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# Selling e-commerce innovations: How do CMOs and CIOs describe their roles and relationships in the e-commerce adoption process?

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SELLING E-COMMERCE INNOVATIONS
How do CMOs and CIOs describe their roles and relationships in the e-commerce adoption process?

**OBJECTIVES**

Even though companies have brought innovative solutions to the markets since the beginning of the world's commercial activities, innovation sales as an academic concept is rarely new and left on a quite minor attention and only a few researchers have given their contribution to the topic. This study aimed to give insight into the sales of e-commerce innovations by describing the roles and relationships of Chief Marketing Officer (CMO) and Chief Information Officer (CIO) in the e-commerce adoption process. Furthermore, the paper aspired to provide information how CMOs and CIO describe e-commerce as an investment and how do they describe the e-commerce adoption process.

**METHODOLOGY**

Due the lack of previous academic researches about innovation sales the foundation for the theoretical framework was laid on the academic discussions of industrial buying behavior and innovation adoption. For the empirical part of the study the chosen qualitative approach provided the means to reach a deep understanding of the respondents' opinions and build a thick descriptions from the given research phenomenon. The data was gathered from the CMOs and CIOs of four larger Finnish companies in the form of semi-structured personal interviews.

**KEY FINDINGS**

The results show that the poor experiences with the e-commerce investments drive the transformation of the adoption process and the role and the relationships of the CMOs and CIOs. The channel approach in marketing is out-dated and the organizations are focusing on managing the comprehensive business model transformation where the traditional and digital channels form an integrated concept and an uninterrupted interface for the customer experience. Therefore, the CMOs and CIOs are aiming to expand their roles from the traditional framework towards an overlapping set-up. Needles to say, the e-commerce solution providers should adjust their sales processes accordingly.

**KEYWORDS**

Innovation sales, innovation adoption, industrial buying behavior, e-commerce, Chief Marketing Officer (CMO), Chief Information Officer (CIO)

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VERKKOLIIKETOIMINNAN INNOVAATIOIDEN MYYNTI
Kuinka markkinointi- ja tietohallintojohtajat kuvailevat roolinsa ja suhteensa verkkoliiketoiminnan adoptioprosessissa?

**TUTKIELMAN TAVOITTEET**
Vaikka yritykset ovat kautta aikain tuoneet uusia innovaatioita markkinoille, innovaatioiden myynti akateemisena aihealueena on jäänyt hyvin vähälle huomiolle ja vain harvat tutkijat ovat antaneet sille kontribuutionsa. Tämän tutkimuksen päätavoite oli lisätä ymmärrystä verkkoliiketoiminnan innovaatioiden myyntiin kuvaamalla markkinointi- ja tietohallintojohtajan roolit ja suhteet verkkoliiketoiminnan adoptioprosessissa. Lisäksi tämän tutkimuksen tavoitteena oli tuottaa tietoa siitä kuinka markkinointi- ja tietohallintojohtajat kuvailevat yritystensä verkkoliiketoiminnan investoinnit sekä adoptioprosessin.

**TUTKIMUSMENTELEMÄT**
Vähäisestä aiemmista innovaatioiden myyntiä käsittelevistä tutkimuksista johtuen tämän tutkimuksen teoreettinen viitekehys rakennettiin yritysten ostokäyttäytymistä sekä innovaatioiden adoptointia koskevien teorioiden näkökulmasta. Tutkimuksen empiirisessä osuudessa käytettiin laadullista lähestymistapaa, sillä se mahdollisti syvällisten ja laajojen kuvausten laatimisen tutkittavien henkilöiden mielipiteistä ja vastauksista sekä tutkimuskohteesta. Data kerättiin neljän suuren suomalaisyrityksen markkinointi- ja tietohallintojohtajilta puoli-strukturoiduilla henkilöhaastatteluilla.

**KESKEISET TUTKIMUSTULOKSET**
Analyysin perusteella todettiin, että yritysten huonot kokemukset verkkoliiketoiminnan investoinneissa ajaa heidät muuttamaan adoptioprosessejaan sekä markkinointi- että tietohallintojohtajan rooleja ja suhteita. Kanava-ajattelu markkinoinnissa on vanhentunutta ja yritykset keskittyvät johtamaan perusteellista liiketoimintamallin transformaatiota, jossa perinteiset ja digitaaliset kanavat muodostavat yhtenäisen konseptin ja katkeamattoman rajapinnan asiakaskokemukselle. Markkinointi- ja tietohallintojohtajat pyrkivät vastaamaan muutostarpeisiin laajentamalla omia roolejaan perinteisistä siiloistaan kohti päällekkäin meneviä toimenkuvia. On selvää, että verkkoliiketoiminnan ratkaisutoimittajien tulee muovata myyntiprosessiaan siten, että ne vastaavat muutosten myötä syntyviin tarpeisiin.

**AVAINSANAT**
Innovaation myynti, innovaation adoptio, yrityksen ostokäyttäytyminen, verkkoliiketoiminta, markkinointijohtaja, tietohallintojohtaja

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# 1. Introduction

Sairanen and Hämäläinen (2010) summarize their findings that Finnish companies are investing in innovations, but selling innovations is challenging. This study aims to build a better understanding around e-commerce innovation selling by describing the roles and relationships of Chief Marketing Officer (CMO) and Chief Information Officer (CIO) in the adoption process of e-commerce while using previous studies of industrial buying behavior and innovation adoption as a basis for the conceptual framework.

In this Chapter, I will first introduce the main topic and present the relevant background in order to show why this line of research is important and why further research in this area is required. Then, I will proceed to the research problem and objectives of this study, pointing out how this study addresses these issues in order to provide further knowledge. After this, I will go through the key concepts of the topic. Finally, I will shortly present the structure and organization of this study.

## 1.1 Background and research motives

In order to justify the focus, frameworks and context of this study, I will introduce the current state of innovation selling, industrial buying behavior and adoption of innovations and electronic commerce (e-commerce). I will begin with innovations selling. Then, I will move onto industrial buying behavior and finish this subchapter with e-commerce related issues.

It can be argued that new products and innovations are critical to any company's ongoing sustainability (Fu et al. 2010) and an important determinant of wealth creation and economic growth (Easingwood et al. 2006). Srivastava et al. (1999) identified new product development as one of three core business processes and as an important driver of shareholder value. Furthermore, innovations have become increasingly important as means for competitive advantage, sustainable growth and financial success in today's competitive

business environment (e.g. Pauwels et al. 2004; Sorescu and Spanjol, 2008). Therefore, already for a long time there has been a great interest in analyzing the performance and success factors of new product innovations (e.g. Cooper, 1979; Susan, 1993; Cooper and Kleinschmidt, 1995; Avlonitis and Papastathopoulou, 2001; Henard and Szymanski, 2001; Murray and Chao, 2005; Clanton et al. 2006; Easingwood et al. 2006). In order to succeed, it seems that current consensus emphasizes the importance of market orientation and market vision during the new product development process (e.g. Narver and Slater, 1990; Jaworski and Kohli, 1993; Atuahene-Gima, 1995; Im and Workman, 2004; Narver et al. 2004; Susan and de Brentani, 2010).

Regardless the newness or oldness of a product, sales has always been a crucial part of product and company's success. Studies regarding innovation selling have mainly focused on internal issues within the organizations that provide new and innovative products, services and solutions. (e.g. Rackham, 1998; Hultink and Atuahene-Gima, 2000; Fu et al. 2008; Meyer et al. 2010;). However, innovation selling through understanding of industrial buying behavior and innovation adoption has left in minor attention — even though understanding the buying behavior of one's current and potential customers and market segments have been recognized as one of the most important tasks of marketing and one of the most crucial factors in the selling process of new products (e.g. Webster and Wind, 1972; Sheth, 1973; Cooper, 1979; Smith and Taylor; Anderson et al. 1987; Michaels et al. 1987; McQuiston, 1989; Bunn, 1993; Roberts, 2000). Some of the researchers claim that there are only little, if any differences between consumer and industrial buying behavior (e.g. Wind, 1978; Wilson, 2000). Moreover, one of the key decisions that have to be made in business is to decide whether to make or buy (Walker and Weber, 1984). Nevertheless, I will focus only on the industrial buying behavior and will not discuss about the make-or-buy dilemma because the scope of this study is e-commerce solutions which are rarely adopted without any procurement involved.

Understanding the industrial buying behavior is far from a simple task (Johnston and Lewin, 1996). It seems that interest in industrial buying behavior began in around 1970's (Webster, 1965; Robinson et al. 1967; Webster and Wind, 1972; Sheth, 1973). Especially Robinson,

Faris and Wind's (1967) Buygrid model is claimed to be pioneering and one of the most used theories both in practice and academic research. Moriarty (1983) describes it as *"one of the most useful analytical tools for both academicians and practitioners interested in organizational buying behavior."* Webster and Wind's (1972), and Sheth's (1973) descriptive models are also claimed to be pioneering, yet very complex and difficult to assess and use in practice. (e.g. Anderson et al. 1987; McQuiston, 1989; Bunn, 1994; Mitchell et al. 2003; Barcly and Bunn, 2006). Moreover, Robinson's et al (1967) Buygrid model has also faced some critic. Specifically, critics have suggested that the model overstates the newness of the task as a primary descriptor and should be expanded to include factors such as complexity and importance of the purchase situation (Johnston 1981; Silk and Kalwani 1982; Anderson et al. 1987). Furthermore, in his Taxonomy of Buying Decision Approaches, Bunn (1993) claims that some of the buying decisions are uncertain because the firm has no experience with the solution. One could add under the same topic also the solutions that are technologically complex and differentiated, and difficult to evaluate. In other cases uncertainty is caused by the unpredictable aspects of dealing with a new vendor. One could argue that when companies are in the e-commerce adoption process the situation often involves all of these elements and factors. A fact is that only a small percentage of new product initiatives succeed in the marketplace (e.g. Crawford, 1977; Delre et al. 2007; Chiesa and Frattini, 2011) reinforcing the need for additional research that increase the understanding of the industrial buying behavior and adoption of innovations. This study aims to contribute to these issues and is therefore well justified. I have now introduced the current state of innovations and innovation selling, buying behavior and adoption of innovations. Next I will finish this subchapter discussing about digital revolution and e-commerce related issues.

Digital revolution is a global phenomenon and has changed the world tremendously in the past few years. According to many studies this phenomenon is only in the beginning and the influence of digitalization is predicted to grow rapidly in the future. (e.g. Alba et al., 1997; Rust, 1997; Meuter et al., 2000; Zysman and Newman, 2006;). E-commerce can be seen as a part of the digital revolution and its accelerated growth (Yu and Yu-Hui, 2009), and it has already redefined numerous of industries, such as music (Elberse, 2010), airline

(Jarach, 2002), book (Kotha, 1998), broadcasting (Levy, 2001), adult entertainment (Edelman, 2009), and many other industries (Wartella and Jennings, 2001). For customers, e-commerce has provided a lot wider choice of products, services and prices from different suppliers and the means to search, compare, select and purchase products and services more readily. For marketers, it has opened a whole new range of possibilities to grow business fast, compete more equally with larger competitors, create new ways of selling existing products, offer new services, expand into new markets, reach new suppliers, reduce the cost of doing business, improve product quality and apply new communication techniques. (e.g. Chaudhury and Kuilboer, 2002; Daniel et al., 2002; Mahmood et al. 2004; Sutanonpaiboon and Pearson, 2006; Boeck et al. 2009; Chaffey et al. 2009).

Despite the great opportunities, companies have experienced a lot of challenges and issues adopting the e-commerce or at least doing it successfully (e.g. Wind and Mahajan 2000; Dellarocas 2003; Rowley 2008; Zhu and Zhang 2010). Chitura et al. 2008 argue that these issues have studied a lot and they have largely remained the same since the birth of e-commerce. However, one of the key issues in e-commerce adoption has been the newness of it. In other words, e-commerce in general and solutions around it are still perceived as unknown, uncertain and nontraditional. When studying barriers of e-commerce adoption, for instance, Cloete, et al (2002) reported that companies have limited knowledge of e-commerce models and methodologies, Lawson et al. (2003) found that some of the firms are not sure how their customer would react to it, Lane et al. (2004) contended that companies are not ready to adopt e-commerce as a business concept, and Scupola (2009) argued that reasons are lack of both marketing and information technology knowledge. It seems that e-commerce adoption requires simultaneously expertise in both Marketing and IT functions. In organizations these functions are often managed by the Chief Marketing Officer (CMO) and Chief Information Officer (CIO). From the e-commerce seller's point of view it would be interesting to analyze the roles and relationship of these two function heads in the e-commerce adoption process. The amount of new innovations and solutions around e-commerce will increase as the digital revolution becomes greater. Therefore, it can be argued that a study that aims to describe the roles and relationships of CMO and CIO in the e-commerce adoption process creates a meaningful framework for analyzing e-

commerce innovation selling using previous studies of industrial buying behavior and innovation adoption as a basis of the theoretical framework.

## 1.2 Research objective, scope and questions

In this study, the main research objective is to analyze the chosen research phenomenon, i.e. selling e-commerce innovations in the chosen research context of describing the roles and relationship of CMO and CIO in e-commerce adoption process. I will discuss these issues from a theoretical perspective using previous studies of industrial buying behavior and innovation adoption as a basis, and then conduct an empirical study to find out how reality fits into the theoretical frames. Because e-commerce as a phenomenon and as an investment contains elements from both Marketing and IT functions the main research question can be expressed as follows:

*How do CMOs and CIOs describe their roles and relationships in the e-commerce adoption process?*

In order to answer the main research question and gain a better understanding of the issue I have divided it into two sub questions:

*How do CMOs and CIOs describe e-commerce as an investment?*

*How do CMOs and CIOs describe e-commerce adoption process?*

## 1.3 Key concepts

In the following, I will shortly present the key concepts of this study, which are industrial buying behavior, innovation and innovation adoption, electronic commerce, Chief Marketing Officer and Chief Information Officer.

*Industrial buying behavior*

Industrial buying behavior theories aim to analyze different factors and their impact on behavior of firms and groups and individuals' within during buying and procurement process (Sheth, 1973). The difference between consumer and industrial buying behavior is that, for instance, industrial buying takes place in the context of a formal organization influenced by budget, cost, and profit considerations. Furthermore, industrial buying usually involves many people in the decision process with complex interactions among people and among individual and organizational goals. (Webster and Wind, 1972) Johnston and Lewin (1996) summarize their finding that it is the complex nature and the large amount of many different, yet interrelated factors that makes understanding industrial buying behavior so difficult.

*Innovation and innovation adoption*

Oxford American Dictionary defines innovation as follows *"the action or process of innovating; a new method, idea, product".* Rogers (1995) approaches innovation from the perspective of uncertainty and information. In other words, uncertainty is generated by innovation, defined as an idea, practice or object that is perceived as new by the potential adopter. An innovation presents a new alternative or alternatives with new means of solving problems. However, probabilities of the new alternatives being superior to previous practice are not exactly known by the individual problem solvers. Thus, they are motivated to seek further information to cope with the uncertainty that it creates.  In order to define the influence of an innovations Robertson (1971) categorizes them into continuous and discontinuous. Discontinuous innovations are perceived to have significant consequences for existing production or consumption patterns. In other words, innovations that alter existing patterns of production or consumption or creates new patterns of consumption. Examples are micro- computers, electronic mail or video recording. The key to defining innovations is the perception of the product among potential adopters. An innovation may be high technology from the supplier's vantage point but if it is not perceived as altering and improving the customers' business functions it is not of interest in the present context. (Robertson and Gatingon, 1986) Innovation adoption as a concept refers to this very issue. That is to say, whether an individual or organization perceives the innovation as worth

adopting and therefore decides to adopt, postpone or reject the innovation. It is well known that different groups of adopters have different characteristics concerning the adoption of innovation (Rogers, 1995). Besides the different reasons for different group of adopters, the timing of the adoption separates different groups from others (Bass, 1967).

*Electronic commerce*

Electronic commerce (e-commerce) can be defined in number of ways and the different definitions vary by scale and content. Narrowly defined electronic commerce can be seen purely as marketing, buying, and selling over information networks or the Internet (Chesher et al. 2003; Chaffey, 2006). In a wider meaning electronic commerce has been defined as a set of activities including information sharing, maintaining of business connections and conducting different kinds of business transactions over information networks (Kalakota and Whinston, 1996; Adam et al. 1999; Chaffey et al. 2009). Moreover, definition of e-commerce often includes specific features, such as ability to sell on a global basis, (Reynolds, 2004). Furthermore, e-commerce is one part of the e-business which instead means integrating sales, marketing, accounting, manufacturing, and operations with the website activities (Rosen, 2002; Chesher et al. 2003). In other words, e-business is a superset of e-commerce.

