

# Marketing, Market-based Assets and Capabilities, Core Business Processes, and Financial Performance in Finnish Companies

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## MARKETING, MARKET-BASED ASSETS AND CAPABILITIES, CORE BUSINESS PROCESSES AND FINANCIAL PERFORMANCE IN FINNISH COMPANIES

This study focuses on the role of marketing in the core business processes of companies and examining how those core business processes affect the financial performance of companies. This was done by creating a conceptual framework that included role of marketing in the core business processes, three core business processes that were product development management, supply chain management and customer relationship management and financial performance measures based on previous research and academic literature. The conceptual framework is based on six hypotheses developed from the literature review.

The data used in this study was from StratMark's Markkinoinnin tila 2010-survey. The data was collected through an online questionnaire that targeted the senior management of Finnish companies. The questionnaire was sent to 15,941 executives 1134 of whom completed the survey. The data was analyzed using two multivariate methods. Firstly, confirmatory factor analysis was used to develop the measurement model. Secondly, a structural equation model was used to test the hypotheses.

The results of this thesis show that marketing does have a strong positive relationship with the three core business processes, especially with customer relationship management. This thesis also offers support for the positive relationship between the three core business processes and financial performance of a company however this relationship is not as strong as the one between marketing and the three core business processes. Based on the findings of this study managers are recommended to integrate marketing with their core business processes.

This thesis provides a simple and generalized model that links marketing, core business processes and financial performance together.

**KEYWORDS:** Marketing, core business processes, product development management, supply chain management, customer relationship management, market-based assets, market-based capabilities, resource-based view, financial performance

MARKKINOINTI, MARKKINA RESURSSIT JA – KYVYKKYYDET, YDINLIIKETOIMINTA PROSESSIT JA  
TALOUDELLINEN SUORITUSKYKY SUOMALAISISSA YRITYKSISSÄ

Tämä tutkimus keskittyy markkinoinnin rooliin yrityksen ydinliiketoimintaprosesseissa ja tutkii miten nämä ydinliiketoimintaprosessit vaikuttavat yritysten taloudelliseen suorituskyykyyn. Tutkimus tehtiin luomalla konseptuaalinen viitekehys, joka perustui aikaisempaan tutkimukseen ja akateemiseen kirjallisuuteen. Viitekehys sisälsi markkinoinnin roolin ydinliiketoimintaprosesseissa, kolme ydinliiketoimintaprosessia, jotka olivat tuotekehityksen johtaminen, toimitusketjun johtaminen ja asiakassuhteiden johtaminen sekä taloudellisen suorituskyyvyn mittarit. Tämä viitekehys perustui kuuteen hypoteesiin, jotka kehitettiin tutkimuksen teoriaosuudesta.

Tutkimuksessa käytetty aineisto perustui StratMark:n Markkinoinnin tila 2010-tutkimukseen. Aineisto kerättiin käyttämällä verkkopohjaista kyselylomaketta, joka oli suunnattu suomalaisyhtiöiden johdolle. Kyselylomake lähetettiin 15941 johtajalle, joista 1134 täyttivät kyselylomakkeen. Aineiston analysoimiseen käytettiin kahta monimuuttujamenetelmää. Ensimmäiseksi käytettiin vahvistusfaktorianalyysiä mittausmallin kehittämiseen. Toiseksi käytettiin rakenneyhtälömallia hypoteesien testaamiseen.

Tämän tutkielman tulokset osoittavat markkinoinnin vahvan positiivisen suhteen yrityksen ydinliiketoimintaprosesseihin, erityisesti koskien asiakassuhteidenjohtamista. Tämä tutkielma tukee myös ydinliiketoimintaprosessien ja yritysten taloudellisen tuloksen välistä positiivista suhdetta, mutta tämä suhde ei ole niin vahva kuin markkinoinnin ja ydinliiketoimintaprosessien välillä. Tämän tutkielman tuloksien perusteella yritysjohdolle suositellaan markkinoinnin integroimista yritysten ydinliiketoimintaprosesseihin.

Tämä tutkielma tarjoaa yksinkertaisen ja yleistetyn mallin, joka yhdistää markkinoinnin, ydinliiketoimintaprosessit ja taloudellisen suorituskyyvyn.

AVAINSANAT: Markkinointi, ydinliiketoimintaprosessit, tuotekehityksen johtaminen, toimitusketjun hallinta, asiakassuhteiden johtaminen, markkinaperusteiset resurssit, markkinaperusteiset kyvykkyydet, resurssiperusteinen näkökulma, taloudellinen suorituskyyky

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# 1. Introduction

The main objective of this study is to examine the role of marketing in company business processes and company performance. This chapter introduces the motivation and contents of this study by describing the background, followed by the definition of the research problem and the objectives. This is followed by a description of the methodology and scope of the study. Next, the key concepts of the study are defined and, finally, the structure of the study is presented.

## 1.1 Background

There is an increasing demand for marketing and marketing actions to be held accountable for both market performance and financial performance (e.g., Stewart, 2009; Srinivasan & Hanssens, 2009; O'Sullivan & Abela, 2007; Rust, et al, 2004). The lack of accountability and clear metrics for measurement marketing performance has threatened the position of marketing in many firms (Rust, et al, 2004). In Stewart (2009) one chief financial officer (CFO) said "Marketing is not strategic. It's just tactics and we just control the cost." It is clear that if marketing activities cannot be viewed as an investment rather than just as expenses and as strategic in nature, the position of marketing in the company will be undermined. This is not only a challenge to the discipline of marketing; it can also undermine company performance in time when customer needs and wants are becoming more individualistic and complex.

In response to the challenges of marketing in contemporary business climate, there has been a lot of academic debate on the future role of marketing as a function and as an activity. Webster (1992) argued that "marketing will focus on strategic partnerships and positioning the firm between vendors and customers in the value chain with the aim of delivering superior value to customers." This is supported by Moorman and Rust (1999), who viewed the role of marketing as playing a key role in managing the connections between customers and critical firm elements. This leads to the concept of market-based assets and capabilities. Market-based assets are market-specific resources that are mostly intangible, such as information of customers and relations with them (Srivastava et al, 1998). This intangible nature is especially meaningful since according to Doyle (2000 p. 18; 19) approximately 75 percent of the value of Fortune 500 companies lies in intangibles (brands, marketing-based intangibles, etc.). Doyle (2000 p 18; 19) argued that these

intangibles are the root source of shareholder value. Market-based capabilities are the skills that determine how well these market-based assets are created and leveraged (Ramaswami et al. 2009; Day, 1994). Marketing investments are investments in market-based assets and capabilities since they are directed towards acquiring and retaining customers and building brand equity and superior value in the eyes of the customers (Sheth & Sisodia, 2002).

However superior value to the customer can only be offered if all functions in the organization contribute together. This requires cross-functional integration with all the key areas and processes of the organization (Slater & Narver, 1994a) meaning marketing must be integrated with other functions and processes in a company. In order to provide value for a customer, a firm must develop solutions for the customer, acquire inputs and transform them into desired customer outputs, and manage the linkages and relationships with external marketplace actors, especially with customers (Srivastava, Shervani & Fahey, 1999)

This study focuses on the effect that marketing processes and activities have on firm performance and the effect that marketing has on to core business processes. Srivastava et al. (1999) defined firm's core business processes as product development management (PDM), supply chain management (SCM) and customer relationship management (CRM). This study evaluates the effect that marketing has on each of the three main business processes in terms of how they affect a firm's financial performance (for example return on investment).

## 1.2 Research problem and objectives

The objective of this study is to link marketing to key business processes and through that to the financial performance of Finnish companies. A study by Ramaswami, Srivastava, and Bhargava (2009) empirically tested the effect of the three core business processes on a firm's financial performance. However, that study had a small sample size (88 firms) and used only a few metrics for the core business processes. While Ramaswami et al.'s (2009) study focused how market-based assets affect the three core business processes the present study focuses on the influence of marketing. However, by examining whether the role of marketing on the three core business processes is strategic, minor, non-existent and its effect on company performance, this study will



expand Ramaswami et al.'s study on the subject by having a larger sample size of 1134 and including more metrics for the core business processes.

In order to reach the objectives of this thesis the main research question is:

*What effect does marketing have on company performance?*

The main research question is answered by four sub-questions

- How do market-based assets and capabilities affect core business processes?
- How are market-based assets and capabilities integrated to core business processes?
- What effect do of market-based assets and capabilities have on core business processes?
- How do these core business processes affect financial performance?

### 1.3 Methodology and Scope

The empirical part of this study is based on data collected in a national survey as a part of the StratMark research project. The survey, known as Markkinoinin tila 2010, contains answers from 1134 decision makers from companies ranging widely in size. The data received from the questionnaire broadly covers the current state of marketing and other activities and topics in these companies. The focus of the present study is the role of marketing in key business processes (PDM, SCM and CRM) through market-based assets and capabilities, the performance of those processes and the financial performance of the companies.

This research can be divided into two parts: the literature review and the empirical research. The literature review covers the existing literature related to the topic under review in order to provide a conceptual framework for the empirical research.

The literature review is conducted by reviewing the literature regarding marketing as well as the relatively new concepts of market-based assets and capabilities and the core market-facing business processes. The purpose is to examine the relationships between these concepts. To this end, a number of many frameworks, hypotheses and theories were examined before developing a conceptual framework and hypotheses. The literature review does not review all of the available literature instead it focuses on the information, concepts and theories that are relevant for this study.

The second part of this uses statistical analysis methods that are relevant for testing the conceptual model. The purpose of the empirical part is to test the hypotheses based on the literature review. The statistical analysis is performed using two statistical methods: confirmatory factor analysis (CFA) and structural equation modeling (SEM). These methods are ideally suited to examine the relationships between marketing and the three core business processes and between the three core business processes, and financial performance. In chapter 4.1, confirmatory factor analysis is used to test the validity of the factors and their indicators in the conceptual model. This is done in order to test the goodness-of-fit between the measurement model and the actual data. In chapter 4.2, structural equation modeling is used to test the hypotheses related to the conceptual model, with the intention of evaluating the relationships between marketing and the core business processes and between the core business processes and financial performance.

## 1.4 Key Concepts

Marketing: Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large (American Marketing Association, 2007).

Core business processes: These are business processes in which companies engage in order to achieve defined business purposes or objectives that explicitly contribute to generating and sustaining customer value (Srivastava et al., 1999). For the purposes of the present study there are three core business processes: product development management (PDM), supply chain management (SCM), and customer relationship management (CRM).

Product development management (PDM): A process that aims to create solutions that, customers need and want (Srivastava et al., 1999).

Supply chain management (SCM): SCM encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, SCM also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third- party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies (Council of Supply Chain Management Professionals).

Customer relationship management (CRM): A process that identifies customers, creates customer knowledge, shapes customer perception of the firm's products and image, builds customer relationships through satisfactory experiences and maximizes customer responses for optimal revenue and profit growth (Srivastava et al., 1999). "CRM is an ongoing process that involves the development and leveraging of market intelligence for the purpose of building and maintaining a profit-maximizing portfolio of customer relationships" (Zablah et al., 2004).

Market-Based Assets: Market-specific and mostly intangible resources that can be leveraged in order to create competitive advantages. Market-based assets are divided into relational and intellectual assets. Relational assets are outcomes of relations with the firm and key external stakeholders. Intellectual assets are knowledge that the firm possesses about its environment (Srivastava et al., 1998).

Market-Based Capabilities: Bundles of skills and knowledge used to manage, create and leverage market-based assets in order to create positional and/or competitive advantages that are not easy for competitors to imitate (Ramaswani et al., 2009; Day, 1994).

Resource-Based view: A company's resources are its source of competitive advantage. In order for the company to gain a competitive advantage these tangible and intangible resources must be valuable; rare; imperfectly mobile and there cannot be any strategically equivalent substitutes (Wernefelt, 1984; Barney, 1991).

Financial performance: the profitability of a company. This what evaluates a company's performance. In this study, the metrics used to evaluate companies' profitability are profit margin, return-on-investment (ROI), and return-on-assets (ROA).

## 1.5 Structure

Chapter 2, the literature review of this study, provides the theoretical background for the empirical part of this study. Section 2.1 focuses on what are market-based assets and capabilities are and how they create competitive advantages. The three core business processes are then examined in order to understand what they are and how they affect the firm. This is followed by a discussion about integrating marketing into these core business processes. Finally, the benefits that marketing and market-based assets and capabilities can bring to these processes in order to increase firm performance are discussed. Section 2.2 focuses on product development management (PDM). Section 2.3 focuses on supply chain management (SCM). Section 2.4 focuses on customer relationship management (CRM). Section 2.5 briefly presents the methods used to measure financial performance and, 2.6 introduces the conceptual framework for the study.

Chapter 3 presents the empirical study in order to answer the research questions. The data collection, contents of the survey and the resulting data are all presented here in detail. Chapter 3 also presents the statistical methods used in the study starting with confirmatory factor analysis (CFA) and then structural equation model (SEM) analysis.

Chapter 4 presents the empirical findings regarding the effect that marketing's has on core processes and firm performance, based on the findings of the literature review. This chapter also reviews the reliability and validity of the analysis.

Chapter 5 discusses the empirical findings and their fit to the reviewed literature. Next, the findings of the study are summarized for managerial implications. The thesis ends with discussions of the study's limitations and future research implications.

## 2 Literature Review

The core objective of marketing is to attract and retain customers for the company. In order to do this, the company must provide superior value to customers compared to its competitors. By leveraging market-based assets and capabilities, a company can deliver superior customer value and create competitive advantages (Srivastava et al., 2001). If marketing wants to create customer or market orientation and develop market-based assets and capabilities in the company, it must influence all the market-facing core business processes that create customer value (Srivastava et al., 1999). This is similar to the view held by Moorman and Rust (1999) that the principal role of marketing is to manage connections between the customer and critical firm elements. Moorman and Rust (1999) discovered that marketing function contributes to perceptions of firm financial performance, customer relationship performance and new product performance. Webster (1992) argued that marketing should focus on managing strategic partnerships and positioning the firm between vendors and customers in the value chain, with the aim of delivering superior value to customers, and with customer relationships as the key strategic resource. Matz (1997) and Slater and Narver (1994b) argued that, marketing and other key firm functions must cooperate effectively if they are to compete effectively in the marketplace.

The previous paragraph suggests that marketing must have a strategic and cross-functional role in the firm in order for it to influence firm strategy, customer relationships, and product development, and manage the firm's value chain or supply chain to deliver superior value to customers and in the end improve the firm's financial performance. Srivastava, et al (1999; 2001) defined the critical firm elements that Moorman and Rust (1999) mentioned as market-based processes that include PDM, SCM and CRM. The aim of PDM is to create solutions that customers need and want while the purpose of SCM is to acquire all the inputs, both physical and informational, and transform them into customer solutions as effectively and efficiently as possible. CRM aims to identify customers, create customer knowledge, build customer relationships, and shape customer perceptions of the firm and its products and services.

Five broadly defined marketplace shifts that affect the competitive context of the marketplace, and also affect the role of marketing in firms and in the key business processes are:

1. Product focus gives away to the need to address customer functionality

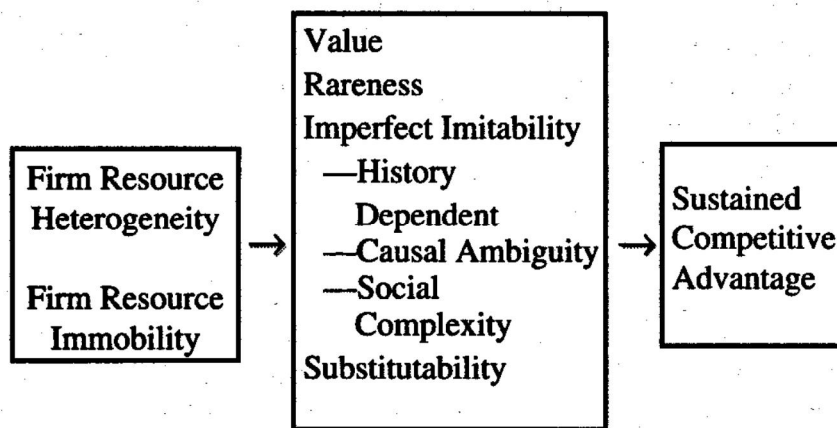
2. Product differentiation evolves into solution customization
3. Transaction-based exchanges are replaced by relationship-based customer intimacy
4. Stand-alone competition frequently gives away to networked rivalry
5. Economies of scope and increasing returns are added to economies of scale

(Srivastava et al., 1999)

## 2.1 Market-based Assets and Capabilities

Marketing creates value for firms by managing and combining market-based assets and capabilities. Market-based assets, which are both tangible and intangible, include brands, customers, and channels, while market-based capabilities include marketing expertise and process knowledge, both of which are sources of competitive advantages (Ramaswami et al., 2009). This view is aligned with the resource-based view of the firm. The idea of viewing firms as a set of resources was first presented by Penrose (1959) (quoted in Wernerfelt, 1984). However, that view did not receive a great deal of attention until Wernerfelt (1984) articulated a resource-based view of a firm. Wernerfelt (1984) argued that firms want to create a situation in which their resource situation makes it difficult for competitors to catch up; such an advance required a balance between exploiting the firm's resources and developing new ones. This view of the firm was further developed by Barney (1991) who focused on the characteristics that resources must possess in order for them to contribute to competitive advantage. According to Barney (1991) competitive advantage is achieved when a firm implements a value creating strategy that is not currently implemented by competitors. A sustained competitive advantage is achieved when competitors cannot duplicate the benefits of the focal firm's value creating strategy. Barney (1991) also presented the argument that a firm's resources are heterogeneous and immobile. However, not all firm resources have the potential to create a competitive advantage. In order to create a competitive advantage, a resource must have four attributes: it must be valuable, rare, imperfectly mobile, and there cannot be any strategically equivalent substitutes (see figure 1).

