. When interpreting the data strictly from a brand-centric viewpoint, despite the respondent's perceptions, actually, none of the companies have fully adopted a brand strategy. These two viewpoints (adopted vs. not-adopted a brand strategy) are further discussed and opened up and identified as the core of a brand strategy adoption process.

A cluttered environment seems to be the main driver of adopting a brand strategy by a high tech SME manager. The issue of the cluttered environment linked to adopting a brand strategy is a finding that has also been revealed by prior studies. For instance, Aaker (2006, 24) and Temporal & Lee (2001) claim that without supporting brands an innovation too often sinks into the clutter of the marketplace. Traditionally, brands have emerged in those industries where the competition intensity has been the hardest, and this has led to an approach where a brand is seen as "product plus" (Aaker & Joachimstahler 2000). How-

ever, the findings of the present study suggest that in a high tech environment the competition is not the major challenge at the early stages. The challenge lies in the complexity of communication in a cluttered environment. When the environment is cluttered with all kinds of messages and media, the need arises to position one's offering and create a consistent, clear message. Branding is a very effective way of creating internal and external consistency, and the high tech SME managers seemed to be aware of it. The nature of high tech is causing a real strategic problem to companies and their products, because technology is so freely available and product parity so easily achievable. For instance, it is quite clear that all the companies on the Internet have to take this into account. The message is lost on the Internet and all the efforts can be wasted without a strong brand. This leads to a situation where brand building begins even before the product is completed. The need to develop brands based on a holistic approach (Kotler et al. 2009, 426; Clifton 2003, 234-237), where a brand is viewed as an emotional and intangible experience, increases. In today's emerging cluttered marketplace as well as competition, standing out from the crowd is an even bigger challenge than before, as more and more offerings crowd onto a more level playing field. The following extract below by respondent KP depicts the challenge in her specific situation.

> Respondent KP: "I mean we have our power point presentation that um you know I could…I'm sure I could go over it with someone and say you know this is how the message that I want to promote behind our brand. So that everyone knows that we're on the same page. So that someone doesn't think we're um trying to be uh just entertainment where we're trying to be entertainment and education. Or um whether they think we're just trying to recruit people for careers. I want people to have the message that so that we're all on the same page."

However, all respondents who had adopted a brand strategy pointed out that the implementation was still at a very early stage. The first three stages in Rogers (2003) Innovation-Decision process are mental, but the implementation requires also a change in behavior. When interpreting the data, it is evident that a brand strategy adoption is at a very early stage in the adoption continuum. The following extracts by two respondents describe quite well the differences between mental acceptance and how difficult it is to achieve a change in behavior both by the manager and in the organization.

> Respondent JA1: "Estäis... hmmm suurin este on että emme tee asialle mitään. Meidän firmassa en keksi nyt koska aiomme tehdä. Suuri haaste on että aiomme tehdä vai emme." "It would prevent,…. hmmm the greatest obstacle is that we do not do anything about it. In our firm I cannot think of when we are going to do. The big challenge is whether we are going to do it or not."

> Interviewer HN: "So um what is now your own opinion - you have the motivation and commitment to build a strong brand?"

> Respondent KP: "Um I definitely do. I will say it has been a long, way longer path than I thought. It was gonna take... I mean it's not…you think of something and it's just not done that day. I'm more of a… I like to see the results you know and uh…"

When interpreting the data, strong leadership seems to be crucial to the commitment and motivation to build up a brand in the organization. This finding can be compared with Barney's (1991, 99-120) study that a manager him/herself has the potential to generate sustained competitive advantage. The manager's importance is also highlighted in prior studies and can be found in the present study in section 4.5. The manager has an influence on the allocated resources which enables a long-term commitment. Temporal & Lee (2001) have studied brand building in high tech companies and noticed that although the need might be greater than in consumer goods industry, technology companies, in general have not adopted branding with the same enthusiasm. One of the reasons for this appears to be that many top managers of technology based companies are not marketing specialists and therefore do not have branding skills. This study also suggests that the likely insufficiency in brand building capabilities seems to impede on the success of brand management.

> Respondent AR: "Kyllä mä uskon että ei se häviä. Tietty se on niinku tähänkin asti sen ajan ja rahan siihen löytyminen siihen pidempiajan rakentamiseen." "Yes, I believe that it will not disappear. Of course it's like until now, to find the time and money to build it up in long term."

> Respondent JA2: "No… ei, tiedostamatta että sitä tehdään niin varmaan pärjätään, mutta sillei että se olisi niinku ohjattu. ja että tunnistaisi että tää on tätä ja tätä" "Well …. no, unconsciously we manage to do it ok, but so that it would be guided and we would recognized what is what"

To sum up, section 6.1 described a brand strategy adoption process as seen through the subjective perceptions of high tech SME managers. In addition, the description provides a launch pad to understand what changes are needed in order to facilitate the adoption of a brand strategy in high tech SME's. In the next section the focus is moved towards trying to understand the possible differences between the perceptions of high tech SME managers representing the USA and Finland.

6.2 National differences

Researchers and evaluators are encouraged to analyze qualitative data in order to understand a phenomenon as a whole. In a holistic perspective it is essential for overall understanding to analyze a person in his/her social environment or in an organization's external context. (Patton 2002, 59-61). In the present study the first part (6.1) of the empirical analysis focused on describing the parts, whereas the second part (6.2) focuses on capturing the relationships emerging from and related to the context within which occurs. The companies represent two different national and cultural contexts, the USA and Finland. A holistic analysis is also seen as a window into the whole. The theoretical framework of the present study acts as a foundation for organizing the findings in the empirical data.

6.2.1 Adoption process

As a whole, a brand strategy adoption process as perceived by high tech SME managers can be identified from the data. What is of interest is that no major differences between nationalities were identified, although some minor differences could be highlighted. A brand strategy adoption process requires dissemination of a new idea which requires a change in a manager's behavior. A change as such is difficult to identify based on the present data since it happens over a period of time. Anyway, interestingly, in all the stories of the respondents, some kind of a turning point can be identified. The type of turning point can be a trip to the USA, feedback in a coaching session or facing global competition.

A brand strategy adoption process consists of all the decisions, activities and their impact on independent and/or linked procedures which require resources at every stage. The typical decisions that a manager makes are connected with resources. Based on the data regardless of the nationality, three types of resources can be identified: knowledge, time and money.

> Respondent JA2: " se on minun päätösten varassa" "it's dependent on my decisions"

> Respondent JC: " I think that uh as far as resources a lot of it's not spending, it's more about spending time than it is money for us"

> Respondent AR "Tietty se on niinku tähänkin asti sen ajan ja rahan siihen löytyminen siihen pidempiajan rakentamiseen" "It's just like this far, how to find the time and money to build it up in long term"

The managers perceive the need for a brand with the recognition of a need to differentiate offerings due to the cluttered environment. It seems that the Finnish respondents highlighted the need for a strong brand especially when they wanted to enter the global market. The American respondents highlighted the cluttered environment as such. This need-country-bias may be due to the size of the domestic market. For the most of the Finnish companies competition is not very intensive in the domestic market. However, the domestic market is not sufficient for growth and the need arises to enter the highly competitive global markets.

> Respondent JA2: "se mahdollistaa taas uusien asioiden tekemisen ja sen myötä globaalin markkinajohtajuuden ottamisen" "it enables doinh new things and along with it taking the global market leadership"

The allocation of public funding for other purposes than marketing raises criticism in Finland. Particularly, in one straightforward comment it is being reflected on that marketing activities (including sales) are not within the public funding or support. According to the respondent, this due to the product-centric public opinion.

> Respondent JA1; "Mä tiedän esimerkiksi miten mä voisin kehittää tän tuotteen tosi hyväksi, me ollaan jo tehty pienet testit, mutta meillä ei ole rahaa. Ja se mikä eniten

158

sitä rahaa syö on se markkinointi. Sitä mä olen miettinyt että miksi Suomessa kaikki raha (tuki) maksetaan tuotekehitykseen mutta sitten kun pitää myydä tulee joku ulkopuolinen yritys ja pistää enemmän rahaa ja ne hyötyy siitä. Suomessa kehitetään että se tuote on hyvä ja kuka sitten saa rahat on se ulkomaalainen yritys. Kun täällä ei uskota siihen myyntiin vaan siihen tuotteeseen"" For example I know how to develop our product further for it to be very good, we have already done some tests, but we have no money. And marketing is the field that requires the most of the money. I have been thinking why all the public support is given to the development of the product, but when the time comes to sell it, a foreign company comes and they have more money to spend and they benefit from it. In Finland a product is developed to function at a good level but the foreign companies get the revenues. People here do not believe in sales but instead believe in the product."

6.2.2 Brand strategy

When it came to the dominant approach to a brand strategy, none of the respondents had fully adopted a brand strategy. Moreover, it was not possible to make a significant distinction between the Finnish or American respondent's product- or brand-centric orientations. It can be noted that these terms are intended to represent the end-points of a continuum of adoption rather than an "either/or" dichotomy. Overall, employing the concept of a brand strategy rather than a product strategy emphasizes market orientation and the importance of considering not only product development but also customer needs and a sustainable competitive advantage.

Some managers regardless of their nationality, had created a brand strategy, although the contribution to the business strategy was weak. One interesting implication of the non-adoption of a brand strategy is that the link between the company's current profitability and a brand was not mentioned. In addition to this, the organizational and managerial responsibilities were not transparent. Thus, the status and the name of the person responsible for the brand did not come up without probing.

According to the managers' perceptions, as an outcome of a successful brand strategy implementation a sustainable intangible asset has been achieved. Nevertheless, no national differences can be identified. When interpreting the data, the implementation of brand activities is at a tactical level. As a consequence, in order to hold the sustained competitive advantage stronger brand equity needs to be achieved. The managers need to continue to create value through strategic brand management.

6.2.3 Manager's role

When interpreting the respondents' descriptions as whole, it can be stated that the manager is in the key role of making the strategic decisions including the decisions concerning branding regardless of nationality. Although prior conditions affect a manager's knowledge, nationality as such does not seem to sufficiently predict an attitude towards a product or brand strategy.