*Chief Marketing Officer and Chief Information Officer*

In this study the job title and function Chief Marketing Officer (CMO) refers to the person who is leading organization's marketing functions. The Chief Information Officer is on the other hand referring to the person leading the IT functions. There are many synonyms for both titles (e.g. Marketing Director or Head of IT) and the main point in this study is to focus on the top heads of the both functions.

## 1.4 Structure of the study

Following this introductory section, the next Chapter comprises the literature review of this study. It discusses about the factors that influence on the industrial buying behavior and

innovation adoption. Chapter 3 summarizes the theoretical part and introduces the conceptual framework of this study. Chapter 4 describes the chosen research methodology before moving on to Chapter 5 where the data of the study is discussed and analyzed. Finally, Chapter 6 focuses on conclusive discussions and implications.

## 2. Literature review

In this Chapter, relevant literature and earlier research of industrial buying behavior and innovation adoption are presented. After exploring nearly 300 studies regarding industrial buying behavior and innovation adoption I found out that they can be categorized under three different themes. Firstly, the studies that approaches the topic analyzing factors outside the organizations. This theme had three recognizable sub-categories which can be named as 1) organization's end-customers, 2) competitive environment and 3) innovation sellers and other suppliers. The second theme covers the studies that focus on organization's internal factors. They can be further divided into three following sub categories: 1) organizational structure and climate, 2) organizational technology and systems and 3) organization's technological orientation, expertise and experience. Finally, some of the studies focused on the certain groups and individuals within the organization. Once again, more compact sub-categories were recognized. These were 1) buying center, 2) individuals and 3) decision makers. Naturally there were also studies that aimed to build a comprehensive and integrated analysis focusing on all the three major themes at the same time.

I have organized the literature review of this study applying the themes and sub-categories introduced above. In the first section, I will discuss the outside the organization related issues. In other words, I will discuss environmental and industry related factors (Chapter 2.1) that influence on the buying behavior and innovation adoption of the organizations. This section is further divided to organization's end-customers (2.1.1), competitive environment (2.1.2) and innovation sellers and other suppliers (2.2.2). In the second section, I will move onto the inside the organization related factors (2.2). That is to say, I discuss the organization wide factors that have an impact on the buying behavior and innovation adoption. This section covers the organizational technology and systems (2.2.1), organizational structure and climate (2.2.2) and technological orientation, expertise and experience (2.2.3). Finally, I drill into the smallest pieces of units analyzing the topic from the group and individual person's point of view. Like the first two sections, the last section is also divided into three parts: buying center (2.3.1), individuals (2.3.2) and decision

makers (2.3.3). The organization of this Chapter is presented in the Picture 1 and it illustrates my chosen approach of starting from the most extensive factors (i.e. the environmental and industry related) and step by step moving into the more compact issues (i.e. individual persons inside the organization). More profound argumentation of the chosen organization and approach are discussed on the further parts of this Chapter.
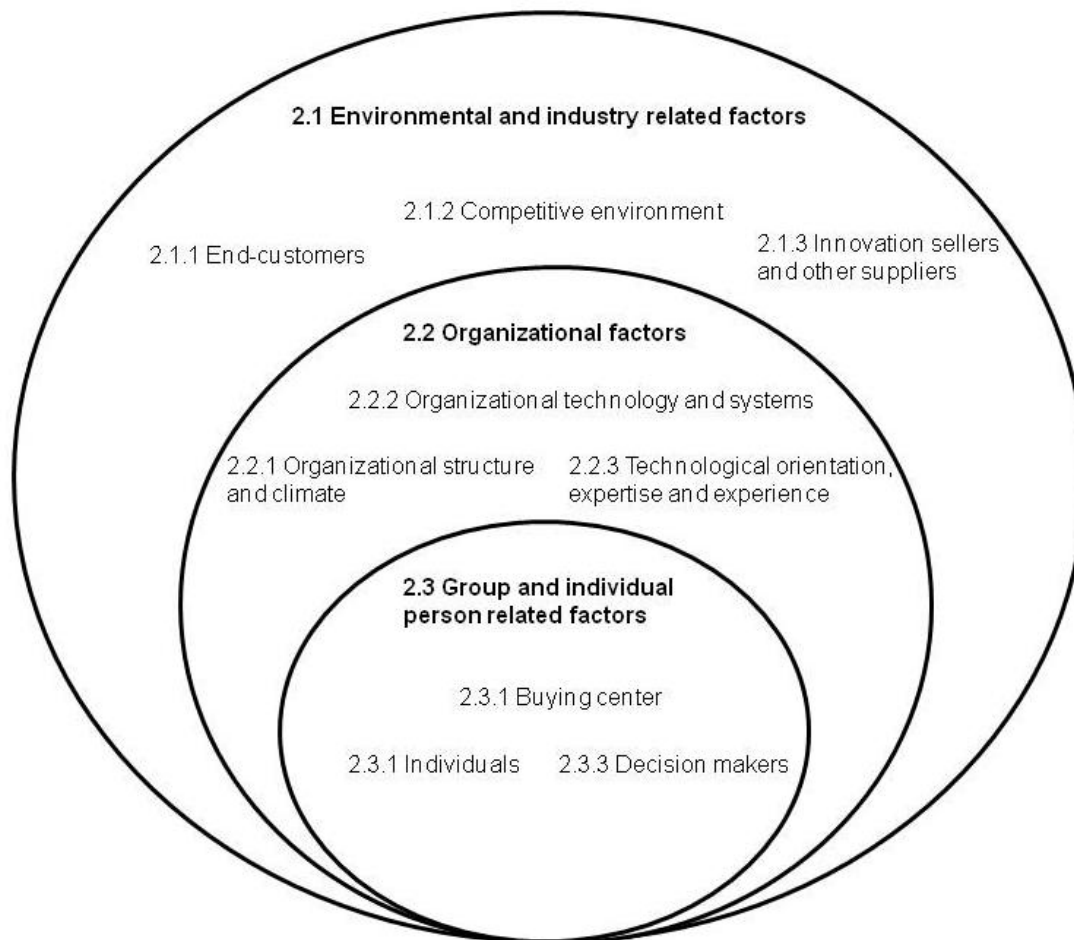


Figure 1. Organization of the literature review of the study

## 2.1 Environmental and industry related factors

Organizational sociologists have long argued that firms adopt technologies because of institutional pressures from constituencies in their environments (Srinivasan, 2002). Environmental factors can be categorized into environmental and more concrete, institutional factors. Environmental factors are typically further dived into physical (i.e.

geographic, climate, and ecological), technological, economic, political, legal, and cultural factors. For instance, Samli et al. (1988), and Lunsford and Fussel (1993) argue that understanding the social and cultural context of the markets is essential. Moreover, regulatory agents may have an influence on the organizations in many ways. In other words, laws may require changes in the organization's outputs creating new buying needs (Grønhaug and Venkatesh, 1991). Nevertheless, environmental factors are very difficult to identify, measure and analyze (Cooper, 2000). On the other hand, institutional environmental factors such as governments, end-customers, competitors, and sellers and their influence are more easily to comprehend (Webster and Wind, 1972). Therefore, in this subchapter I will focus on institutional environmental factors, that is, end-customers, competitive environment, and finally innovation sellers and other suppliers.

## 2.1.1 End-customers

In this section I will discuss about end-customers' influence on the buying behavior and innovation adoption. In the first paragraph I will analyze the overall importance and weight of the customers' impact on increasing and accelerating the innovation diffusion and innovation adoption. Then, I will discuss the topic in a light of IT-innovation and e-commerce solutions. The last paragraph consists of discussion about the customer's power to slow and prevent the innovation diffusion, innovation adoption, and adoption of e-commerce.

The importance of an organization's customers cannot be overstressed (e.g. Anderson et al. 1994; Zeithaml et al. 1996; Chakraborty et al. 2007.) This will lead to a situation that customers have a great impact on organizations' buying behavior and innovation adoption. In other words, any changes within customers' behavior, needs, or preferences for inputs will most likely lead changes in organization's buying needs, and needs for new innovations may arise. It is quite obvious that the more important the customer is to the organization the more likely and rapidly it will adapt to changes in customer's needs. (Grønhaug and Venkatesh, 1991).

Shainesh (2004) claims that one of the main reasons for the firms continuously investing in upgrading their IT-systems with new innovations is to improve the delivery of superior customer service. In the study reported by Ha (2000) some managers reported that the decision to set up websites or switch to email had been made as a direct response to requests from powerful customers. Furthermore, when studying critical success factors for e-commerce use, Jeffcoate et al (2002) found customer demand being the most important factor. Ching and Ellis (2004) argue that customer demands may be even more salient for smaller firms with few large clients. Moreover, Stroetmann (1979) suggests that smaller firms, by rapidly and flexibly adjusting to changing market conditions and new customer demands are more likely to adopt innovations earlier than larger firms.

As the customers are one of the key drivers of innovation adoption, they may also be one of the key barriers to slow down or reject the adoption. That is to say, customers can be very skeptical about the implementation of web-based processes (Cachon and Fisher, 1997) and refuse to adopt web-based services such as e-commerce due to feared costs, service disruptions, or confidential data issues (Corbett et al. 1999). On the other hand, one must have a certain amount of critic because studies made by Cachon and Fisher, (1997) and Corbett et al. (1999) are over ten years old and attitudes towards the Internet has changed a lot during that time (e.g. Zysman and Newman, 2006; Yu and Yu-Hui, 2009; Chaffey et al. 2009). Nevertheless, only seven years old study by Ching and Ellis (2004) shows that when asking organizations about their reasons for e-commerce rejection or postponement, some of them say that their customers are not ready or willing to adopt it.

As a conclusion for this section, it seems that the organization's end-customers and the changes in their behavior and preferences are very important if not the most important catalyst for innovation diffusion and e-commerce adoption. Contrariwise, if the organization interprets that its current or potential customers are not ready or willing to adopt the use of e-commerce, it is almost certain that the organization will not adopt it or at least postpones the adoption. Therefore, in order to understand an organization's buying behavior and adoption of the e-commerce, one must understand the preferences and the

behavior of the organization's customers. Maybe more importantly, one must understand the organization's knowledge and beliefs about its current and potential customers' behavior and preferences behavior because in the end it is the organization who decides whether adoption of the e-commerce is creating value for its customers or not. Be that as it may, the end-customers as a factor will be an interesting topic to discuss in the empirical part of this study and especially about the CIOs role regarding to it because it traditionally has not belonged to CIO's core.

### 2.1.2 Competitive environment

In this section I will analyze the impact of competitive environment to organization's buying behavior and innovation adoption. In the first paragraph, I will discuss about the competitive pressure and its influence. Then, I will move onto different industry-related factors and their impact on the competitive environment and perceived competitive pressure and further on innovation diffusion and adoption. In the third paragraph, I will analyze innovation and information diffusion's effects on innovation adoption within the competitive environment.

An organization is challenged by its competitors — present and new entrants, as well as substituting products (Porter, 1980). According to many studies influences from substitute competition are easily overlooked (e.g. Porter, 1980; Ganesan, 1994). Because organizations tend to follow the most visible competitors, the more visible is a competitor and its competitive moves, the more likely is that new buying needs for innovations arise (Grønhaug and Venkatesh, 1991). Technological change is a principal driver of competition. It destroys monopolies, creates new industries and renders products and markets obsolete (Srinivasan et al. 2002). Moreover, Tzokas and Saren (1993) argue that the adoption of new ideas, products and processes developed elsewhere, i.e. by the suppliers, is one of the key issues in competitive environment. Kimberly and Evanisko (1981) claim that in order to maintain competitive, for larger organizations there may be a greater necessity to adopt innovations than for smaller ones. On the other hand, it has been suggested that e-

commerce can offer smaller companies considerable benefit (Lynn et al 1999; Levy et al 2005). In particular, these authors suggest that e-commerce offers such companies an opportunity to compete more effectively with their competitors, both large and small. Moreover, Acs and Audretsch (1988) argue that primary reason is that smaller firms must take risks in terms of early adoptions to remain competitive with larger firms. Furthermore, Premkumar and Roberts (1999) identified a perceived competitive pressure as being a significant factor driving the adoption of new information technologies in 78 small rural businesses. Many other studies have come to same conclusion, that is, competition and competitive pressures generally increases the likelihood of innovation adoption (e.g. Kimberly and Evanisko, 1981; Levin et al. 1987; Link and Bozeman, 1991; Srinivasan et al. 2002).

As it comes clear, competition and competitive pressure increase the probability of innovation adoption. The question is: how does an organization perceive its competitive environment? This discusses about the industry-related factors that influence on the competitive environment and perceived competitive pressure and further on the innovation adoption. According to various studies, the greater the environmental turbulence, the more proactive and rapid are the purchases of a new technology relative to a firm's competitors in order to maintain its competitive superiority (Weiss and Heide, 1993; Slater and Narver, 1995; Kim and Pae, 2007). Moreover, Srinivasan (2002) argues that in technologically turbulent environments, the value and impact of prior stored learning deteriorates with environmental change. Rapidly changing technological environments will require constant surveillance of markets and technologies and create a need to experiment with new technologies. Firms in such environments will, over time, gain experience in sensing and responding to emerging technologies. Gatignon and Robertson (1989) found that competitive price intensity reduces receptivity to innovation because the industry's financial resources are depleted. However, Shainesh (2004) studied the innovation adoption from the viewpoint of industry's IT-intensity, and one could argue that the same industries, i.e. banking, financial services & insurance, telecommunication services and airlines, which are highly IT-intensive, are also highly price intensive. In the same study he suggests that these industries are very potential customers for new innovations because

they are upgrading their systems to gain competitive advantage. Both studies by Robertson and Gatignon (1986) and Gatignon and Robertson (1989) argue that difficulty in predicting demand is expected to have a positive effect on propensity to innovate. Uncertainty of demand heightens perceived competitive vulnerability and makes the firm more susceptible to innovation in its quest for competitive advantage. As a conclusion, it seems that perceived competitive pressure varies between industries and the greater the turbulence and the intensity of the industry, the more likely an organization is forced to seek and adopt innovations.

In this section, I will discuss about the influence of the industry concentration and the impact of oligopolistic market structure which both increase the likelihood of innovation adoption. This is due to three reasons. Firstly, industry participants under oligopolistic conditions pay close attention to each other's competitive moves and that the benefits of adopting an innovation increase as the number of competitors decreases (Reinganum 1981). Secondly, the participants are also more likely to have the discretionary financial resources necessary to innovate than those in industries characterized by numerous firms with small market share (Gatignon and Robertson, 1989). Thirdly, in oligopolistic environment the acceptance of technological innovations helps build or maintain barriers to entry and preserves cost advantage (Levin 1978). When it comes to monopolistic market structure, there are arguments on the both sides. Salter (1960) and Swan (1970) argue that a monopolistic company is less likely to recognize the value of innovation. However, Kamien and Schwartz (1975) argue that monopolistic companies are willing to capitalize on innovations in order to prevent entries.

In this last paragraph, I will analyze innovation and information diffusion's effects on innovation adoption within the competitive environment. According to Abrahamson (1996), the more there are organizations that adopt a new innovation, the more the knowledge about the innovation's efficiency and benefits spreads throughout the business sector. As a result, more and more non-adopters will rationally adopt the new practice because of its demonstrated benefits (Mansfield, 1985; Rogers, 1983). Another main driver of new practice adoption is the so-called bandwagon effect. Bandwagons are diffusion

processes whereby organizations adopt innovations, often without any rational assessment but because of the external pressure caused by the large number of organizations that have already adopted or are considering adopting the new technology (Reinganum, 1981; Tolbert and Zucker 1983). In the organizational behavior literature, Kimberly (1978) found that innovativeness is more likely when organizations are integrated into external information environments. Moreover, according to Robertson and Gatignon (1986) communication openness, that is, the amount of potentially useful information communicated among competitors increase the innovation adoption. During the time the importance of this variable has probably increased as the information has become more available and open. Furthermore, when it comes to e-commerce, one could argue that hiding its adoption from competitors is not even possible as the e-commerce is rather visible and open for the audience.

As a conclusion, it is quite evident that an organization's competitive environment is one of the key factors impacting on the buying behavior and innovation adoption. Needless to say, the CMO's role in analyzing and understanding the competitive environment must be substantial. However, the interesting question is again that what is the CIO's role in this issue?

### 2.1.3  Innovations sellers and other suppliers

This is the last section considering environmental and industry related factors, and their impact on industrial buying behavior and innovation diffusion and adoption. In the following I will take a look at the innovation sellers and other suppliers, and their impact on the organization's buying behavior and innovation diffusion and adoption. I will start analyzing the influence of the innovation suppliers' competitive environment and its impact on the suppliers' behavior and characteristics of innovation, and further its effect on innovation diffusion. The second paragraph consists of analysis about the current supplier--adopter relationship, and its impact on innovation adoption. In the final paragraph I will sum up the main findings from the previous studies.