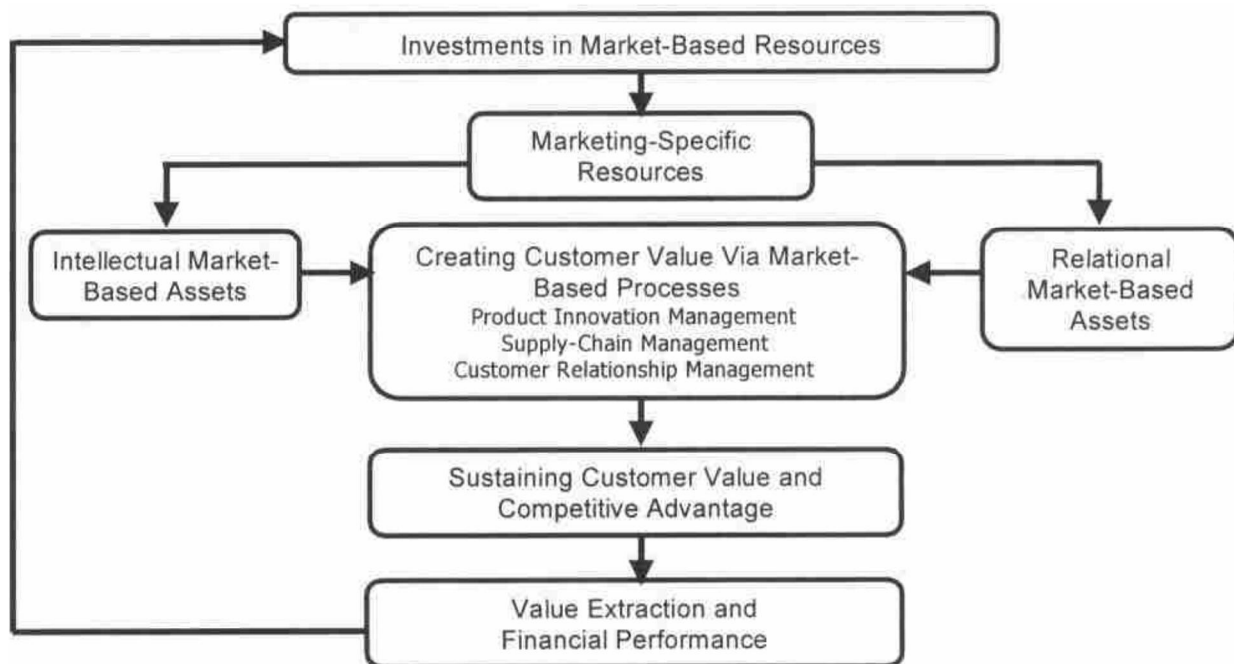
Figure 1: The relationship between resource heterogeneity and immobility, value, rareness, imperfect imitability and sustainability and sustained competitive advantage (Barney, 1991)



Market-based assets are market-specific resources that can be divided into relational assets and intellectual assets. Relational market-based assets are firm relationships with parties such as customers, networks, and supply chain members. Intellectual market-based assets are the types of knowledge that a firm has of its competitive environment (Srivastava et al., 2001; Srivastava et al., 1998). Intellectual market-based assets could be considered a product of Kohli and Jaworski (1990) concept of market orientation, which focused on the collection and dissemination of market knowledge. Market-based capabilities are complex bundles of skills and knowledge that create and leverage market-based assets in market-facing processes in order to develop value and competitive advantages for the firm (Day, 1994; Ramaswami et al., 2009). These capabilities can be "static" or "dynamic". Static capabilities manage current resource (asset) configurations, whereas dynamic capabilities achieve new resource (asset) configurations in response to market changes (Eisenhardt & Martin, 2000). Day (1994) touched on this when he identified two distinct and critical marketing capabilities. The first is market sensing, which determines how well the company can sense changes in the market and anticipate responses to marketing actions. The second is customer-linking capability, which consists of the skills, abilities and processes needed to identify individual customer needs and respond to them. Market-based capabilities can greatly enhance a company's ability to outperform its competitors and to create sustained competitive advantages (Weerawardena, 2003; Tsai & Shih, 2004). Figure 2 provides an overview of the effect of market-based assets on company financial performance.



Figure 2: Overview of market-based resources and company financial performance (Adapted from Srivastava et al, 2001)



Marketing's management of market-based assets and capabilities can significantly increase company performance, provided it has a strategic role in the company's planning and decision-making processes. Morgan et al. (2000) found that company performance was significantly higher when marketing input was present in all areas of the strategy formation process. This implies that the more strategic the role of marketing in the three core market-facing processes the better the performance of these will be. The following chapters will present how market-based assets and capabilities affect a company's core market-facing processes and how these market-facing processes affect a firm's financial performance.

## 2.2 Marketing and product development management

Product development management (PDM) is a process that creates solutions that the customers need and want (Srivastava et al., 1999; Ramaswami et al., 2009). In other words, PDM manages process that creates one or more of products and/or services that provide solutions for customer needs and wants. Product development can be broadly defined as the transformation of market opportunity and a set of assumptions about product technology into a product available for sale

(Krishnan & Ulrich, 2001). Successful new product development is essentially a multidisciplinary process (Olson et al., 2001). The main functional units that contribute to successful product launch in new product development are research and development, marketing, operations and production (Zirger & Maidique, 1990; Song et al., 1997). In the present study the focus will be on how marketing affects PDM through market-based capabilities and assets. PDM is the management of new product/service development and includes:

- Ascertaining new customer needs
- Designing tentative new product/service solutions
- Developing new solution prototypes
- Identifying and managing internal functional/departmental relationships
- Developing and sustaining networks of linkages with external organizations
- Coordinating product design activities to speed up business processes

Srivastava, et al., (1999)

The success of a new product development process can be evaluated using two key indicators: effectiveness and efficiency. Effectiveness is how well the product meets the targeted needs of the customer, for example, benefits versus costs to the customer, or, more simply, how much value it creates for the customer. This is a customer-oriented view. Efficiency is the measure of resources (time, money, etc.) used for a given output (Madhavan & Grover, 1998). This focuses on how many products or services are created in relation to the time and money invested in them. From a more financial perspective, the success of new product development can be evaluated by the following metrics: success rate, percent of sales, profitably related to spending, technical success rating, sales impact, profit impact, success in meeting sales objectives, success in meeting profit objectives, profitably relative to competitors and overall success (Cooper & Kleinschmidt, 1995).

According to Cooper and Kleinschmidt (1995), Montoya-Weiss and Calantone (1994), and Zirger and Maidique (1990), the main internal factors that contribute to the success of new product development process at the project level and within a company are:

- Product advantage
- Technological synergy
- Marketing synergy
- Company resources

- Product strategy
- Competitiveness, size and rate of growth of the target market
- Proficiency of technical activities
- Proficiency of marketing activities
- Proficiency of up-front (homework) activities
- Protocol (product definition)
- Top management support
- Speed to market
- Financial/business analysis
- the technical performance of the product
- product's value to customer
- synergy of the new product with the firm's existing competences

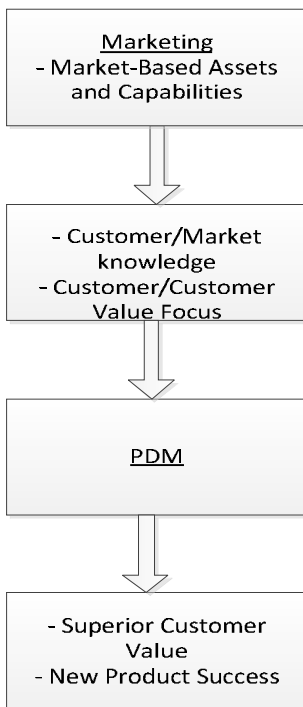
Marketing can affect many of the factors that contribute a new product success. The above list contains two factors proficiency of marketing activities and marketing synergy that are explicitly "marketing only", and can be considered as market-based capabilities. However, marketing plays a role in several other factors on the list, such as speed to market, product strategy, value to customer and picking right markets (related to competitiveness, size and the rate of growth of the target market). There is a large body of literature on R&D and marketing integration, and the effect that these on the success of a new product launch (Song et al., 1996; Olson et al., 2001; Souder, 1988; Cooper & Kleinschmidt, 1995...). Marketing as a discipline infuses market inputs to new product development with the intention of keeping the company's products ahead of current and emerging rival products (Srivastava et al., 1999).

The main roles for marketing in product development management are to provide customer and competitor information, provide customer/market focus (market orientation), link offerings to customers, involve customers in product development, customize to satisfy individual customer's needs, and focus on providing superior value to the customer (Ramaswami et al., 2009; Krasnikov & Jayachandran, 2008; Srivastava et al., 1999; Day, 1994). According to Li and Calantone (1998), the primary role of marketing in new product development is to provide market knowledge to the product development process. Market knowledge consists of customer knowledge and competitor knowledge. Customer knowledge is knowledge about customers' current and potential needs. Customer needs can be expressed or latent. Expressed needs are those that customers are aware

of and can therefore express. Latent needs are those that customers are not aware of (Narver et al., 2004). Competitor knowledge is knowledge about competitors' products and strategies (Li and Calantone, 1998) and is closely tied to intellectual market-based assets, which are a source of competitive advantage (Srivastava et al., 2001; Srivastava et al., 1998). Market knowledge makes it possible to more effectively link offerings to customers by creating a better fit between the benefits that customers seek and the benefits the company provides, thereby increasing customer value offered (Day, 1994; Baker & Sinkula, 2005; Zhou et al., 2005). This will create satisfaction for customers and improve relational market-based assets, which in turn leads to successful new product development projects. Marketing skills or market-based capabilities can create product differentiation, which enhances relative product performance (Song & Parry, 1997). Acquiring and leveraging market inputs such as customer requirements helps reduce delays in conceptualizing, specifying and prototyping customer solutions, which increasing the speed to market of new products and services (Srivastava et al., 1999). External sources can also improve the effectiveness and efficiency of new product development. These external sources or market-based relational assets are various stakeholders such as government agencies, universities and various partners. As mentioned earlier with regard to customers, these external sources can provide inputs (information, technological capabilities) that can be used to develop new products and services. Collaborations of this type can be referred as new product development networks. Möller and Rajala (2007) defined several business networks types, seven of which can be seen as new product development networks. These seven networks types can be divided into three categories: current business nets, business renewal nets and emerging business nets. Each of these have stable and well-defined value systems. Current business nets consist of vertical demand-supply nets and horizontal market nets. Business renewal nets consist of business renewal nets and customer solution nets and seek incremental improvements to defined current value systems. Emerging business nets, which consist of application nets, dominant design nets, and innovation networks have emerging value systems that imply radical changes in old value activities.

This leads to the concept of market-based assets and capabilities being important for product advantage, product's value to customers, strategy of the product and selection of the target market and thus improving the effectiveness and efficiency of product development management. Figure 3 offers a simplified overview of marketing and product development interaction.

Figure 3: Combining marketing with product development management



The previous paragraphs have suggested that marketing is to be integrated into product development management in order to ensure effective and efficient new product development. Song et al. (1997) stated that marketing and R&D functions both recognize that successful new product development requires cross-functional cooperation as has the marketing literature (e.g. Song and Parry, 1997; Zirger and Maidique, 1990). Cross-functional integration requires management. As the difficulty of the new product development task increases, so does the interdependence among the functions, which results in a greater need for cross-functional exchange of ideas, information, and other resources. Song et al. (1996) found five potential internal barriers to effective exchange of information and cross-functional integration between marketing and R & D within an organization. These barriers are similar to those identified by Maltz (1997). Song et al.'s (1996) barriers are:

1. Lack of trust or respect between marketing and R&D, which originates from perceived lack of credibility.
2. Different orientations contribute to different ideologies, languages, and goal orientations, which lead to a general lack of communication and integration.
3. The lack of formalized communication structures and communication in general acts as barrier to effective cross-functional integration.

4. Physical proximity acts as a barrier, the fact that marketing and R & D departments are often in different locations makes information sharing more difficult.
5. Lack of managerial support for integration acts as a barrier to information exchange and integration.

These five barriers (especially barriers 2-5) can be seen as common to all cross-functional integration efforts in organizations. Senior management plays an important role in the product development management process by championing the project and providing strategic direction and creating policies and procedures (reward and evaluation systems) that remove barriers and create a culture of cross-functional cooperation (Song et al., 1997).

The concept of marketing improving product development management is backed by previous empirical research suggesting that the addition of marketing to new product development and the cooperation between marketing and R & D contributes significantly to success in new product development and to a firm's financial performance. Dutta et al. (1999) claimed, that the most important determinant of a firm's performance is the interaction between its marketing and R & D capabilities. Song and Parry (1997) said that cross-functional integration between marketing and R&D can create project-specific advantages. Zirger and Maidique (1990) also identified cross-functional integration as an important factor in new product development. Li and Calantone's (1998) research showed that market knowledge had a positive effect on product advantage and product performance. According to Joshi and Sharma (2004), customer knowledge, which is a part of market knowledge, had a positive impact on new product performance. Li and Calantone's (1998) research also indicated that the marketing -R&D interface was even more important than market knowledge; this can be interpreted as meaning that market knowledge does not fully affect new product development unless it is properly integrated with R&D. According to Souder (1988), separation of R&D and marketing functions is only effective for handling simple technologies, simple markets, and well defined customer needs; for new product innovations, it is necessary to have cooperation between the marketing, R & D and other business functions. According to Ramaswami et al. (2009), better capability in involving customers in product development leads to better development of differentiated products. Olson et al. (2001) concurred that project performance is higher when marketing, R&D, and operations are highly involved in the early stages of new product development, regardless of the innovation level of the new product. Hise et al. (1990) divided the new product development process into three phases: input phase, design

phase and evaluation phase. When marketing and R & D demonstrate high levels of joint effort in determining the final design of new products, these products have higher levels of success compared to when there is low levels of cooperation. This applies to both consumer and industrial products.

The above indicates that there is strong empirical evidence for marketing having a positive role in new product development, especially by contributing market knowledge, when it is properly integrated with R&D and has a strong role in it, this leads to the following two hypotheses.

Hypothesis 1a: Marketing's involvement in PDM is positively related to PDM's performance

Hypothesis 1b: PDM performance is positively related to Firm's financial performance

## 2.3 Marketing and Supply Chain Management

Supply chain management (SCM) can be defined as "the systematic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole" (Mentzer et al., 2001). SCM is not just about logistics, as reflected by the Council of Supply Chain Management (previously the Council of Logistics Management) having separate definitions for logistics and supply chain management. SCM is about managing a network of companies and market actors. Companies do not so much compete against each other but networks of supply chains compete against other networks of supply chains (Lambert and Cooper, 2000).

According to Srivastava et al. (1999), Wu et al. (2006), and the Global Supply Chain Forum SCM process includes:

- Selecting and qualifying desired suppliers
- Establishing and managing inbound logistics

- Designing and managing internal logistics
- Establishing and managing outbound logistics
- Designing work flow in product/solution assembly
- Running batch manufacturing
- Acquiring, installing and maintaining process technology
- Order processing, pricing, billing, rebates and terms
- Managing (multiple) channels
- Managing customer services such as installation and maintenance to enable product use
- Customer service management
- Demand management
- Manufacturing flow management
- The use of information and communication technologies (ICT)
- Returns

As the above list shows that SCM includes many processes. Some are internal, but most are a combination of internal processes and cooperation and integration with external entities.

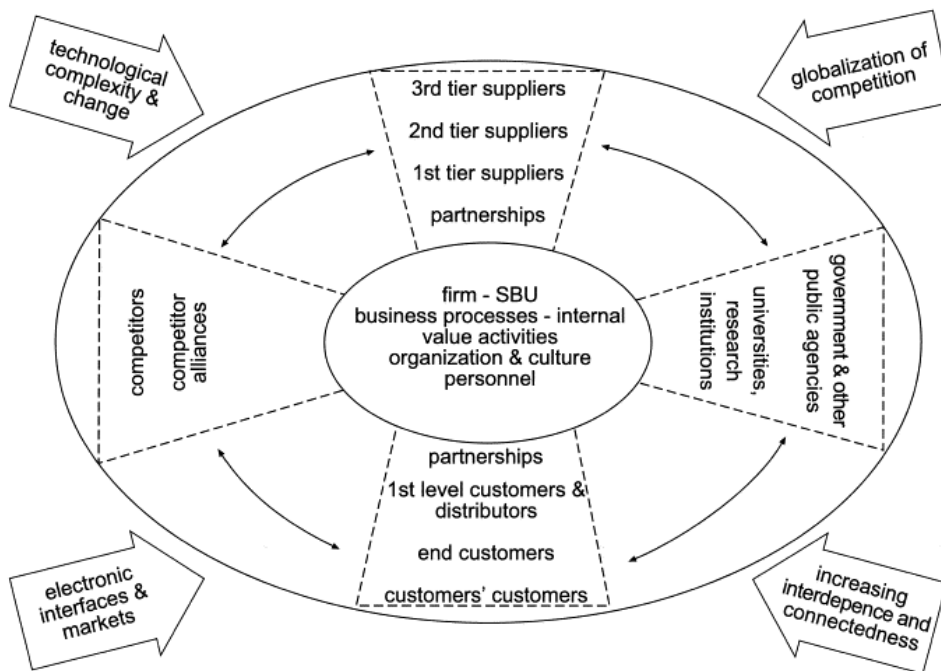
The main objective of SCM is to increase customer value. Increased customer value can be created in two distinct ways. According to Cooper and Ellram (1993), SCM has three objectives: reduce inventory investment in the chain, increase customer service through increased stock availability and reduced order cycle time, and help build a competitive advantage for the channel (channels) in order to create customer value. Cooper and Ellram's (1993) method focuses mostly on internal efficiency. The second way focuses on integration and cooperation between supply chain partners. Srivastava et al. (1999) argued that market-driven SCM includes shifting the focus away from obtaining the functionally best inputs at the cheapest possible prices, towards designing, managing, and integrating the firm's own supply chain with that of both suppliers and customers. The value experienced by the end customers is the main objective rather than internal goals. This



second way requires the use of market-based assets and capabilities in order to foster efficient and effective coordination and integration with members of the supply chain.

As a firm's supply chain consists of suppliers, buyers, end-users, inbound, internal, and outbound logistics, a supply chain is not a chain of businesses with one-to-one, business-to-business relationships but a network of multiple businesses and relationships (Lambert & Cooper, 2000), as presented in Figure 4. In fact, it is the networks that compete with each other not single companies (Möller & Halinen, 1999). Supply chain networks consist of the supply chain network structure, the supply chain business processes and the supply chain management components. How much a supply chain needs to be managed depends on the complexity of the product/service, the number of available suppliers, the length of the supply chains, and the number of suppliers and buyers at each level of the supply chains (Lambert & Cooper, 2000).