The combination of the manager's previous experience has an effect on his/her attitude towards a brand strategy but no national differences can be identified based on the data at hand. Neither, the influence or support of other

members in the organization can be identified. Seeking support, information and resources from different external sources of advice, appears to be important for both nationalities. To the extent to which personal sources may be preferred when managers are uncomfortable or uncertain about their decisions, this study suggests that managers in the USA may turn more often to their private sector sources such as family and friends. In contrast, in Finland the managers seem to contact mainly individuals and organizations whose primary role or functions includes support for business.

> Respondent AR: Pyrkisin käyttämään mahdollisimman paljon apuvoimia. Kaiken maailman riippuen resursseista pystytäänkö palkkaamaan henkilöä, vai käytetäänkö opiskelijoita vai ostetaanko ulkopuolista neuvoa. Tai sitten katotaan sisäiset resurssit miten voitas jakaa tehtäviä. "I would use as much outside support as possible. Depending on the resources we should decide whether we could hire somebody or whether we should use students or buy outside advice. Or we could look at our internal resources as to how we could delegate duties."

> Respondent EK : "my father and I had been working on the concept for the products"

> Respondent MM: "my new plan was: I had made, through my network, friends with some of the sales guys for software"

It is worth noting that this private vs. business sources – bias does not necessarily extend to networking when it is utilized as a source of new information. More generally, the findings in the present data state that highly educated managers tend to have a wide network position. All kinds of different business contacts have been shown to be helpful and provide resources depending on the company's needs.

What highlights the role of the manager in the adoption process is the fact that without the manager's acceptance and decision, a brand strategy will not be implemented in the organization. With regard to nationalities in the case of the manager's acceptance and decision to commit to a brand strategy, it appears that no differences can be identified. Two cautions can be offered here. Firstly, the data consists of only a few managers that had committed to a brand strategy. Secondly, it is useful to bear in mind that the implementation stage was not within the scope of the phenomenon examined in the present study.

7 CONCLUDING DISCUSSION

Financial success in business is of primary importance for the majority of companies, and a significant and positive link between strong brands and companies' performance has been recognized by prior studies (Berthon et al. 2008; Doyle 2001; Gromark & Melin 2011; Keller 2008; Krake 2005). However, the existing branding literature emphasizes how to identify the outcomes of branding success but simultaneously reveals only an inadequate amount of research on how to reach those outcomes. Studying the processes from the perspective of an individual is recommended by Warren & Hutchinson (2000) in order to understand and provide further understanding of how to reach those targets. The above motivated the present study to explore the adoption of a brand strategy. The chosen viewpoint was an individual's perception of the adoption process. Research conducted on the perceptions of managers about branding seems relatively scarce (Centeno et al 2013; Gundala & Khawaja 2014; Urde 1999) although managers are the drivers of companies' performance, and their decisions correlate to a large degree to the success of a brand (Berthon et al. 2008; Gilmore et al 2001; Riezebos 2003). In accordance with the guidelines set by prior research (Teece et al. 1997; Irvin & Michaels 1989, 4) for shifting the research focus from strategic management research towards implementation, the focus of the present study was on the process of adoption as such and not, for example, on branding outcomes.

The present study has discussed brand strategy adoption in the context of high tech environment, especially in small and medium sized companies. It contributes theoretically to brand orientation and strategic brand management theories by integrating branding theories into the literature on strategic management and advances our understanding of the strategic role of a brand. Definitions of a brand from this perspective are absent in the existing theories. Moreover, prior research recognizes brands more as an asset than as a strategy. However, from the process or management viewpoint, this study is in line with the previous findings that brand building is a strategic management process. The findings in this study provide a new understanding of a brand management process, with special emphasis on the early stage, the adoption of a brand strategy. The present study benefitted from Rogers's (2003) Innovation-Diffusion Model in

identifying links between high tech marketing challenges and the adoption of branding strategies. A deeper understanding of a brand strategy adoption process, the foundation of the brand management process, is a contribution to contemporary brand orientation, strategic brand management and high tech marketing theories.

The context of the study is high tech SME companies since governments globally have recognized them as an important component of the economy (European Commission 2005; Hecker 2005; Mohr 2001; Rausch 1998; VICTA 2007). SME high tech companies drive the global growth and create new advanced technology and innovations. The challenge for high tech SME enterprises in today's globalized business world is that the environment in which they operate is turbulent. Thus, the challenges are more numerous and complex compared to the traditional companies. Therefore also the public organizations consider it significant to allocate resources to high tech SME companies in order for them to find means to compete and gain success. (Litvak 1992; Locke 2006; Martin et al. 2009; VICTA 2007).

The aim of the present study was to understand the reality of brand strategy adoption as perceived by high tech SME mangers. The purpose of this study was set to explore issues that are of significance during the first stages of the adoption process and find out

What kind of a process is brand strategy adoption by high tech SME managers?

Under this main research question the study firstly explored how high tech SME managers become aware of a brand strategy, and how this makes them begin to search for information. The first stage is called the knowledge stage (Rogers 2003, 170), and it is influenced by prior conditions such as previous experience, felt needs and problems, innovativeness and the norms of the social system. Secondly, the study explored how a manager forms an attitude towards a brand strategy and how the perceived characteristics of a brand strategy, relative advantage, compatibility, complexity, trialability and observability, affect the persuasion. Thirdly, the manager then either rejects or adopts a brand strategy. If the manager decides to reject a brand strategy, the adoption process ends at the decision stage. Alternatively, if a brand strategy is adopted, the process continues, and the manager begins to implement brand management in the organization. However, the implementation stage was not within the focus of the present study.

The thesis consists of three main parts. First, some background and motivational information was offered to the readers of the study. After this the focus, aim and objectives of the research, the outline of the thesis and the context, namely the high tech environment, were presented. Secondly, a literature review for creating a framework for the study was conducted in the following chapters 2, 3 and 4 framing the overview on branding research, the perceived characteristics of a brand strategy and the effect of an organization and a manager on its adoption. Thirdly, the empirical part began by discussing the chosen research methodology and implementation. An exploratory qualitative study approach was chosen as the most appropriate since there is inadequate

amount of existing literature available on the research phenomenon. Moreover, the low level of implementation of brand management in high tech companies may have a negative impact on the validity of data collected by structured questions.

The results of the present study richly describe the existence of the brand strategy adoption phenomenon in the high tech context. Moreover, the results suggest what the main factors of a brand strategy adoption in high tech context are and how they potentially affect the adoption process. The adoption of a brand strategy is seen as a process, and the results of the present study indicate that SME high tech managers are at a very early stage on the adoption continuum. The results provide us understanding what changes are needed in order to enhance the adoption of brand strategies. Promoting general awareness of branding advantages in high tech, allocating financial and knowledge resources to support marketing activities, enabling cross-functional networking, facilitating market orientation in the organisation, providing more literature aimed at practitioners about the branding and/or branding an innovation in high tech are the main mechanism to facilitate adoption at the early stages. The results help us to understand why branding has been so slowly adopted by high tech SME managers. In fact, there seem to be more barriers than catalysts in the adoption process.

A major theme in the present study has been in merging of the diffusion research and a general diffusion model into the strategic marketing management and branding theories. Therefore this study is interconnected by exchanging research findings within a marketing/management and a social marketing diffusion research tradition. The value of this study to the existing marketing diffusion research tradition is that it supports the earlier findings that the diffusion model is a conceptual paradigm with relevance to many disciplines. Moreover, the value of the empirical findings of this study to the diffusion paradigm is that it supported the presentation of the research findings of the present study in the form of higher-level generalizations and of a more theoretical nature.

The value and the contribution to the existing theories lie in the holistic and detailed approach to the description, understanding and interpretation of an SME manager's behaviour. In the present study, I presented an empirically grounded description of a brand strategy adoption as perceived by high tech SME managers. As a conclusion, I also propose and define a concept of a brand strategy adoption process as "the process through which an individual becomes aware of a brand strategy and begins to search for information, passes from first knowledge of a brand strategy, to the formation of an attitude toward the brand strategy, to a decision to adopt or reject, to the implementation and use of a brand strategy and to a confirmation of this decision" (adapted from Rogers 2003, 170). The study differs from earlier research by increasing our theoretical understanding of the context related early stages of an adoption process of a brand strategy. It provides three different viewpoints as follows: 1) characteristics of prior conditions, i.e., how a high tech manager becomes aware of a brand strategy 2) perceived attributes and their effect on a brand strategy 3) activities that lead to a choice to adopt or reject a brand strategy. All three concepts are explored and discussed further below in the above mentioned order. Based on these results, the empirically grounded

framework of a brand strategy adoption process in high tech SMEs is developed. Figure 14 displays the proposed model resulting from the present study. The model is explained and illustrated in detail at the end of the Results section.

7.1   Main results

7.1.1   Factors that enable a high tech manager to become aware of a brand strategy

Similarly to the findings in the present study prior studies (Gilmore et al 2001; Temporal & Lee 2001; Ward et al. 1999) have discovered that high tech SME managers' background affect their intentions of brand management. Ward et al. (1999) see that a non-marketing background limits high tech managers understanding about the branding advantages. Thus, this may lead to the rejection of the idea of adopting a brand strategy.

However, the findings of the present study suggest that primarily it is crucial to understand the non-marketing background from the viewpoint of how messages are interpreted. The non-marketing mind-set inhibits receiving brand strategy messages because the recipients consider their primary focus to be on other tasks than marketing. Moreover, some of the respondents of this study did not seem to be quite aware of the meaning and content of their own involvement in marketing, although they were responsible for it. As a consequence of this kind of a situation, managers may allocate more resources to product development instead of creating added value to the customer by using marketing tools. This is consistent with West & Noel (2009, 17) findings that prior experience have implications for the staffing practices and founder team composition in the new business. The respondents also tended to postpone or avoid marketing related decisions. When discussing the key factors of moving forward to implementation, the respondents brought up the need of money. However, when interpreting the data, it was apparent that the respondents also lacked knowledge.