It can be expected that suppliers of the innovation and the level of their competition will also have an impact on the likelihood of acceptance in the market (e.g. Brown, 1981; Robertson and Gatignon, 1986). Industry competitiveness is generally assessed by the number of competitors, the concentration ratios, and the mobility barriers that competitors are able to erect (Porter 1980). These measures of competitiveness are interrelated and in turn affect the competitive actions, determining the characteristics of the innovation, its resource allocations and pricing, which in turn, have impact on the innovation diffusion potential and the speed of it (Eliashberg and Chatterjee, 1985). That is to say, firstly, under high competitive intensity, greater resource allocations and more aggressive pricing policies are likely to materialize, thus encouraging more rapid diffusion (Robertson and Gatignon, 1986). At a later stage of the product life cycle, competitive intensity remains high, but producers will be much more focused on secondary demand than on the primary demand. Experience curve pricing will drive down industry price levels and bring more customers into the market at a faster pace (Bass, 1980). Secondly, rivalry within the industry stimulates R&D output (Grabowski and Baxter 1973). It has been documented that there is a positive relationship between R&D commitments and the invention/innovation process (Kamien and Schwartz 1982) which consequently will lead to enhanced technologies and more rapid rate of new product introductions by the industry (Robertson and Gatignon, 1986). Thirdly, the speed of diffusion can be also enhanced by reasonable industry standardization of a technology or retarded if competing standards prevail. This is the theory behind Abemathy and Utterback's (1978) concept of dominant design. Weiss and Heide (1993) argue that the lack of dominant design increases buyers' information search efforts and prolongs their overall duration of their search processes. That is to say, buyers' resistance may be a function of the perceived risk of buying a product that may turn out to be the wrong standard. Customer behavior theories, therefore, suggests that the sooner the industry attains standardization on a dominant design, the more rapid the diffusion process, since customers will be more receptive to the innovation as the perceived risk of buying the wrong standard declines (Robertson and Gatignon, 1986). A standard of technology also reduces product differentiation among suppliers, thus heightening the price competition (Farrell and Saloner 1985), which will lead

to increase in diffusion. Fourthly, the more active suppliers are on communicating and informing the market, the more customers will be aware of their products, and the more likely they consider buying and adopting it (e.g. Frambach, 1993; Frambach et al. 1998). In other words, if the suppliers would not put any effort into convincing organizations to implement e-commerce, the odds are that only few firms would actually adopt it. A number of empirical studies have shown that the greater allocation of marketing actions (e.g. advertising, personal selling, promotional support, and distribution support), the faster the diffusion process (Bass 1980; Lilien et al. 1981; Horsky and Simon, 1983; Simon and Sebastian, 1987; Prins and Verhoef, 2007). The received information by the adopters from the sellers is a sum of availability of information, the quality of information, and the value of the available information (Webster, 1969). Of course, it must be pointed out that sellers are not the only source of information and several studies have shown that higher levels of network participation are associated with a higher chance of becoming aware of an innovation, and thus with a higher likelihood of adopting it (Håkansson, 1982; Abrahamson and Rosenkopf, 1997).

Groundbreaking Buyclass Theory by Robinson et al (1967) suggests that new buying situation will lead to a thorough consideration of alternative suppliers. However, McMillan (1972) studied buying centers and found a common perception that current suppliers are less risky than prospective suppliers. This finding suggests that risk perceptions can be reduced in new buying tasks by giving the edge to current suppliers. Several other studies also suggest that avoiding rather than considering alternatives is a risk-reduction strategy practiced by buyers in new task situations (e.g. Cardozo and Cagley, 1971; Puto et al. 1985; Anderson et al. 1987). Furthermore, the level of which buyer is tied up to current suppliers because of the switching costs reflects significantly to information search efforts (Weiss and Heide, 1993). The role of the other suppliers and the changes within may also cause new buying needs (Grønhaug and Venkatesh, 1991). That is to say, the bigger is the strategic influence of a supplier's output the more likely is an organization to adapt to its changes, and new buying needs may arise. Moreover, Robertson and Gatignon (1986) argue that firms with high vertical coordination or dependence (e.g., airframe manufacturers and airlines) the more likely is the innovation adoption. According to Aiken

and Hage (1972) and Kimberly (1978) strong vertical coordination leads to a greater information flow, and thus more rapid adoption. The vertical coordination may even lead to situation where suppliers offer incentives to encourage adoption, which naturally increases the likelihood of adoption.

Besides the competition between the potential innovation adopters, it seems that competition between innovation suppliers also increases and accelerates innovation adoption. This is due the several consequences of an intensive competition, that is, decreased prices, increased R&D efforts, and increased standardization, and active communication and marketing. In this study this variable is quite interesting because competition among suppliers of IT innovations is usually rather tough (Waarts et al. 2002) and one can list several Finnish suppliers of the e-commerce products and services just doing a little search from the Internet. If international players are considered, the list grows tremendously. Furthermore, an organization's current marketing and IT partner and its repertory and competence will also influence the e-commerce adoption as organizations tend to prefer them. Finally, depending on the strategic importance and incentives of other suppliers, their influence may be significant.

I have now discussed about the three main sub-categories under extra-organizational, i.e. environmental and industry related factors that influence on the buying behavior and innovation adoption. As already presented in the introduction of this Chapter, I now move onto the organizational factors.

## 2.2 Organizational factors

Webster and Wind (1972) argue that organizational factors cause individual decision makers and adopters to act differently than they would if they were operating in other organizations. Several studies have been defined, divided, and categorized these factors in many ways (e.g. Thompson, 1967; Aldrich, 1979; Waarts et al. 2002; Olson et al. 2005). It seems that common consensus is that the influence of the factors are highly interrelated

and connected to each other. In this sub-chapter I will analyze the impact of the organizational factors on buying behavior and innovation adoption under three themes. I will start with the organizational structure and climate, then I will move onto the organizational technology and systems and in the final section I will discuss about the technological orientation, experience, and expertise of the organization.

## 2.2.1 Organizational structure and climate

Baker and Freeland (1970) have argued that individual characteristics do not seem to be important determinants of innovative behavior among people in organizations, but the organization and its structural characteristics are the most apparent factors for innovative activity and response. Furthermore, Baumgartel et al. (1976) suggest that organizational climate is the single most important influence on the new product adoption decision. Organizational structure and climate as concepts are quite vague; however, they refer to more stable patterns of the organization. These are, for instance, management of processes and people (Leavitt et al. 1973), relatively enduring quality of the internal environment of an organization that is experienced by its members, influence their behavior and can be described in terms of the values of a particular set of characteristics or attributes of the organization (Taguiri and Litwin, 1968). Organizational structure and climate can also be approached from the viewpoint of formal structure which consists of communication, authority, status, rewards, and work flow that are reflected by attitudes, values, norms, behaviors, feelings, and relationships among members or between members (e.g. Sells, 1963; Payne, 1971). I will analyze the organizational structure and climate in the same context as the relationship between these two being totally interdependent and together relating environment of the organization, behavior and objectives of the individual member (Kennedy 1983a).

When discussing about organizational structure and climate, organizational behavior theories tend to describe them in terms of centralization, formalization, complexity, specialization and functional differentiation. Centralization refers to whether decision

authority is closely centralized, i.e. held by top managers or is decentralized, i.e. delegated further. Formalization is the degree to which formal rules and procedures govern decisions and working relationships. These rules and procedures are often developed and standardized to handle repetitive tasks and activities within organization. Complexity refers to differentiation and the presence of multiple skills or professions in the organization. (e.g. Thompson, 1967; Payne and Mansfield, 1973; Aldrich, 1979; Olson et al. 2005). The size of the organization has a great influence in all the variables. Firstly, as the size of the organization increases, it becomes more difficult to centralize all decision-making. The overload at the top of the organization leads the CEO to delegate some decision authority to lower levels of management. Secondly, large organizations have greater needs to formalize their activities than do small organizations. Thirdly, as the amount of people in the organizations increases, the differentiation of people increases as well. Therefore, the size of the organization is positively related to the degree of decentralization (e.g. Whetten, 1987; Hitt et al. 1990; Sheth, 1973), formalization (Hitt et al. 1990), complexity, specialization and functional differentiation (Damanpour, 1996).

Bellizzi and Belonax (1982) found that the degree of centralization is negatively related to detecting and activating new buying needs. According to Kennedy (1983a) this is because the structure of any organization inevitably determines the communication and consequently the information flow. The greater nature of centralization or bureaucratization in some organizations necessitates an increase in the number of channels of communication through which the innovation has to travel. Hence, it can be concluded that centralization should inhibit innovation. Grønhaug and Venkatesh (1991) argue that the degree of formalized, governed, and standardized rules and procedures are negatively related to making an organization aware of new buying needs. This is also supported by Srinivasan et al. (2002) and Webster (1970) who argue that firms with hierarchy culture may not generate and share information about new technologies. Grønhaug and Venkatesh (1991) also claim that the high degree of complexity make the organization more aware of new buying needs than does low organizational complexity. Baldridge and Burnham (1975) and Kennedy (1983b) support the claim that complexity increases the likelihood of innovation adoption. In addition, Moch and Morse (1977) postulated that specialization

and functional differentiation would be positively associated with the frequency with which compatible innovations were adopted. Kimberly (1978) confirms these results.

The search procedure and new product adoption is likely to be more evident and more innovative in organizations where the structures tend to be organic, and the structure of an organic organization is one of high complexity, low centralization, low formalization and low stratification (Kennedy, 1983a). Moreover, Beukema (1974) argues that innovative firms are more supportive to a motivational reward system and to superior-subordinate collaboration, put higher emphasis upon mutual confidence and trust, and are more willing to resolve conflict through confrontation, not by suppression and force, compared with non-adopter firms. In a later study, El Sherbeny (1978) confirmed these hypotheses. One could argue that this is also related to the strategic posture of a firm. That is to say, organizations that pursue an aggressive, innovation-oriented strategy are more likely to fuel their activities with an orientation that is open to innovation (Han et al., 1998; Hurley and Hult, 1998). Moreover, Moorman (1995) notes that entrepreneurial climate and culture, such as adhocracy, thrive on information acquisition and thus such firms are likely to be informed about new technology developments. Furthermore, because adhocracy cultures foster risk taking, managers in these firms are willing to experiment with new technologies (Srinivasan, 2002).

As a conclusion, one could argue that e-commerce adoption process in highly dependent on the organizational structure and climate. Because a successful e-commerce adoption seems to require expertise in Marketing and IT, discussions about CMO-CIO relationship and cross-functional co-operation will probably generate interesting insight to the topic.

## 2.2.2 Organizational technology and systems

Especially for new product innovations it is important to take customers' existing technology and solutions into account (e.g., Webster, 1969; Webster and Wind, 1972; Anderson et al. 2000). Rogers (1995) and Tripas (1998) argue that current technology works

as complementary assets and helps the firm derive value from new technologies. For instance, personal computers initially diffused more rapidly among consumers and firms that had prior experience with mainframes or minicomputers or other products related to computers than among those that did not (Dickerson and Gentry, 1983; Mahajan et al. 1990; Srinivasan, 2002). According to Thompson (1967) organizational technology can be defined and comprehended as means-end relationships, which can be characterized by flexibility and complexity. In this case, flexibility means the amount of inputs and outputs of an organization if the organization is seen as input-throughout-output system. In other words, the fewer the possible inputs or outputs, the greater is the inflexibility. Grønhaug and Venkatesh, (1991) argue that the degree inflexibility is positively related to needs of specific products, and thus organizations with inflexible technologies are less likely to adopt new innovations. Complexity in this context means how complex the organization's technology is perceived. The degree of complexity is negatively related to innovation adoption, because it will lead into difficulties in detecting and understanding buying needs of new products and services (Grønhaug and Venkatesh, 1991). On the other hand, Baldridge and Bumham (1975) and Robertson and Gatignon (1986) argue that the complexity of tasks increases the probability of adoption because complex tasks provide greater incentives and payoffs for the adoption of task simplifying innovations.

Rogers' (1962) pioneering theory (e.g. Bass, 1969; Tigert and Farivar, 1981; Waarts et al. 2002) about diffusion of innovation approaches the issue mainly from the viewpoint of innovation characteristics. He argues that if the innovation is perceived to be better than the existing system, i.e. a measure of its relative advantage, and is consistent with needs of the potential adopter, i.e. a measure of its compatibility, it is more likely that a favorable attitude towards the innovation will be formed. On the other hand, both arguments can be derived to concern current organizational technology. That is to say, the measure of relative advantage and compatibility depend purely on current technology and solutions. Premkumar and Roberts (1999) identified a perceived relative advantage or derived current technology being a significant factor driving the adoption of new information technologies. Consequently, Thong (1999) found that the perceived relative advantage of the innovation played a key role in the adoption of information systems. Moreover, Anderson and Narus

(1999) argue that adoption decision is based on the comparison of the expected situation after adoption and current situation. However, it is important to notice that an objective comparison is easier said than done because the value of new innovation might be difficult to quantify (Brynjolfsson and Hitt, 1998). When it comes to measure of the innovation's compatibility, Waarts et al. (2002) claim that the level of IT integration and intensity, that is the level at which information processes and systems are integrated across various functional areas within organization and how much the business depends on computerized information processes, is positively related to the early adoption of new IT innovations (i.e. ERP-software). Pennings and Harianto (1992) support this claim. According to Grønhaug and Venkatesh (1991) new buying needs directly related to products offered and core technology will receive greater attention than other organizational buying needs. That is to say, production equipment and raw materials will probably receive higher attention than office equipment and systems improving accounting procedures. As most of the companies' survival and success depends highly on sales, one could argue that efforts aiming to improve marketing and sales (e.g. e-commerce solutions) would receive quite high attention in many cases. Finally, it is important to note that most of the organizations resist change and revert to previous ways of doing business (Coch and French, 1948; Hannan and Freeman, 1978; Olson and Boyer 2002). Despite the fact that changing often gives a firm greater competitive advantage, an organization may nevertheless resist the change (Kotter, 1995).

To sum it up, current organizational technology and systems have a great impact on innovation adoption. The innovation is more likely to be adopted if current technology and systems are flexible, incomplex, perceived worse than the new innovation, and compatible with the new innovation. Moreover, the greater the level of IT integration and intensity, the more likely is that the organization adopts new IT innovations, such as e-commerce. On the other hand, future-focused firms review their current technology options and actively monitor new technologies to assess how these technologies may advance or hinder the achievement of their objectives. In addition, because of their focus on the firm's future rather than on the past or the present, these firms are also willing to cannibalize existing investments in responding to new technologies. (Srinivasan, 2002). Needles to say, the

content of this sub-chapter refers more to the technological functions (vs marketing) of an organization. Therefore, one might predict that the CIO's role would be emphasized in the topic related discussions.

### 2.2.3 Technological orientation, expertise and experience

In addition to existing technology and solutions, customers' technological expertise and orientation is a critical factor in innovation adoption and buying behavior (Webster, 1969).

Mainstream marketing theory suggests that a firm supplying technological innovations should identify and target early adopters since their behavior will inaugurate the decision process for the innovation (Baker, 1975; Foxall, 1984). Timing of adoption is equally important for the adopters since an early adoption of an innovation may give rise to first-mover advantages (Porter, 1985; Kerin et al., 1992). Moreover, as the speed of response has acknowledged as a crucial element of firm's capabilities for establishing or maintaining competitive advantage, early adoption may increase ability to respond faster to changing environmental or competitive conditions (Stalk, 1988; Eisenhardt, 1990). Waarts et al. (2002) argue that early adopters are likely to envision the potential strategic advantages of new innovations better and faster than later adopters, and therefore potential value should be emphasized to them when selling innovations. Srinivasan et al. (2002) argue that the greater the firm's technological opportunism, that is to say, the level of awareness of changes in the firm's environment which is likely to create pressures for change, the greater is the extent of technology adoption.