Figure 4: Focal firm perspective of a business network (adapted from Möller and Halinen, 1999)



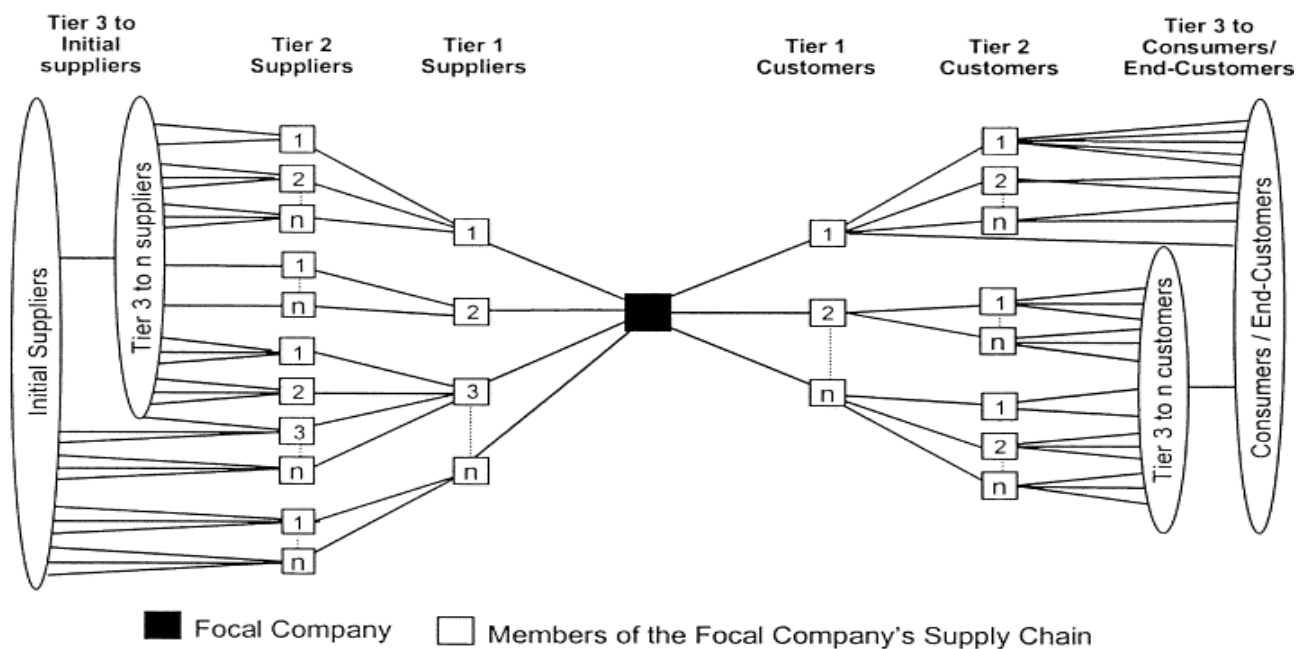
According to Lambert and Cooper (2000), there are three aspects to a firm's supply chain:

- The members of the supply chain
- The structural dimensions of the network

- The different types of process links across the supply chain

“The members of a supply chain include all companies/organizations, with whom the focal company interacts directly or indirectly through its suppliers or customers from point-of-origin to point-of-consumption” (Lambert et al., 1998). To make the complex supply chain more manageable, it is useful to make a distinction between primary and supporting members of the supply chain. Lambert and Cooper (2000) defined primary members as “all those autonomous companies or strategic business units who carry out value-adding activities (operational and/or managerial) in the business processes designed to produce a specific output for a particular customer or market”. Lambert et al. (1998) defined supporting members as “companies that simply provide resources, knowledge, utilities or assets for the primary members of the supply chain”. It should be noted that a same organization can be both a primary and a supporting member in the same supply chain.

Figure 5: Supply Chain Network Structure (adapted from Lambert & Cooper, 2000)

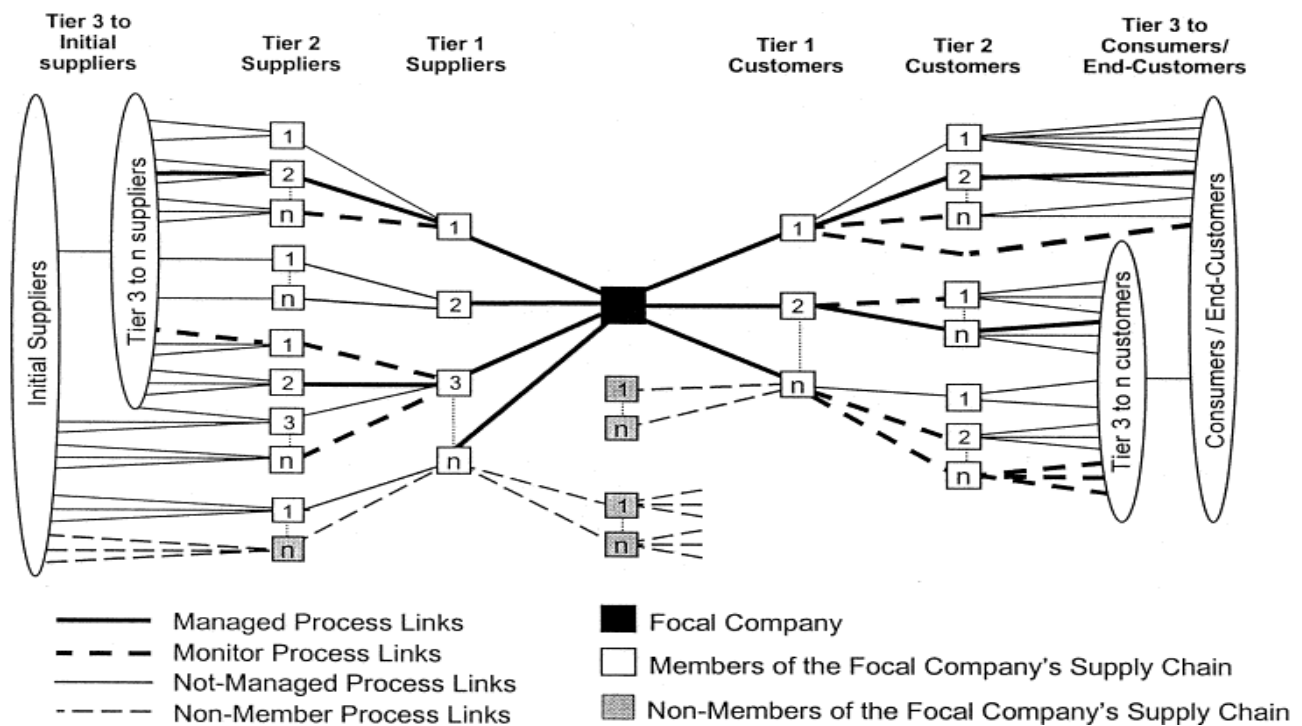


As Figure 5 shows, the supply chain network has three structural dimensions. Horizontal structure means the number of tiers across the supply chain. Depending on the industry/market the supply chain may be long and have many tiers or it can be short. Vertical structure refers to the number of suppliers/customers present in each tier. The supply chain may be narrow, with only a few members on each tier, or it can be wide with multiple members on each tier. The third structural dimension is the focal company's horizontal position in the supply chain. The focal company can

be near the initial source of supply, near to the end-user, or somewhere between these end-points of the supply chain (Lambert & Cooper, 2000).

The processes must be managed and integrated within the supply chain. However, integrating and managing all these processes with all members in the chain might not be desirable due to limited resources and the importance of supply chain members/processes. Therefore, the level of integration will vary between process links and time. Lambert and Cooper (2000) and Lambert et al. (1998) identified four different business process links: managed process links, monitored process links, not-managed process links, and non-member process links, as shown in Figure 6.

Figure 6: Types of Intercompany Business Process Links (Adapted from Lambert and Cooper, 2000)



Managed process links are those that the focal company considers important to manage and integrate. Monitored process links are not as critical to the focal company as managed process links but it is important for the focal company that these links are managed and integrated between other members of the supply chain network. Therefore the focal company will regularly monitor how the other company manage and integrate these links. Non-managed process links are those with which the focal company is not actively involved and are not important enough for

resources to be devoted to for monitoring. Non-member process links are process links between members of the focal company's supply chain and non-members of the supply chain. While non-member links are not considered a part of the focal company's supply chain, they can affect the performance of the focal company and its supply chain. For example, a non-member supplier can be a supplier to the focal company's biggest competitor.

Some internal supply chain business processes require integrating. Some firms prefer a functional structure for integration, some use a process structure, and others use a combined functional and process structure (Lambert & Cooper, 2000).

Lambert and Cooper (2000) identified nine supply chain management components for successful supply chain management.

- Planning and control
- Work structure
- Organization structure
- Product flow facility structure
- Information flow facility structure
- Management methods
- Power and leadership structure
- Risk and reward structure
- Culture and attitude

Planning and control of operations are the keys to creating a desired supply chain network. Control aspects can be operationalized as performance metrics for measuring supply chain success. The work structure indicates how the firm performs its tasks and activities. Organizational structure can refer to the structure of an individual firm or the whole supply chain network. Product flow facility structure is the network structure for sourcing, manufacturing and distributing across the supply chain. Information flow facility structure is one of the most important management components. Information flow has a strong influence on the efficiency of

the supply chain and is a primary component for integration in the supply chain. Management methods refer to the company philosophy and management techniques. For example, an organization can have a top-down or a bottom-up structure. The power and leadership structure will affect the channel form. Strong channel leaders have considerable influence on the supply chain. The risk and reward structure influences the long-term commitment of channel members. The culture and attitude of channel members affects how well the channel works as a supply chain (Lambert & Cooper, 2000).

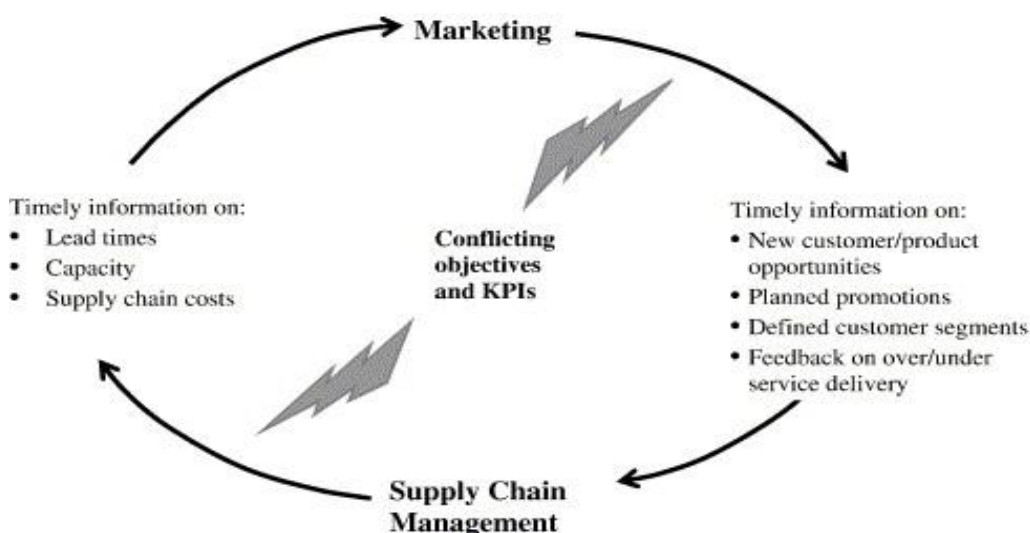
Jüttner et al. (2007) focused on outbound operations when integrating marketing and SCM. "Marketing is traditionally externally focused and creates customer value, while supply chain management (SCM) is inwardly focused and concentrates on the efficient use of resources in implementing marketing decisions". However, their view of integrating marketing and SCM can also be applied to inbound operations as there is evidence that market-based assets and capabilities can also improve inbound operations (Dyer & Hatch, 2006). Jüttner et al. (2007) referred to the integration of marketing and SCM as demand chain management (DCM). They divided integration into three themes: process integration, configuration, and social interactions. They propose a total of seven roles for marketing in these three integration themes.

According to Jüttner et al. (2007), process integration involves integrating demand and supply processes and the customer buying life cycle (shown in Figure 7). The role of Marketing in process integration is to (1) facilitate integration by disseminating customer and market information, (2) consider the effect of marketing activities from an integrated process perspective, and (3) to foster a demand-based rather than a supply-based integration of information needs.

Jüttner et al. described (2007) configuration as follows "Managing the demand chain configuration comprises the strategic decision on the number of customer segments the company can serve with differentiated supply chains as well as the structural aspect of a customer segment focused demand chain organization". Marketing has two roles in configuration integration. The first is to link the external customer-value segmentation with the internal segmentation of production, logistics, and sourcing. The second is to obtain knowledge about customer needs, and changes to those needs in order to ensure the structural adaptation requirements of the supply chain (Jüttner et al., 2007).

Social interaction entails the working relationships between people in marketing and in SCM. In many companies, there is a widespread lack of integration and interaction. Jüttner et al.'s (2007) general barriers to integration are somewhat similar to what Song et al. (1996) identified as barriers between marketing and R&D integration. The main barriers are lack of communication and information sharing, "us versus them" attitudes, conflicting key performance indicators (KPIs) between the two functions (especially when they are tied to reward systems), and a lack of common understanding of information/knowledge with functions *as they might interpret it differently*. Jüttner et al. (2007) proposed two ways in which marketing can improve social interaction between marketing and SCM. Firstly, marketing must proactively exchange information with SCM and provide timely information on defined customer segments, new customer/product opportunities, planned promotions, feedback on over/under service delivery, and seek information on lead times, capacity and pipeline costs (see Figure 7). Secondly, marketing must seek more collaboration with SCM in order to ensure mutual understanding of the information exchanged and collective goals.

Figure 7: The working relationship between marketing and SCM for demand chain activities (adapted from Juttner et al. 2007)



While the literature on marketing and new product development integration is quite extensive there has been considerably less literature on SCM and marketing integration (Ellinger, 2000). However, marketing, market-based assets and capabilities and supply chain management are not separate but inextricably intertwined. In fact, it could be argued that marketing and relational

marketing, which creates and leverages market-based relational assets, are vital for successful supply chain management (Min & Mentzer, 2000).

Market-based assets and capabilities have an impact on SCM. At least four marketing concepts have an impact on SCM: market information, information sharing, close long-term relationships, and inter-firm cooperation (Min and Mentzer, 2000). All four of Min and Mentzer's concepts can be traced to market-based assets and capabilities. Market information is an intellectual market-based asset and close long-term relationships are relational market-based assets. Information sharing and inter-firm cooperation are activities that require both market-based assets and capabilities. Marketing produces and stores market information that is needed in the process of building, maintaining and enhancing supply chain relationships. These relationships are created and maintained by information sharing, which is vital for the effective implementation of SCM across the supply chain partners both "upstream" and "downstream" (Shore & Venkatachalam, 2003). This requires two-way communication between the supply chain members. Successful SCM also requires trust, long-term relationships, and inter-firm cooperation between the supply chain members. Marketing facilitates relationship marketing, which focuses on creating and leveraging relational market-based assets, this promotes the long-term relationships and inter-firm cooperation required for successful SCM (Min and Mentzer, 2000; Bowersox et al., 2000). Internally cross-functional coordination, in the form of sharing information and joint planning on marketing promotions or expected sales increases, improves SCM's responsiveness to changes in markets (Stank et al, 1999).

Ellinger (2000) argued that logistics and marketing have joint responsibility for customer service. Siguaw et al. (1998) found that a supplier's intellectual market-based assets can positively influence a distributor's intellectual market-based assets and commitment to the supply chain partnership. Stank et al. (1999) found that frequent cooperation led to better internal SCM performance and better interdepartmental effectiveness. The infusion of market knowledge (intellectual market-based asset) to SCM resulted in improved SCM performance (Min et al., 2007) Information exchanges and collaborative communication with the supplier led to better supplier knowledge, increased affective cooperation, and led to continuous improvement in supplier performance (Dyer & Hatch, 2006; Joshi, 2009). While it has been previously stated, that it is not just individual companies that compete against each other but networks and supply chains, that compete against each other (Hult et al., 2007; Lambert & Cooper, 2000; Möller & Halinen, 1999),

Dyer and Hatch (2006) stated that even when competitors share the same supplier, they can get different performance from the supplier by using knowledge transfers and building relation-specific production capabilities that are not easily adopted to production for the competitor. High integration of marketing and SCM in firms leads to significantly better service quality, especially when dealing with service elements that go beyond the basics. Firms with high integration between marketing and SCM are better able to serve their customers' needs and respond to special customer service requests (Stank et al., 1999).

Based on the previous information the following two hypotheses are formed.

Hypothesis 2a: Marketing's involvement in SCM increases SCM's performance

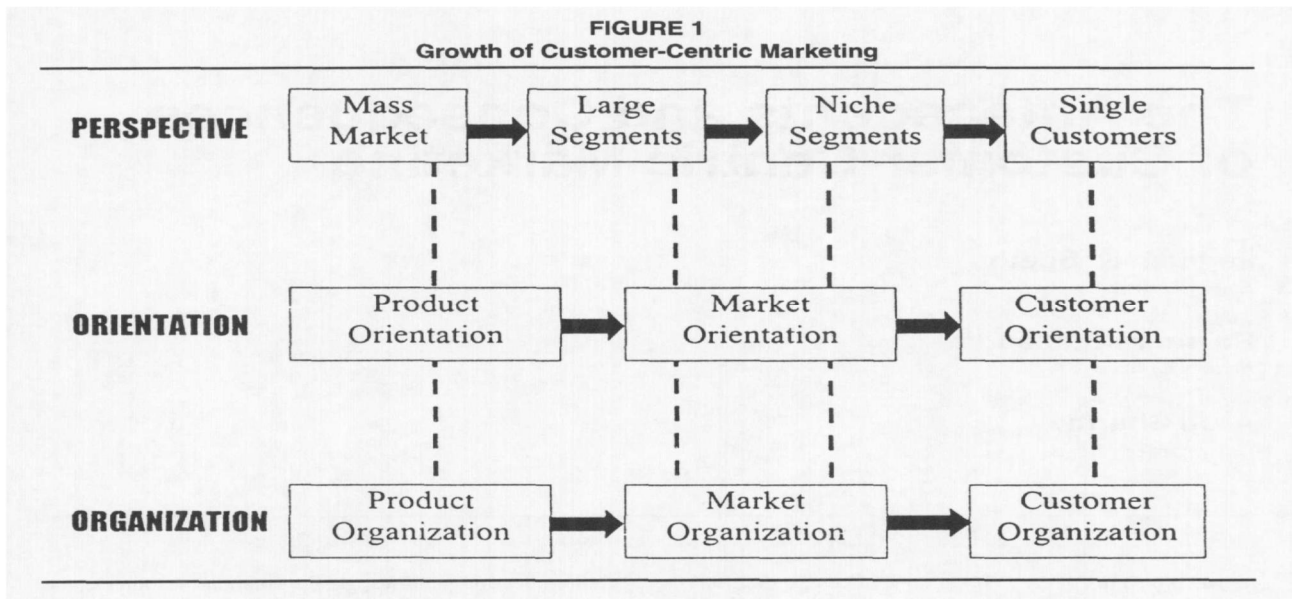
Hypothesis 2b: SCM is positively related to Firm's financial performance

## 2.4 Marketing and Customer Relationship Management

Customer relationship management is mainly a strategic process that builds customer relationships by creating customer/market intelligence in order to achieve an optimal profitable customer portfolio (Srivastava et al., 1999; Zablah et al., 2004; Payne and Flow, 2005). From the theoretical perspective of the present study, CRM's market-based capabilities create customer-focused intellectual market-based assets. These assets are used to create relational market-based assets, which, in turn, are leveraged to create value to the customers and to the firm. Zablah et al. (2004) reviewed five different analytical perspectives on CRM, as 1) a process, 2) a strategy, 3) a philosophy, 4) a capability and 5) a technology. According to Zablah et al. (2004) CRM is best viewed as process that receives contribution from the remaining perspectives. Several other authors share the process perspective, including Srivastava et al. (1999); Reinartz et al. (2004). The CRM as a philosophy perspective is particularly important from the marketing point of view as it promotes a customer-centric culture in an organization that is at the center of market-based assets and capabilities and marketing (Wilson et al., 2002; Sheth et al., 2000). According to Day (2004) this customer-oriented approach is the new dominant logic for marketing. The evolution to this dominant logic is shown in Figure 8.