Many prior studies (Armario et al 2008; Hills et al. 2008; Gromark et al. 2011; Grønhaug & Möller 2005; Wong & Merrilees 2008) stress the need to enhance market or brand orientation in SME's in order to create competitive advantage and thus enhance their success. The findings of the present study confirm that the need has not disappeared. Moreover, the present study suggests that a market-oriented attitude needs to be built from the very beginning. Managers need to be aware of the fundamentals of marketing since it is a prerequisite to managing marketing. In fact, managers who understand how much their work involves marketing are more open and willing to learn more and they have the tendency of even receiving information concerning marketing.

This study has found that generally information on branding facilitates an effective adoption of a brand strategy. The respondents seem to consider networking as the primary source of information. This is an interesting viewpoint

for future research since traditionally branding has been seen internally-driven process. However, branding from relation-centered viewpoint, i.e. contribution of partners and other stakeholders as co-creators of branding has been paid only a little attention. This finding is in line with prior studies. Mäläskä et al. (2001) propose a model of network actors participation in b2b SME context. West & Noel (2009) suggest that due networking individual managers may have more knowledge at their disposal than they think. The study conducted by Donckels & Lambrecht (1997) states that highly trained entrepreneurs in growth-oriented companies tend to have a wide network position. Gilmore et al. (2001) concludes that networking is a marketing competence and that as such, a way of implementing marketing in SMEs can be developed. Several researchers (Gronum et al. 2012; Molina-Morales & Martinez-Fernández 2010, 261; West & Noel 2009) highlight the importance of networking especially in a new context since it is a source of new information and a high predictor of performance. This study suggests that finding the right people is the basis of conducting business in a high tech SME context. The advantage is that by networking the mangers can reach many industries, and although the different ways of forming the networks require time and the outcomes are difficult to show, the respondents consider it worth their time.

The results of this study indicate that prerequisite for successful networking is communication skills, and typically technical people have communication problems (Möller & Rajala 1999, 223-252; West & Noel 2009, 18), which may impede or limit networking. On the other hand, high tech managers are creative by nature and therefore can find innovative ways of developing and maintaining relationships. This finding is in agreement with Gilmore et al. (2001) who suggest that networks develop in the course of time. Although the importance of networking is emphasized by prior studies and by the majority of the respondents in the present study, not all managers find other people as the main source of information. The evidence from this study suggests that this is due to a lack of confidence in their expertise. They considered it difficult to find good experts who would understand the very complicated nature of high tech branding, and it is quite clear that this may be the case in reality. West & Noel (2009, 18) support this view by highlighting networks that managers utilize for advice and consultation seem to be critically important. Therefore, some level of self-confidence in one's ability to judge the value of advisement is in place. The study conducted by Gibb (1990) also confirms the above findings. According to Gibb (1990), most SME's will not deliberately seek formal sources of support unless they are introduced to them through their existing informal networks in which they have developed confidence and trust.

However, this study did not reveal financial reasons for *not* seeking help from experts. Hanlon & Saunders (2007) demonstrated that the start-up phase combined with limited financial resources forces the manager to utilize resources immediately available for little or no cost. Nevertheless, a manager is able to extract more work from unpaid sources than paid sources.

Mäläskä et al. (2011) conducted a qualitative study in which they suggest a concept of a "branding pool". It refers to *the independent network actors that directly participate in B2B SME branding activity, and is distinct from the related concepts of a branding community and strategic net*. They propose those actors to be other firms, non-profit organizations, governmental bodies, or individual managers. It can thus be suggested that public organizations could play a more active role in training and providing experts specialized in high tech marketing. Moreover, the experts need to build close networks and meet the entrepreneur's needs. Especially during the start-up phase specialized knowledge needs to be obtained cost-effectively and quickly. Such approach may maximize the benefits from branding knowledge compared to it being purchased later on in the company's development process.

It was also shown that managers tend to search for specific marketing information from written sources. It is interesting to compare this finding with West & Noel's study (2009, 17-18) in which they identified three different sources of knowledge resources: 1) related industry and business experience, 2) previous experience in start-up situations and 3) knowledge gained through networking. Written sources were not mentioned at all. The significance of online material seems apparent since it was mentioned as the main source by all the respondents. What makes Internet so popular is its ability to provide topical, exact information at once for a need at hand. An implication of this is the possibility that public organizations can offer virtual marketing services with reasonable costs aimed at high tech companies.

As to the Internet, it is considered a favorable learning environment. High tech managers' positive attitude and high educational background also facilitate learning. However, one of the significant findings emerging from this study is that there is a lack of relevant learning material in the market. Branding guidelines for companies that possess only an idea about the technology but not yet the tangible end-product are absent in literature although the need for a brand strategy arises already when of only the idea of an innovative product is born. Moreover, the results of the present study indicate that branding may be different in SME context compared to traditional marketing environment. The latter view is supported by prior research (Berthon et al. 2008; Centeno et al. (2013); Doyle 2001; Wong and Merrilees 2005). As discussed already in the Introduction chapter of the present study, the role of the learning and adoption process of a brand strategy is seen as insignificant in literature. This leads to a lack of sufficient and appropriate text books or other written material aimed at non-marketers in different marketing contexts.

An interesting source of information, which is highly linked with the high tech SME context, is people who help the companies for good reasons of conscience. This is a finding that was not raised in the background literature searched for the present study. A noteworthy characteristics of high tech companies is that they provide innovations that often offer us the possibility of living a better life. These features are valued in society and motivate people to help companies to commercialize their offerings without expecting financial

rewards in return. Their reward is being able to help people in need. The challenge that the high tech companies face is how to find these people. Some online funding platforms are available for people so that they can fund what they are passionate about or what matters to them (e.g. Indiegogo). However, public organizations could also take an intermediary role in linking the companies and experts who voluntarily want to take part in facilitating the success of an innovation.

Based on the interpretation of the data, high tech SME managers are identified and divided into three different groups based on their own perception of their commitment to a brand strategy and the level of implementation of a brand strategy in the company. The issue of the scale of commitment to a brand strategy is a finding that has not been revealed by prior studies. This finding seems to be consistent with the work of Wong and Merrilee (2005, 158) in which they illustrate the three levels of branding the archetypes ladder. In the lowest ladder, brand orientation is minimalist and in the highest it is integrated. This study suggests that in general the managers do not reject the idea of building up a brand at first glance, quite the opposite. They have a very positive attitude towards brands, which is somewhat contradictory to previous studies (Temporal & Lee 2001, 54; Ward et al. 1999, 55-95). More research is needed to understand the relationship between attitude towards brands and the level of implementation.

However, some of the respondents were very uncertain about committing to brand building, and it seems likely that this uncertainty is linked with an early stage of product development. The most uncertain respondents' idea of what is required in order to build up a brand effectively and appropriately appears thus to coincide quite closely with product development and risk management. This uncertainty may be due to their previous experience in other industries or type of organisations (West & Noel 2009, 17). It is equally possible that their perceptions reflected their concrete thinking process due to their educational background. It has also been confirmed by prior studies that marketers tend to see the future as it already exists and engineers want to take one step at a time (Moriarty & Kosnik 1989, 13). Thus, it seems that those respondents, who were uncertain about committing to brand building understood the meaning of a brand from a product-plus viewpoint. They wanted to complete the product first and build the brand around it later on. The implication of this is that their behaviour is in conflict with what previous studies recommend. According to Smith (2003, 97), the central organising principle should be the brand. Moreover, Vázquez et al. (2002, 27-28) state that managers need a holistic view (as opposite to product-plus-view) in order to align their organisation to deliver the product promise and create value for the customers. The challenge is how to find these seeds of innovations as early as possible. Prior studies confirm that brands just do not happen, they result from the creation of strategies and executions (Aaker 1996, 358; Abimbola 2001; Berthon et al. 2008; Capon et al. 2001, 218-220 Centeno et al. 2013; Wong and Merrilees 2007) and uncertain managers need support and knowledge.

The respondents in the second group understood that a brand was more than a product. However it was difficult to estimate if they fully understood the strategic role of a brand because they postponed their own attempts to commit to a brand strategy. The lack of time and money were emphasized as the reason of not focusing on brand. However, the interpretation of the data implies that the lack of knowledge and skills impedes implementation. In other words, since they do not have the ability to build up a brand, they underestimate their own participation and are under the assumption that they should hire someone to manage their brand. The implication of this finding is that with a little effort these managers would be good candidates to the adoption of a brand strategy.

In the third group the respondents were committed to a brand strategy. The interesting finding emerging from this study was that these managers represented companies that were building up brands in a new industry where, traditionally, brands had not emerged or been supported. Christodoulides & de Chernatony (2004, 168-179) state that new branding requires adaptations to the traditional marketing approach. This study suggests that some mangers adapt their creativeness into brand building and that they have found new ways of creating brand equity. Whether the managers who have committed to a brand strategy are aware or not of the traditional branding approach, they, nevertheless lead the way and are benchmarked by other high tech SME managers.

All in all, the findings suggest that in general the respondents do not possess much knowledge about branding. Their first attempts to build up brands are remarkably similar. The respondents generally bring up the idea that decisions are made intuitively guided by the mandatory, often legal, steps. At the moment the managers do not seem to recognize that their intuition is based on their experiences within their own industry. Obviously, this usually leads to product-centric decisions which can also be of strategic significance. Despite the importance of the early stage decisions, the managers are not necessarily yet aware of all the consequences. The respondents of the present study seem to agree that giving a name is one of the most important of the early stage decisions.

One of the most significant findings to emerge from this study is that giving a name to a company, product or innovation is actually a strategic thinking process. The respondents do emphasise the strategic significance of a brand name. In fact, the respondents tell numerous examples of the communication power of a good name, and some of them even say that the name can protect the innovation. However, what is alarming is that the importance from branding point of view is often under-acknowledged. Aaker (1996, 242) and Keller (2008, 16, 145) recommend that a name should communicate the value to the customer and differentiate the product from that of the competitor. The findings suggest that in general the respondents fail to give a name from a branding viewpoint. A good name is viewed as a subjective interpretation, and it can be seen in the industry's own frame of values. The value of the finding is in its occurrence specifically in the high tech SME context. Typically, other brand con-

texts such as those in the consumer goods industries, public organizations, locations, are already cluttered with names.