Rogers (1962) argues that if the innovation is easy to understand and use, or in other words, the measure of its complexity is low, it is more likely that a favorable attitude towards the innovation will be formed. Once again, this can be derived from innovation point of view to technological orientation, expertise and experience. That is to say, the measure of experienced complexity depends on the technological expertise and orientation. Shainesh (2004) claims that especially large firms that have internal IT

departments, have experience and in-house expertise of large scale innovation implementations, or have long experience in outsourcing, are more likely to buy and adapt new innovations. Other studies as well support the claim that the more experience a firm has in technology or products related to the innovation, the higher is the likelihood of new adoption (Pennings and Harianto, 1992). Moreover, the degree of perceived complexity tends to inhibit the implementation, which may delay purchase decisions (Zaltman et al. 1973). For instance, experience decreases the amount of information search effort and thus shortens the overall adoption process (Weiss and Heide, 1993). Pennings and Harianto (1992) also found that the higher are the previous capital investments in technology the more likely that firm will adopt new technological innovations. Furthermore, the level of technology orientation and expertise impact on which individuals or roles dominates the buying and adoption decision. That is to say, if a company is technology orientated it is more likely that engineers and tech savvy people have a great impact on decisions (Sheth, 1973). In addition, Carter and Williams (1957) imply that firms with numerous engineers, chemists, and other scientists and technicians among their policy-making personnel will tend to adopt innovations earlier, take less lime to reach an adoption decision, and use much wider variety of information sources. However, Ozanne and Churchill (1971) found that innovation adoption of smaller firms is more likely to be activated because of the skilled labor problems. In other words, smaller firms with less skilled labor look for solutions, which would substitute the poor skills of the labor. Beyond the expertise, positive attitude towards new innovations and newness plays an important role as well in innovation adoption (Baldwin and Scott, 1987).

The greater the professionalization of an organization, the more rapid is the diffusion (Robertson and Gatignon, 1986). Professionalization increases the likelihood of accessing extra-organizational information about innovations (Leonard-Barton, 1985) and it is expected that organizations are more likely to adopt innovations when they have specialist professionals who define the innovation as compatible with their needs and interests (Moch and Morse, 1977). In a similar vein, Robertson and Wind (1983) have argued that professionals are more important than managers in affecting receptivity to innovation. Moreover, Ozanne and Churchill (1971) found that firms with fewer elite and educated

personnel took longer to make the adoption decision. The information absorption capacity of the potential adopter contributes significantly in separating adopters from non-adopters (Gatignon and Robertson, 1989). Smaller firms may lack the knowhow to process potentially valuable information adequately (Nooteboom et al. 1990).

To conclude, organization's technological orientation, expertise, and experience increase the likelihood of innovation adoption. These following attributes, which tend to have a positive impact on innovation adoption, are usually associated with technologically orientated organizations: being an early adopter; having a positive attitude towards technology and newness; having previous experience in innovation investments; and having technologically educated and professional people. As in the previous sub-chapter, these issues as well seem to emphasize the role of the CIO more than the CMO.

This was the last part of the organizational related factors and in accordance with the Picture 1, I will now drill down into more smaller piece of units. In the next chapter, I will discuss the group and individual person related factors, and their impact on the buying behavior and innovation adoption.

## 2.3 Group and individual person related factors

Almost 80 years ago, Fredric (1934) argued that the main objective of all industrial marketing is to contact the one who actually makes the purchase decision, regardless of his or her position or title. Therefore, McQuisition (1989) argues that the primary objective of an industrial marketer is to identify firstly who participates in the purchase decision and secondly what are the factors that affect the interpersonal influence between the participants during the decision. Moreover, for software and IT marketer, Shainesh (2004) stresses the importance of identifying and knowing the participants of the decision-making, each participant's relative influence and what evaluation criteria each participant uses. These are the issues that I will have a look at in this subchapter. That is to say, in the next section the concept of buying center is discussed and how the newness of the product

affects the size of it. Then I will move onto the individual person related factors and decision makers.

## 2.3.1 Buying center

One of the key issues that differentiate industrial buying from consumer buying is that industrial buying usually involves many people in the decision-making process (Webster and Wind, 1972; Sheth, 1973). The term buying center refers to this issue and was first introduced over 40 years ago by Robinson et al. (1967). Moreover, according to researchers the buying center notion has been one of the most important conceptual contributions made in the study of industrial buying behavior (Johnston and Bonoma, 1981). To define it shortly, buying center consist of all the individuals affecting the buying decision. In this section I will discuss how the newness of the product and organization related factors influence the composition of the buying center and more importantly, how it will affect the innovation adoption.

Many studies have found that the composition of the buying center within a company varies a lot between different buying situations (e.g. Pingry, 1974 Mayer, 1983 Mayer, 1983; Wind, 1978; Doyle, et al. 1979; Mayer, 1983; Naumann et al. 1984; Anderson, 1987), during the course of a single decision process (Moriarty and Bateson, 1982; Kennedy, 1983b), and both between and within industries (Clemens, 1974). In other words, the buying center or the group of individuals who are involved with the buying process and decision-making may or may not be a formally identified unit and it is usually a set of roles assumed by different people for different purchases. Furthermore, Bonoma, et al. (1977) and Silk and Kalwani (1982) have pointed out that the dynamics of an industrial purchase give the decision-making unit a fluid nature, with different individuals coming and going depending on the type of decision and the particular phase of the process.

One of the issues influencing the composition of the buying center is the buying target (Johnston and Bonoma, 1981). And as the level of purchase importance, complexity, and

novelty increase, the number of buying center participants also tends to increase dramatically (e.g. Robinson et al. 1967; Anderson et al. 1987). Moreover, Grønhaug (1975) found joint buying decisions to be more common in novel buying situations in which the amount of organizational experience was low and more information was needed to make a decision.  Johnston and Bonoma (1981) pointed out that the amount of participants increases both vertically and laterally. That is, different vertical organizational levels will participate as well as different lateral departments. The increased size of the buying center naturally affects the buying and adoption process by prolonging it significantly (Ozanne and Churchill, 1971).

When the buying task is new and important, it is common that the purchasing agent has a minor role and engineering, because of its expertise in evaluating alternatives, has a major role (Pingry, 1974). Related to this is the use of outside consultants. That is to say, in order to reduce the uncertainty in the decision process of software and IT investments, an outside consultant is often hired and participating in the buying center (e.g. Dawes et al. 1997; Tikkanen et al. 2000). However, the use of specialized buying labor (e.g. outside consultants) is more common in larger than smaller companies (Bellizzi, 1981). Moreover, it must be pointed out in this context that in smaller companies where decision-making is more centralized than in larger companies, it is always possible that the buying center consists of only one individual (Ching and Ellis, 2004).

In addition to purchase target's features, the business environment also affects the structure of the buying center. Firstly, firms under rapidly changing circumstances require diverse sources of information to analyze and adapt to dynamic markets and technological trends (McGrath 2001). Therefore, organizations are willing to have a decision-making process that incorporates as much diverse information and expertise as possible to reduce potential misinterpretations of dynamic market needs and technological trends (Helfat and Raubitschek 2000). Secondly, a turbulent environmental situation that requires coordinated solutions to political decision-making with diverse sources of information and expertise encourages various departments to participate in the decision to purchase new

technologies, which will result in the buying center having a large scope for participation (Kim and Pae, 2007).

As a conclusion for this section it can be argued that the newness of the product and organization related factors have an impact on the structure of buying center, namely increasing the size of it and possibly adding outside consultants in it as well. All of this in turn slows the buying and adoption process of the organization. Moreover, many studies argue that as size of the buying center increases the horizontal co-operation (e.g. Marketing and IT co-operation) increases as well.

## 2.3.2 Individuals

In this section I will discuss about individuals' influence on the organization's buying behavior and innovation adoption. I will start analyzing economical issues; however the emphasis in this section will be more in behavioral variables and on the background of the individuals.

Many marketing texts and introductory marketing courses tend to distinguish between consumer and industrial buying in terms of rationality — rationality in these cases being synonymous with economic rationality (e.g. Smith and Taylor, 1985; Shaw et al. 1989). It is clear that one of the factors driving the innovation adoption is the perceived costs and benefits inherent in the particular innovation. The cost of an innovation has many components, such as initial investment costs, operational costs, and the costs of learning how to capitalize on the new innovation. (Ching and Ellis, 2004) This issue has been widely recognized being less of a handicap for larger businesses. That is to say, numerous empirical findings indicate a positive relationship between size and adoption behavior because the size is conceived as input volume or giving more slack resources and therefore increasing the frequency of adoption (e.g. Becker and Stafford, 1967; Mytinger, 1968; Rosner, 1968; Mohr, 1969; Hage and Aiken, 1970; Aiken and Hage, 1971; Corwin, 1972; Scherer, 1990). Moreover, in his study regarding to IT users, Ha (2000) reported that the

learning and economic costs entailed in the setting up of a secure online presence remains a significant barrier to adoption for some small and medium sized enterprises. This finding is consistent with other studies that have found cost to be an important variable affecting innovation adoption (Tornatzky and Klein, 1982; Premkumar, et al., 1994; Fink, 1998). Furthermore, it is important to note that the owners of the smaller businesses are more concerned about the investment's payback duration. The pressure to show a return often leads to small firms being more concerned with medium-term survival rather than long-term viability. (Akkeren and Cavaye, 1999) As a result, owners are often hesitant to make substantial investments if short-term returns are not guaranteed. Related to this is Rogers' (1962) argument suggesting that trialability of the innovation increases the likelihood of adoption. On the other hand, Palvia, et al. (1994) have suggested that cost is not a significant deterrent in the adoption of information technologies due to the commoditization and price decrease of hardware and software.

Regardless the importance of rational or economical factors, the behavioral nature of industrial buying has been recognized by Kotler (1965) in his early review of the literature noting the strong influence of behavioral variables. Shaw et al. (1989) support this claim. Moreover, Kellog (1970) summarize his findings that *"purchasing managers and specialist buyers are human beings first, last, and all the time, and they, like others, respond to all the same stimuli, even though they sometimes try to hide the fact."* Therefore, in the following paragraphs I will analyze the influence of an individual's background, which is according to Sheth (1973) probably the most significant factor affecting one's buying behavior. The individual's background consists of multiple variables, such as education, age, cosmopolitanism (Rogers, 1962), personality, perceived role set, motivation, cognition, and learning, awareness, experiences, attitudes, preferences (Webster and Wind, 1972), role, goals, values, lifestyle (Sheth, 1973), attitude towards technology (Baldwin and Scott, 1987) as well as competence, workload, organizational position (Grønhaug and Venkatesh, 1991), and technological readiness (Parasuraman, 2000). Needles to say, some of them are easier to comprehend, measure, and analyze than the other ones.

Yu and Yu-Hui (2009) argue that current studies attempting to find the determinants influencing individual-level technological adoption are heavily based on technology acceptance model (TAM) by Davis (1986). In TAM, the actual behavior of an individual to adopt a technology-based product can be predicted by the perceived usefulness and perceived ease-of-use. Iacovou et al. (1995) emphasize the importance of the company owners and argue that if the owner neither perceives the technology to be useful, nor understands its potential, then he or she will be reluctant to adopt it. Parasuraman's (2000) research regarding the concept of technology readiness and people's propensity to embrace and use new technologies for accomplish goals in home and work suggests that the notion of technology readiness relates to people's mental attitudes towards technology. Moreover, White et al. (1998), Prescott and Conger (1995) and Van Slyke (1996) have argued that the ability to use the Internet for such a wide range of business activities, it is better to comprehend not as a single innovation, but as a cluster of related innovations. For software and IT marketer, Shainesh (2004) stresses the importance of identifying and knowing the potential customer's and further its buying center participant's technology readiness in order to successfully identify profitable customers and target the marketing messages.

Almost 40 years ago, when adoption of a computer was perceived as a risky new buying task, Peters and Venkatesan (1973) found demographic and personality features of the decision makers systematically affecting purchase decisions. In particular, close-minded, less educated individuals with less experience in computers and less confidence in their ability to evaluate computers were less likely to purchase. Moreover, Sweeney et al. (1973) examined personality traits of purchasing agents and they found that individuals with a low tolerance for ambiguity and a desire to simplify complex situations systematically avoided active consideration of many aspects of alternative suppliers. Dickerson and Gentry (1983) reported that adopters of personal computers in comparison with non-adopters tend to be older and have higher income, more education, and higher status, i.e. more professional, technical or managerial occupations. Grønhaug and Venkatesh (1991) stress the importance of an individual's overall competence in his or her position, which will help the individual to notice and understand problems and therefore recognize new buying needs.

These findings are consistent with those of most empirical studies in the diffusion theory literature (Gatignon and Robertson, 1985b). Kirby and Turner (1993) found that the lack of knowledge on how to use the computers and technology will result in the situation that the person is less likely to adopt new IT innovations. Furthermore, Julien and Raymond (1994) found that level of assertiveness and rationality of the person in decision-making would make him/her more likely to adopt the use of new innovation if it suited the organization. It is important to note, that even though all the long-term background variables, e.g. education, would support the innovation adoption, simple things such as current work load of an individual may prevent the innovation adoption. That is to say, workload varies both across members of the organization and for the individual member over time (Grønhaug and Venkatesh, 1991) and when the load is high it has been observed that new buying needs are easily dropped or postponed (March and Olsen, 1984). This assertion is also supported by the Cyert et al. (1956).

The importance of the purchase, or in other words, perceived impact of the purchase on organizational profitability and productivity, has been shown to affect the buying behavior of individuals and their participation during the buying process. For instance, Reve and Johansen (1982) found importance of the purchase decision to the organization to be one of the factors that affected both the number of participants and their behavior throughout the purchase process. Kirsch and Kutschker (1982) showed that the relative value of the investment to the purchasing organization had a major impact on the firm's perception of the purchase situation and on the behavior of the individuals involved. Early work in this area showed that the greater the perceived impact of the purchase, the greater the perceived risk of the decision for the individual participants (Sweeney, Mathews, and Wilson 1973). Industrial buying theory states that when faced with risk and uncertainty in a purchase decision, individuals in the buying center seek more information to reduce that uncertainty (Sheth 1973; Anderson, 1982). Moreover, Gronhaug (1975a) discovered that the complexity of the buying task was correlated positively with the amount of information sought to make that decision. On the other hand, the complexity of purchase situation can be also defined as the level of information wanted by the buyers (McQuiston, 1989). Furthermore, Kirsch and Kutschker (1982) found that the complexity of the decision

situation also affected the frequency of conflict between the individuals of the buying center.

The role of negative information in decision processes, particularly negative word of mouth, has long time captured the interest of researchers (Mizerski 1982; Richins 1983; Mahajan et al. 1984; Leonard-Barton, 1985; Kalish and Lilien, 1986; Trusov et al. 2009; Kozinets et al. 2010). General finding is that negative information outweighs positive information in the decision-making process and one of the key factors of innovation adoption is firstly the amount of negative word-of-mouth and secondly individuals tolerance for negative information, which varies lot among individuals (Gatignon and Robertson, 1989). Related to tolerance for negative information is attitude toward information heterogeneity, in other words, whether the decision maker is more accepting of homophilous sources of information within industry or is the decision maker willing to consider heterophilous information sources beyond the bounds of the industry. Kimberley (1978) and Robertson and Wind (1980) suggest that adoption is more likely when the decision maker is integrated into external or heterophilous networks of information. One could argue that Roger's (1962) suggestions about individual's level of cosmopolitanism can be at least loosely linked to this theory. This is because cosmopolitanism, which is regarded as a major determinant of adoption, is the degree to which an individual's orientation is external to his/her immediate social system. According to various studies exposure to information helps to evaluate innovations and usually increases the probability to adopt the innovation as well (Bettman 1979; Rogers 1983; Ebadi and Utterback, 1984). In their research, Akkeren and Cavaye (1999) found an interesting factor affecting IT adoption. One major barrier of IT adoption was the mistrust of the IT industry as some business individuals perceived the IT industry to be over-selling the benefits of technologies and misinforming them. Akkeren and Cavaye's study was made in a middle of so-called .com boom and one can easily concur to the results. In accordance with many other studies discussed in this paper, Ozanne and Churchill (1971) suggest that the level of technical orientation, cosmopolitanism and education are positively related to the amount of substitutes considered. These factors are also positively related to the numbers of information sources used during the buying process. Moreover, in the same study they found that younger

people tend examine more substitutes than older people. They suggest that older people may be more committed to established supplier relationships and may tend to ignore alternative sources of supply. Conventional wisdom suggests that individuals also place a premium on having adequate information and have a greater tendency to share that information (DeBruicker and Summe, 1985; Jackson 1985). Weiss and Heide (1993) argue that buyer's perceived pace of technological change, that is, the rate at which the focal product and its features are changing, has an impact on the information search.

To sum it up, there are various factors impacting on the individuals and their buying behavior. Some of them are easier to measure and analyze than others. However, when analyzing these factors in the context of this study, it seems that the individual related factors and differences in the CMO's and CIO's backgrounds might have a great impact on their roles and relationships in e-commerce adoption processes.

### 2.3.3 Decision makers

As it has become clear groups are involved in most organizational buying and decision-making processes. However, an individual's impact and can often dominate the whole buying process (Kauffman, 1996). Even though Dupont (1963) argues that the powerful influencers are often invisible, it seems that in many cases it is quite easy to identify buying center participants in a given purchase situation (e.g. Johnston and Bonoma, 1981; Gronhaug, 1977; Kelly, 1974; Patchen, 1974), but quite difficult to understand their dynamics and power relationships (Kauffman, 1996). For instance, Fortin and Ritchie's (1980), Grashof and Thomas' (1976), Patchen's (1974), and McMillan's (1973) studies suggest that there are significant differences in the perceived influence of major participants in the buying process, but that every participant of the group reports that it is one of the most important and central. In theory this could mean that even though one would ask the organization to name the decision maker, the results would show as many decision makers as there would be respondents.