Figure 8: Evolution to customer-centric marketing (adapted from Sheth et al., 2000)



According to Parvatiyar and Sheth (2001) the rise of CRM can be attributed to the advent of sophisticated computer and telecommunication technologies that enable producers to directly interact with end-customers, and to the growth of the service industry, where creating a relationship with the customer can be very important.

There are many views on what CRM entails. The literature suggests that CRM contains many tactical and strategic actions including marketing, technology, sales, and customer service. According to Parvatiyar and Sheth (2001), it extends to many areas of marketing and strategic decisions. The content of CRM can be viewed from a narrow tactical perspective or from a broad strategic perspective. According to Srivastava et al. (1999) the CRM process includes but is not limited to:

- Identifying potential new customers
- Determining the needs of existing and potential new customers
- learning about product usage and application
- Developing/executing advertising programs
- Developing/executing promotion programs
- Developing/executing service programs
- Developing/executing sales programs
- Acquiring/leveraging information technology/system for customer contact

- Managing customer site visit teams
- Enhancing trust and customer loyalty
- Cross-selling and upselling of product service offerings

According to Stone et al. (1996), another important factor of CRM is identifying company's individual customers. This corresponds with what Sheth et al. (2000) referred to as customer-centric marketing, which allows the creation of long-term relationships between the company and its customers and manages that relationship to the benefit of the company and its customers. A subset of identifying company's current customers is identifying the value of these current customers, that is, the amount of income or other benefits they provide for the company. It is especially important to identify the high-value customers who bring large profits to companies (Ramaswami et al., 2009; Zhou et al., 2005). Stone et al. (1996) argued that CRM helps differentiate between profitable and non-profitable customers. A non-profitable customer is generally one that costs more to serve than it brings to the company. The identification of customers is part of market segmentation, which is another important part of CRM and marketing in general. Segmentation is the division of customers into homogeneous segments based on demographic and/or behavioral factors or, according to Peppers et al. (1999) by their needs and value. Batt (2000) argued that, in services, the best way to segment customers is according to their profitability.

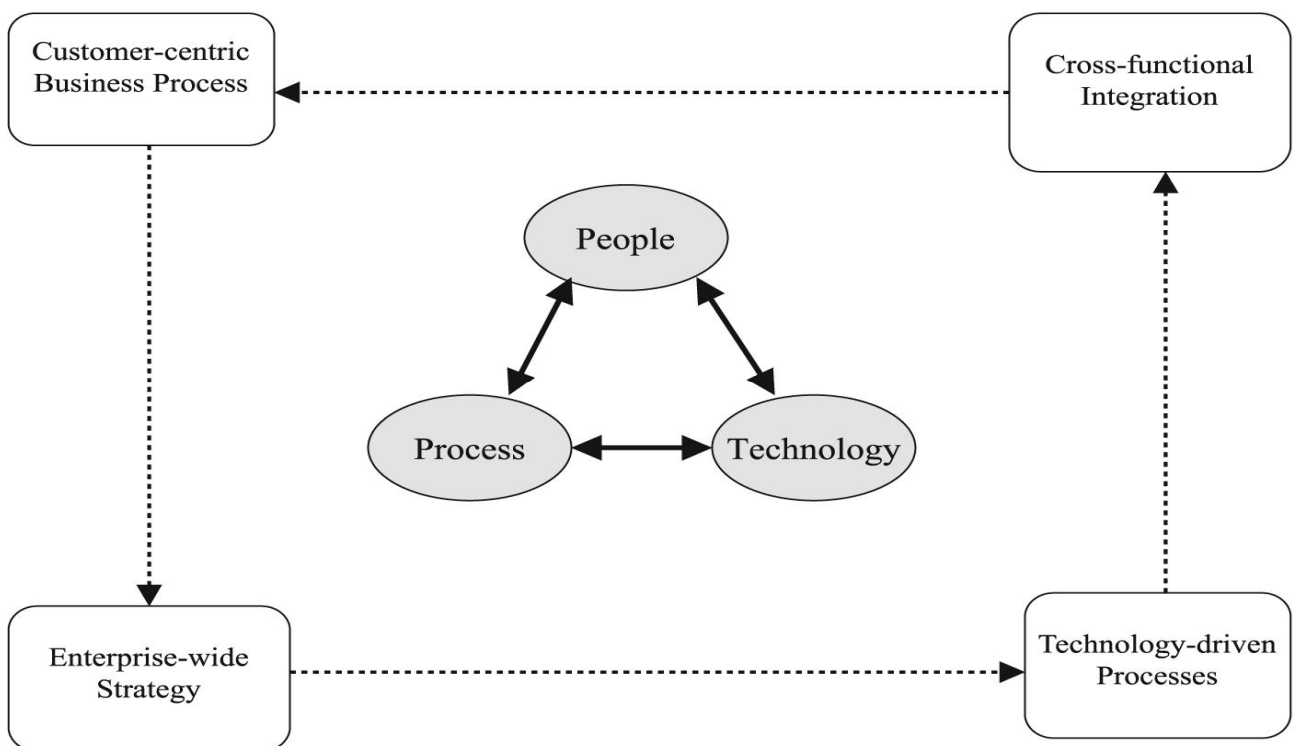
Because there are several misunderstandings regarding what CRM is, what it contains, and many of the real-world failures in implementing it. It is necessary to go into detail regarding to the implementation of CRM-systems.

According to Rigby et al. (2000) many CRM-system implementations fail, mainly due to implementing CRM before creating a customer strategy, implementing CRM before changing the organization to match the CRM, assuming that more CRM technology is better, and trying to build relationships with the wrong customers or trying to build relationships the wrong way. Based on these arguments, in order for CRM implementation to be successful, it should be a customer-centric, integrated, organization-wide process that uses technology but understands that technology alone does not create successful CRM.

Chen and Popovich (2003) argued that a successful CRM implementation requires an integrated approach to technology, process, and people (Figure 9). Developing CRM in a company requires a

company-wide, cross-functional, customer-focused business process engineering. Chen and Popovich (2003) claimed that focusing solely on the technological aspect of CRM (buying and implementing CRM software) is likely to lead to failure. Other authors have expressed this view as well (Parvatiyar & Sheth, 2001; Rigby et al., 2002).

Figure 9: CRM implementation model (adapted from Chen and Popovich 2003)



The technological aspects of CRM include data warehouses, enterprise resource planning (ERP) systems, and the Internet (Chen & Popovich, 2003). Chen and Popovich (2003) defined a data warehouse as an information technology management tool that collects customer data throughout the organization by combining all the organization’s databases and provides instant access to all business decision makers in the organization. Data warehouses make CRM possible since they organize customer data into customer intelligence that provides better understanding of the customer. According to Chen and Popovich (2003), the main benefits of data warehouses are:

- Accurate and faster access to information in order to facilitate responses to customer questions

- Data quality and filtering to eliminate bad and duplicate data
- The ability to extract, manipulate, and drill-down data quickly for profitable analysis, customer profiling, and retention modeling
- Advanced data consolidation and data analysis tools for higher-level summary as well as detailed reports
- The ability to calculate the total present value and estimate future value of each and every customer

Chen and Popovich (2003) explained that ERP systems are used to link all internal functional areas of a company together (such as marketing, manufacturing, and distribution) and the external areas (such as suppliers and customers) into an integrated system with shared data. While ERP systems are not required for CRM they can be beneficial. While ERP systems complement and enhance CRM, there are several basic differences between them. According to Chen and Popovich (2003), ERP systems mainly integrate back-office functions instead of integrating back- and front-office functions as CRM systems do, and they focus on fragmented information systems instead of fragmented customer data. The Internet has brought new opportunities and challenges for CRM. It gives customers greater access to companies with online ordering and around-the-clock operations (Chen & Popovich, 2003). Lee-Kelley et al. (2003) found support that a successful Internet CRM implementation can increase customer loyalty. Effective CRM implementation requires an information system that shares relevant customer information across all interface units, collects all relevant data from each customer interface, and provides knowledge of the marketing strategy and tactics needed to secure customer business and loyalty to employees interacting with the customer (Parvatiyar & Sheth, 2001).

CRM is an organization-wide process (Srivastava et al., (1999); Reinartz et al., (2004)), therefore, in order to implement it, the business processes of the whole organization must be adapted to it. Srivastava et al. (1999) claimed that, in the current competitive environment, companies must be customer-oriented instead of product-oriented in order to be successful. According to Chen and Popovich (2003), CRM techniques are focused on single customers, in order to accomplish this focus requires the firm to be organized around the customer instead of the product. Customer-oriented organizations integrate marketing and other business processes to serve customers and respond to market changes. This makes it necessary to redesign core business processes focusing

on the customer perspective and involving customer feedback. Payne and Frow (2005) identified five processes that are essential for a company to be customer-oriented:

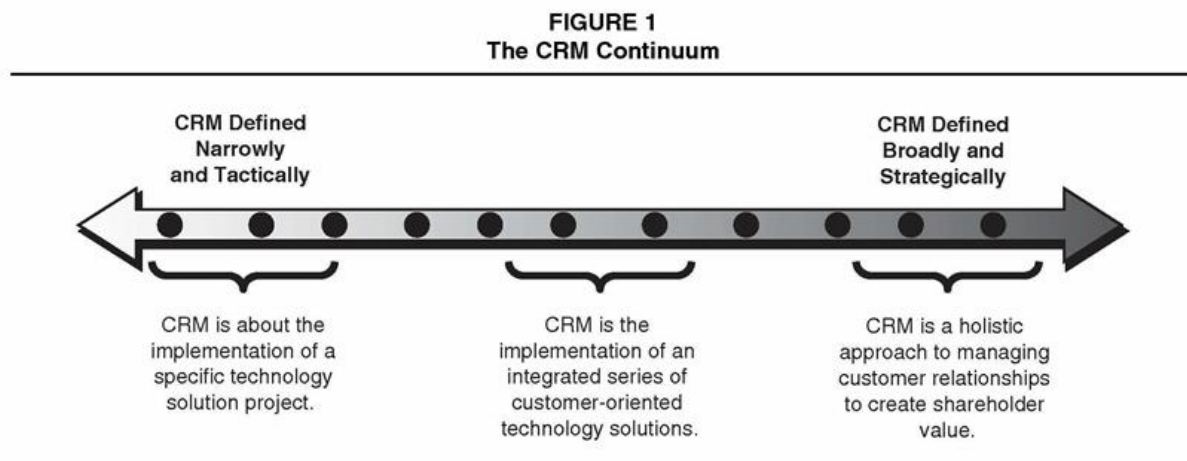
- A strategy-development process that includes not only a business strategy, but also a customer strategy
- The dual value creation process (firm and customer value) that is at the heart of the exchange process
- The multichannel integration process that encompasses all customer touch points
- The information-management process that includes the data collection and data analysis functions
- The performance-assessment process that ties the firm's actions to its performance

In order to redesign business processes, it is necessary to have the support of senior management (Chen and Popovich, 2003; Wilson et al., 2002; Shah et al., 2006); without it, the organization-wide culture and process change will fail. According to Ryals and Knox (2001), CRM requires an organization culture that is adaptive and responsive to change with high quality communication within the organization. However, since CRM implementation is an organization-wide process, it also requires the cooperation of various business departments in order to integrate their functions for comprehensive customer focus, and individual employees, as there may be changes to their jobs, the organizational culture, and how their performance is measured and rewarded after CRM implementation (Ryals and Knox, 2001). According to Shah et al. (2006) members of the organization must share two distinctive views; that understanding comes from "living" with customers and that customer loyalty is the key to long-term profitability.

According to Day (2004), marketing's new dominant logic is customer-centric. This suggests not only that marketing could improve CRM with PDM and SCM (as has been argued in this thesis), but that CRM is an inherently new form of marketing or that marketing is CRM. While the emergence of CRM can be attributed to the rise of advanced and sophisticated computer and communication technologies (Parvatiyar & Sheth, 2001), the technology is only an enabler. The role of marketing in CRM is to ensure that CRM is customer-oriented and not technology-oriented. Customers are what Srivastava et al. (1998) referred to as a company's market-based assets, and CRM is what nurtures, develops, and leverages these assets. Marketing is crucial to ensure that CRM focuses on what Srivastava et al. (1999) and various other authors (Zablah et al., 2004) referred to as creating

an optimal customer portfolio. In other words this means acquiring and keeping profitable customers, maximizing their life-time value and, in so doing, increasing shareholder value. The role of marketing is to move CRM from a narrowly and tactically defined process to a broadly and strategically defined process (Figure 10).

Figure 10: The CRM continuum (adapted from Payne & Flow 2005)



Stone et al. (1996) argued that the main benefits of good CRM for a company entail one or more of the following factors: increased customer retention and loyalty, increased sales, lower costs of attracting customers, steadier cash flow, and reduced costs of sales. In addition to the benefits mentioned above, CRM can also help in develop customized products and services (Rigby et al., 2002), which would improve product development management success.

Customer retention is about holding on to customers. Reichheld et al. (2000) claimed that 5% increase in customer retention or loyalty increases a company's profits by 25 to 100 percent. This claim is supported by Gupta et al. (2004) who found that 1% increase in customer retention increases customer value to the firm by 2.45 to 6.75 percent. Reichheld et al. (2000) argued that loyalty is a powerful indicator of value provided to customers. Loyalty leads to increased revenues and market share as customers make referrals and repeat purchases. This customer satisfaction and loyalty increases future cash flows and reduces their variability (Gruca & Rego, 2005). Increased loyalty also lowers costs as the need to acquire new customers and replace old ones diminishes. Finally, loyal customers may become less price-sensitive and companies become more skilled at serving their customers. This increase of revenue and decrease of costs leads to higher profits, which can be invested in improving customer value.

Additional ways to increase customer loyalty include loyalty programs and increasing switching costs (Srivastava et al., 1999). According to Dowling and Uncles (1997), loyalty programs seek to bond customers to a company or its products and services. Loyalty programs usually reward customers who participate in them. According to Dowling and Uncles (1997), these rewards might directly support the product's value proposition, either immediately (promotions) or in a delayed fashion (frequent flyer clubs). The rewards might also be indirect; in other words, not related to the product such as lotteries. Switching costs can be divided into three types: procedural, financial, and relational (Burnham et al., 2003). Procedural switching costs include economic risk, evaluation, learning, and setup costs. Financial switching costs include loss of benefits and financial-loss costs. Relational switching costs include personal-relationship loss and brand relationship loss costs. According to Burnham et al. (2003), all these types of switching costs significantly influence customer's intentions to continue their relationship with a company. Srivastava et al. (1999) and Burnham et al. (2003) argued that companies can create switching costs by bundling products and services, augmenting perceptions of product complexity (by bundling and educating customers of product features), and encouraging broader product use. This management of market-based assets creates barriers for competitors to acquire customers or markets (McNaughton et al., 2001). Burnham et al. (2003) also noted that loyalty programs can increase a customer's switching costs, which exists in both business-to-customer markets (b2c) and in business-to-business markets (b2b).

According to Ryals (2005), CRM delivers better firm performance by measuring customer relationships and helping to manage customer relationships. In other words, firms should focus on profitable customer retention and profitable customer management. By segmenting potential and current customers according to their lifetime value, a company can determine which customers to pursue and serve. A company's profitability increases when it focuses on profitable customers; that is, it divests unprofitable customers and only acquires profitable ones. As CRM helps to identify profitable customers, CRM activities can also increase the profitability of customers; for example, Srivastava et al. (1999) claimed that CRM can help in cross-selling and up-selling to current clients. Cross-selling is the selling of additional services or products related to those that the customer has bought. Cross-selling can also have an effect on switching costs by, in effect, bundling products. Up-selling involves selling the customer more high-end products or services than what had been sold previously. Up-selling and cross-selling both increase the customer's value to the company.

While segmenting customers by their value is useful for determining how much to serve their customers and target them with marketing actions, it does not indicate what type of marketing actions should be taken in order to increase up-selling and cross-selling. In order to attract customers and get current customers to respond to marketing actions, other segmenting measures within CRM should be taken. Berger et al. (2002) argued for segmentation methods based on customers' needs and purchase behavior, including such factors as purchasing power, purchasing regularity, and what products and/or services they purchase in order to make up-selling and cross-selling more effective.

CRM process might be the purest form of market-based assets and capabilities, since its function is to create and leverage intellectual and relational market-based assets. The firm's market-based capabilities will determine how well the market-based assets are created and leveraged.

The following hypotheses are drawn from this chapter's literature review.

Hypothesis 3a: Marketing's involvement in CRM improves CRM's performance

Hypothesis 3b: CRM performance is positively related to Firm's financial performance

## 2.5 Financial Performance

This chapter defines the metrics used to evaluate firm's financial performance in this thesis. Financial performance is firm profitability. In this thesis, financial performance includes operating margin, return on investment (ROI), and return on assets (ROA). Operating margin is operating income divided by revenue, which is a good way to compare the profitability of small companies with that of large companies. ROI is the ratio of money gained or lost in an investment compared to the amount of money invested, which shows the effectiveness of a company's investments. ROA is net income divided by the assets of the company, which shows how effective the company assets are at creating income. These three metrics are well suited to measure and compare the profitability of companies, regardless of their size, as opposed to a metric such as revenue. Accordingly, these financial performance metrics will be used to test the hypotheses of this thesis.

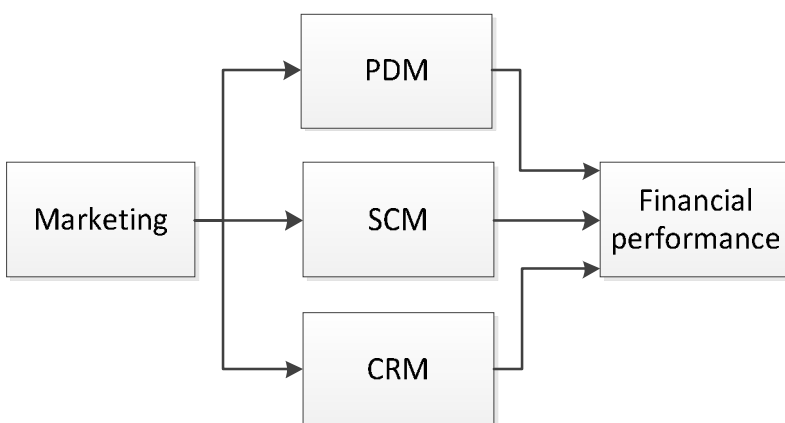


## 2.6 Conceptual Framework

In this chapter, a conceptual framework is created in order to integrate the claims of this thesis. The earlier concepts will also be revisited.