Often the name is a given factor. For instance, if one wants to build up a national brand, one cannot change the name of the country. However, in high tech companies the name represents something new which does not even exist yet. With the help of a name a company can take the ownership of a whole category. A good brand name communicates more than the product features, it represents the need that the innovation is satisfying.

This study supports Rogers's (2003, 251) recommendations and suggests receiver-oriented names with an empirical approach. Moreover, a brand name and visual communication elements have the desired meaning for the intended audience, and possible global viewpoint is also taken into consideration. To sum up, the strategic importance of a brand name is significant, and the managers' need guidelines and encouragement to move beyond giving names that are influenced by the technology, as is often the case today. By increasing the understanding of the strategic importance of giving a name and highlighting the branding viewpoint, high tech companies can achieve sustainable competitive advantage at a relatively low cost.

The need to communicate a consistent message across the organization raises the need to search for more information concerning brand building. The respondents seem to lack some level of self-confidence in their own abilities and skills and therefore they search for help, for the most part in their existing networks. When comparing the findings of the present study with Keller's (2008, 38-39) definition of a strategic brand management process, one can state that brand building is at a tactical level. The beginning of the management process, positioning, is emphasized by most of the respondents. However, the other brand management activities lack from the experiences of the managers and therefore the respondents do not highlight any singular detail about a brand manager. This implies that some of them have not even considered who actually is responsible for managing the brand. Moreover, they do not have competencies to evaluate the quality of brand management which leads to a situation that they are somewhat at the mercy of a good luck. Anyway, according to the respondents, they can learn from their own mistakes, although it can be a very expensive way of learning. This result is supported by a resource based view (Teece et al. 1997) since managerial learning can become a fundamental strategic issue. Branding in the high tech context is still a scarce resource and the company's resources have begun to grow when the manager has learned more about branding. Consequently, the investment in learning how to build up a brand begins to pay off at the very early stages if the knowledge of how to differentiate offerings and create competitive advantages is increased. Bearing in mind the focus of the present study, which is to understand a brand strategy adoption, the findings suggests that it is likely that the how-to knowledge impedes the adoption. In other words, the high tech SME managers may not fully adopt or they may even reject branding strategies just because they do not know how to develop a brand strategy and build up a brand.

The findings indicate that in general high tech managers are curious by nature and, thus, are motivated to understand why something works, which may facilitate the adoption of a brand strategy. However, the respondents' opinions varied considerably, and it seems that they modify their justifications in accordance with their own experiences. Their tacit knowledge and personal viewpoints pose a real threat to successful brand building in the high tech context in case there is a need for new perspectives and understandings. West & Noel (2009, 18-19) stress that the foundation for new knowledge is to connect with a new source of information. They also recommend and emphasize that public organisations should enhance connecting business people with different backgrounds and the findings of the present study support their conclusions.

The results of the present study suggest that the influence of a social system is crucial. The importance of networking is once again emphasized. As to networking, it is not only used as a source of information, as discussed before. Another important function for networking is to diminish the feeling of loneliness and uncertainty. A study conducted by Molina-Morales & Martinez-Fernández (2010) emphasizes that managers need to know how to design their networks and the present study has shown that high tech managers can use their creativeness in order to facilitate interactive communication outside the company. However, the results also imply that networking has not been exploited to its full extent. Moreover, the respondents struggle with demonstrating the value of their networks. The present study did not reveal any evidence on such behavior that the high tech SME managers felt they were expected to perform. However, the respondents brought up issues how people in high tech environment tend to behave. Stereotypically people in the high tech context lack communication skills and they have a tendency of concrete thinking. As also noted by the respondents, these qualities may impede interaction between different people and thus also a brand strategy adoption.

Moreover, other social relationships have an impact on the possible adoption of a brand strategy. The present study has shown that so called "*opinion leaders*" and "*change agents*" influence by providing information and advice. Their role can be significant since their background, resources, experience and education enable high tech SME managers to understand the advantages of a brand strategy and thus facilitate the adoption. In order to enhance the adoption of branding strategies in high tech SMEs, the opinion leaders, people who have committed to building up a brand, should be identified and utilized. Opinion leaders should be retrained and encouraged to implement brand management and above all, reminded to keep up the contacts with other managers (the followers).

The theoretical contribution of the present study to branding theories is in the context perspective. Most of the earlier research on branding takes the perspective of brand equity and brand management in large organizations in the consumer industry or regardless of the environment. However, the present study contributes further to the branding theories in differentiating the impact of the new marketing phenomena on commencing and adopting a brand strategy. Moreover, this study contributes further to brand orientation literature by providing a process view and understanding how the

extent of brand orientation may be or has been achieved. This study also contributes to high tech marketing and SME brand management theories by increasing theoretical understanding of how prior conditions and perceived characteristics of a brand strategy affect its adoption.

7.1.2 The effect of perceived attributes of a brand strategy on adoption

Following Rogers (2003) guidelines, five attributes, which help to explain the rate of a brand strategy adoption are identified and expanded. This study has shown that in general a brand strategy is perceived by the respondents to provide greater advantages than a product strategy. The findings suggest that the expected benefits are primarily connected to strategic and managerial advantages. To a minor extent, financial advantages were also seen of significance. This, however, can be proved only in the long run. Moreover, the fundamental advantage of branding, the creation of added value, seems unfamiliar to the respondents. What seems to be missing from the respondents answers is one advantage of a strong brand. It can create monopolistic protection against competition and thus may help to earn higher margins. The advantages are weighted up against the costs of adoption. In fact, the perceived risk is seen significant since there are plenty of costs revolving around brands during the first steps. Numerous prior studies have found the importance of brand orientation and branding advantages (Aaker & Joachimstahler 2000; Berthon et al. 2008; Capon et al. 2001; Chernatony 2001; Gromark & Melin, 2011; Keller 2000; Keller & Lehman 2006; Ward et al. 1999; Wong and Merrilees 2007) and emphasize rewards as the main reason why brands endure. The interpretation of the present data implies that the respondents are not fully aware of fundamentals and advantages of branding, and it can be considered to be a result of an inadequate adoption process of a brand strategy. On the other hand, since the respondents are able to chart numerous rewards, in particular strategic advantages, it is also possible that the strategic role of a brand is greater in the high tech context compared to traditional marketing in which the literature has emerged.

The findings of the present study seem to repeat the same stereotypical features of high tech SME managers as those stated by prior studies (Temporal & Lee 2001; Ward et al. 1999). As perceived by the high tech SME managers, marketing was not considered to fit closely with their situation and it was not regarded as a familiar or favourable issue. In addition, since branding is not generally diffused in high tech, the trigger to adopt a brand strategy may arise only on the condition of having close connections to other type of companies. Thus it may be that high tech SME managers utilize a brand strategy incorrectly (adapted from Rogers 2003, 244). As discussed earlier, they may lack capabilities since they manage a brand based only on their previous experience. Apart from past experiences, the respondents do not perceive a brand strategy to be quite consistent with their existing sociocultural values, either. The influence of gaining a social status on creating a brand strategy is weak. However, by creating innovations the respondents clearly gain a social status within their community and they want to link emotional associations to their product. Conse-

quently, the roots of intangible values are linked to the product features instead of a creative brand strategy. Thus, intangible values are not created as part of a brand strategy development but as part of product development.

The results regarding compatibility lead to recommendations public organizations to enable and support branding clusters. In order to enhance brand strategy adoption, the public organizations, change agents and opinion leaders may utilize positioning research. Positioning and the findings of the present study may help to identify the ideal niche of a brand strategy relative to the perceptions of high tech SME managers' existing practices. Branding can be an interrelated element for all types of companies and organizations. In a branding cluster the companies would learn from and trigger each other in developing their branding strategies. It should be born in mind, however, that choosing to commit to a brand strategy is a fundamental change for a company, and, therefore, all the available support by peers and by experts is needed. To some pioneer high tech SME companies as well as to some conscious regions branding clusters may prove to be an opportunity to a sustainable growth.

According to the experiences of the respondents, a brand strategy requires resources and is difficult to understand and use, and in this way the results of the present study follow those of the majority of the prior studies (Aaker 1991; Capon et al. 2001; Clifton 2003; Deloitte 2005; Keller 2000; 2008; Martin et al. 2009). Moreover, an interesting context specific aspect emerges from the data. The challenge for high tech SME managers is to turn complex technological information into a simple brand message that would communicate the benefits to the end-user. This finding seems to be in line with Juntunen et al (2010) research, who also found that creating consistent brand communication was seen important by SME managers. The findings of the present study suggest that the multi-dimensional complex nature of a brand strategy can be a major barrier of adoption. The results lead to the recommendation of a long-term investment in knowledge resources in order to develop marketing and communication skills and abilities in high tech SME organizations.

Although the respondents have experiences in trying a brand strategy the low level of implementation implies that a brand strategy has not been adopted as a whole. In other words, a brand strategy is only experimented with on a limited basis. This result is in line with Wong's and Merrilees's (2005) findings. They state that most SMEs are "on the lower steps of the ladder". Moreover, prior studies (Keller 2008; Krake 2005; Ward et al. 1999) and especially new stream or research on brand orientation (Wong and Merrilees 2005; Reijonen et al 2012; Urde 1999) highlight that the whole company should focus around brand. The trial of branding strategies by a peer can be a substitute. However, the problem is that branding strategies have not penetrated high tech industry. In order to learn from other companies, one has to build networks outside the technology industry, since the subjective evaluations of a brand strategy flow mainly through interpersonal networks, and the source of new knowledge lies in people with different perspectives and understandings (see also the discussion in chapter 4.1). As already discussed earlier, the results regarding trialabil-

ity also indicate that branding clusters would facilitate a brand strategy adoption in high tech SME companies.

The study contributes theoretically to branding and high tech marketing literature by describing the perceived attributes of a brand strategy, which affect the rate of adoption.