According to various researchers the formal position in the organization defines the influence and importance of an individual within buying center (e.g. Ronchetto et al. 1989; Pfeffer, 1981; Bacharach and Lawler, 1980, Perrow, 1970;). Therefore and not surprisingly, Premkumar and Roberts' (1999) found adoption to be affected by top management support and Wilson et al. (2008) found top management support and management understanding the most important factors influencing e-commerce adoption. Moreover, Srinivasan et al. (2002) stress the efforts of the top management team to emphasize the importance of organizational responsiveness to new technologies because new technologies may entail destruction of existing assets for which management's approval will be required. Regardless the fact that formal rank is one the most important factors influencing an individual's importance and weight within the buying center, many studies argue that it is only one factor of the many affecting an individual's importance and weight (Astley and Sachdeva, 1984). That is to say, individuals of a buying center may have different roles. This roles have been categorized, as users, influencers, deciders, buyers, and gatekeepers (Webster and Wind, 1972), contributors, participants, responsible persons, and directors (Klass, 1961), those who make major buying decisions, those who make recommendations, those who approve purchases, those who affect the conditions of use and those who conduct the buying negotiations (Weigand, 1968). Moreover, these roles may be multi-dimensional (e.g. Gorman, 1971; Wind, 1978). Furthermore, Shainesh (2004) argues that sometimes informal participants may actually make or strongly affect the buying decisions.

According McQuiston (1989) the importance and weight of an individual within buying center is the product of his/her participation and influence. That is to say, the amount of written or verbal communication or participation combined with the extent to which the communication offered by an individual for consideration is perceived to affect the actions of other participants in the buying center. As mentioned, when the members of buying center are faced with the uncertainty, they seek to reduce it through the gathering of more information. Individuals gathering the most applicable information are perceived as best able to cope with this uncertainty and influence gravitates to those individuals. (Anderson, 1982; Salancik and Pfeffer, 1977) Leavitt (1951) defines centrality as the level of

involvement in network relations. In other words, individuals may gain power because they are functionally indispensable (Hickson et al. 1971) or because of their greater control and greater access to relevant resources (Brass 1984), thereby increasing others' dependence on them (Emerson 1962; Ruekert and Walker 1987; Salancik and Pfeffer 1977). Empirical support for a positive association between influence and network centrality has been obtained by Ronchetto et al. (1989), Brass (1984) and Fombrun (1983). Moreover, if the executive level decision makers of the organization are subjective and refer to the opinions of experienced people who recommend the adoption of e-commerce into the organization, then they are also more likely to accept their opinions (Harrison et al., 1997). Typically in formal organizations, a small group of individuals, generally occupying the highest hierarchical positions, have the most influence or decision-making authority (e.g. Stevenson et al, 1985). An employee who has access to such a dominant reference group may obtain from it valuable information and resources, thus increasing his/her influence in the buying center. Furthermore, an organizational member may be attributed influence simply on the basis of membership in a powerful department. (Ronchetto et al. 1989) In support of this notion, Blau and Alba (1982) found that departmental membership had the most important effect on individual power in comparison with individual and emergent network variables.

It seems that from outside perspective finding out the true decision makers within the organization is often a difficult task. That is to say, there are multiple factors impacting on the role and weight of an individual's decision making power. Moreover, the decision-making role of an individual may vary during the adoption process. These are probably one of the most interesting topics to analyze with the CMOs and CIOs.

This is the end of the literature review of this study. I have conducted a concluding part after each section. Hence, I will not analyze the details at this point. However, as an overall conclusion, one could argue that some of the discussed factors, i.e. customers and competitive environment can be traditionally seen belonging more to the Marketing function and CMO than to the IT function and CIO. On the other hand, the organizational technology and systems together with the organization's technological orientation, expertise and experience can be, in turn, seen to be closer to the IT function and CIO.

Therefore, this literature review points out the already mentioned statement that a successful e-commerce adoption require both marketing and technological expertise.

# 3. Conceptual framework

The aim of this study is to build a better understanding around selling e-commerce innovations by describing the roles and relationships of Chief Marketing Officer (CMO) and Chief Information Officer (CIO) in the adoption process of e-commerce while using previous studies of industrial buying behavior and innovation adoption as a basis of the theoretical framework. In Chapter 2 the Industrial buying behavior and innovation adoption theories were themed and discussed accordingly. The first section of Chapter 2 analyzed the environmental and industry related factors, and their impact on industrial buying behavior and innovation adoption. From environmental and industry related factors I moved into organizational factors and finally to the group and individual factors. As a result, the literature review creates an integrated and comprehensive basis for theoretical framework around the research objective and research question.

In this section the conceptual framework is presented in the Picture 2. The picture illustrates the chosen theoretical approach and how the earlier studies have been analyzing different factors that influence on the industrial buying behavior and innovation adoption. Using these factors as basis for the empirical discussions the author seeks to find out how the CMOs and CIOs describe e-commerce as an investment, e-commerce adoption process and consequently their roles and relationships in the e-commerce adoption process. The next Chapter provides more thorough insight to the methodology of this study; however, the reader can already have a look at the interview guides in the Appendix 1 and 2 that are compiled according to the Picture 2.
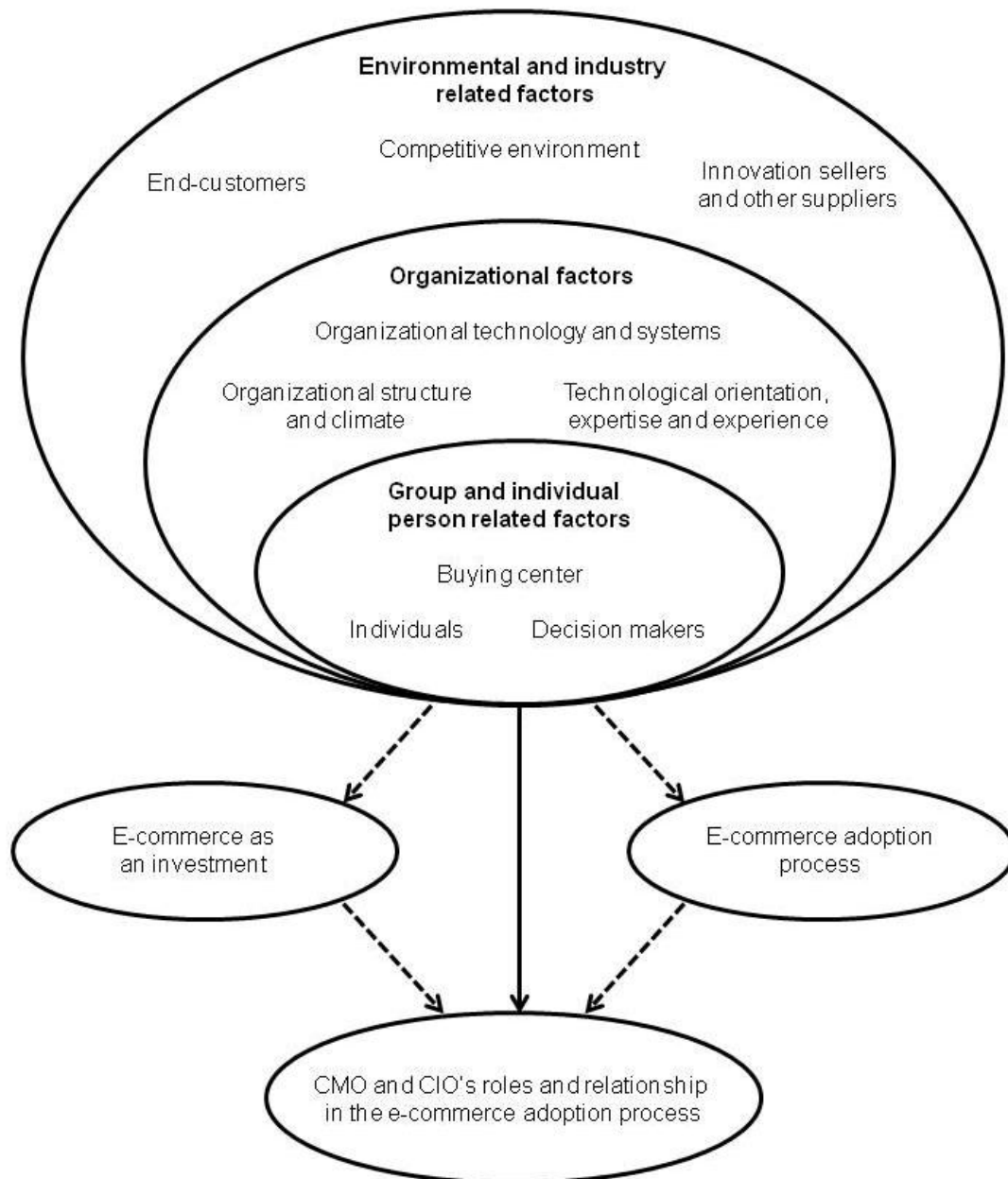
Figure 2. Conceptual framework

## 4. Methodology

The literature review part of this study reveals the various factors impacting on industrial buying behavior, innovation adoption and consequently how the roles and relationships of CMO and CIO are affected in the e-commerce adoption process. In the empirical part I will study how CMOs and CIOs from the same company describe their roles and relationships and the factors impacting on them. In this Chapter, I introduce my chosen research methodology and argue why it is suitable for the given research objective.

I will start by justifying my qualitative research approach and the use of semi-structured theme interviews as a data collection method. Then I will move onto selection of respondents and introduce them one by one. Into the fourth section of this Chapter I have documented my data collection process. Finally, I will discuss the trustworthiness of this research analyzing the validity, reliability and objectivity of the study.

### 4.1 Research approach

The purpose of this study is to describe CMO's and CIO's roles and relationship in the e-commerce adoption process. Therefore, I decided to apply qualitative research method because it provides the researcher means to reach a deep understanding of the respondents' opinions and build a thick descriptions from the given research phenomenon (Silverman, 2010).

Interviews as a method are suitable when studying phenomenon that is with other methods difficult or even impossible to observe, such as opinions, thoughts, feelings and experiences (Patton, 2002). In other words, interviews aim to gather data from the respondent's views and opinions — trying to build a deep understanding of the research phenomenon. Consequently, Arnould & Wallendorf (1994) argue that interviews provide means to built thick descriptions from the experiences of respondents. Moreover, Gummesson (2000) points out that an interview is a great method to study complex processes, or in other words, produce insight that cannot be produced using quantitative

research methods (Patton, 2002). Even though Silverman (2006) points out that interviews will not always provide the most reliable data from the respondent's experiences and real descriptions they can, however, provide unique information about the thoughts and opinions. Therefore, a qualitative approach using interviews as the means for collecting the data is a suitable and justified method for this study.

## 4.2 Interviews

Interview methods have been categorized and further on sub-categorized in various ways (e.g. Hirsijärvi & Hurme, 1980; Patton, 2002; Yin, 2003; Silverman, 2006). Hall & Rist (1999) divides them into three main categories: the individual or personal interviews, the focus group interviews and the large group interviews. In order support the objective of this study I chose to use personal interviews because of its three clear advantages. Firstly, face to face interaction with the respondent enables possibilities to dig deep into the subject and the respondent's opinions, thoughts, attitudes and descriptions. This includes also spontaneous answers and possibilities to observe implicit signals, such as body language and tone of voice. Secondly, individual interview gives the possibility to control the interview process and clarify difficult concepts in order to ensure that the respondents truly understand the topic and theme of the discussion. Finally, comparing to group interviews, the risk of respondents adoption to group conformity or a single person taking a dominant role in the interview is — if not totally avoided, than at least much lower.

The categorization of individual interviews is also multifaceted (e.g. Hirsijärvi & Hurme, 1980; Patton, 1987; Hall & Rist, 1999; Patton, 2002; Yin, 2003; Silverman, 2006). The main driving criterion of the categorization is nevertheless the level of openness or flexibility vs. systematic or lack of flexibility in the structure and guide of the interview. The interviews of this study were done using semi-structured theme interviews. Hirsijärvi and Hurme (1980) defines theme interviews as a method that is between open interview and structured interview. Or in other words, as an interview method that is semi-structured and has characteristics of a discussion. The topics of the theme interview are defined

beforehand and the role of the interviewer is to ensure that all the themes are discussed during the interview. I chose this strategy because of its several benefits. Firstly, I wanted the CMOs and CIOs to discuss the issues and factors as much through their own experiences as possible. Secondly, industrial buying behavior, innovation adoption and e-commerce adoption process included certain rather complex terms and concepts which could therefore cause ambiguity and would require more clarification and discussion. Thirdly, the intensions were not to guide the interviews too much by discussing only the factors suggested by the theoretical framework but discover other, possibly significant factors that influence on the roles and relationship of the CMO and CIO in the e-commerce adoption process. (Saunders et al., 2007)

The personal interviews of this study aimed to gather a comprehensive data and insight how CMOs and CIOs describe their roles and relationship in the e-commerce adoption process. The semi-structured interviews enabled the data gathering through discussions and also clarifying questions were allowed if required. If the interviews revealed interesting issues and factors regarding the e-commerce adoption process that were not documented on the theoretical framework and interview guide, the issues and factors were added to the guide to be utilized in the following interviews. The interview guide is presented in Appendix 1.

## 4.3 Selection and introduction of the respondents

In order to support the objective of this study, I chose the respondents by investigating the Finnish Top 500 companies and their e-commerce adoptions. The aim was to find companies whose e-commerce launch was no more than 18 months old. The investigations were done by following Finnish business papers (e.g. Kauppalehti, Markkinointi&Mainonta and Talouselämä) and discussing with people from the companies (e.g. Management Events International Ltd) who organize e-commerce seminars. As a result of this process I decided to choose 4 companies and 2 two persons from each company to represent the CMO and the CIO. One of the companies (further as *Company X*) required confidentiality,

thus the names of the company and respondents are not disclosed. The companies and respondents are presented in the Table 1.

| Company | Company industry | CMO | CIO |
|---|---|---|---|
| Veho Group | Automotive importing and retailing | Kenneth Strömsholm | Hannu Harjula |
| MTV MEDIA | Broadcasting and media | Heikki Rotko | Risto Koivula |
| Helsingin Sanomat | Publishing and media | Kaisa Aalto | Mikael Liljedahl |
| Company X[1] | Retailing | John Doe[1] | Jack Stone[1] |

Table 1. The respondents

## 4.4 Data collection

As already discussed in the Chapter 4.2, I decided to use individual semi-structured theme interviews for gathering the data. The interviews were conducted during 14.6.2012-3.7.2012 and the total amount of respondents was 8. That is to say, I interviewed the CMOs and the CIOs of four different companies. The length of the interviews varied from 56 to 94 minutes, the average length being 64 minutes per interview. All the 8 interviews were conducted in the respondents' office meeting rooms ensuring that no outside disturbance would occur.  The offices were located in Helsinki, Finland.

The interviews were done using the interview guide as the foundation. The briefing that I gave to the respondents beforehand was aimed to be as short as possible. The reason for this was that my goal was to get more honest answers due the spontaneous discussions. The briefing was done over the phone approximately 1-2 weeks before the actual interview, simultaneously when I was approaching the respondents for the first time. During the phone call I explained that I wanted to interview the person regarding his/her company's e-commerce adoption and his/her role in it.

 After the casual small talk the interviews started with the first theme, discussions about the e-commerce adoption in general and comparing it to the other investment projects.

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[1] Name changed for the confidentiality reasons

Then we moved into second theme and discussed the environmental and industry related factors. The third theme covered the organizational related factors and the last theme was group and individual related factors. All of the themes were discussed in the light of their impact on the e-commerce adoption process, the respondent's role and the CMO-CIO relationship, and how they in turn affected the adoption process. All the interviews were recorded in order to ensure a proper data gathering and management. After the interviews the recordings were transcript.

## 4.5 Trustworthiness of the study

Locke et al. (2004) argue that a researcher will face a few issues while doing qualitative research. These are, for instance, how to formulate good questions, how to match them with appropriate methodology and how to collect high-quality data. The very same issues and criteria then affect the trustworthiness, or in other words, validity, reliability and objectivity of the research (Bryman & Bell, 2003). Because every qualitative research is so much depending on the researcher Eskola & Suoranta (1998) argue that the main criterion for the trustworthiness of the study is analyzing the researcher him/herself.