Srivastava et al. (2001) argued that the role of marketing is to develop and leverage market-based assets and capabilities in order to improve a company's financial performance and create shareholder value. Moorman and Rust (1999) claimed that the function of marketing is to manage connections between customers, while the critical company functions/processes add to Srivastava et al.'s (2001) view. According to Srivastava et al. (1999), these critical company processes (PDM, SCM, and CRM), are those market-facing processes that explicitly contribute to creating and sustaining customer value. Also, Slater and Narver (1994b) argued that cooperation between marketing and key company functions is necessary for competing effectively in the marketplace. The arguments of Srivastava et al. (1999; 2001) Slater and Narver (1994b) and Moorman and Rust (1999) suggests that the strong role of marketing in the three market-facing business processes improves their performance, which leads to better financial performance for a company.

Figure 11: Theoretical framework of this study



The conceptual model in Figure 11 represents the hypotheses of this study. Based on the hypotheses, marketing is expected to have a positive causal relationship with the core business processes (PDM, SCM, and CRM) and the core business processes are expected to have a positive causal relationship with financial performance.

### 3. Research Methods

This chapter explains how the data of this research was collected, what the data consists of, how the variables are constructed and operationalized, and what statistical methods are used in the empirical part of this thesis. Because of the amount and nature of the data, a quantitative research method was the appropriate choice.

#### 3.1 Collecting the Data

The data for this thesis was collected using a broad national study on the state of marketing in Finnish companies by the StratMark research project. In the spring-winter period 2010 the StratMark research project conducted its second survey on Finnish marketing and business skill and marketing's position in the business field. The 2010 survey is a follow up to the 2008 survey and helps track changes in the state of Finnish marketing. The online survey was directed at firms with five or more employees, with contact information for potential survey participants collected from MicroMedia's database. There were 1134 responses, which translates to eight percent response rate for personnel and 10% response rate for companies. The survey contained eight thematic groups exploring each firm's business environment and position in it, the role of marketing, sales and marketing, the effectiveness and productivity of marketing, business processes and marketing, managerial challenges and marketing investments, marketing orientation, learning and innovation, and background information. The questionnaire is included in Appendix 1. Of those who answered the survey, 38 percent were chief executive officers (CEO), 3 percent were executive vice presidents, 5 percent were chairmen of the board, 12 percent were sales and/or marketing directors, 22 percent were other executives, 5 percent were regional managers, 4 percent were partners and 11 percent were general managers.

#### 3.2 Research Data

The data was collected from a wide variety of companies in different industries. The number of respondents is taken from the 2010 data, upon which this thesis is based. For comparison purposes, data from the 2008 survey has been added.

Table 1: Top 15 respondents by industry.

| Industry  | 2010        |       | 2008        |       |
|---|-------------|-------|-------------|-------|
|   | Respondents | %     | Respondents | %     |
| Business-business services                                  | 260         | 22.93 | 244         | 21.27 |
| Data processing services                                    | 114         | 10.05 | 94          | 8.2   |
| Agency activity and wholesale                               | 73          | 6.44  | 75          | 6.54  |
| Finance- and insurance, banks                               | 73          | 6.44  | 71          | 6.19  |
| Machine and equipment manufacturing                         | 71          | 6.26  | 61          | 5.32  |
| Construction  | 49          | 4.32  | 49          | 4.27  |
| Metal refining and manufacture                              | 47          | 4.14  | 47          | 4.1   |
| Paper industry, publishing and graphic production           | 46          | 4.06  | 69          | 6.02  |
| oil-, rubber-, plastic- and chemical products and chemicals | 43          | 3.79  | 34          | 2.96  |
| Electronics and electrical products                         | 42          | 3.70  | 57          | 4.97  |
| Transportation, storage and telecommunications              | 39          | 3.44  | 57          | 4.97  |
| Retailing   | 38          | 3.35  | 44          | 3.84  |
| Food and beverages  | 27          | 2.38  | 41          | 3.57  |
| Hotels and restaurants                                      | 26          | 2.26  | 22          | 1.92  |
| Real estate services and rental activity                    | 26          | 2.26  | 41          | 3.57  |

As Table 1 shows, the survey strongly represents services and business-to-business companies. The distribution of respondents has remained much the same as in the 2008 survey. The top four industries are the same and while there have been some changes from 2008 data (paper industry, publishing and graphic production, data processing services), the two data sets are comparable. In Table 2, the respondents' distribution is presented relative to the size of the company by their number of employees and market share.

Table 2: Company size by number of employees and market share

| Personnel | Respondents | %    | Market share | Respondents | %    |
|-----------|-------------|------|--------------|-------------|------|
| 1-5       | 95          | 8,4  | <1%          | 56          | 4,9  |
| 6-10      | 135         | 11,9 | 1%-3%        | 90          | 7,9  |
| 11-20     | 185         | 16,3 | 3%-5%        | 85          | 7,5  |
| 21-50     | 243         | 21,4 | 5%-10%       | 113         | 10,0 |
| 51-100    | 128         | 11,3 | 10%-20%      | 189         | 16,7 |
| 101-250   | 129         | 11,4 | 20%-35%      | 191         | 16,8 |
| 251-500   | 65          | 5,7  | 35%-50%      | 140         | 12,4 |
| >500      | 154         | 13,6 | >50%         | 127         | 11,2 |

Based on the number of employees, the European Commission classifies companies as micro-, small-, medium-, or large-sized companies (<http://ec.europa.eu>). As Table 2 shows, most of the respondents (58 percent) represented small or micro companies with 50 or fewer employees. A total of 22.7 percent were medium-sized companies with 51-250 employees, and 19.3 percent were large companies with over 250 employees. The company size in this survey differs strongly from the overall distribution in Finland, where 99.1 percent of companies are small, 0.7 percent are medium-sized and 0.2 percent are large companies (Statistics Finland, 2009). This difference can be partly explained by excluding all companies with fewer than five employees. Despite the lower amount of small companies the sample is quite extensive. In terms of market share, the respondents were quite evenly distributed. Table 3 presents the market types in which the respondents operate.

Table 3: Market type

| Market type             | Respondents | %    |
|-------------------------|-------------|------|
| New, developing markets | 146         | 12,9 |
| Growing markets         | 460         | 40,6 |
| Mature markets          | 425         | 37,5 |
| Declining markets       | 103         | 9,1  |

It is clear from Table 3 that most respondents (78,1%) operate in growing or mature markets, which are more stable.

### 3.3 Construction and Operationalization of Variables

The construction of variables is based on the Markkinoinnin tila 2010 survey. The empirical part of this study includes five constructs (unobservable or latent concept), of which four are endogenous and one is exogenous. The endogenous constructs are product development management, supply chain management, customer relationship management, and financial performance. The exogenous construct is marketing (role/involvement). The constructs of core business processes (PDM, SCM, and CRM) discussed by Srivastava et al. (1999) consist of multiple indicators that can

be regarded as sub-processes for the main processes. The construct of financial performance also includes several indicators.

### 3.3.1. Endogenous Variables

Endogenous latent variables are equivalent to dependent variables that are theoretically determined by factors in the model. They are causally dependent on other variables, either exogenous variables or other endogenous variables (Loehlin, 2004; Hair et al., 2010).

#### Product Development Management

Srivastava et al. (1999) defined PDM as a process that aims to create solutions that customers need and want. The indicators are measured on a scale from 1 to 7, with 1 being "much worse than competitors" and 7 being "much better than competitors".

#### Supply Chain Management

According to Council of Supply Chain Management Professionals, SCM encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, SCM integrates supply and demand management within and across companies. The indicators are measured on a scale of 1 to 7, with 1 being "much worse than competitors" and 7 being "much better than competitors".

#### Customer Relationship Management

According to Srivastava et al. (1999) CRM is a process that identifies customers, creates customer knowledge, shapes customer perception of a firm's products and image, builds customer relationships through satisfactory experiences, and maximizes customer responses for optimal revenue and profit growth. The indicators are measured on a scale of 1 to 7, with 1 being "much worse than competitors" and 7 being "much better than competitors".

## Financial Performance

Financial performance indicators are measured on a scale of 1 to 7, where 1 is “much worse than competitors” and 7 is “much better than competitors”. While these indicators are subjective rather than objective, previous research has shown that subjective measures correlate strongly with objective measures (Dess & Robinson, 1984). The subjective measures correlated well with objective measures when return on assets and operating margin were used (Dess & Robinson, 1984; Pearce et al., 1987). This offers reassurances that subjective measures are also appropriate for return on investment.

### 3.3.2 Exogenous Variables

Exogenous latent variables are the equivalent of independent variables. They are determined by factors outside the model since they are not influenced causally by any factors in the model (Loehlin, 2004; Hair et al., 2010). The primary role of marketing is to develop and manage market-based assets and capabilities. When properly integrated with the three core market-facing business processes (PDM, SCM, and CRM), these market-based assets and capabilities will impact the performance of these core processes, which will influence the firm’s financial performance (Srivastava et al., 1999; Ramaswami et al., 2009) Because this thesis studies the influence of marketing on core business processes (PDM, SCM, and CRM) and financial performance, the strategic role of marketing is the only exogenous latent variable in this thesis’ model.

### Marketing’s Strategic Role

Marketing’s strategic role is the exogenous variable in this model. Marketing’s strategic role is measured on a scale of 1 to 5 for all three core business processes, where 1 is “no role” and 5 is “very strong role”.

## 3.4. Methods of Statistical Analysis

The data analysis in this study was performed using two confirmatory multivariate techniques. Confirmatory factor analysis (CFA) was used to test the theoretical model in order to build a

measurement model to be used in a further analysis with the structural equation model (SEM) to test the study's hypotheses.

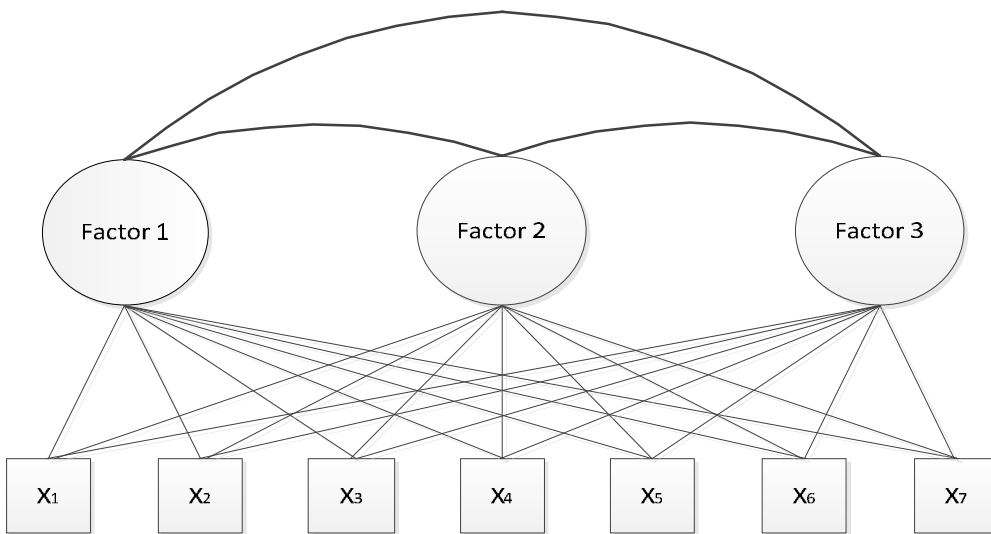
### 3.4.1 Confirmatory Factor Analysis

CFA differs philosophically from exploratory factor analysis (EFA). EFA explores the data and provides information on how many factors are needed to best represent the data. In EFA all measured variables are related to every factor by factor loading estimate (see Figure 12). The distinctive difference is that the factors are derived from statistical results and not from theory (Hair et al., 2010). However, there are several disadvantages with using EFA. According to Long (1986), a researcher must assume that:

- All common factors are correlated (or all common factors are uncorrelated)
- All observed variables are directly affected by all common factors
- Unique factors (errors) are uncorrelated with one another
- All observed variables are affected by a unique factor
- All latent variables are uncorrelated with all unique factors

According to Long (1986), these assumptions are made regardless of their appropriateness, also "additional and generally arbitrary assumptions must then be imposed in order to estimate the model's parameters." The EFA model's inability to incorporate meaningful constraints and the necessary incorporation of meaningless constraints make it a less than ideal analysis model for this thesis (Long, 1986).

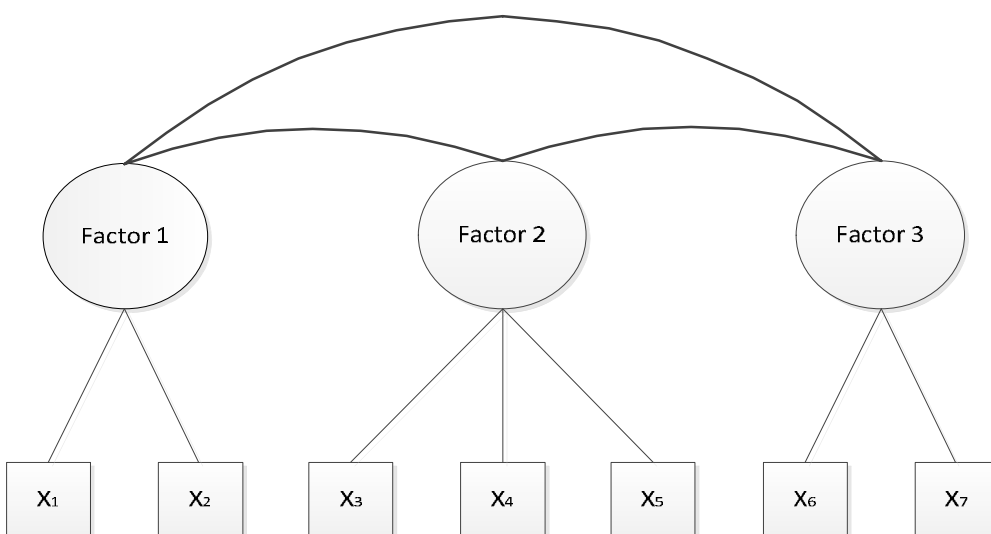
Figure 12: EFA model (adapted from Long, 1986)



(The unique factors have been removed from the figure for clarity.)

In contrast to the EFA, use of the CFA model allows the researcher to specify the number of factors that exist for a set of variables and which factor each variable will load on before the data is analyzed (Hair et al., 2010). In other words, the statistical model will not assign variables to the factors. Instead, the researcher will do that based on the theory being tested. Also, a variable is only assigned to a single factor and cross-loadings are assigned (see Figure 13). CFA allows the researcher to either confirm or reject his theory by determining how well the theoretical specification of factors matches reality of the data (Hair et al., 2010).

Figure 13: CFA model (Adapted from Long 1986)



(The unique factors have been removed from the figure for clarity)



Since this thesis tests the effect of marketing on core business processes as defined by Srivastava et al. (1999), CFA is a proper method with which to analyze the data as the core business processes will be represented by factors. Despite the appropriateness of using CFA for this study, an EFA is also performed in order to ensure the stability of the CFA model. All of the variables/indicators in EFA correlate with every factor (see Figure 12), therefore if both methods yield similar factor models, this indicates validity of the theoretical framework. The key results for this study are factor loadings, which are the correlation between original variables and the factors. There are different views about how high the values should be. Hair et al. (2010) required values for factory loadings to be greater than  $\pm 0.50$  in order to be considered practically significant. On the other hand, Kline (2011) suggested that factory loadings greater than  $\pm 0.70$  are ideal.

Construct validity is the extent to which a set of measured variables actually represent the latent construct (factor) they are designed to measure (Hair et al., 2010). According to Campbell and Fiske (1959), both convergent validation and discriminant validation are both required in order to establish construct validity. Convergent validity is the extent to which the indicators of a specific factor converge. Discrimination validity is the extent to which one factor is truly distinct from another factor in the model. Suitable convergent validity is  $> 0.5$  at minimum and is ideally  $> 0.7$  (Hair Jr. et al, 2010). In discriminant validity, 1 would mean that the factors are basically the same and could just make up one factor. Discriminant validity is supported when the average variance extracted (AVE) for factor is greater than the shared variance between factors ( $> 0.50$ ) or the estimated correlations between constructs are not too high ( $> 0.85$ ) (Kline, 2011).

### 3.4.2 Structural Equation Modeling

Structural equation modeling (SEM) seeks to explain the relationships among multiple variables. It can be considered as the combining of factor analysis and regression (path) analysis (Hair et al., 2010). SEM, which is the second confirmatory multivariate analysis method used in this study, is used after confirmatory factor analysis (CFA).

According to Hair et al. (2010), although SEM models can be tested in several ways, all structural equation models share three characteristics:

- Estimation of multiple and interrelated dependence relationships

- An ability to represent unobserved concepts in these relationships and account for measurement error in the estimation process
- Defining a model to explain the entire set of relationships

What separates SEM from other multivariate techniques is the use of separate relationships for each set of dependent variables, which means that SEM can simultaneously estimate a series of separate but interdependent multiple regression equations by specifying the structural model that a statistical program uses.

Covariance is the basic statistic of SEM. It can be presented as:

$$cov_{xy} = r_{xy} SD_x SD_y$$

Where  $r_{xy}$  is the Pearson correlation and  $SD_x$  and  $SD_y$  are their standard deviations. Covariance represents the strength of the association between X and Y and their variabilities (Kline, 2011).

Figure 14: Simple structural equation- based path diagram (adapted from Loehlin, 2004)

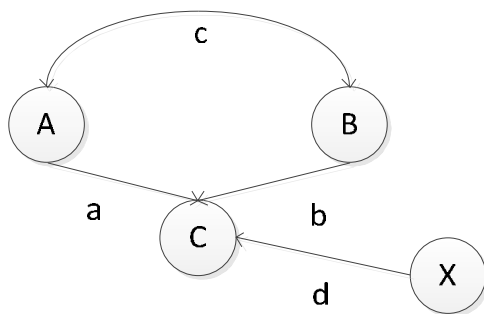


Figure 14 contains a simple structural equation, where  $C = aA + bB + dX$ . There a, b, and d are structural coefficients, X is the “extraneous” variable or the “error” variable, A and B are the independent variables, and C is the dependent variable. In structural equation modeling each equation expresses a downstream variable (dependent variable) as a function of the causal paths leading to it. There will be as many equations as there are dependent variables (Loehlin, 2004; Hayduk, 1989).