7.1.3 Activities that lead to a choice to adopt or reject a brand strategy

The respondents of the present study seem to agree that they have considered a brand strategy adoption at some point. However, some respondents have a tendency to postpone the decisions regarding branding and emphasize that unfinished product development has an effect on their focus and priorities. In fact, prior studies (Lieberman & Montgomery 1988, 41-43; Nevens et al. 1990, 157) support their opinions and state that the first-movers gain advantages. When interpreting the data at hand, the primary reason for launching a product as soon as possible is to generate cash flow. Since the financial foundation is relatively weak, the resources are allocated on a short term basis. On the other hand, some studies (Walker & Mullins 2008; Golder & Tellis 1993) point out that being a pioneer is not always the way to success. They recommend that companies should target the market by adapting to the market conditions and recognizing opportunities although it may require a longer product development process. The needs for money and time seem to be two overlapping, but necessary elements. Much like the respondents of this study, Möller & Rajala (1999, 522-523) stress that the influence of the high tech context is highly complex. Naturally, the respondents feel that they are in a paradoxical situation. Taken together, these results suggest that the rejection of a brand strategy adoption decision can be interpreted both from a strategic and time management viewpoint.

The importance of strategic marketing decisions can be seen undervalued at the early stages of product development. What supports this claim is the fact that the respondents gave numerous examples of the status of product development during the interview although the questions regarded marketing and/or branding. One explanation can be that high tech managers emphasize the importance of product development since their passion and preference is in technology. It is possible that an uncompleted product is used as an excuse for concentrating on the field of their enthusiasm and motivation. The underlying passion of a high tech manager is in engineering and product development and not in brand building which they consider as a necessity. The respondents did emphasize the significance of money in directing the strategic decisions. The lack of financial support for strategic marketing actions from public organizations was stated as a major barrier to focusing more on marketing issues.

One more implication emerging from the data is that although the product development issues are drawing the majority of the attention, it seems worth the time at the moment. However, only in retrospect when assessing the achievements, does the need of early stage strategic branding decisions arise. The pressing everyday decisions occupy the working day and overshadow the strategically more important, although not so instant, decisions. Also Urde

(1999) draws to attention that in order to enhance brand orientation, branding needs to be incorporated into a company's strategic planning from a very early stage. This view is supported by Juntunen et al. (2010, 127-129) who see that the time period and the growth of the company are important components of SME brand building. Their study focused on corporate brands, and the findings, which showed that corporate brand building starts even if the corporation in question exists, are consistent with the findings of the current study, namely the importance of decisions concerning the early stages of product development.

Although the criteria in the present study for the decision stage are either adoption or rejection, it is difficult to classify one of the respondents on the basis of either of them. According to him, a brand is a by-product instead of being the nucleus of marketing activities, as recommended by prior studies (Krake 2005: Desai & Keller 2002; Aaker 1991). The respondent raises issues of concrete product-linked activities and of using engineering terms in developing marketing strategies. In other words, he refers indirectly to brand building from the engineering or technology aspect.

The findings suggest that it is important to understand that brand building may have to adapt to or take new forms in new contexts, such as the high tech environment. Moreover, it is equally important to understand what applies from the past and traditional marketing and what new rules are unfolding that will create the success stories of tomorrow. In the future, it would be interesting to approach the SME brand management process from an alternative, for example from the Agile methodology, viewpoint. As already discussed, SMEs are usually characterised by a flat and informal organisational structure and ad hoc planning. Agile applications, for example Scrum, have become popular due to their simplicity and flexibility. Thus, the challenge of applying this innovative method seems to diminish. (Leffingwell, 2014).

The results lead to implications to public organizations and other stakeholders supporting brand building activities in the high tech context. The need to understand a receiver's mind-set is crucial. At least to some extent, it is also useful to compare marketing terms with engineering terms in order to enhance deeper understanding. A high tech manager's ability to innovate can inspire and be even a source of new thinking also in the field of traditional marketing. Facebook is an excellent example of a strong high tech brand which was the fastest rising brand in the world in 2010. Facebook brand value is 19 102 m$, and more importantly, the brand value growth (%) is 246. Only in a few years it is more valuable than many traditional brands that have existed for decades, such as Nike (13 917 m$), Budweiser (8 805 m$, Mercedes (15 344 m$) and L'Oréal (15 719 m$). (Millward Brown Optimor (including data from BrandZ, Kantar Worldpanel and Bloomberg).

The majority of the respondents of the present study consider themselves having adopted a brand strategy. They perceive their marketing management as being focused on a brand and they know how to build up a brand, although they are also aware of their limitations. Anyway, they have formed a mental

acceptance and at the minimum are preparing for a change in behavior. This includes other people, depending on the size of their organization.

Since the cluttered environment seems to be the main driver of adopting a brand strategy it is interesting that only a few respondents highlighted the importance of brand positioning. Nevertheless, the tendency was to emphasize the consistency of a brand message, not the positioning. Comparing to consistency, positioning is the origin whereas consistency is one consequence of positioning. In other words, the features of positioning have a strong influence on creating a consistent and clear message. Other terms can be found in the strategic branding literature when referring to a company's success in developing uniqueness. Wong & Merrilee (2005, 157) refine the nature and meaning of "brand distinctiveness" construct in their study. They see that focus is an important element of brand distinctiveness, especially in the SME context due to the limited resources.

Another challenge that the respondents face in adopting a brand strategy is to integrate it throughout the organization. The results indicate that the lack of sharing and transferring knowledge within the organization is a major barrier of adoption. Moreover, the role of a high tech SME manager is crucial since the likely insufficiencies in brand management capabilities seem to impede implementation. A brand strategy development and implementation requires education, experience and knowledge, in other words action, the right and skilled person or people. The findings are in line with a study conducted by Kogut & Zander (1992, 383-397). They state that a company's capacity to innovate is linked with its capacity to combine and exchange knowledge. Furthermore, Autant-Bernard et al. (2010, 202) consider that innovation adoption occurs and a company is categorized as "adopters" as soon as the company declares that its innovation process has been developed. To sum up, when failing to manage knowledge resources, a brand strategy is not developed or in use on a regular basis and thus, has not been fully adopted.

The study contributes to the brand management and strategic branding literature by increasing our understanding of how the different characteristics of brand strategy decisions have an effect on the adoption process. The contribution lies in the identification of those characteristics and in the evaluation of their impact on rejection or adoption. This understanding may be applied in future contextual theory development.

I summarize the findings of the present study with the help of an empirically grounded model of brand strategy adoption in high tech SMEs. Figure 14 depicts and displays my proposed model which explains the first four (4) early stages of adoption. In Figure 14, the constructs arising from the data are referred to as: "becoming aware", "beginning information search", "forming an attitude" and "adopting or rejecting". The processes are presented in the figure, although in reality the behavior of an individual, in the present study, a high tech SME manager, is not necessarily straightforward and the decision is not an instantaneous act.

Strategic perspective – possibility to create competitive advantage

Facilitates

Benchmar-king

1. TO BECOME AWARE

Type of Organization
Type of Industry
Individuals experience
and mind-set

Impedes
General una-
wareness of
marketing

Strategic perspective – importance of early decisions, e.g brand name

Facilitates

Indirect and
direct partici-
pants

2. TO BEGIN INFOR-
MATION SEARCH

Source of information
Type of information
Need for information
Own capabilities

Impedes

Lack of
knowledge,
materials

Strategic perspective – Long term investment in knowledge

Facilitates

Branding clus-
ters

3. TO FORM AN AT-
TITUDE

Advantages are
weighted against the
cost of adoption

Impedes

Difficult in
practice

**Strategic perspective – Tendency to postpone decision, ad hoc decisions
overshadow strategically more important, not so instant, decisions**

Facilitates

Brand build-
ing may take
new forms

4. TO ADOPT OR RE-
JECT

How to measure if
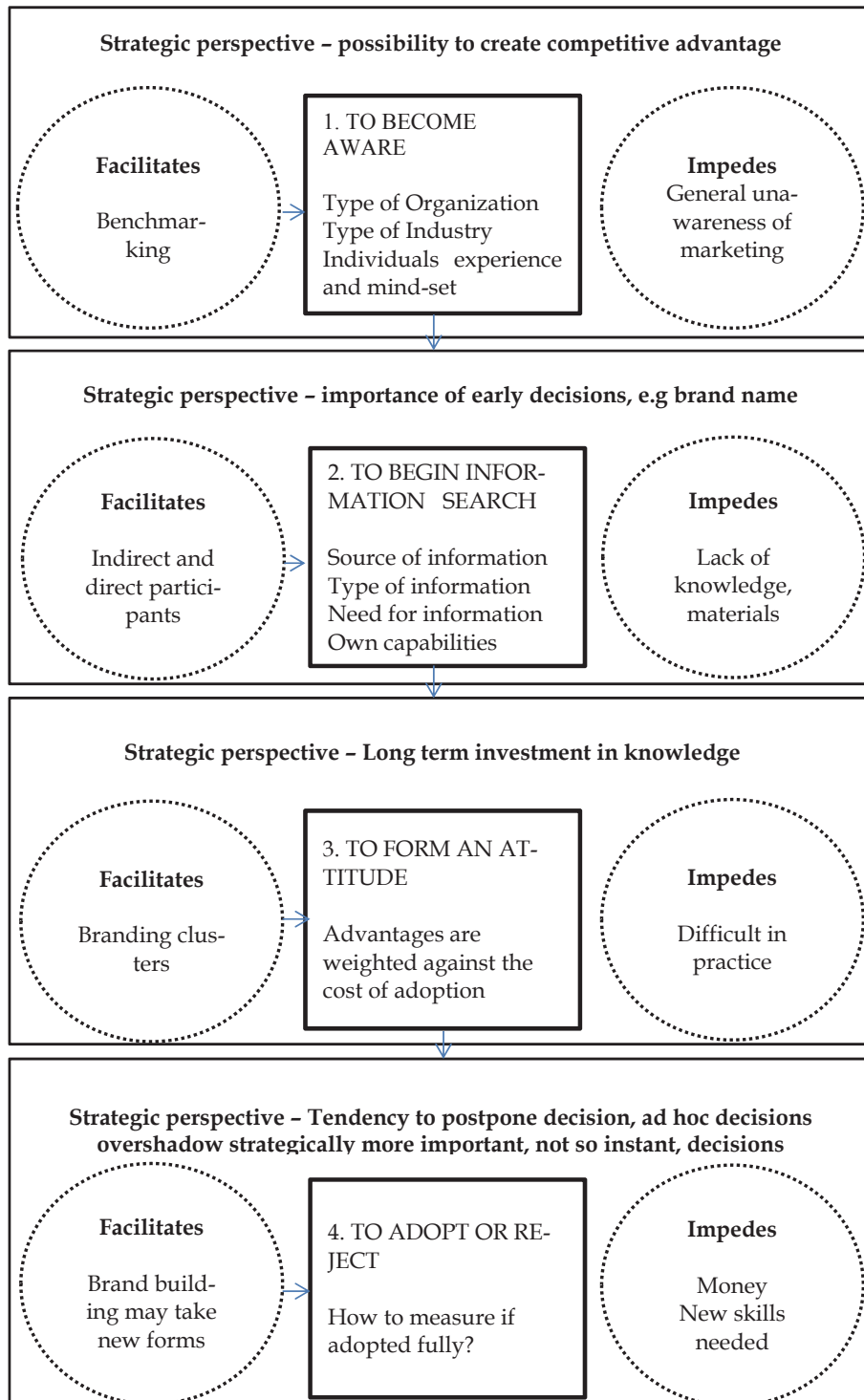adopted fully?