Validity of the study means that the study measures what is supposed to measure (e.g. Bryman & Bell, 2003; Gummesson, 2000). When conducting a qualitative research by interviewing, one is observing and 'measuring' abstract concepts, such as feelings, thoughts, opinions and attitudes. Therefore, in order to increase the validity of this study I asked critical questions during my research process, such as how well the companies and their CMOs and CIOs are chosen, how well the interview guide is constructed from the theoretical framework and how well the interview process with respondents is executed. Moreover, after the interviews the data was shown to the respondents in order to ensure its accuracy and validity.

Reliability on the other hand refers to the study's consistence. That is to say, if the study would be done another time the study should produce the same results as the in the first

time. (e.g. Bryman & Bell, 2003; Gummesson, 2000) Originally evaluating reliability using this definition comes from the scholar of quantitative research and applying them as they are to evaluate qualitative research has faced critic in the academic discussions, and thus other frameworks have been developed by various researchers (e.g. Lincoln & Guba, 1985; Biggam, 2008; Silverman, 2010). Yin (2003) emphasizes the importance of thorough documentation in all the steps taken during the research in order to increase the reliability. Therefore, the reliability of this study is improved by careful documentation of the research methods.

Finally, the trustworthiness of the study is also depending on how objectively the interviewing process and the data analysis is carried out (e.g. Bryman & Bell, 2003; Gummesson, 2000). Evaluating the objectivity of a qualitative research is, however, complex task because of the nature of the qualitative methods. That is to say, the data analysis in qualitative research always requires the personal interpretations of the researcher. Consequently, objectivity should be understood as a simultaneous realization of as much reliability and validity as possible (Patton, 2002).

I have now described the methodology of this study. In the following I will move onto the analysis chapter and finally conclude my findings in the sixth chapter.

## 5. Analysis

This chapter is dedicated to analyze the data gathered from the empirical research. I will start by analyzing the data in a light of the e-commerce investments. That is to say, I will discuss about how the respondents described e-commerce as an investment. In the second part I will analyze how the respondents described the e-commerce adoption process. Finally, I will go through how the respondents described their roles and relationships in the e-commerce adoption process.

### 5.1 E-commerce as an investment

During the interviews it became very clear that the respondents have been quite dissatisfied with their organizations' e-commerce and IT investments in general. Therefore, one could interpret a pressure for changes in their investment logic, adoption process and finally in the roles and relationships. The overall turmoil that the e-commerce adoption processes have been facing constantly will be the major theme of the whole chapter. In this section I will focus on discussing and analyzing how the respondents described e-commerce as an investment. At the same time the goal is to build a foundation for the next sections which focuses more on the transformation of the adoption process and the roles and relationships.

Especially business-orientated people, i.e. CMOs described e-commerce and IT investments with more or less negative tone. According to the interviews the respondents have seen too many missed deadlines, exceeded budgets and failed projects. Their dissatisfaction with the IT in general was so overwhelming at times that one could wonder whether they have just recently been involved with some disaster project. Strömsholm was probably the most frustrated respondent of them all and the following sample of his 5 minute monologue clearly shows his attitude and approach towards e-commerce investments.

*None of the IT-projects get done in time or in the budget. All of them are always late or exceed the budget. Even though it sounds weird, all this is in kind of acceptable in general. It's one of the characteristics of the whole IT-industry. It's the same thing with laptops. We take for granted that*

*they just crash and must be restarted all the time. And we all think that it is totally OK and logical. And after three years the laptop is useless and it has to be thrown away. It's a common way for IT sector that everything is late and over budget. And the systems don't work like they should when they are released. And after the launch they must be fixed over and over again and everyone is angry. And for years they try to fix the system and get it right but after a while the moment comes when there is no point anymore to fix it because you have to get a totally new, upgraded system. I believe that there are plenty of theses done about the very same issue. That is, how the hell it can be so damn hard to do proper IT-systems. And nowadays we all accept the fact that it is impossible. They never get done in the given schedule. Every time when there is a meeting they tell me that the projects are late because there have become some issues. Some features have been added to the project and they are now slowing it down. There has been a merger or acquisition or something else. And you know, when something is merged into a bigger corporation, it's not enough that we just put it together with the same accounting systems. We have to integrate it to all the other systems as well. And then there are different systems in the old and in the new and they need to be integrated with each other. And when the integration starts no one knows will it take 6 or 12 months and will it cost 100 000 or 200 000 Euros. It's just a mess. Many of the people who have been involved with these projects for years have already given up. They just say that there is no point to raise one's voice anymore. It's just the way it goes. And as you know, there have been a lot of public sector projects, for instance, in healthcare sector where they have been working on with a project for two or three years and spent hundreds of millions and then they just say that "This is a no go. Let's just bury the project." And no one gets shot.  But hey, think about if some would be buying cars. Somebody would decide to buy cars worth of 100 million, or in other words, 2000 cars and we would say to him that "We will deliver 2000 pcs E-series Mercedes for you by the end of the year." And then at end of year we'd say that "The delivery will be late and we have some issues." And then after two years we'd say that "No-no, we are not going make it. Actually, the scoping and definition of the project were done poorly in the beginning. And then one contact person left and some other guy replaced him. As a matter of fact, you as a customer didn't do your job that good either. You couldn't explain us what do you want and didn't know what to order. The truth is that we are not going to deliver 2000 cars. Let's just forget the whole project and close the books. Hundred million is gone but not a single car is ready." (Strömsholm, Veho)*

After a few minutes he continued telling about his experiences with the failed IT projects and the enterprise systems which have gone from bad to worse due the system upgrades. Accordingly, Rotko also expressed his dissatisfaction with his organizations e-commerce projects, their exceeded budgets and missed schedules.

*In my opinion these projects always take too much time. That is, we are more and more in the IT related business and every time we are developing something new it just take too much time. Time to market is way too long. That's one thing that gets me irritated. And of course the budgets are exceeded every now and then. And then there are the cases which just go totally wrong due the technical or business related issues. (Rotko, MTV MEDIA)*

Even though Aalto's attitude and descriptions about e-commerce investments were slightly more positive, she also brought up the failed projects.

*In our company there have been also failures in very big projects. (Aalto, Sanoma)*

It was evident that the words like "IT", "ICT" and "Tech" had a bad reputation among the CMOs. It was interesting to note how Doe would like to dilute the IT-factor from the e-commerce investments because of the bad karma the concept brings to the investments and ventures.

*Even though you would like to dispel it, there is still a very strong IT factor involved in these cases. That is to say, there's always the risk that in a very IT-focused project the technological approach takes over. You have to make sure that the technology is done like not-so-traditional-IT-project but as a part of the business development. (Doe, Company X)*

It is true that companies have had troubles adopting e-commerce successfully and according various studies most of the companies miss their targets that they have set for the investments (e.g. Wind and Mahajan 2000; Dellarocas 2003; Rowley 2008; Zhu and Zhang 2010). However, e-commerce investments can be also seen as something that must be done even though their return on investment may remain poor.

*Digital and online business models are having one major weakness in general. That is, only few companies are making significant profits with it. Even in a global scale. At the same time, however, one could argue that there is no choice. (Doe, Company X)*

When asking the respondents why they think that the e-commerce projects tend to miss the targets so often, the answers varied across the board. One of the respondent argued that the solution providers are incompetent in their selling processes. They are poor in evaluating the requirements, the complexity of the business and technical needs and their own abilities and therefore, they easily end up overpromising and underdelivering.

*I think that when we send out RFTs to 3-4 providers they all naturally want to get the deal. Then they are a bit too optimistic so and they say that it will cost 80 and it will take 70 even though they should say that it will cost 120 and it will take 130. I'm not saying that they are doing it to fool us but maybe they just don't understand the complexity of the projects. They don't have sufficient knowledge about our IT architecture, systems and the interfaces that must get integrated. And in addition there is a huge desire to get the deal. In other words, there is too much optimism and not enough realism. This is a common problem in this industry. And I have heard so many stories from my colleagues aboard about these cases that have been gone so wrong. (Rotko, MTV MEDIA)*

Another CMO on the other hand blamed the mismanagement of the IT project execution and mostly he blamed the company CIO.

*Sometimes he's a bit too much of a theorist and not enough of a hands-on guy. He seems to get everything look good and logical on a paper but when it comes a time for execution the issues start to arise. That is to say, when we start to plan the projects all the powerpoints do get done so that we can see the step by step execution plan. All the timetables are in place and we can see that there's a slot for interviews, testing and so on. But in practice very often everything just melts down into one big mess and in the end the output is something that it shouldn't be, and it's late. (Strömsholm, Veho)*

Doe analyzed that failures might be due the incompetence of the technological people. However, he also emphasized that the project teams are often forced to execute projects in impossible schedules and budgets. That is, he blames the incompetent steering groups.

*I'm very strict when it comes to the budgets and keeping them. The whole point of all this that we have the expertise to estimate the costs. On the other hand, I'd like to add that it's also unprofessional if all the estimated costs need to be forced into the very bottom all the time in order to get them accepted. What I mean is that when the budget doesn't keep the reason is often that there has been a pressure to execute something with given costs. However, the fact is that the experts should have the freedom to estimate the costs without outsiders who have no clue about it. There are two reasons why the budgets get exceeded. Either there's not enough expertise. That is, someone, so called expert has estimated it totally wrong and he hasn't take some of the outside factors into account. Or, and this is usually the case, there is a management board or some other group of decision makers who force to do the investments within a certain budget. That is, there may become cases that one just do not have any options but to invest but there is a some piece of paper which says that is needs get done with 500 000 even though in real life it should cost 700 000. "What the hell, let's just squeeze and force the project to 500 000." I can tell you that these kind of "let's squeeze and force" budgets do not work in the IT sector. (Doe, Company X)*

The most forgiving and probably the most realistic argument came from Aalto who explained that e-commerce investments often involve lots of unknown factors that are difficult or even impossible to take into account beforehand. Moreover, she emphasized the issue that e-commerce and digital environment is constantly changing in a fast pace. The very same issue, i.e. the turmoil and unpredictability of the digital environment will be discussed later in this paper.

*The projects are often more challenging and complex that may cause the delays and exceeded budgets. Moreover, one must always keep in mind that the market environment and the world is changing fast and the changes in the consumer behavior is very difficult to forecast. It's the same thing with b2b. The digital environment is changing in a fast pace there as well. (Aalto, Sanoma)*

She also emphasized the newness-factor that plays a major role in new, innovative ventures. That is to say, when investing to something that has already done multiple times

the planning is easier but when doing something for the first time the forecasting is more difficult.

*When something hasn't ever done before, one just has to try to estimate the budget and schedule; however, sometimes it's just impossible to take all the factors into account. If you're buying something off-the-shelf or, for instance, if you're building a house you know very well all the steps of the project beforehand. (Aalto, Sanoma)*

CIO Koivula also approaches the issues regarding e-commerce investments through their complex nature saying the newness generates most of the problems and risks.

*IT projects are often more complex. There are more providers and stakeholders involved. And when you're talking about e-commerce there's often many unknown factors comparing to, for example, traditional real estate projects. I'd like to say, that in most of the cases the problem is not the technology but the management, scoping and the lack of a solid business case. All this combined with the fact that there might be new technologies involved. (Koivula, MTV MEDIA)*

Doe agreed on this statement. He said that e-commerce as a concept is still so new that there has not been developed enough general best practices that could help adopters to execute the investment projects efficiently. One could wonder if the digital environment will ever reach the same level of stability and predictability as, for instance, the traditional retail industry.

*In my previous life when we invested into a retail shop we bought concrete, bricks, refrigeration equipment and labor for six months. And the output was something physical. And we could calculate the payback time pretty easily when we knew the population of the area. We could even estimate the profits. All this is yet to come in e-commerce. The first round of learning hasn't been done yet so that it would help us to understand and estimate the business models. The very first round, the dot.com boom in the early 2000's gave us of course something to learn from. However, the technology and the world we are living in have developed so much from those days. (Doe, Company X)*

Aalto as well sees the e-commerce investments riskier than other investments.

*It's true that the risks will materialize more easily in these ventures. At least in some ways. For example, the estimated timeline won't be so fast than it was expected or the market penetration won't be so deep than expected or the interest in the media won't be so great. That is to say, there are many factors that may harm the business case. Moreover, sometimes the original concept won't work at all or it needs to be changed radically. (Aalto, Sanoma)*

It became clear that the respondents had challenges to deal with fact that they cannot completely understand the complex technical issues that are involved with the investments. Maybe the feeling of helplessness is one of the key reasons why they felt so frustrated. For instance, in his previous role as a retailer, Doe could pretty much understand everything that a physical grocery needed in order to function and to be profitable. However, for him e-commerce as concept involves almost mysterious factors that he will maybe never be able to comprehend totally.

*It's so difficult to comprehend that as an outsider you just cannot go there and start poking and digging. The only thing you can do is ask good questions. (Doe, Company X)*

One could interpret the same mindset in Strömsholm's answers as well.

*Of course I always doubt that if it's going to work or not and are we making the right decisions and so on. However, you just cannot tell it yourself until you see the end result. (Strömsholm, Veho)*

On the other hand, CIOs had a lot more positive approach to the e-commerce investments. For instance, Koivula said the IT investments actually succeed a lot often than the public thinks.

*If it has been said that half of the projects are always late or something else but there is also another statistic that says that 97 per cent of the projects are in time and budget. However, it's usually the failures that get the most of the attention. And it's good that they do get notified. However, I bet to disagree that IT projects would always be late or exceed the budget. (Koivula, MTV MEDIA)*

It was very clear how both CMOs and CIOs described the e-commerce investments as business investments and not as traditional IT investments.

*It's very simple to answer to that question that they are business investments. In general if I think about this it is always the business that is the driver in these investments. That is, everything starts from the business. (Doe, Company X)*

Furthermore, maybe because of the bad reputation of the IT investments in general even Stone as a CIO respondent did not want to associate e-commerce with IT. He argues that managing e-commerce with IT approach is a fatal mistake and e-commerce investments should most definitely treat as business investment.

*I have said it that we are not going to establish any IT department here and these projects are not managed from the IT perspective. I can tell you; those companies that are still doing it like that are totally lost. In other words, we are very allergic to develop anything with an IT approach. (Stone, Company X)*

Due the failed e-commerce investments it seems that the respondents' organizations have changed the way they manage and prioritize their e-commerce investments. That is to say, more sophisticated methods have been implemented emphasizing the importance to show a return on investment. The transformation of management of the e-commerce investments and adoption process will be discussed more in the next section. However, in this section I want to underline the transformation of the investment logic which in turn seems to have a great impact on the selling process.

*Nowadays we evaluate more carefully whether there is any sense to do the project or not. We are bringing these unpleasant factors on the table, such as cost-benefit calculations. In other words, we ask for the costs, results and metrics for the results. And then after six months we also evaluate whether the targets were reached or not. (Harjula, Veho)*

Due the multi channel dilemma of e-commerce and traditional channels measuring and assessing the ROI was described to be difficult. Moreover, the innovative and pioneering characteristics set different budget logic for the e-commerce innovations according to Doe and Strömsholm.

*Every time when you invest into something for the very first time it is not primarily a profitable case. First you have to put the seeds on the ground before you can expect to gain any profits. And it takes time to gain the profits. That's just the sad truth. Consequently, one should always think about how the results and profits should be calculated in this world. The way we see it is that our digital channel have gained us profits if our web shop drives our customer to make the purchase in the retail shop. Measuring this, however, is so damn hard. (Doe, Company X)*

*There are customers whose buying process contains 95% of the digital channels and then there are customers who only use 5%. On an individual level measuring this is very difficult; however, we have to offer the freedom of choice to our customers and the customer experience should not be harmed by the choice of channels. (Strömsholm, Veho)*

On the other hand, Doe said that even though one would ignore the multi-channel dilemma and only assess the digital channel, evaluating the return on e-commerce investment might still be very difficult.

*It depends so much of the investment how easy the ROI is to calculate. For example, an investment that improves the visual aspects of a website so that there are more motion picture. How do you assess whether it increase the sales or not? There really are cases like these a lot. On the other hand, we can consider mobile compatibility. If we have a technology that is compatible with mobile devices we can estimate that there are customers who use mobile this much and the amount of customers will increase in the future. If we are selling this much we should sell x per cent via that channel which would mean this and that. You get the point. (Doe, Company X)*

One of the most interesting findings was the budgeting logic behind the organizations' e-commerce investments. According the interviews, e-commerce investments are financed by one centralized IT budget. The size of the IT budget is approved by the Executive Board or some other high decision making unit, however, the budget is then managed by the CIO. Or at least so it was used to be but how it will be in the future is difficult to say. That is, in the second section of this Chapter, I will discuss about how the respondents see their roles being in a transition and becoming more and more overlapping with each other.