According to Hair et al. (2010) using SEM is a six stage process:

Stage 1: Define individual constructs

Stage 2: Develop and specify the measurement model

Stage 3: Design a study to produce empirical results

Stage 4: Assess the measurement model validity

Stage 5: Specify the structural model

Stage 6: Assess structural model validity

Reliability is a measure of the degree to which a set of indicators of a latent construct is internally consistent. It represents the extent to which the indicators measure the same thing or how interrelated they are. A regression coefficient is composed of two items: the real structural coefficient between the dependent and the independent variable and the reliability of the predictor variable. The effect of measurement error can be shown as an expression of the regression coefficient

$$\beta_{y.x} = \beta_s \times p_x$$

$\beta_{y.x}$  is the observed coefficient,  $\beta_s$  is the true structural coefficient, and  $p_x$  is the reliability of the predictor variable. SEM makes an estimate of the true structural coefficient instead of the observed regression coefficient. This is critical unless reliability is 100 percent, so SEM corrects for the amount of measurement error in the variables.

When interpreting the results of SEM analysis, the main focus is on the structural parameter estimates, which are SEM's version of regression coefficients and measure the linear relationship between constructs. The higher the value, the stronger the relationship is between constructs (Hair et al., 2010).

According to Hair et al. (2010) the recommended minimum sample size used in SEM depends on five considerations:

1. Multivariate normality
2. Estimation technique
3. Model complexity
4. Amount of missing data
5. Average error variance among the reflective indicators

### 3.4.3 Assessing Structural Model Validity and Reliability

Goodness-of-fit (GOF) is a measure of how well a specified (estimated) model reproduces the observed covariance matrix in the indicator variables. GOF compares the theoretical model to reality. The closer the values between theory and reality, the better the GOF is. The fundamental measure of difference between observed and estimated covariance matrices is the chi-square ( $\chi^2$ ), which is the key value in testing GOF of any structural equation model. The chi-square test can be represented mathematically as:

$$\chi^2 = (N - 1) (S - \Sigma_k)$$

Where N is the overall sample size, S is the observed sample covariance matrix and  $\Sigma_k$  is the SEM estimated covariance matrix (Hair et al, 2010).

However, the chi-square test is sensitive to large sample sizes (especially those over 200) and model complexities. This means that while using SEM, one should also use other methods in order to assure a good GOF (Hair et al., 2010; Hoe, 2008). Approximate fit indexes can be used to evaluate model fit. These approximate fit indexes can be divided into four subcategories: absolute fit indexes, incremental fit indexes, parsimony-adjusted indexes, and predictive fit indexes. However, these categories are not mutually exclusive since some indexes can be classified into more than one group (Kline, 2011).

Absolute fit indexes are interpreted as proportions of covariances in the sample data matrix. As explained by the model these indexes focus on model-data matrix correspondence and have no explanatory power for individual outcomes (Kline, 2011) Typical absolute fit indexes statistics are the root mean square error of approximation (RMSEA), goodness-of-fit index (GFI), and standardized root mean residual (SRMR). RMSEA is one of most commonly used measures for correcting for the unreliability of the chi-square test with large samples. The lower the RMSEA values, the better the fit of the model. However there is no consensus about what the cutoff value should be (Hair et al., 2010). Hoe (2008) suggested that values less than 0.05 indicate a good fit, values less than 0.08 but higher than 0.05 indicate a reasonable fit, and values higher than 0.08 but lower than 0.10 indicate a mediocre fit. GFI is another attempt at a fit statistic that is less sensitive to sample sizes. Generally, values higher than 0.90 indicate a good fit. Standardized residuals are deviations of individual covariance terms. SRMR is the standardized value of the root

mean square residual and is useful for comparing fit across models. SRMR values which are higher than 0.1 indicate a problem with the fit (Hair et al., 2010).

Incremental (comparative) fit indexes indicate the relative improvement in the fit of the model compared with the statistical baseline model. The baseline model is typically the null model that assumes zero covariances among the observed variables (Kline, 2011). Typical incremental fit index statistics are normed fit index (NFI), non-normed fit index (NNFI), comparative fit index (CFI), and relative fit index (RFI) (Hair et al., 2010). NFI is the ratio of the difference in the chi-square value between the fitted model and the null model. It ranges between 0 and 1, with 1 indicating perfect fit. However, model complexity usually inflates the estimate of model fit. CFI is an improvement of the NFI and is relatively insensitive towards model complexity. Its values range between 0 and 1. Values above 0.90 usually indicating a good model fit.

The formula of the parsimony-adjusted index includes a built-in correction for model complexity. The parsimony-adjusted indexes generally favor simpler models (Kline, 2011). The common statistics for parsimony-adjusted index are adjusted goodness-of-fit index (AGFI) and the parsimony-normed fit index (PNFI) (Hair et al., 2010).

Predictive fit indexes estimate the model fit in hypothetical replication samples of the same size that are randomly selected from the same population as the original sample. Most uses of SEM do not belong to the specific context of predictive fit indexes.

Score reliability is the degree to which scores in a particular sample are free from random measurement error. One of the most used reliability coefficients is the Cronbach's alpha, which measures internal consistency reliability (Kline, 2011). Generally, reliability coefficients of around .90 are considered "excellent", while values around .80 are considered "very good", values around .70 are "adequate" and values of .60 are questionable.

$$\frac{kr}{1 + r(k - 1)}$$

Where k is the number of items and r is the average Pearson correlation between all pairs of items (Kline, 2011).

Other methods used to assess model reliability are the composite reliability and average variance extracted. Values between .6 and .7 indicate acceptable composite reliability and values over .7 indicate good reliability. The formula for composite reliability is

$$\frac{(\sum_{i=1}^n L_i)^2}{(\sum_{i=1}^n L_i)^2 + (\sum_{i=1}^n e_i)}$$

Where  $L_i$  is the sum of factor loadings for the construct and  $e_i$  is the sum of error variance terms for the construct (Hair et al., 2010).

The average variance extracted (AVE) values higher than .5 are considered indicating adequate convergence. The formula for average variance extracted is

$$\frac{\sum_{i=1}^n L_i^2}{(\sum_{i=1}^n L_i^2)(\sum_{i=1}^n e_i)}$$

Where  $L_i^2$  is the squared sum of all factor loadings for the construct and  $e_i$  is the sum of error variance terms for the construct (Fornell & Larcker, 1981)

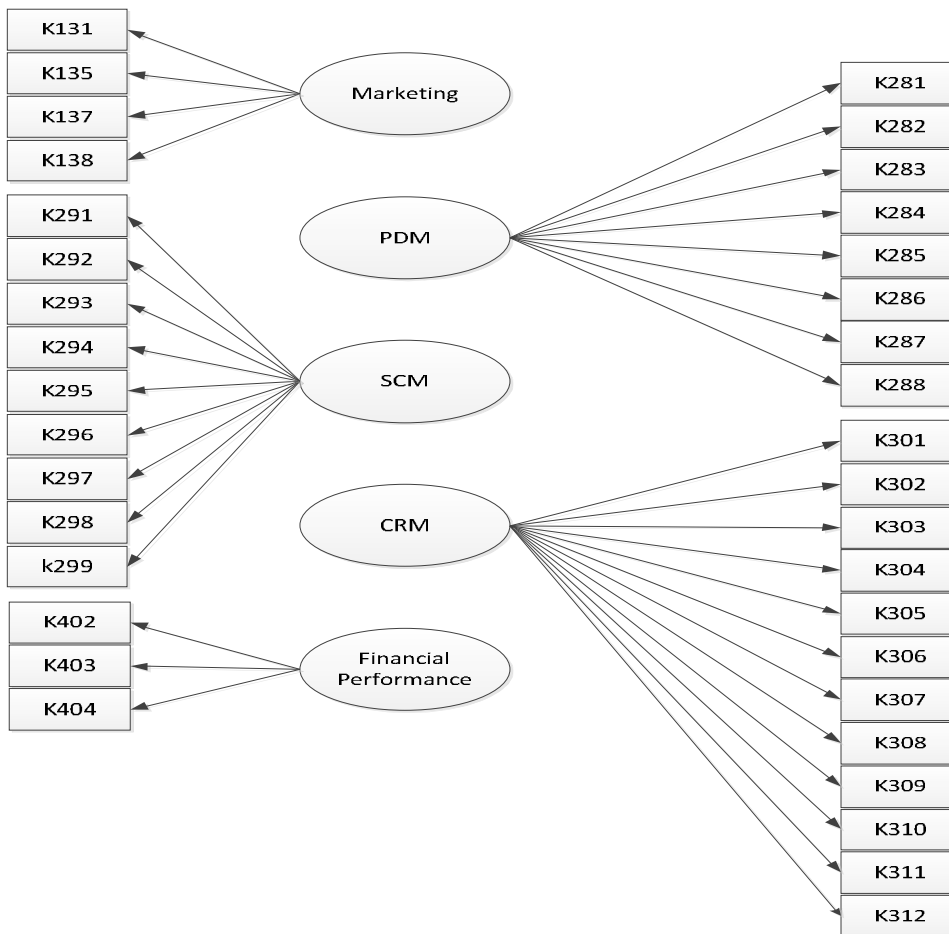
## 4. Results and Analysis

In this chapter, the statistical analysis of the data is conducted and results are reported. The analysis of the data followed a two-step method. The first step was to test the measurement model's constructs using confirmatory factor analysis. The second step was to test the structural model created from the constructs of the first step by using a structural equation model analysis. Both analyses were done using LISREL 8.8.

### 4.1 Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) was used to test the potential indicators for the five constructs presented in the previous chapters. The five constructs contained between 3 and 12 indicators, with total of 36 potential indicators. The purpose of the confirmatory factor analysis was to test the measurement model and eliminate indicators that did not fit the model. However, since the point of structural equation modeling is to test a theory, the choice of indicators for the structural model is not made only by how well the indicators fit the model, but also by how important they are to the theory.

Figure 15. The initial CFA model



The initial model (seen in Figure 15 above) contained all the relevant indicators (questions) from five parts of the questionnaire: role of marketing, product development management (PDM), supply chain management (SCM), customer relationship management (CRM), and financial performance. However, this initial CFA model did not have desirable overall fit statistics in all categories. Most of the fit statistics were fine RMSEA = 0.078, NNFI = 0.93, CFI = 0.94, SRMR = 0.058. However, the GFI was only 0.81, which suggests that the model will not fit without changes to it, especially since the fit statistics sometimes show poorer values in the structural equation model compared to the confirmatory factor analysis model.

The next step in testing the measurement model was to eliminate indicators in order to improve the fit of the model. Indicators were eliminated based on their factor loadings and communalities and their importance to the theory. Generally, each indicator had to have a factor loading of 0.65 or higher (using standardized solutions on LISREL 8.8) and communalities of 0.40 or higher. However, I was prepared to accept somewhat lower values if the indicators were important to the



theory and their factor loadings were not very weak ( $<0.60$ ). As for discriminant validity,  $>0.85$  was considered as the cut-off point. Discriminant validity did not present any problems; all the correlations between factors were clearly under the  $>0.85$  limit, with the highest value being 0.74 between the factors CRM and SCM. However, there were many indicators that did not meet the required factor loading values.

The elimination process started by eliminating indicators with factor loadings lower than 0.60. The process took several rounds until only indicators with factor loadings equal or higher than 0.65 remained. However, 4 indicators that didn't quite meet my standards were retained, these indicators did however meet the minimal standards ( $\geq 0.50$ ) presented by Hair et al. (2010). These were three for the construct of marketing (K135, K137 and K138) and one for the construct of CRM. The one for CRM was customer retention (K303), which the marketing literature considered important for company revenues and profits (for example, Reichheld et al., 2000). The final indicators for the measurement model and their loadings and communalities can be seen in Table 4.

Table 4: Final standardized loading and communalities.

| <u>Indicator</u> | <u>Loading</u> | <u>Communality</u> |
|------------------|----------------|--------------------|
| K135             | 0.59           | 0.39               |
| K137             | 0.55           | 0.30               |
| K138             | 0.74           | 0.55               |
| K281             | 0.78           | 0.60               |
| K282             | 0.72           | 0.51               |
| K285             | 0.73           | 0.53               |
| K286             | 0.77           | 0.59               |
| K287             | 0.74           | 0.54               |
| K288             | 0.65           | 0.42               |
| K295             | 0.81           | 0.65               |
| K296             | 0.75           | 0.56               |
| K297             | 0.67           | 0.44               |
| K303             | 0.61           | 0.38               |

|      |      |      |
|------|------|------|
| K304 | 0.69 | 0.47 |
| K305 | 0.67 | 0.45 |
| K306 | 0.77 | 0.59 |
| K307 | 0.77 | 0.59 |
| K402 | 0.88 | 0.78 |
| K403 | 0.99 | 0.97 |
| K404 | 0.97 | 0.94 |

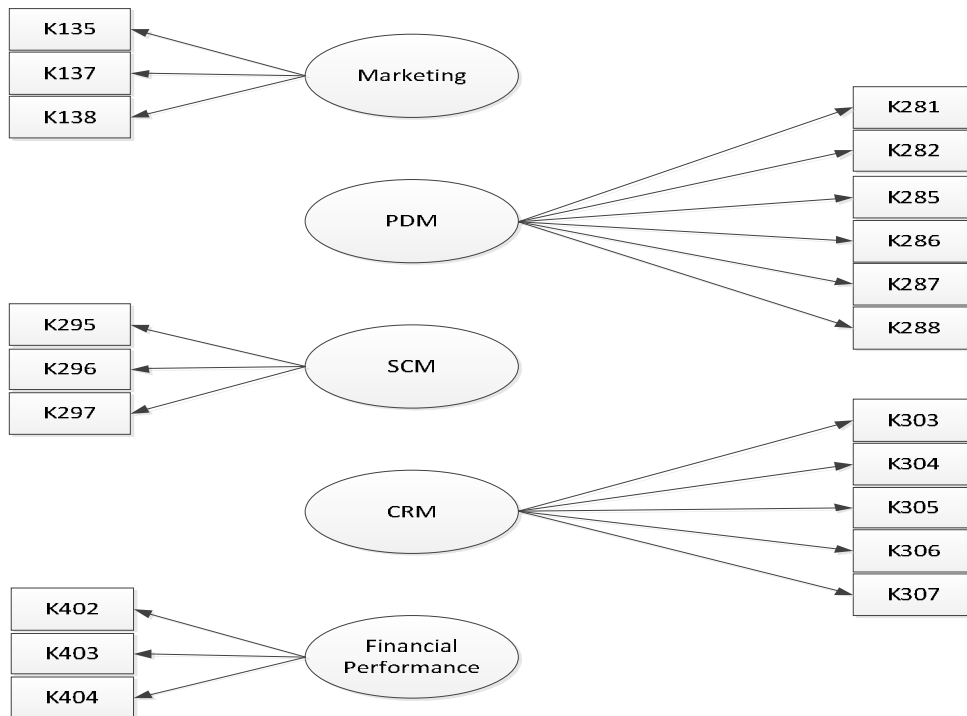
The correlation matrix of the five constructs for the measurement model can be seen in Table 5 below.

Table 5: Correlation matrix of constructs

| Construct                           | Mean | Standard deviation | 1    | 2    | 3    | 4    | 5    |
|-------------------------------------|------|--------------------|------|------|------|------|------|
| 1. Marketing                        | 2.70 | 1.10               | 1.00 |      |      |      |      |
| 2. Product Development Management   | 3.45 | 1.20               | 0.30 | 1.00 |      |      |      |
| 3. Supply Chain Management          | 3.49 | 1.03               | 0.28 | 0.34 | 1.00 |      |      |
| 4. Customer Relationship Management | 3.29 | 1.06               | 0.31 | 0.63 | 0.59 | 1.00 |      |
| 5. Financial Performance            | 3.62 | 1.53               | 0.12 | 0.30 | 0.25 | 0.31 | 1.00 |

The final measurement model contained 20 (21) indicators out of 36 original indicators. The final measurement model indicated a very good fit with RMSEA = 0.068, NNFI = 0.95, CFI = 0.96 and SRMR = 0.047. The goodness of fit index had risen to 0.92, up from the first model's 0.81. Overall, the goodness of fit statistics showed a very robust model. The final confirmatory factor analysis model is seen in Figure 16.

Figure 16: The final CFA model



For the final test of convergent and discriminant validity, the SAS Enterprise Guide was used for an exploratory factor analysis. During the analysis, the number of factors was limited to five and the Orthogonal Varimax rotation method was used. The exploratory factor analysis showed support for the model validity, as all of the factors in the exploratory factor analysis matched the constructs in the confirmatory factor analysis. Details of the convergent and discriminant analysis can be found in Appendix D, while Cronbach's alpha coefficients ( $\alpha$ ) are provided in Appendix E. As Table 6 shows, the composite reliability for all the constructs were good ( $>.70$ ), as was the average variance extracted ( $>.50$ ). Cronbach's alphas for the constructs were good, except for the construct of marketing, which had a value of 0.654. While this value is not ideal, it is still good enough to be included, especially since the construct had good values for composite reliability and average variance extracted.

Table 6: Composite reliability and average variance extracted.

| <u>Construct</u>               | <u>Composite reliability</u> | <u>Average variance extracted</u> |
|--------------------------------|------------------------------|-----------------------------------|
| Marketing                      | 0.802                        | 0.580                             |
| Product Development Management | 0.909                        | 0.625                             |

|                                  |              |              |
|----------------------------------|--------------|--------------|
| Supply Chain Management          | 0.765        | 0.522        |
| Customer Relationship Management | 0.850        | 0.533        |
| <u>Financial Performance</u>     | <u>0.780</u> | <u>0.542</u> |

Because the final measurement model (Figure 17) accurately reflected my theoretical perspective and indicated a good fit, it was retained for use in the structural equation model.

## 4.2 Structural Equation Modeling

In addition to confirmatory factor analysis (CFA), a structural equation model (SEM) analysis was made in order to examine the relationships between the constructs based on the theoretical part of this thesis. The final structural equation model can be seen in Figure 17.