Impedes

Money
New skills
needed

FIGURE 14   A model of a brand strategy adoption by high tech SME managers

Based on the literature found for the present study, the adoption process of a brand strategy has not been either conceptualized or presented before. Centeno et al. (2012, 449) have, however, recognized some starting conditions of SME brand-building. Wong and Merrilees (2005, 159) have illustrated a model of a brand-driven approach to the brand marketing strategy, in which they identified "brand barriers". This refers to the obstacles that hinder SMEs to carry out brand-based activities.

The main different constructs and how they potentially affect the process were identified and classified on the basis of a theoretical and empirical framework. This study suggests that the phenomenon of brand strategy adoption is composed of several stages. However, the proposed model represents the focus of this study and consists therefore only of the first four stages and it is from the perspective of an individual, a high tech SME manager. The adoption process consists of multiple choices and activities and their impact on independent and/or linked procedures over time. Every stage requires resources and can also be approached from a strategic perspective. The different stages are illustrated by using large boxes which also refer to the boundaries of the context of the present study.

The vertical direction of the model illustrates that the adoption occurs in the course of time. Based on the data, it is difficult to estimate how much time the adoption process requires. However, the literature review and the results of the present study indicate that the majority of high tech SME managers are still at the early stages of the adoption process. It is therefore likely that the process is slow, practically stationary. However, these results should be interpreted with caution.

The name of the stage characterizes high tech SME *managers' perceptions* of the stage, and they are illustrated by using smaller boxes. During each stage, a manager disseminates new ideas or knowledge which *changes the manager's behavior* and enables to move on. However, the findings indicate that it is possible that a manager does not move on in the adoption process and, hence, there are gaps in between the stages.

Based on the findings of this study, the activities or decisions that impact on independent or linked procedures are grouped into two dimensions; those that *facilitate* and those tha *impede* the adoption. These dimensions are illustrated by using circles. In addition, arrows are used to illustrate the possible impact. Understanding the influence of these dimensions is especially important for stakeholders, such as public organizations, who want to enhance the adoption process.

The empirical findings of this study indicate that it is difficult to know when the initial stage begins. The findings suggest the existence of the "becoming aware" – stage, even when managers are not aware of this phase. However, the findings highlight the importance of the initial stage, since during the stage the manager interprets branding messages and forms an understanding of his/her own involvement in marketing activities. Since the high tech SME envi-

ronment is not cluttered with brands, pioneering companies may gain strategic and competitive advantage by successful brand management.

During the second stage, a manager begins to search for information from a variety of sources of information: networks, written sources, people who help for ethical reasons, social relationships, opinion leaders and change agents. (S)he prefers the type of information which can be obtained cost-effectively and quickly, which is specialized and virtual. However, the selection of the information can be based on a subjective interpretation within of the frame of industry's values. The need often arises when a company aims to communicate a consistent message. Finally, managers' own capabilities may either impede or facilitate the adoption. In order to enhance the adoption, the findings suggest a number of activities for public organisations, such as, providing networks and connecting people with different backgrounds, as well as providing experts specialized in high tech marketing. The main barriers are linked with knowledge resources. However, more theoretical and empirical research is needed in order to be able to suggest practicalities.

During the next stage a manager forms an attitude towards a brand strategy. The perceived characteristics influence on whether a manager forms a favourable or unfavourable attitude towards a brand strategy. The stage includes phases when advantages are weighted against the costs of adoption.

During the decision stage, the adoption process either continues further to the implementation stage or ends. A manager may decide to implement a brand strategy and, thus, decide to adopt a brand strategy. Based on the findings, it seems that brand building may adapt or take new forms in the high tech SME context. High tech brands may be a source of new thinking also in the field of traditional marketing. The implementation stage, however, was not in the focus of this study. Alternatively, a manager may reject a brand strategy by simply forgetting about it or choosing an alternative strategy. The findings indicated that the managers' tendency was to postpone decisions because they wanted to focus on other business areas, often product development. Typical characteristics of SMEs, such as ad hoc-way of life, may impede the adoption since everyday decisions occupy and overshadow the strategically more important, not so instant, decisions. The complexity of the environment puts managers in a paradoxical situation, since brand building seems to start even before the product is ready to be launched into the market. Thus, the present study suggests that money is significant in directing strategic decisions. Furthermore, the limited skills in brand implementation may also be one barrier of adoption.

7.2 Suggestions for future research

Theoretically, the present study contributes primarily by narrowing down an infinite set of hypotheses on a puzzling phenomenon, namely brand strategy adoption in the high tech context, to a feasible number. The conclusion of ab-

ductive reasoning is a hypothesis. Peirce[11] defines abduction as "an educated guess", "intelligent conjecturing" or "the process of forming an explanatory hypothesis". Since the context of the present study was relatively unfamiliar, plenty of new facts, ideas, questions and problems ("discoveries in Peirce´s language) were left for further examination. Yet, explanations in themselves do not constitute a theory but they can create and ground theories. The aim of abduction is to suggest an explanation (i.e a hypothesis), and subsequent research may either accept or reject it. According to Peirce, abduction is a significant part of scientific reasoning since it is the only logical operation which introduces a new idea and in which knowledge is expanded. (Råholm 2010, 265 ; Khisty & Member 2000).

The present study contributes and "provides discoveries" to branding theories by forming hypotheses and research questions on three main concepts. Firstly, *a context perspective* is approached. Hence, the present study contributes further to the branding theories in differentiating the impact of the new marketing phenomena on brand building. The suggestions for the future research are:

1. How do context-related prior conditions have an effect on adoption of a brand strategy?
2. How do the managers become aware of a brand strategy in different marketing environments?
3. What is the relation between the marketing environment and brand management / successful brand building?

Secondly, in the present study the *perceived attributes of a brand strategy*, which affect the rate of adoption, are described. Moreover, the present study has increased our understanding that *different characteristics of brand strategy decisions* have an effect on the adoption process. The suggestions for the future research are:

1. How can the different perceived characteristics of a brand strategy be measured in a consistent manner?
2. Have the perceived characteristics of a brand strategy an effect on the adoption of a brand strategy?
3. What are the potential connections between the perceived characteristics of a brand strategy and its diffusion within the organization?

Thirdly, the findings in this study provide a new understanding of *a brand management process, with special emphasis of the early stage, the adoption of a brand strategy*. The present study benefitted from Rogers's (2003) Innovation-Diffusion Model in identifying links between high tech marketing challenges and adoption of branding strategies. It is a contribution to the understanding of a brand strategy adoption process, the foundation of the brand management process. The suggestions for the future research are:

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[11] American philosopher and founder of the Pragmatic School of philosophy

1. What are manager's salient behavior patterns such as beliefs, opinions, attitudes, motivational factors in a brand strategy adoption process?
2. What is the role of a manager's nationality in adopting a brand strategy?
3. What is the influence of other members of organization in adopting a brand strategy?
4. What are the characteristics and differences of a brand strategy adoption process in different marketing environments?
5. How to measure the potential connections between a manager's prior conditions and the decision to adopt a brand strategy?

The above discussion will hopefully stimulate progress in specific research directions. To sum up, many important questions and issues are yet to be resolved. Firstly, a theoretical model would provide us a useful guide for further research. As this study was a qualitative study, the findings cannot be statistically generalised. It would be valuable to study the adoption process in same or other contexts, revealing other aspects, either confirming these results or challenging them. For example, the different stages and relationships in the adoption process could be examined empirically, and the justifications of the selection of the sources could be provided in the study. The content of such studies provide some sort of preliminary understanding for compelling and logical justifications found in the current literature for why we should expect certain relationships in our data if the models are tested empirically.

Secondly, as I outlined in the theoretical framework, the manager plays a strategic role in brand management. The field would benefit from a phenomenological study of high tech managers and how they view and understand their key intangible (marketing) asset, their brand. In other words, such study might reveal whether the adoption of a brand strategy is related to a specific characteristics of managers. Such research could also provide insights to what high tech managers actually do. Such an approach might take the form of multiple case studies or in-depth interviews. The studies could focus on research questions asking what, how and why.

Thirdly, it would be important to study branding from several other viewpoints in addition to the focus of the present study. For example, the latter stages of the adoption process, implementation and confirmation, should be further examined. In addition, future research can also empirically examine managerial and organisational capabilities in order to for example, measure the effectiveness of branding decisions. Assessing capabilities relates to measuring whether or not brand-focused or market-oriented high tech companies are able to achieve relative advantage, such as sustainable competitive advantage over their competitors by means of strategic brand management.

Fourthly, combining the findings of the present study with competitiveness studies could offer new insights to future research. As it was already outlined in the theoretical part, it would be interesting to empirically examine the

need of entrepreneurial support for marketing and branding activities and the impact of such support. It is important to provide new insights, highlight and identify gaps in our understanding of why the Finnish system fails to generate high-growth start-ups although the investment in R&D per capita ranks among the highest in the world.