*IT has a certain budget and operational guidelines that are approved by the Executive Board. The function of the IT is only justified to support business and the money comes from the business. This is a fact that one has to keep in mind all the time. (Harjula, Veho)*

*Our IT procurement is managed by the IT department. And the budget is in practice managed by the IT department. They have the knowledge how much we have, how much we have spent it and they can say whether any solution is good or not. (Aalto, Sanoma)*

*The Group Management Board approves the IT budget and the IT plan. That is, it makes the decisions about the investments. Then we have the steering groups that can execute the projects within the budget and prioritize them as well. They also have to be able to make decisions to a certain extent because if I now make the budget for 2013, I have no clue what we are really going to do in September 2013. One thing is sure: there will be something that we are going to do because normally there becomes something where we need to have the budget allocated. That is to say, we are not locking all the money beforehand to a specific project but we have the budget and then we prioritize the projects all the time. As a steering group we have the power to change priorities. (Harjula, Veho)*

*My role is to take care of the company level IT budget. And then we naturally allocate the money from it to the business units. The budget is divided to 6-7 units and my role is, of course, to prioritize where we are allocating the money.  (Koivula, MTV MEDIA)*

*We had a certain budget and within that budget we were very autonomous to decide how we are going to spend it. Basically I have presented the business proposals and asked if it's OK and always got the go ahead. (Aalto, Sanoma)*

*So in practice we have got the budget from the Board and within the budget we allocate the resources to the projects. This is our way. Actually, this is rather unusual way in the Group but we*

*have recognized it absolutely mandatory in order to successfully execute the e-commerce venture. (Stone, Company X)*

Be that as it may, ability to show a significant return on investment seems to be the fastest way to get the projects prioritized on the top of the pile.

*If somebody comes up with a killer application today and arguments it by showing a million Euro profits for a 100 000 Euro investment we start the planning right away. In other words, we are not tied up with our plans but we can adjust the plans and prioritize the projects if necessary. (Harjula, Veho)*

*In the end everything becomes very clear after one have done a thorough analysis. At the same time the decision making becomes very easy as well. (Rotko, MTV MEDIA)*

To sum it up, it seems that the respondents have not been satisfied with their e-commerce investments and IT investments in general. Therefore, there has been a great pressure to approach e-commerce investments differently, namely with marketing and business orientation.

*All the projects and ventures are more or less business driven. They are done in order to do business. Some of them have direct relation with the business and others may have more indirect relation. If it's about updating some technology in our backbone, well then you could say it is an IT investment, however, most of our projects have much more direct relation with the business. (Rotko, MTV MEDIA)*

*My opinion is that they are business investments. Of course there are few IT-investments for the background systems, however all the services that are developed on these systems are always business investments. (Aalto, Sanoma)*

Moreover, if there was one theme that was discussed a lot, it was the turmoil and transition phase of the e-commerce investments. The turmoil and how it affects the buying behavior, e-commerce adoption process and the roles and the relationships will be analyzed more in the following sections.

## 5.2 E-commerce adoption process

In this section I will analyze how the respondents described the e-commerce adoption process and the factors that influence on it. As already mentioned in the previous section the respondents have been generally dissatisfied with their e-commerce investments,

which in turn creates a pressure for adjusting the adoption process. Moreover, it becomes clear how the different factors discussed in the literature review part of this study are described to be in a constant transition making the adoption process being in a transition as well.

Rotko and other CMOs described the influence of organizations' end-customers as the most important factor for the organization's e-commerce adoption. Moreover, it seems that the constant changes in the customer behavior and the fact that the changes are difficult to forecast are the most profound factors keeping the adoption process in transition.

*Well, of course everything that we do need to have some relevance for the consumer. If consumers wouldn't use our services we wouldn't have any business. In other words, all of our innovations are based on the mission that we are developing stuff that the consumers want already now or in the future. (Rotko, MTV MEDIA)*

*The first step was taken due the fact that our customers demand these services. The reason why we are having this e-commerce venture is only based on our customers' needs and wants. There has been a huge change in the overall consumer behavior and we're constantly thinking how we could react to that phenomenon the best possible way.  (Doe, Company X)*

The following responses show how the respondents described the constant changes in the market dynamics and their impact on the adoption process.

*The biggest challenge in all of this is that the competitive environment is changing in a fast pace. New competitors are entering the market all the time and all the changes are faster and more difficult to forecast than before. Nowadays we increasingly follow these relatively new players, such as Google, Facebook and Apple. So, we have spent quite much time in Silicon Valley, you see. (Rotko, MTV MEDIA)*

*Competitors are moving fast. International and domestic players enter the market fast. You may have a great idea and a real business case but then again some other player from the US might just do it a lot faster and better and then you have basically missed the train. (Aalto, Sanoma)*

*The competitive environment is very wide when it comes to consumer goods. If you go across the border there's Germany, UK… Basically there are no limits and therefore you cannot analyze every single detail that thoroughly. (Stone, Company X)*

As already discussed in the previous section, the multi-channel dilemma makes the calculation of the return on investment difficult. In addition to that, the same issue seemed to have a major impact on the e-commerce adoption process.

*Before the digital era the buying process was very simple. A customer saw an ad or heard about the new car or a model from the neighbor and decided to walk in to the store. Then we had a very clear sales process that included the customer needs analysis, after which we showed him the car and took it for a test drive and so on. Today, a customer can find out answers to all his questions before telling us that he is interested in buying a car from us. Of course we have to be able to serve the customer seamlessly in every channel. Naturally this has a huge impact on our processes. (Strömsholm, Veho)*

Doe also describes how the dilemma has had a remarkable influence on their adoption process. Moreover, he said that even though the situation is what it is, their organization just have to deal with it.

*Like I said, this is not a cash cow yet. This venture is purely established due the fact that the customers want to buy from this channel and they also want to buy cross the channels.  (Doe, Company X)*

Stone argued that e-commerce adoption means a comprehensive transformation to the ways how organizations are going to do business today and in the future.

*What really is happening right now is that we are not just setting up a webshop. We are in a total business model transformation and finding out ways how the traditional retail and digital channel will integrate with each other. In other words, you have to take into account, for instance, the processes of order and delivery, and so on. (Stone, Company X)*

Moreover, Doe describes the adoption process being a long journey for the organization and at the moment the process is only in the beginning. He believes that in order to be profitable in 2020 the company must have a strong position in the digital channels. The strong position can be only achieved by starting the adoption early enough, i.e. today.

*In order to be a successful retailer in 2020 you must be in all the channels. Operating in multiple channels means that you sure have the ones which are currently out there.  And you see, some of those channels and touch points are used for sales and some of them are only used for interaction. So in other words, the e-commerce venture that we are now having is actually preparing us to be ready in the future. You know, these are pretty heavy investments and at the moment we are in a phase of opening the doors and channels. We have a strong vision that in the future a retailer must manage comprehensively the digital and traditional environment in order to be competitive. And in order to be competitive one must be profitable. So we are kind of taking the first steps at the moment and step by step improving our presence there where the customers will be in the future. (Doe, Company X)*

Koivula analyzed the adoption process through organization's market position. He says that being a market leader gives the adoption process different characteristics comparing to a situation if the organization would be a minor player.

*The competitive environment has a huge impact on us and our actions. Partly due the historical reasons and our own expertise we have reached the market leader position. Being the market leader requires different activities comparing to challengers. You have to take many elements into account, such as the risk of cannibalization. On the other hand, as the biggest player you need to be able to make radical, big moves all the time that reshapes the whole market. We want to be the one who reshapes the market and finds new business opportunities. And like I said, that is a whole different world for us comparing to the minor players. (Koivula, MTV MEDIA)"*

Doe also argues that the adoption process depends highly on the organization's current market position. He underlines that having a strong brand sets more critical requirements for the adoption process.

*Size of the company and your current brand has a tremendous influence on your options. You also need to consider how big you are now and how big you want to become. You see, if we are opening a webshop under our brand name we just need to be absolutely sure that everything works. We cannot afford any major setbacks in the customer experience. On the other hand, if you would open some Mom & Pop Shoe shop or whatever, it is not the end of the world if Mom and Pop has an announcement on the front page that says "Sorry, we are having a maintenance break at the moment. Please come back tomorrow." We just don't have that option. I guess this increases our development costs in general because we just have to do things all the time by the book and double check everything. (Doe, Company X)*

Harjula emphasizes that when the size of the company's technological systems reach the certain extent and complexity it is quite difficult to react on competitors' moves anymore. That is to say, e-commerce systems and processes might grow so complex that the company is tied up on the chosen strategy. Therefore, it might be impossible to change the strategy rapidly without messing up the current way of doing business.

*We do not have any chances to follow every competitor's moves. Of course we would like to, for instance, set up a webshop for spare parts, however, if you think about what that would require from the all systems and processes you notice that it's easier said than done. (Harjula, Veho)*

One theme that arose in the discussions was that large amount of technical service providers is seen as a burden. Moreover, the respondents argue that one of factor changing

the adoption process is the organizations' goal to decrease the amount of different service providers and systems.

*Considering the size of our company we have quite a lot of different systems. However, we have aimed to reduce the amount of systems and providers all the time. Moreover, we try to screen the most essential solution providers and build up strategic partnerships with them. Actually, we have recognized five of those strategic providers. Then we have the next group who are in the middle but not on the strategic level… For example there was that one case we sent out the RFTs and the proposals we got were strongly suggesting the Microsoft SharePoint. Well, that didn't come as a surprise for me since we had already set that direction with our previous steps. (Harjula, Veho)*

*I have had a certain guideline for the technology that I have been following all the time. That is, our mission is to build a sound architecture base and we don't want to have a ragbag of different technologies. (Stone, Company X)*

The reasons why organizations want to have as little different systems and platforms as possible is quite simple: it decreases the development, operating and maintenance costs and at least theoretically increases the return on investment.

*In order to gain synergies we wanted one CMS which can be used for three different places. The maintenance operations and the management of in-house capabilities is a lot more cost efficient if you have a homogeneous technical environment. You have to have pretty good arguments if you want to bring something exotic twits into our platforms. That is, if it's not Windows compatible. (Harjula, Veho).*

*Well, we have a very challenging technical infrastructure. Just only building and maintaining these systems is a challenge itself. I can tell you that these webshops what we have now and what we are going to have in the future would be much easier to develop in another environment or using other technologies. In order to get the systems working as a whole we need to be integrated to other systems within the Group. A few of them are very challenging which in turn requires additional investments from us. However, we just have deal with it. Moreover, we lose our autonomy when we are integrating our systems to something that are managed and owned by someone else. All this makes it challenging from the system administration's point of view as well.  (Stone, Company X)*

It was interesting to note that even though current systems have impact on the adoption process, mostly on decreasing the amount of opportunities or slowing down the adoption process, Aalto said that her organization is willing to take short cuts in order to fasten up the process.

*We have a comprehensive architecture plan for the IT and e-commerce venture. And all the new stuff that we are building should be aligned with that plan. On the other hand, sometimes we are doing compromises if the architecture is not ready and the new concept should be developed fast. It*

*helps us to make quick tests and see if the concept and business case works at all. However, we must always have a plan for the next steps. That is to say, we need to have the answers how we are going to integrate it to the enterprise architecture. (Aalto, Sanoma)*

Consequently, Liljedahl expressed his view on the same issue and emphasized the importance of time to market.

*There was a risk of not getting the product ready in time if we would have to integrate everything to the enterprise architecture right from the beginning. That's why we did it as a standalone solution. Afterwards I can tell you that is was a smart call. Of course these standalone projects always raise some internal issues. That is, it's the Infra people who are not happy with them. (Liljedahl, Sanoma)*

At the same time when the organizations are aiming for the minimum amount of solution providers they are also aiming to deepen the relationships into partnerships. That is to say, the role of the solution providers is described to be significant, however the traditional buyer-supplier relationships are something that the respondents would like to avoid and there seems to be a need for more profound partnerships. One could argue that all this accordingly will once again affect and transform the e-commerce adoption process.

*Too often those companies take the traditional provider's role. That is, we send out the RFTs and then someone wins the case and just does the project. Naturally, I always expect to get more professional vision and expertise from them. On the other hand, it seems that they are lacking the industry specific know-how they would need in order to be competent to tell us what we really need. (Rotko, MTV MEDIA)*

*The providers and the whole value chain have a huge impact and a role. That is, sometimes we are competing with each other, sometimes we are business partners and sometimes we are customers and the buyers. It is essential to have a comprehensive understanding about the whole value chain and the partners. I think that the relationships are more deep and longer in a technological side comparing to, for instance, ad agencies. (Koivula, MTV MEDIA)*

*Those service providers have a big role. And they do take the role what your letting them to have — both in the good and bad. In other words, you have to manage them very carefully. I'd like to add that on the other hand, there's so much to gain from those relationships. I think that nowadays the providers are always in big role every time when you are developing anything that has strong technological element. (Doe, Company X)*

Aalto and Lilhedahl described how the partnership was formed step by step. Moreover, I would like to stress that the transformation from buyer-supplier relationship to co-operative partnerships had many same elements that the descriptions regarding the transformation of the CMO-CIO relationship had.

*We have aimed to find small and agile providers and to build up partnerships with them. That is to say, we are quite far from the traditional model where the customer makes the definitions and gives them to provider who in turn executes the projects and just delivers the output back to customer. When you're having a partnership with someone you plan and execute together using agile methods. (Aalto, Sanoma)*

*First we ordered a student project and we just put our mobile site into a container and sent it away. After we saw that everything went well we ordered the native application. And after we saw that it also went well we ordered the iPad application and took it to the Board meeting. And after that went well again, we got 6 months to develop the actual application. In other words, we started with baby steps and they delivered everything as promised every time. Thus, we gave them more responsibility. And no, we didn't have any official process for picking up the provider. I was an easy decision. Those guys had gained so much trust comparing to other players. (Liljedahl, Sanoma)*

In the last part of this section I will analyze the transformation of the e-commerce management. As already mentioned, the organizations have pressures to change their e-commerce management in order to cope with changing factors that are impacting on profitability of the e-commerce investments. Moreover, according to the interviews the management transformation is the most influential factor that are changing the how the respondents see their roles and relationships in the adoption process. Strömsholm described the changes in Veho's e-commerce adoption through managerial transformation from disorganized decision making process to building up a separate e-commerce strategy with managerial and organizational processes to support it.

*Where do we have the ultimate decision makers who says which case is more important than the other? That's why we have defined the e-commerce strategy and guidelines because it should help us to make the right decisions. There was the time when we didn't have any strategy nor official guidelines and no one knew who to approach if you wanted to get something done. You needed to ask from here and there, maybe from the IT or maybe from your boss. You see, the prioritization of the IT projects is one of the most difficult tasks in this world. In an organization like ours there must be thousands of different ideas and wishes regarding e-commerce on a yearly basis. We had all kinds of lobbying and stuff like that and those who were the best in that got their projects done. Therefore, it was necessary for us to define the strategy and decision making processes which now — at least in theory helps us to prioritize the task and get the most out of them on a Group level. (Strömsholm, Veho)*

Harjula adds that the changes in e-commerce management have influenced on their adoption process by decreasing the amount of initiatives.

*We have had quite of a learning process between the functions and units after we have moved into a centralized decision making process. And of course this has not been an easy process for all. For example, back in the days if somebody came up with an idea he could just start to execute it right away if he just had the budget for that. Nowadays, the ideas are taking into the centralized decision making unit and then the benefits of the projects are evaluated and prioritized accordingly. In other words, for someone this might seem that the amount of bureaucracy has increased. At the same time this has also decreased the amount of pointless projects that are pushed into the development funnel. (Harjula, Veho)*

On the other hand, Doe described that his organization's managerial processes are wanted to be loose.

*On a certain extent we have given a great deal of autonomy. It's because we are an organization full of experts and we don't have too many people in the same roles. It also means that those individuals need be real experts on their fields. We also have a very flat organization. And we want to keep it that way. In order to keep it that way we need to be able to empower those experts to do the decisions. We want to avoid the situation that every time when we need to decide something we should gather together into a meeting to make that decision. A lot of decisions are made in the corridor. Of course it is clear who calls the shots here in the end. And if Tina or Jack is in doubt they sure come to knock my door and we take a look at the case together. But like I said, we don't have the kind of culture which would force us to gather together all the time to make decisions. And I think that's just great. And what is the reason for that? Well, I think that we have just let it evolve to that. We haven't been so eager to micro-manage all the little tasks and decisions. The results have been great and I guess it's all thanks for the smart people we have. I believe that a culture of micro-management and strict decision making processes wouldn't fit to an organization like this, full of hard core experts. (Doe, Company X)*

In accordance with Doe's description, Rotko also argues that stiff decision making processes are something that organizations should try to avoid since it tend to slow down the time-to-market of the investments.