Figure 17: The Structural Equation Model

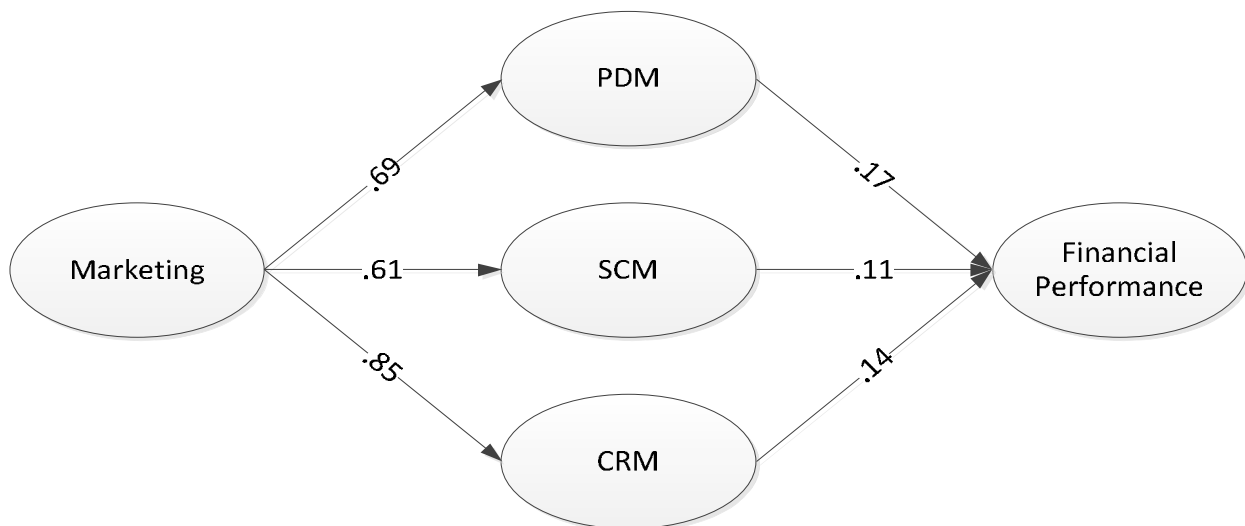


Table 7 presents the relationships between constructs, including the statistical significance of the relationships. A two-tailed test was used to assess the statistical significance. All relationships were significant to at least the .01 level and four relationships were significant at the .001 level. All the relationships are positive and according to the theory. There is a very strong relationship between marketing and the three core business processes (PDM, SCM, and CRM), which confirms

hypotheses 1a, 2a, and 3a. It is not surprising that the strongest support is for marketing CRM relationship, giving that marketing and CRM are closely linked in the literature. The relationship between the core business processes and financial performance is weaker, but still positive and statistically significant. This means that there is moderate support for hypotheses 1b, 2b, and 3b, with product development having the strongest effect on a company's financial performance.

Table 7: The relationships between constructs and their statistical significance

|                                  | Relationship                      | Regression coefficients |
|----------------------------------|-----------------------------------|-------------------------|
| Marketing                        | →Product Development Management   | .69***                  |
| Marketing                        | →Supply Chain Management          | .61***                  |
| Marketing                        | →Customer Relationship Management | .85***                  |
| Product Development Management   | →Financial Performance            | .17***                  |
| Supply Chain Management          | →Financial Performance            | .11*                    |
| Customer Relationship Management | →Financial Performance            | .14**                   |

\*p<.01; \*\*p<.005; \*\*\*p<.001

There were some significant changes in the model fit values compared to the CFA value. Still, the model fit values are decent and show that the data fits the model relatively well. The chi-square was 1374.8 (164 degrees of freedom), RMSEA = 0.082, NNFI = 0.93, CFI = 0.94, SRMR = 0.062, and GFI = .89. The squared multiple correlation coefficients ( $r^2$ ) were not that particularly high .47 for PDM, .37 for SCM, .12 for financial performance. However, CRM had a high value of .72.

## 5. Summary and conclusions

This chapter covers the conclusions of my study. It starts with a discussion of the objectives and purpose of this study. It then presents the key results and the conclusions derived from these results, followed by the managerial implications of the study. The limitations of this study are then discussed. Finally, implications for future research are discussed, including suggestions for possible future research avenues.

### 5.1 Discussion

The purpose of this study was to examine different possible roles of marketing today as opposed to the traditional four Ps (price, promotion, product and place) approach. Instead, this study focused on the market-based assets and capabilities approach that is based on the resource-based view of the company. In order to achieve this the theoretical part of the study involved describing what is the role of marketing in the three core market-facing business processes (PDM, SCM, and CRM) and the benefits that marketing can bring to these core business processes. To achieve that, it was important to open up these three core business processes: the purpose of these business processes in companies, the activities they include, and why they are important for companies.

The empirical part of this study quantitatively examined the relationships between marketing and the three core business processes, as well as those between the core business processes and financial performance of firms. I was fortunate to have an excellent empirical data set in the form of the Markkinoinnin tila 2010 survey, which allowed me to examine my hypotheses with a sample of over 1000 Finnish companies.

### 5.2 Key results and conclusions

This part presents the final results for the hypotheses which are then interpreted and conclusions are drawn from them. Table 8 shows the level of support for each of the study's hypotheses.

Table 8: Summary of results.

| <u>Hypothesis</u> | <u>Relationship</u>         | <u>Level of Support</u> |
|-------------------|-----------------------------|-------------------------|
| 1a                | Marketing → PDM             | High                    |
| 1b                | PDM → Financial Performance | Low                     |
| 2a                | Marketing → SCM             | High                    |
| 2b                | SCM → Financial Performance | Low                     |
| 3a                | Marketing → CRM             | Very High               |
| 3b                | CRM → Financial Performance | Low                     |

Hypotheses 1a, 2a, and 3a were based on the relationships between marketing and the three core business processes. The basis was that the stronger the role of marketing in a core business process, the better this business process would perform. All the relationships were statistically significant. Based on the results, there is strong or very strong support for these hypotheses. It appears that marketing has a positive influence on product development management (PDM) and supply chain management (SCM) and that the stronger role of marketing in these business processes, the better they perform. This positive relationship was the strongest in customer relationship management (CRM), which seems to validate the marketing literature's position that marketing (not technology) is the most important aspect of CRM. These results validate the view of marketing scholars' that marketing should not be limited to the traditional tactical role, but should have an active strategic role in companies, especially in these three core business processes.

Hypotheses 1b, 2b, and 3b were based on the relationships between the three core market-facing business processes and the financial performance of companies. All of these relationships were statistically significant. Here, there is some support for the hypotheses suggesting that these business processes have a positive effect on financial performance. Somewhat surprisingly, however, while this relationship is significant, it does not seem to be a particularly strong one. This

might be due to other factors that were not presented in the model, such as firm size or type of industry, having an effect on financial performance. Also, the Markkinoinnin tila 2010-survey was conducted during an economic recession, which could have influenced the survey data on financial performance. Nevertheless, these core business processes do have a positive effect on the financial performance of companies.

### 5.3 Managerial implications

The main managerial implication is that marketing has a strong positive influence on all three the core business processes. This includes new product/service development, which has traditionally been seen as the domain of R&D and engineers. The positive relationship between the strategic role of marketing and performance of the business processes suggests to managers that marketing should be considered an essential part of the core business processes and should have a strong strategic role in all core business processes. According to StratMark's Markkinoinnin tila 2010-survey, Finnish companies realize that marketing should have strong role in CRM, which had a strong or very strong role in 72.3 percent of the surveyed companies. However, Finnish companies do not share this view regarding PDM and SCM. From the Markkinoinnin tila 2010-survey, it can be seen that marketing had a strong or very strong role in product development management in only 36.1 percent of the surveyed companies and only 31.3 percent for supply chain management. Increasing marketing's role to a more strategic role could lead to a significant improvement in PDM and SCM capabilities for Finnish companies.

### 5.4 Limitations

Firstly, the data used in this study is only in context of Finnish companies. While the theory presented is global in nature, caution should be used if the results of this study are applied to non-Finnish companies. Secondly, the study focused on marketing and three core business processes (PDM, SCM, and CRM), but did not account for other possible processes, firm sizes, specific industries, or the nature of markets in which companies operate (mature markets, growing



markets, etc.). Thirdly the study did not conduct a mediational analysis to examine the possible mediational effects that core business processes can have on each other.

## 5.5 Implications for future research

This study was a generalized view on Finnish companies and it would be interesting to conduct similar studies on international companies. Also, since this study did not take the numerous different industries or firm types into account, it would be interesting to see how the results would differ when examining high-tech firms, for example, or another specific sector or type of customer segments (b2b or b2c). For example, would PDM have a stronger impact on financial performance in high-tech firms? Do the results differ between service-oriented companies and product-oriented companies? The conceptual models used in this study and the Markkinoinnin tila 2010- survey can lend themselves to a variety of interesting future studies.

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StratMark Markkinoinnin tila 2010-survey

## Appendix A: The original Stratmark questionnaire in Finnish.

### Markkinoinnin tila 2010

Aalto-yliopiston kauppakorkeakoulun ja Hanken sveniska handelshögskolanin käynnistämän StratMark-hankkeen tavoitteena on nostaa suomalainen markkinointi- ja kaupallistussuhteinen osuus kansallista ydinosaamista Suomen liika-elämän pitkin aikavälin kansainvälisen kilpailukyyn turvaamiseksi.

Ensisijainen suomalainen markkinointiosaston rooli ja tila kartoitetaan Markkinoinnin tila -kysely toteutettiin keuhkokuumeella 2008. Kysely keräsi lähes 1200 vastaajaa, muodostaen yhden kokoluokkaisen laajimmista meidän osuista koskaan kerättyä taloudellisen tutkimusaineistosta. Pitkätutkimuksen ja kehityksen vertailun yli ajan mahdollisuuksien kysely toteutetaan nyt toista kertaa. Keräämme tänään kartoita ajankohtaisia ja monipuolista tietoa suomalaisten yritysten markkinoinnin tilasta, roolista, prosesseista ja mittareista.

Pyrimme tavoittamaan kattavasti koko liika-elämän kantien, sillä myös päämäärät ovat yhteisiä. Mitä suuremman joukon vastaajia saamme, sitä tarkoituksenmukaisemmin tuloksilla voimme tulevaisuudessa palvelia yhteisiä kehitystyöitä. Kyselyn tulokset muodostavat yhden konkreettisimmista liiketoiminnan tutkimusta ohjauksesta rakentamista nyt ja tulevaisuudessa.

Kyselyn käyttäminen vie testiryhmän vastausten perusteella aikaa keskimäärin noin 35 minuuttia. Kyselyn voi täyttää kahden viikon välein, joten koko lomaketta ei tarvitse täyttää kerralla. Kiloaika vaiennäkösti kaikille kyselyyn vastaajalle lähetetään raportti, jota löytyy ilmi kyselyn keskeisimmät löydökset. Raportti lähetetään tulosten valmistuttua kesällä 2010.

Tutkimustiedot raportoidaan ainoastaan kokonaisuuksina, josta yksittäisiä vastaajia ei voida tunnistaa.

Kiitos, että olet mukana nostamassa suomalaista markkinointiosastoa uudelle tasolle!

Tutkimusterveisin,

Professori Henrikki Täöänen ja StratMark-tutkimusryhmä  
Aalto-yliopiston kauppakorkeakoulu

There are 47 questions in this survey

### Yrityksen liiketoimintaympäristö ja asema päämarkkinoilla

Ensisijaisessa osiossa käsitellään edustamaa liiketoimintayksikön toimintaympäristöä ja asemaa päämarkkinoilla. Ellei erikseen määritetty, vastaa kaikkiin tähän kyselyyn kohtaan liiketoimintayksikköä ja valitsemalla päätoimialan näkökulmasta. Mikäli yrityksellä ei voida erottaa selkeää toimintaa tai markkinatilan poikkeavia yksiköitä, vastaa koko yrityksen näkökulmasta. Pienten yritysten kohdalla liiketoimintayksikkö ja yritys tarkoittavat yleensä samaa. Pyydämme teitä pyrkimään koko kyselyn ajan johdonmukaisuuteen silinä, mitä yrityksenomaisuutta vastaamiseen koskevat. Mikäli edustat moniosuista tai globaalia yritystä, vastaa suomalaisen yksikön näkökulmasta. Mikäli yrityksesi toimii usealla toimialalla, vastaa päätoimialan (yrityksellesi tärkeimmän) toimialan mukaisesti.

#### 1 [K1]K1. Vastaaajan nimi \*

Vastauksesi:

#### 2 [K2]K2. Yhteystiedot \*

Kirjoita vastauksesi tähän:

Sähköpostiosoitte

Puhelinnumero

#### 3 [K3]K3. Asema organisaatiossa (tehtävänimike) \*

Vastauksesi:

#### 4 [K4]K4. Yrityksen ja edustamasi liiketoimintayksikön tiedot \*

Kirjoita vastauksesi tähän:

Nimi

Y-tunnus

#### 5 [K5]K5. Mikä on liiketoimintayksikkösi pääasiallinen toimiala? \*

Valitse vain yksi seuraavista:

- Maan-, riista-, metsä-, ja kalatalous
- Kalvostoiminta ja louhinta
- Elintarvikkeiden ja juomien valmistus
- Tekstiilien, vaatteiden, nahkan ja nahkatuotteiden valmistus
- Puutavaran ja puutuotteiden valmistus
- Paperiteollisuustuotteiden valmistus, kustantaminen ja graafinen tuotanto
- Öljy-, kumi- ja muovituotteiden sekä kemikaalien ja kemiallisten tuotteiden valmistus
- Ei-metallisten mineraalituotteiden valmistus
- Metallien jalostus ja metallituotteiden valmistus
- Koneiden ja laitteiden valmistus
- Elektroniikka- ja sähkötuotteiden valmistus
- Kulttuurien valmistus
- Energia- ja vesihuolto









## Markkinoinnin vaikuttavuus ja tuloksellisuus

Neljännessä osassa keskitytään markkinoinnin vaikuttavuuden ja tuloksellisuuden seuraukseen liittyviin aiheisiin. Osassa käsitellään mm. mittauskäytäntöjä, niiden bränditulosermuloksuutta sekä mitään liittyviä haasteita.

### 20 [K20]K20. Seurataanko liiketoimintayksiköissä säännöllisesti markkinoinnin tavoitteiden saavuttamista? \*

Valitse vain yksi seuraavista:

- Kyllä  
 Ei

### 21 [K21]K21. Millä tasolla tavoitteiden saavuttamista seurataan?

Only answer this question if the following conditions are met:

\* Vastaus oli 'Kyllä' at question 20 [K20] (K20. Seurataanko liiketoimintayksiköissä säännöllisesti markkinoinnin tavoitteiden saavuttamista?)

Valitse kaikki jotka soveltuvat:

- Vuositasolla  
 Kvartaalitasolla  
 Kuukausitasolla tai useammin  
 Projektitasolla

### 22 [K22]K22. Raportoidaanko markkinoinnin tuloksellisuutta yrityksen ulkopuolisille tahoille (esim. vuosikertomuksessa tai muissa tilinpäätöstiedotteissa)? \*

Valitse vain yksi seuraavista:

- Kyllä  
 Ei

### 23 [K23]K23. Missä ja miten markkinoinnin tuloksellisuutta raportoidaan yrityksen ulkopuolelle?

Only answer this question if the following conditions are met:

\* Vastaus oli 'Kyllä' at question 22 [K22] (K22. Raportoidaanko markkinoinnin tuloksellisuutta yrityksen ulkopuolisille tahoille (esim. vuosikertomuksessa tai muissa tilinpäätöstiedotteissa)?)

Vastauksesi:

### 24 [K24]K24. Seuraavissa kuudessa kysymyskokonaisuudessa keskitytään markkinoinnin tuloksellisuuden mittareihin. Kysymme sinulta 1) mitkä seuraavista mittareista ovat liiketoimintayksiköissä käytössä, sekä 2) mitkä mittarit ovat nähdäksesi keskeisimpiä seurattavia mittareita? Yksi mittari voi olla käytössä, keskeinen, molempia, tai ei kumpaakaan.

#### 25 [K24a]K24a. Kuluttajan/loppukäyttäjän ajatuksia/asenteita ja tunteita seuraavat mittarit

Valitse kaikki sopivat vaihtoehdot:

|   | Käytössä                 | Keskeinen                |
|---|--------------------------|--------------------------|
| Tunnettuus (spontaani/autettu/yhteensä)                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| Merkittävyys (keskeisyys, tärkeys)                                      | <input type="checkbox"/> | <input type="checkbox"/> |
| Koettu laatu / arvostus (kuinka korkealle arvotettu)                    | <input type="checkbox"/> | <input type="checkbox"/> |
| Kuluttaja-käyttäytyminen (odotusten täytyminen)                         | <input type="checkbox"/> | <input type="checkbox"/> |
| Relevanssi kuluttajalle/loppukäyttäjälle ("minulle sopiva tuotemerkki") | <input type="checkbox"/> | <input type="checkbox"/> |
| Imago / persoonallisuus / identiteetti (voimakkuus)                     | <input type="checkbox"/> | <input type="checkbox"/> |
| (Koettu) erilaistuminen (ero muihin brandeihin)                         | <input type="checkbox"/> | <input type="checkbox"/> |
| Sitoutuminen / ostoaikomus (Ilmaistu oston todennäköisyys)              | <input type="checkbox"/> | <input type="checkbox"/> |
| Muut asenteet, esim. mieltymys (useita mahdollisia indikaattoreita)     | <input type="checkbox"/> | <input type="checkbox"/> |
| Tieto (Kokemukset tuotteen ominaisuuksista)                             | <input type="checkbox"/> | <input type="checkbox"/> |

#### 26 [K24b]K24b. Kuluttajan/loppukäyttäjän käyttäytymistä seuraavat mittarit

Valitse kaikki sopivat vaihtoehdot:

|   | Käytössä                 | Keskeinen                |
|---|--------------------------|--------------------------|
| Käyttäjien (asiakkaiden) kokonaismäärä                                    | <input type="checkbox"/> | <input type="checkbox"/> |
| Uusien käyttäjien lukumäärä   | <input type="checkbox"/> | <input type="checkbox"/> |
| Uskollisuus / pysyvyys (esim. montako % osti sekä tänä että viime vuonna) | <input type="checkbox"/> | <input type="checkbox"/> |
| Hintaherkkyys / -jousto (mitkä tahansa myyntimäärän herkkyyden mittari)   | <input type="checkbox"/> | <input type="checkbox"/> |
| Promootio johdosta tehdyt ostot   | <input type="checkbox"/> | <input type="checkbox"/> |

|   | Käytössä                 | Keskeinen                |
|---|--------------------------|--------------------------|
| Tuotteiden määrä käytössä kohden (kuinka laajalti loppukäyttäjät hyödyntää tarjoamaa) | <input type="checkbox"/> | <input type="checkbox"/> |
| Leadien määrä / tiedustelut (uusien prospektien lukumäärä)                            | <input type="checkbox"/> | <input type="checkbox"/> |
| Konversioprosentti (leadista myyntiin)  | <input type="checkbox"/> | <input type="checkbox"/> |
| Loppukäyttäjiltä tulevien valitusten määrä (loppukäyttäjien tyytymättömyyden taso)    | <input type="checkbox"/> | <input type="checkbox"/> |

**27 [K24c]K24c. Väliportaan asiakkaiden/jälleenmyyjien suhteen laatua ja ominaisuuksia seuraavat mittarit**

Valitse kaikki sopivat vaihtoehdot:

|  | Käytössä                 | Keskeinen                |
|--|--------------------------|--------------------------|
| Jakelu / saatavuus (esim. myymälöiden lukumäärä) | <input type="checkbox"/> | <input type="checkbox"/> |
| Asiakastytyytyväisyys                            | <input type="checkbox"/> | <input type="checkbox"/> |
| Asiakasvalitusten määrä                          | <input type="checkbox"/> | <input type="checkbox"/> |