7.3   Managerial and empirical contributions

The implications of this study concern executive and marketing managers in high tech companies, public organisations and communities and academic and industrial experts. The findings suggest several courses of action to be taken by public organisations and communities in order to allocate resources for high tech SME companies for finding means to compete and success. Although the respondents bring up the need for money, it is apparent that they also lack of knowledge. This study suggests that academic and industrial experts could take more active role in training and providing both, online and written learning material for non-marketers. Their role is significant since they can facilitate networks and services. In active co-operation, SME managers may obtain market orientation and thus, create competitive advantage which enhances companies' success. Moreover, it seems that there is a need for financial support before the innovation is ready for market. Currently in high tech marketing literature, the strategic importance of the early marketing decisions is not highlighted. However, this study suggests that it is important to find the seeds of innovations at a very early stage since often high tech managers need guidelines and research information to support their decision. When highlighting the branding viewpoint, it is possible for the companies to achieve sustainable competitive advantage. Regions may also stimulate their growth and compatibility by promoting branding clusters. Branding clusters may prove to be an opportunity to a sustainable growth for local areas or even nations. In branding clusters companies it would be easier to get support and managers would learn and trigger each other in developing branding strategies.

The findings of the present study encourage high tech SME managers to acquire more knowledge on branding in order to fully exploit brand management. It is also encouraged to develop the skills and abilities of all staff members and consider marketing as a long-term investment in knowledge resources.

7.4   Critical evaluation

Judging a qualitative research depends on criteria. The perceptions of credibility are connected to different perspectives and to different philosophical frameworks. People view qualitative findings through different paradigmatic lenses and react differently. Patton (2002, 542-550) has identified five con-

trasting sets of criteria for judging the quality and credibility of qualitative research. In the present study I have chosen the traditional scientific research criteria since the theoretical, philosophical and empirical orientation corresponds to those perspectives and concerns. According to Patton (2002, 93, 543) it flows from reality-oriented perspective. The aim is to capture the primary debates that differentiate this approach from other qualitative approaches and from quantitative research. Patton (2002, 542) states that some of the criteria within the framework overlap. Thus, the three (3) latter criteria overlap with social construction and constructivist criteria since they correspond especially towards empirical perspectives and concerns. Hence, the aim is also to evaluate by what criteria the present study will be judged by others. The following criteria for evaluating the quality and credibility of the present study are presented in italics in the beginning of each paragraph.

Traditional scientific research reports are suggested for special attention to objectivity of the inquirer. That is for understanding how my own experiences and background affect what I understand and how I act in the world of inquiry. (Patton 2002, 542-550). *Objectivity of the inquirer* discusses and takes into account biases attempting to minimize them. Criticism raised towards qualitative approach states that it is too subjective, since the instrument of both the data collection and interpretation is the researcher. It is important to acknowledge subjectivity since it can also be a presumption of objectivity. Objectivity has been considered the strength of the scientific method. In explorative research the researcher's interpretations begin to create the foundation of the outcomes already at the very early stages of the process. To acknowledge and be aware of the bias of subjectivity enhances the possibility of objectivity. Due to my prior experience of the study field, I paid a great deal of attention to subjectivity and was aware of the potential bias. Building up a strong theoretical framework helped me to develop my theoretical orientation and to guide the empirical observations. (Patton 2002, 14, 50)

Validity of the data is evaluated through a combination of three different criteria: internal validity, external validity and objectivity. The internal validity of qualitative methods refers to a great extent to the skill, competence and rigor of the researcher as well as to the present status of his/her life that might prove a distraction. In the present study, I realize that completely value-free inquiry was impossible. However, I have evaluated my skills and motivation as well as my current and past work experience in order to enhance the credibility of the present study. External validity refers to concepts that are created from the data and that can be used in different ways. In the present study the conclusions are reached without complete evidence. The validity of the findings is based only on a fair sample which is not representative of a larger population. The sample limitation also raises a question about objectivity, the extent to which the elements of the theory can be generalized to other marketing environments which have not been early to adopt branding strategies. Moreover, the respondent's perceptions are highly connected with the high tech context since the respond-

ents were aided to explain the nature of the marketing and branding efforts of the company they represented.

Systematic rigor of fieldwork procedures refers to a systematic process which is also followed systematically in order to discuss their possible influence in reporting findings. I have both knowledge and experience of the phenomenon and research processes and thus, can be considered able to create a dependable framework and setting for the study. The detailed description of the process makes it as transparent as possible. In reporting, analytical perspective and the empirical findings have been emphasized.

Correspondence of findings to reality refers to the truthfulness of origins. I was fortunate enough to be able to interview managers who contributed to this study voluntarily and therefore there were no grounds of doubting their intentions to answer as truthfully as possible. The aim was to capture their descriptions and explanations of the phenomenon to correspond as closely as possible as it actually operates. However, it was possible that they would try to give an ideal description of their reality. To avoid this I explained before the interview that there were now correct or incorrect answers. The aim was to reveal the facts as they appeared and as they perceived them. I began the data collection by conducting the first interview in Finnish since it is my native language and I could transcribe the recordings myself. During the writing process I started to analyze the data I had collected. I also transcribed my own questions, including probing questions so as to be able to evaluate my influence. Especially, I paid attention if I had asked leading questions or made judging comments. The interviews then continued in Finland and I began to see my role more as a listener than as someone asking questions. It was important to let the respondents talk even if they did not quite "answer" the question. In retrospect I can identify my own approach to be of critical importance. I was aware, that even if I had personal opinions or interpretations, they did not appear in the data I was collecting.

Triangulation refers capturing and respecting multiple perspectives. In traditional scientific research the idea is to triangulate in order to capture and report consistency of findings across methods and data sources. (Patton 2002, 544-545). In the present study, two types of analyses methodologies have been used. Firstly, in content analysis validity and reliability of themes derived with the help of the previous literature has been evaluated. Secondly, during the qualitative comparative analysis a holistic perspective was aimed at. Common aim for having two types of analysis methods was to explain phenomena as completely as possible. Therefore in the analysis of the present study there are also descriptions of one respondent's perceptions. In my understanding these specific cases within a particular context offer perspective and encourage dialogue. Regardless of the unit of analysis, the present study seeks to describe the units in depth and detail, holistically and in context. In the report I found it important to find the general opinions as well as the individual differences of the respondents. Such an example among many in the present study was the discussion about whether a certain company had rejected or adopted a brand strategy. I admit

that the small sample size may limit the number of different perspectives and that it is one limitation of the present study.

Reflexivity refers to a researcher's self-awareness involving self-questioning and self-understanding (Patton 2002, 64). In order to be reflexive, I evaluated my background and bias that would possibly appear in the study with the help of questions, "*What I know?*" and "*How I know it?*". In terms of reflexivity, I succeeded in my self-evaluation of the presumption and awareness of a possible subjectivity bias in the beginning of the study and during the research process. When it comes to the interpretations I have made, the criticism towards the adoption of a brand strategy is more likely to be affected by my personal interest and experience. In addition, the moderator bias in the in-depth interviews is relatively high. The lack of interview structure results in susceptibilitye to the interviewer's influence. (Malhotra & Birks 2006, 211). When it comes to the interviewer's skills, although the interviewer has a great deal of experience in the business context of conducting and observing qualitative data collection, she has no experience of collecting data in the high tech context. Moreover, the past experience in other marketing contexts may have developed a certain awareness of the factors that make the researcher see in a particular way, which might bias the interpretation. All in all, following Patton's (2002, 51) guidelines, I tried to adopt a neutral perspective. By neutral Patton (2002, 51) means that the researcher has no predetermined results to support and is true to all perspectives as they emerge. Neutrality is not easy to attain but techniques have been developed for helping to produce a credible outcome. I used those techniques in the present study and discussed them openly in Chapter 6, Research design.

Praxis refers to the research process and how it is realised. The data obtained through in-depth interviews is difficult to analyse and interpret. To overcome this, the researcher built a strong theoretical awareness and used additional, documental material to make sense of the data. The evidence is illuminated by numerous quotations, and iterations between theory and data are presented. Another limitation in the present study is the language. The purpose of most qualitative research is to derive meaning through interpretations, not necessarily "facts" from the respondents. In the present study, the researcher has tried to reach and interpret the language and logic of target respondents since they use the language of non-marketers, or as one could even call it, the language of engineers. Anyway, the language and the understanding of what meaning non-marketers give to different concepts differs from the language used by the researcher.

Enhanced and deepened understanding (Verstehen) refers to the unique human capacity to make sense of the world. I argue that I possessed some capacity for empathy towards the respondents due to my prior experience. I was able to comprehend their motives and feelings to a certain extent although they were in a different social-cultural context. Although I had personally gone through the same adoption process, a great deal of emphasis during the interview discussions was laid on trying to picture the empirical world that actually surrounded

the respondents. Moreover, my active involvement with high tech companies in my current work provided me further opportunities to achieve empathy and gave me an empirical basis for describing the perspectives of the respondents.

The objective of the present study has been reached since the aim was to understand the adoption of a brand strategy in the chosen context. This study described the process of a brand strategy adoption as perceived by SME high tech managers. In addition, several new viewpoints to both branding and the high tech marketing field were revealed. Even if the data might have been richer if other data collection methods had been used in addition to interviewing and secondary data collection, I consciously excluded an observation method due to the risk of the respondents wanting to please me. It might have decreased the amount of relevant information that they gave me.

The present study claims to have found the description of a brand strategy adoption by high tech SME managers. The results of the present study do not claim to be objective but they are an interpretation made by the researcher. The interpretations made in the course of the present study are considered defensible, not right, nor corresponding to adoption of a brand strategy as an objective reality. The results based on abduction merely suggest what the adoption of a brand strategy *may be.* The abductive approach has enabled to formulate information that meets the criteria of research and enables continued testing and investigation.