**28 [K24d]K24d. Markkinasuorlutumista kilpailijoihin verrattuna seuraavat mittarit**

Valitse kaikki sopivat vaihtoehdot:

|  | Käytössä                 | Keskeinen                |
|--|--------------------------|--------------------------|
| Markkinaosuus (osuus markkinasta myyntimäärän mukaan)                          | <input type="checkbox"/> | <input type="checkbox"/> |
| Suhteellinen hinta (esim. osuus myynnin arvosta/osuus myynnin määrästä)        | <input type="checkbox"/> | <input type="checkbox"/> |
| Markkinaosuuden uskollisuus (osuus vaatimukset täyttävien tuotteiden joukossa) | <input type="checkbox"/> | <input type="checkbox"/> |
| Markkinapoltto (osuus ostajista tietyn aikavälillä)                            | <input type="checkbox"/> | <input type="checkbox"/> |
| Suhteellinen kuluttajatytyytyväisyys (tytytyväisyys suhteessa kilpailijoihin)  | <input type="checkbox"/> | <input type="checkbox"/> |
| Suhteellinen koettu laatu (koettu laatu suhteessa laatujohtajaan)              | <input type="checkbox"/> | <input type="checkbox"/> |
| Osuus kaikesta markkinoinninvestinnistä (osuus kategoriasta)                   | <input type="checkbox"/> | <input type="checkbox"/> |

**29 [K24e]K24e. Innovoimien tuloksellisuutta seuraavat mittarit**

Valitse kaikki sopivat vaihtoehdot:

|   | Käytössä                 | Keskeinen                |
|---|--------------------------|--------------------------|
| Uusien tuotteiden lukumäärä tetyllä aikavälillä (uusien tuotteiden lanseeraukset) | <input type="checkbox"/> | <input type="checkbox"/> |
| Liikevaihto uusista tuotteista (liikevaihto, myynti)                              | <input type="checkbox"/> | <input type="checkbox"/> |
| Uusien tuotteiden kate (myyntikate)   | <input type="checkbox"/> | <input type="checkbox"/> |

**30 [K24f]K24f. Taloudellista tuloksellisuutta seuraavat mittarit**

Valitse kaikki sopivat vaihtoehdot:

|  | Käytössä                 | Keskeinen                |
|--|--------------------------|--------------------------|
| Myynti (arvo ja/tai määrä)                               | <input type="checkbox"/> | <input type="checkbox"/> |
| Aiemuus-% (alennukset ja hyvitykset % myynistä)          | <input type="checkbox"/> | <input type="checkbox"/> |
| Myyntikatteet (kokonaistuotto-% vuotuisesta myynistä)    | <input type="checkbox"/> | <input type="checkbox"/> |
| Markkinointipanostukset (esim. mainonta, PR, promootiot) | <input type="checkbox"/> | <input type="checkbox"/> |
| Liikevoitto / kannattavuus (tulos ennen veroja)          | <input type="checkbox"/> | <input type="checkbox"/> |
| Omistaja-arvo  | <input type="checkbox"/> | <input type="checkbox"/> |
| Taloudellinen lisäarvo (EVA)                             | <input type="checkbox"/> | <input type="checkbox"/> |
| Sijoitetun pääoman tuottoaste (ROI)                      | <input type="checkbox"/> | <input type="checkbox"/> |
| Asiakkaan elinkaariano (customer lifetime value, CLV)    | <input type="checkbox"/> | <input type="checkbox"/> |

**31 [K25]K25. Arviol yksiköksi kykyä mitata suoritumista seuraavien osa-alueiden kohdalla. \***

Valitse sopivin vaihtoehto:

|   | Erittäin hyvä         | Hyvä                  | Melko hyvä            | Ei helppo eikä hyvä   | Melko helppo          | Helppo                | Erittäin helppo       | Ei relevantti meile   |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Kuluttajan/loppukäyttäjän ajatukset/asenteet ja tunteet   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Kuluttajan/loppukäyttäjän käyttäytymisen väliportaan asiakkaiden/jälleenmyyjien suhteen laatu ja ominaisuudet | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Suorutuminen suhteessa kilpailijoihin   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Innovoimien tuloksellisuus  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Taloudellinen tuloksellisuus  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**32 [K26]K26. Mitkä ovat suurimmat esteet/haasteet markkinoinnin mittaamiselle? \***

Valitse kaikki jotka soveltuvat:

- Riittävä rahoitus ei ole saatavilla
- Johdon ajan puute
- Ei tulleja muilta yksiköiltä
- Osaamisen puute
- Kannustimien puute
- Aineiston puute



- Sitoutumisen puute
- Yhdenmukisuuden puute mittauksissa eri aikoina
- Muu:

**33 [K27]K27. Mikä on yksikkönne ylimmän johdon arvio markkinoinnin tämänhetkisestä tuloksellisuudesta? \***

Valitse vain yksi seuraavista:

- Erittäin hyvä
- Hyvä
- Keskitasoa
- Heikko
- Erittäin heikko
- En osaa sanoa





## Liikkeenjohdolliset haasteet ja markkinointiin kohdistuvat panostukset

Kuudennessa olosuhteessa pyydämme sinua arvioimaan liiketoimintayksikkösi liikkeenjohdollisia haasteita sekä tuetulla vaikutusvektillä markkinointiin panostamisen yhteydessä.

**37 [K31]K31. Missä määrin seuraavat haasteet ovat tällä hetkellä liiketoimintayksikkösi liikkeenjohdon huomion ja resurssien kohteena? \***

Valitse sopivin vaihtoehto:

|  | Erityisen huomion kohde |                       | Keskimääräisen huomion kohde |                       | Vähäisen huomion kohde | Ei relevanttia meille |
|--|-------------------------|-----------------------|------------------------------|-----------------------|------------------------|-----------------------|
| Uuden tuotteen tai sovelluksen kehittäminen                      | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Taloudellisten resurssien ja tuen hankkiminen                    | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Ulkoisten asiantuntijoiden tai hallituksen jäsenten hankkiminen  | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Tuotetuki tai asiakaspalvelu                                     | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Pätevien henkilökunnan hankkiminen                               | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Tarkoituksenmukaiset välineet ja toimitilat                      | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Luotettavien myyjien ja toimittajien verkoston kehittäminen      | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Kysyntää vastaavien määrien tuotanto                             | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Myyntivaihteluiden saavuttaminen                                 | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Johdon osaamisen ja kykyjen laajuus ja taso                      | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Kustannusten kontrollointi                                       | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Organisaation roolin, vastuiden ja käytäntöjen määrittely        | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Johdon tietojärjestelmien kehittäminen                           | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Kannattavuus- tai markkinaosuustavoitteiden saavuttaminen        | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Laajentuminen uusille maantieteellisille alueille                | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Hallinnollisen taakka ja byrokraatia                             | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Taloudellisten järjestelmien ja sisäisen kontrollin kehittäminen | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Aseman vahvistaminen tuote-/markkinasegmenteissä                 | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Asiakkaiden tarpeiden selvittäminen ja tyydyttäminen             | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |
| Systemaattinen kilpailijoiden analysointi                        | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>        | <input type="radio"/> | <input type="radio"/>  | <input type="radio"/> |

**38 [K32]K32. Millaisissa tilanteissa liiketoimintayksikkösi tekee eniten markkinointiin kohdistuvia uusia panostuksia? Valitse seuraavista vaihtoehdoista vähintään yksi ja enintään kolme, tärkeysjärjestyksessä. \***

Aseta kohdat järjestyksen väliä 1-5

- Kilpailun kiristytessä
- Uusille tuotealueille mentäessä
- Uusille markkina-alueille mentäessä
- Kun yrityksellä on mennyt hyvin ja sille on kertynyt varallisuutta
- Kun menee helikosti ja yritys tarvitsee tuloja ja asiakkaita
- Kun yrityksen strategiasa korostuvat kasvutavoitteet
- Uusia panostuksia tehdään tasaisesti, taloudellisesta tai markkinatilanteesta juurikaan riippumatta
- En osaa sanoa





## Taustatiedot

Kehdeloennossa ja viimeisessä osassa kysytään muutamia keskeisiä tietoja edustamassasi yrityksen liityen. Tiedot lähetetään ehdottoman luottamuksellisesti, ja tuloties raportissa esitellään jokaisen kokonaistuloin, josta yksityiset yritykset eivät ole tunnistettavissa. Yksittäisten yritysten tietoja ei raportoida.

### 41 [K35]K35. Omistusmuoto \*

Valitse vain yksi seuraavista:

- Osakeyhtiö  
 Julkinen osakeyhtiö

Muu

### 42 [K36]K36. Mikä on edustamassasi yrityksessä ulkomaisen omistuksen osuus? \*

Valitse vain yksi seuraavista:

- 0%  
 < 25%  
 25-50%  
 51-75%  
 > 75%  
 100%  
 En osaa sanoa

### 43 [K37]K37. Työntekijöiden lukumäärä liiketoimintayksikkösiä \* \*

Valitse vain yksi seuraavista:

- 1-5  
 6-10  
 11-20  
 21-50  
 51-100  
 101-250  
 251-500  
 > 500  
 En osaa sanoa

### 44 [K38]K38. Liiketoimintayksikkösi markkinaosuus \*

Valitse vain yksi seuraavista:

- Alle 1%  
 1% - 3%  
 3% - 5%  
 5% - 10%  
 10% - 20%  
 20% - 35%  
 35% - 50%  
 Yli 50%  
 En osaa sanoa

### 45 [K39]K39. Liiketoimintayksikkösi liikevaihto (EUR) viimeisimmän julkistetun tiedon mukaan \*

Valitse vain yksi seuraavista:

- Alle 350 000  
 350 000 - 2 milj.  
 2 milj. - 10 milj.  
 10 milj. - 50 milj.  
 50 milj. - 100 milj.  
 100 milj. - 250 milj.  
 250 milj. - 500 milj.  
 500 milj. - 1000 milj.  
 Yli 1000 milj.  
 En osaa sanoa

### 46 [K40]K40. Pyydämme vielä arvioimaan, miten yksikkösi menestys suhteutuu tärkeimpiin kilpailijoihin nähden? \*

Valitse sopivin vaihtoehto:

|   | Huomattavasti suurempi kuin kilpailijolla | Suurempi kuin kilpailijolla | Jonkin verran suurempi kuin kilpailijolla | Ei eroa kilpailijoihin nähden | Jonkin verran pienempi kuin kilpailijolla | Pienempi kuin kilpailijolla | Huomattavasti pienempi kuin kilpailijolla |
|---|---|-----------------------------|---|-------------------------------|---|-----------------------------|---|
| Liikevaihto   | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     | <input type="radio"/>         | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     |
| Suhteellinen liikevoitto edelliseltä tilikaudelta               | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     | <input type="radio"/>         | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     |
| Sijoitetun pääoman tuottoprosentti (ROI)                        | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     | <input type="radio"/>         | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     |
| Kokonaispääoman tuottoprosentti (ROA)                           | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     | <input type="radio"/>         | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     |
| Markkinointiin sijoitetun pääoman tuottoprosentti (MROI / ROMI) | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     | <input type="radio"/>         | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     |
| Markkinaosuus   | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     | <input type="radio"/>         | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     |
| Uusien tuotteiden osuus liikevaihdosta                          | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     | <input type="radio"/>         | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     |
| Uusien tuotteiden kannattavuus                                  | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     | <input type="radio"/>         | <input type="radio"/>                     | <input type="radio"/>       | <input type="radio"/>                     |

**47 [K41]K41. Mikä on yksikkönne ylimmän johdon arvio liiketoiminnan tämänhetkisestä menestyksellisyydestä? \***

Valitse vain yksi seuraavista:

- Erittäin hyvä
- Hyvä
- Keskitasoa
- Heikko
- Erittäin heikko
- En osaa sanoa



Appendix B: List of indicators per construct.

Bolded indicators were included in the final structural equation model.

| Indicator | The Strategic Role of Marketing           |
|-----------|---|
| K131      | In senior management                      |
| K135      | In customer relationship management (CRM) |
| K137      | In product development management (PDM)   |
| K138      | In supply chain management (SCM)          |

Five-point scale ranging from 1 = "no role" to 5 = "very strong role".

| Indicator | Product development management                                   |
|-----------|--|
| K281      | Ability to develop new product or service ideas                  |
| K282      | Utilization of new business models                               |
| K283      | Utilization of external stakeholders and networks                |
| K284      | Cooperation and information sharing with other company functions |
| K285      | Quick commercialization of ideas                                 |
| K286      | The number of product or service innovations                     |
| K287      | Successful launches of new products or services                  |
| K288      | Success of research and development investments                  |

Seven-point scale ranging from 1 = "much worse than competitors" to 7 = "much better than competitors".

| Indicator | Supply Chain Management                              |
|-----------|--|
| K291      | The use of information and communication technology  |
| K292      | The acquisition and retention of best distributors   |
| K293      | The acquisition and retention of best suppliers      |
| K294      | Control of installation and maintenance              |
| K295      | Orders processing                                    |
| K296      | Effective and efficient billing and terms of payment |
| K297      | Management of logistics and inventories              |
| K298      | Maintenance/service support for distributors         |
| K299      | Delivery reliability                                 |

Seven-point scale ranging from 1 = "much worse than competitors" to 7 = "much better than competitors."

| Indicator | Customer Relationship Management                                  |
|-----------|---|
| K301      | Collecting customer data  |
| K302      | Management of customer databases                                  |
| K303      | Customer retention  |
| K304      | Parity of firm offerings and customer needs, customer knowledge   |
| K305      | Identifying potential new customers                               |
| K306      | Planning and execution of customer service                        |
| K307      | Planning and execution of customer encounters                     |
| K308      | The ability to respond quickly to customer inquiries and requests |
| K309      | Cross-selling of products and services                            |
| K310      | Up-selling of products and services                               |
| K311      | Ending of unprofitable customer relationships                     |
| K312      | Customer satisfaction   |

Seven-point scale ranging from 1 = "much worse than competitors" to 7 = "much better than competitors."

| Indicator | Financial Performance |
|-----------|-----------------------|
| K402      | Operating margin      |
| K403      | Return on investment  |
| K404      | Return on assets      |

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Seven-point scale ranging from 1 = "much worse than competitors to 7 = "much better than competitors.

## Appendix C: Goodness-of-fit indexes

$$\text{RMSEA} = \sqrt{\frac{\chi_M^2 - df_M}{df_M (N-1)}}$$

Where  $\chi_M^2$  is the model chi-square,  $df_M$  is model degrees of freedom and  $N$  is the sample size (Kline, 2011).

$$\text{GFI} = 1 - \frac{C_{res}}{C_{tot}}$$

Where  $C_{res}$  is the residual variability in the sample covariance matrix and  $C_{tot}$  is the total variability in the sample covariance matrix (Kline, 2011).

$$\text{NNFI} = \frac{\left(\frac{\chi_N^2}{df_N}\right) - \left(\frac{\chi_k^2}{df_k}\right)}{\left(\frac{\chi_N^2}{df_n}\right) - 1}$$

Where  $\chi_N^2$  is the null model chi-square,  $\chi_k^2$  is the researcher's specified model chi-square,  $df_N$  is the degrees of freedom in the null model and  $df_k$  is the degrees of freedom in the researcher's specified model (Hair et al., 2010).

$$\text{CFI} = 1 - \frac{\chi_M^2 - df_M}{\chi_B^2 - df_B}$$

Where  $\chi_M^2$  is the model chi-square,  $df_M$  is model degrees of freedom,  $\chi_B^2$  is the baseline model chi-square and  $df_B$  is the baseline model degrees of freedom (Kline, 2011).

$$\text{SRMR} = cov_O - cov_P$$

Where  $cov_O$  is the observed correlation of standardized residuals and  $cov_P$  is the predicted correlation of standardized residuals (Kline, 2011).

Appendix D: Discriminant and convergent validity.

| Construct             | Variable | Factor1 | Factor2 | Factor3 | Factor4 | Factor5 |
|-----------------------|----------|---------|---------|---------|---------|---------|
| Marketing             | K135     | 0.008   | -0.026  | 0.207   | 0.056   | 0.721   |
|                       | K137     | 0.257   | 0.087   | 0.023   | -0.005  | 0.697   |
|                       | K138     | 0.048   | -0.047  | 0.045   | 0.182   | 0.801   |
|                       | K281     | 0.774   | 0.071   | 0.188   | 0.029   | 0.066   |
| PDM                   | K282     | 0.671   | 0.106   | 0.260   | 0.079   | 0.155   |
|                       | K285     | 0.724   | 0.039   | 0.192   | 0.057   | 0.094   |
|                       | K286     | 0.806   | 0.041   | 0.107   | 0.090   | 0.010   |
|                       | K287     | 0.728   | 0.087   | 0.195   | 0.064   | 0.050   |
|                       | K288     | 0.633   | 0.263   | 0.133   | 0.117   | 0.072   |
|                       | K295     | 0.093   | 0.034   | 0.198   | 0.827   | 0.032   |
|                       | K296     | 0.085   | 0.065   | 0.174   | 0.822   | 0.064   |
| SCM                   | K297     | 0.113   | 0.168   | 0.162   | 0.717   | 0.155   |
|                       | K303     | 0.158   | 0.159   | 0.690   | 0.118   | -0.050  |
|                       | K304     | 0.207   | 0.086   | 0.720   | 0.114   | 0.081   |
|                       | K305     | 0.295   | -0.004  | 0.635   | 0.044   | 0.141   |
| CRM                   | K306     | 0.181   | 0.135   | 0.689   | 0.261   | 0.116   |
|                       | K307     | 0.188   | 0.123   | 0.727   | 0.198   | 0.132   |
|                       | K402     | 0.138   | 0.907   | 0.130   | 0.120   | -0.037  |
| Financial Performance | K403     | 0.137   | 0.951   | 0.130   | 0.092   | 0.022   |
|                       | K404     | 0.149   | 0.942   | 0.150   | 0.069   | 0.025   |

Appendix E: Indicator correlations with total and Cronbach's alpha values.

| Construct             | Variable | Correlation with total | Cronbach's Alpha |
|-----------------------|----------|------------------------|------------------|
| Marketing             | K135     | 0.445                  | 0.654            |
|                       | K137     | 0.420                  |                  |
|                       | K138     | 0.529                  |                  |
|                       | K281     | 0.712                  |                  |
|                       | K282     | 0.644                  |                  |
| PDM                   | K285     | 0.663                  | 0.868            |
|                       | K286     | 0.708                  |                  |
|                       | K287     | 0.683                  |                  |
|                       | K288     | 0.582                  |                  |
|                       | K295     | 0.651                  |                  |
| SCM                   | K296     | 0.623                  | 0.775            |
|                       | K297     | 0.555                  |                  |
|                       | K303     | 0.570                  |                  |
|                       | K304     | 0.654                  |                  |
| CRM                   | K305     | 0.594                  | 0.829            |
|                       | K306     | 0.648                  |                  |
|                       | K307     | 0.661                  |                  |
|                       | K402     | 0.881                  |                  |
| Financial Performance | K403     | 0.952                  | 0.965            |
|                       | K404     | 0.941                  |                  |