YHTEENVETO (SUMMARY)

Brändistrategian omaksumisen ymmärtäminen pienten ja keskisuurten huipputeknologiayritysten johtajien käsitysten mukaan

Elämme brändien ja merkkituotteiden maailmassa. Siitä huolimatta ja vastoin yleistä luuloa, brändit eivät ole saavuttaneet kaikkia toimialoja. Brändit ovat strategisesti tärkeitä ja yksi arvokkaimmista immateriaalisesta omaisuudesta mitä yrityksillä on. Aiempien tutkimusten mukaan brändien arvo ja strateginen merkitys perustuvat mm. niiden tehokkuuteen suojata kilpailulta ja niiden kykyyn edistää taloudellista menestystä. Huipputeknologialle suunnatussa markkinointikirjallisuudessa brändit ovat kuitenkin jääneet vähäiselle huomiolle. Näkökulma ja painotukset ovat olleet muissa osa-alueissa, kuten riskienhallinnassa, ajoituksessa ja epävarmuudessa.

Käsillä olevan tutkimuksen pääteemana oli kuitenkin kuvata ja ymmärtää, miten uusia asioita omaksutaan. Omaksuminen on itse asiassa käyttäytymisen muutosta ja se on vaikeaa, vaikka uuden asian tuomat hyödyt olisivat itsestään selviä. Tässä tutkimuksessa uusi, omaksuttava asia on brändistrategia. Brändistrategia käsitetään tässä tutkimuksessa organisaation fokuksessa olevana holistisena näkemyksenä, joka ohjaa päätöksentekoa ja myötävaikuttaa koko liiketoimintastrategiaan. Sen avulla yritys voi taitojen ja resurssien muodossa saavuttaa ylivoimaisen kilpailuedun. Tuloksena menestyksellisestä brändistrategian toteuttamisesta syntyy vakaalla pohjalla oleva immateriaalinen omaisuus.

Aiemman kirjallisuuden ja tutkimusten mukaan PK huipputeknologiayritysten johtajat ovat usein haluttomia perehtymään markkinointiin, kuten brändien rakentamiseen ja johtamiseen. Toisinaan he eivät edes täysin ymmärrä mitä markkinointi pitää sisällään, sillä heiltä puuttuu markkinoinnin alan koulutus ja työkokemus. Toisaalta brändikirjallisuus ei pääosin tunnista brändien johtamiseen liittyvää tai sitä edeltävää omaksumisprosessia. Brändikirjallisuuden peruslähtökohtana pidetään ajattelutapaa, että yrityksessä ollaan sitoutuneita rakentamaan brändejä. Bränditutkimus on keskittynyt suurten, monikansallisten yritysten, jotka yleensä toimivat kuluttajamarkkinoilla, brändipääoman mittaamiseen ja johtamiseen.

Tässä tutkimuksessa brändistrategian omaksuminen nähdään prosessina ja omaksumis-käsitteen ymmärtämisessä ja soveltamisessa on hyödynnetty Rogersin (2003) Innovaatio-päätöksentekomallia. Tutkimuksen kohteena ovat PK-yritysten johtajat, jotka ovat vastuussa markkinointipäätöksistä ja kontekstina huipputeknologiaympäristö Suomessa ja USA:ssa. Tutkimusongelmana on ymmärtää, mitä on brändistrategian omaksumisprosessi. Tavoitteena on löytää keskeiset käsitteet ja kuvata, miten brändistrategiasta tullaan tietoiseksi, miten sen keskeiset ominaispiirteet vaikuttavat omaksumiseen ja mitkä seikat johtavat päätöksen tekemiseen. Päätös voi olla positiivinen, eli brändistrategia omaksutaan tai se voi olla negatiivinen, jolloin brändistrategiaa ei toteuteta organisaatiossa. Johtajan rooli omaksumisprosessissa nähtiin keskeisenä,

Tutkimuksessa on käytetty abduktiivista päättelylogiikkaa, sillä se soveltuu nimen omaa uusien ilmiöiden kuvaamiseen ja selittämiseen. Tutkimusprosessin eri vaiheissa systemaattisesti yhdistettiin teoriaa ja empiiristä aineistoa. Tutkimustapa oli eksploratiivinen, tulkitseva ja menetelmäksi valittiin kvalitatiivinen. Tutkimusaineisto koostuu pääosin yksilöhaastatteluista mutta lisäksi aineistoa on kerätty sekundäärisistä lähteistä, kuten esitteistä, brändimanuaaleista, promootiomateriaaleista ja yritysten nettisivuilta.

Tutkimuksen tulokset syntyivät tutkijan analyysin ja tulkintojen avulla ja ne on jaettu kahteen pääryhmään. Ensinnäkin kuvattiin yksityiskohtaisesti tutkimuksen tavoitteena ollut ilmiö; brändistrategian omaksumisprosessi huipputeknologian kontekstissa, sellaisena kuten se näyttäytyy johtajien käsitysten valossa. Useimmiten tiedon lisääminen edesauttaa brändistrategian omaksumista. Johtajat pitivät verkostoitumista ja toisia ihmisiä tärkeimpänä tiedonhankintalähteenä. Kaiken kaikkiaan brändistrategia koettiin hyödyllisenä, vaikka se koettiin vaikeana ymmärtää, käyttää ja vaativan paljon resursseja. Brändistrategiaa oli toimeenpantu vain vähäisessä määrin organisaatioissa joten voidaan päätellä, että sitä ei ole täysin omaksuttu. Tutkimuksen tuloksena voidaankin todeta, että huipputeknologian PK-yritysten johtajat ovat omaksumisprosessin alkuvaiheessa.

Toisaalta omaksumisprosessia kuvattiin holistisesti sekä vertailemalla suomalaisten ja USA:laisten johtajien näkemyksiä keskenään. Näiden kahden kansallisuuden välillä ei omaksumisprosessissa pystytty tunnistamaan merkittävää eroa.

Tulosten pohjalta voidaan paremmin ymmärtää, mitä muutoksia tarvitaan, jotta voidaan edistää brändistrategian omaksumista huipputeknologian PK-yrityksissä. Tulosten avulla voidaan myös edistää jatkotutkimusta ehdottamalla keskeisiä tulevaisuuden tutkimusalueita.

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188

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APPENDIX 1

THEMED DISCUSSION GUIDE

I RESPONDENTS BACKGROUND
1. Nationality, native language, age
2. How long have you been in working life (in years)?
3. What is your current Job title?
   - How would you describe your current job?
   - How much and what kind of marketing activities include in your job at the moment? (evaluate in terms of percentages)
4. Describe your company,
   - the industry, when it was established, number of personnel
5. Would you describe how marketing is organized in your company?
   - Who makes the marketing decisions?
6. What kind of experience you have from previous jobs?
   - Have you previous experience in marketing?
7. What is your education?
8. How much and what type of education / training you have had in general (In school / in working life)?
   - on marketing? (In school / in working life?)
9. Have you lived / worked / studied abroad? Where and how long?

II EXPERIENCE QUESTIONS
1. Could you tell me about your experience of getting information from outside your company about marketing in High Tech environment? (literature, articles, education, consultants etc.)
2. Could you tell me about your experience in formulating a marketing strategy in your company?
3. Could you tell me about your experience about managing marketing in your company?
   a. Can you describe a typical day?
   b. Based on your experience, what factors influence the most to company's success? Why?
4. How much resources you have for marketing – time, money, knowledge?
   a. where did these resources came from?
5. Could you tell me about your experience about branding?
6. How did you first attempt to start to build the brand – from start to finish?

7. What is the role of the brand in your organisation (tactical, strategic etc)?
8. Is your marketing already now focused around brand building?
9. Is it relevant marketing strategy for your company? Explain why?

III FEELING QUESTIONS
1. How do you feel when managing the marketing under uncertainty?
2. What did you feel when you discovered that you were not appropriately trained in marketing issues in High Tech?
3. How do you feel are the biggest challenges of marketing in your company?
   a. of branding in your company?
   b. Challenges inside the company, outside the company?

4. What is your own belief –
   do you have the motivation and commitment to build up a strong brand?

IV KNOWLEDGE QUESTIONS
1. What information is available for branding in High Tech?
2. How did you cope with brand management?
3. In what ways you think do branding strategies differ from product or technology oriented strategies?
4. OR Describe the opposite of branding strategy?
5. What are all the different ways to describe how you evaluate your brand?

6. Can you name a few tactical operations / decisions that you see as part of brand building at the moment
7. .... that are NOT brand building at the moment

V CONCLUDING QUESTIONS
Based on your experience, do you find branding a relevant marketing strategy for your company?
   - in High Tech industry in general?

Can you describe the advantages of branding strategy for your company?
   - financial
   - managerial
   - strategic

What factors might hinder / prevent the commencement of branding in your company?
   - If you need help and support in brand building, where would you ask help?

APPENDIX 2

List of secondary data used in empirical study

In order to respect the anonymity of the respondents, the names, symbols, other visual illustrations or detailed descriptions of the materials and products are not mentioned.

Brochures and documents	Respondents
Business cards	All respondents
Product sheets	JA1, AR, EK, MM, KP, JA2, JK
General company brochures	JA1, AR, EK, MM, KP, JA2, JK
Annual reports	JA2, JK
Branding materials	**Respondents**
Brand Manual	KP, JA2
Visual Guide	EK, KP, JA2, JK
Logo	JA1, AR, EK, MM, KP, JA2, JK
Slogans	JA1, AR, EK, MM, KP, JA2, JK
Marketing materials	**Respondents**
Advertisements (for example in trade magazines)	JA1, AR, EK, KP, JA2, JK
Presentations of marketing materials, photogrpahs (for example from trade shows), material used for personal sales	JA1, AR, EK, JA2,JK
Triggers	JA1, AR, KP
Symbols (in connection with brand name)	JA1, AR, EK, MM, JC, KP, JA2, JK
Websites and PR	**Respondents**
Online communication	JA1, AR, EK, MM, KP, JA2, JK
Social media (Linked-In, Facebook)	HS, JA1, AR, JA2, JK
Articles in the newspapers	JA1, AR, JC, JA2, JK
Products	**Respondents**
Personal experiences of the usage of the product, or developing brand	JA1, AR, JK, JA2
Product characteristics (virtual product layout)	HS, JC, KP
Research reports	**Respondents**
Brand awareness and imago research	JA2