*The world around us is changing so fast and therefore the time to market should be as fast as possible. However, it is often to slow from the business perspective. And this is the challenge that we aim to tackle all the time with our processes. (Rotko, MTV MEDIA)*

Moreover, Koivula and Aalto emphasize that in order to get the most out of the e-commerce and innovations organizations need to be bold and have an entrepreneurial mindset. The respondents have described how the management of their e-commerce has already been adjusted a lot since the first phases of the adoption. However, according to the following answers one could argue that they still are not satisfied in their e-commerce management and thus the transformation can be predicted to continue.

*I think that media sector has been the pioneer to certain extent. However, we are still a long way from the modern startup communities. We are still lacking the kind of culture of internal entrepreneurship where we'd have some incubator or investment budget for different ventures. (Koivula, MTV MEDIA)*

*As the whole organization we are trying to change our culture so that we wouldn't be so much afraid of failures. We need to be fast in trying and testing stuff. We should rather make a few mistakes than play it too safe every time. We want to find new business opportunities from the digital environment. And we do know that we cannot find them without being the pioneer, making mistakes and learning from them. Or else there will become another player who takes over the markets. (Aalto, Sanoma)*

*Our weakness is that we need to have quite a many people before we can find a consensus and make the decision. For instance if we are talking about anything that has something to do with import businesses we need have four different guys from four different business units. (Harjula, Veho)*

Moreover, e-commerce investments seem to face the same everyday management challenges as anything else. Especially the communication within the organization was one theme that the respondents described being in a very important role. As it has already discussed in this Chapter, when the organization is operating in a multi-channel environment the e-commerce must be integrated to organization's traditional processes. The question is: how the organizations are going to tackle the challenges and how much will it increase the need for managerial transformation again?

*Every idea regarding the e-commerce and the changes in the processes that influence on the customer experience should be first bought by hundreds of people internally before it would start to work. And the fact is that no organization can keep up if those ideas and changes are coming all the time. It's just impossible. And that's because in practice it doesn't mean a thing when you are sending a message out there about some decisions that have been made. First there is the info should reach the people and then the people should understand it. And thirdly, they should believe in that. They should buy the idea 100% so to say. These are three very big steps that in practice most of the ideas and changes are failing because the piece of information have just only sent out there and it's already forgotten right away. There is no understanding that why something needs to be done differently than previously. And there is no faith. And if no one believes or buys the idea, you can be sure that nothing will ever happen. The biggest reason why people are being so pessimistic about the new ideas and changes is that they have seen too many endless projects that have been started but never finished. (Strömsholm, Veho)*

*One thing that we are constantly developing is the project communication tools that help us to communicate to the various stakeholders and commit everyone to the strategic goals. So that everyone understands the big picture and the value of one's own contribution. The motivation of the organization is the key which can either get the e-commerce project to reach its goal or ruin the*

*whole project. Our challenges are projects that are cross functional and the ones that go across the business units. There is always the risk that these projects start to live their own lives, you know. It's very typical that, for example, business unit and IT unit are prioritizing totally wrong things. (Koivula, MTV MEDIA)*

To sum it up the analysis of the e-commerce adoption process, I will use Doe's view on the future.

*You cannot lock your strategy for five next years in this world. Not to mention for the next ten years. New business models are evolving all the time and the basic structures are changing accordingly. For us it's a tough job to find our own place from the ecosystem. We have traditionally been the dominant player of the market and we have been the first ones to know the upcoming trends. On the other hand, maybe this is one of the reasons what makes this so interesting. I believe that what we are doing now is essential in order to get us there where the retail industry is going. (Doe, Company X)*

In other words, it seems that the various factors that are described to have a huge impact on the e-commerce adoption process are at same time described to be in a great turmoil. Consequently, this gives e-commerce selling a unique nature where one must cope with various changes. In the next and last section of this chapter I will analyze how the respondents described their roles and relationships in the e-commerce adoption process. Furthermore, the section will focus on how the changes in the e-commerce adoption process have in turn changed these roles and relationships.

## 5.3 Roles and relationships in the e-commerce adoption process

In the previous sections of this Chapter I have analyzed how the factors influencing on the e-commerce adoption process and described them being in a constant transition. Moreover, the respondents have very openly expressed their dissatisfaction with the results of their e-commerce investments. Therefore, the organizations have been in a quest to find more efficient ways to manage their e-commerce investments and the adoption processes as a whole. Consequently, there has been a pressure to define the roles and relationships of marketing or business people and the technical resources of the organizations. In this section I aim to describe and analyze the changing roles of the CMO and CIOs. That is to say, many signals seem to imply that in order to increase the

performance of the e-commerce investments organizations want to enhance the technology and business integration. Thus, the roles of the business orientated people and technology orientated people are becoming more overlapping. The role of the CIO is described to become closer to the business but on the other hand, the respondents also emphasized how the business people need to take more active role in untraditional areas. I have divided this section into two parts. First I will focus on the traditional roles and present research material from the discussions where the respondents described the roles being traditional. The second part focuses on the transition phase. This means that I will analyze the discussions where the respondents described the roles starting to transform into more overlapping with each other.

It is necessary to underline that even though the roles are described to be in transition, the traditional role of the CMO has not disappeared anywhere. According to the interviews, the role of the CMO is still very strong when it comes to analyzing factors regarding the end-customers and market dynamics in general. When discussing about the roles and relationships and how they were in 2008, Aalto summarizes them as silo-like and that the IT department in general had very little to do with the customer and market analysis.

*Well, IT didn't really have any role in this. It was the business who did it. (Aalto, Sanoma)*

Liljedahl agrees on the statement and said that his role was indeed very passive when the organization analyzed its customers, competitive environment and market dynamics in general.

*Kaisa basically was the one responsible for analyzing the competitive environment. Okay, I got to see the solutions and applications what New York Times and those had made. However, the decisions and analysis in that sense were made by business and Kaisa. All those market researches and so on. (Liljedahl, Sanoma)*

Moreover, CIOs Stone and Harjula describe their roles being passive as well, however, they seem to be very active in analyzing competitors from the technical perspective that refers to the traditional role of the CIO.

*John's role is much stronger in this area. He analyses the business and market factors more and I don't have much of a role there. I try to follow our competitors from the technical perspective: what kind solutions and tools they are using and so on. I think I'm quite well aware of them. (Stone, Company X)*

*I didn't have any role in analyzing the competitive environment. And I don't think that I even suppose to have. I got already enough committees to work with. Moreover, I do have the access to all the information if needed. On the other hand, I follow our competitors from the technological perspective and I'm very well connected with our competitors via all kinds of forums and events. Kenneth, on the other hand, had a major role in analyzing the competitors from the business perspective. (Harjula, Veho)*

An interesting finding was that the CIOs easily turned the rhetoric of the discussions from "customers" to "users".

*We found beta-testers via our Facebook group and the answering rate was very good and they gave us a lot of valuable feedback. As I recall, we made 5-6 critical fixing rounds before the release. And after the release the users have kept on giving us the valuable feedback. Actually, the user feedback has turned into our ToDo-list. In other words, we have developed the service accordingly the user feedback. (Liljedahl, Sanoma)*

*We made a research for users and just in the end of the project we also made a usability tests. I'm quite satisfied with the end result, especially when I look at feedback that we have got from the users. Actually, I have received a feedback all the way from UK. That is, the colleagues there — not the end-users have been impressed with our service. (Harjula, Veho)*

Rotko argues that his role is naturally closer to the customers because functions that usually are in direct interaction with them, i.e. customer research, marketing and sales, are also reporting directly to him.

*I have closer relationship with our customers because both Marketing and Research are reporting directly to me. And I am responsible for the Sales. Moreover, I have a long experience working with the clients so therefore I naturally understand their needs the best. (Rotko, MTV MEDIA)*

If the customers, competitive environment and market dynamics in general would traditionally seen as CMOs playground, the technologies and supplier relationships can be seen as CIO's core.

*Well, I'm responsible for the technical providers. (Stone, Company X)*

*Jack is responsible for managing the technical providers and partners. (Doe, Company X)*

*Mikael probably knows better how we found the provider. That is, he knows whether we found them or did they find us. Basically, it is the IT department that knows the providers — both domestic and international ones — and the IT have the expertise to evaluate their competences. They have the contacts. (Aalto, Sanoma)*

*Well, we have agreed on that it's my role to find the technical solutions. For instance, when we did the usability study, I found the service provider for it. We have quite a few so called visionaries in the organization and it's our role to make the vision real and concrete. That is to say, the business directors are not that much involved with the technology. The decisions regarding, for example, the technical architecture are done by me and like I said, I have been taken it step by step towards Microsoft environment. (Harjula, Veho)*

It seems that the CMO expects the CIO to have a strong role and competence in the procurement process. That is to say, ensuring that when something is bought it also fits to the original needs that are defined by the business. The importance of the procurement role is especially emphasized in the e-commerce investments because of the feared risks and the complexity of the projects.

*Like I said when the project has something to do with technology they usually take too long or exceed the budget. Risto's role is to be the expert in the procurement process. That is, he should know how these kinds of projects are managed, how the RFTs should be done, how the offers should look like, what kind additional questions should be asked and so on. And when it's time for making the contract he ensures that all the details and clauses are in place so that we are safe when the project are exceeding the budgets and timelines. I think it's good that Risto's department is in charge of managing the projects and we are kind of an internal customer for them.  (Rotko, MTV MEDIA)*

*I have been buying and managing more than ten large web based services that have been based on different technologies. Therefore, I understand the most important and common technologies very well. I have enough experience to know their main strengths and weaknesses and which of them would be suitable for us and which not. Thus, our decision making process is quite short. In practice I prepare almost all of our investment proposals. That is to say, I prepare the required documents according to the investment processes and present them to the decision making units. (Stone, Company X)*

The last part of this section presents the findings from the described transition phase of the roles and relationships. The more strategic role of the CIO was described by Harjula as he said that initiative for strategic e-commerce transformation came from him.

*Actually, I was the one who initiated the whole thing and because of that we founded the project team who started to define our e-commerce strategy. And we also founded a steering group for the venture and I have been a member of the group since day one. The fact that this group is headed by our CEO emphasizes the importance of this group of course. (Harjula, Veho)*

When discussing about the role of the CIO regarding to end-customers, Strömsholm says that it is essential that the CIO is involved and that the CIO understands the customer related factors. However, he does not say that his challenge is to get CIO understand the issues but his challenge is to prioritize the projects with the CIO so that they drive the company the fastest towards the vision of the e-commerce strategy.

*The CIO couldn't understand us or comprehend our business needs if he couldn't understand our philosophy for the customer relationship strategy and management. And therefore I have also illustrated the strategy on a PowerPoint slide. When we have a common understanding and an illustrated vision it's a lot easier to get the others to understand why we are doing this and how the customer experience is affected and so on. My challenge is not get CIO understand our challenges. My challenge is to prioritize the projects with the steering group. That is, what would be the decisions that would take us closer the vision the fastest? (Strömsholm, Veho)*

*On the other hand, we have the business people who like to innovate. We as an IT department bring our own ideas to the table too but mostly it's done by the business. Then together we re-develop and evaluate them and come up with our solutions. (Harjula, Veho)*

Aalto's comprehensive description is a good example of the transition. Her organization has found concrete ways to bring the co-operation between business and IT closer. The roles in strict silos are seen as old fashioned and ineffective. Especially the customer-supplier mindset was described as something that increases the risks of miscommunication and thus generates poor results.

*Usually Sanoma has organized the IT projects and sourcing so that they are managed by the IT department. However, now other business units have started to copy our way which means that all the project members are sitting together all the time. Previously IT department had its own floor and some technical project manager was allocated to the projects and we met him like once a week. This was the typical and formal buyer-supplier model. On the other hand, since 2009 we have had the technical project manager all the time sitting with us and he only goes once in a week to meet the IT team. We have found the method very efficient and thus other units have started to use it as well. (Aalto, Sanoma)*

Moreover, Harjula and Doe also emphasize how the roles and competences should be more overlapping with each other. Especially the requirements and needs for CIOs and IT personnel in general were described to become more and more businesslike.

*Even though my core competence is related to IT I have noticed for a while ago that the CIO must have a competence in business as well. Therefore, I have constantly tried to acquire more that know-*

*how. You have to talk business language with business people. If you are talking IT language with them you can see it from their eyes that they have no clue what you are saying. (Harjuala, Veho)*

*It must be taken care of that there are people who understand the business factors and can communicate it well among the technical experts. (Doe, Company X)*

According to Rotko, his organization needed a stronger, business orientated technological manager who could close the gap and take IT closer to the business. Therefore the company recruited a new CIO couple of years ago.

*We were lacking a modern, Executive level competence to these issues and we only had so called traditional IT competence in our organization. We have made a lot progress after Koivula started here 2,5 years ago. Risto is responsible for the IT but he also has the competence for business matters. Therefore, I ask for his technical opinions but also I'm not afraid to ask a second opinion for business issues. The dialogue is working very well. We are dependent on the technological aspects more and more. And that's why we hired him here. That is, we needed someone to the Management Board who had hard core expertise about the business issues and how the technologic opportunities could help us. When it comes to analyzing the competitive environment my answer is pretty much the same: both I and Risto are doing it. For instance, we are both very well aware about the players in the US and Silicon Valley and we exchange ideas all the time. (Rotko, MTV MEDIA)*

In addition, he continues that the transforming role of the CIO towards business can be seen, for instance, in the cases where the CIO also must understand the market and customer research data.

*Koivula understands the data and graphs as good as me when I show them to him. So we are not so different in that sense. And that's our starting point for everything: whether it's a guy from the IT or marketing, we are all analyzing the same data and following same numbers. (Rotko, MTV MEDIA)*

On the other hand, the changing and overlapping roles also seem to affect in the decision making process. As discussed earlier, in the traditional model CIO's role was emphasized in the selection of solution providers. However, in the transition phase the roles of CMO's and other business people seem to become more important.

*In the end the CIO is not the one who makes the important decision. On the other hand, we have to make the decisions based on what they are telling us. So in that case he has a very important role. (Strömsholm, Veho)*

*In practice Jack manages the relationships between us and the technical partners. However, I am a member of the steering groups. (Doe, Company X)*

*Kenneth can of course say his opinion and he is a strong influencer… We have chosen providers together. For example, we choose the provider for the feasibility study together. During the journey we have made three or four critical decisions regarding the providers. For instance, the main consultant and the design consultant are considered as critical decisions. I have brought my opinions and arguments on the table however when we were choosing the provider for Master Data Management I kind of lost the debate. I didn't get the provider that I wanted but the business people did. (Harjula, Veho)*

*Whether they are technological, content or business people, they are working together in cross functional teams. And I believe we have pretty wide expertise and know how when we have, say 6-8 different people in a team. In the end these teams are always formed case by case. The one who will be in charge depends on the project. If it's a technological project it can be Koivula or someone from his unit. Sometimes it can be business people, that is, me or my subordinate. Naturally we tend to choose the one who has the closest interests. But I don't really see any difference there as long as the project manager has the competence to lead and manage these projects. In the end his role is to gather the necessary people together and come up with the right conclusions with them. It's a good thing that the boundaries are fading away and the roles are getting more and more overlapping. (Rotko, MTV MEDIA)*

*The service providers were working as much with me than with Mikael in this specific case. Normally IT department sends the RFTs and gets the offers but in this case we had so symbiotic team that in practice we discussed together with the provider all the time… It's usually the Head of Business Development who is normally in charge of these new, innovative ventures. We have a development process with all the decision making points and so. The Head of Business Development is responsible for the process. (Aalto, Sanoma)*

*Nowadays business people manage these e-commerce projects, not the IT people. In 2008 IT still managed these projects but not anymore… A few of these new e-commerce ventures have been exceptionally business orientated and maybe that is the reason why we have succeeded so well. (Liljedahl, Sanoma)*

*I can tell you that if these ventures would have been managed by the Group or its IT Department we would not have come as far as this. (Stone, Company X)*

Furthermore, Rotko describes his role being today often as the first point of contact with suppliers and in the end the most important decision maker in the solution provider selection. He also describes himself as the main decision maker.

*Quite often the providers contact me directly, especially with the new initiatives and ventures. I guess it's because I'm very well connected with different people and companies… In the end it is me who calls the shots. My decisions are based on what I hear from my own people and from the IT. And you know how it goes. You get the pieces of information from here and there and then you just have to make the decision based on your own beliefs. Of course you need to have a solid knowledge about the providers. If the provider is a some a small player who have like 7 guys working in that company we probably cannot accept their offer if the project is too important. I'll pay a close*

*attention to the references. And naturally, your own experiences are in a major role. (Rotko, MTV MEDIA)*

Aalto seems to have the same mindset regarding the modern decision making roles.

*I think it's the business directors who are the most important decision makers when we decide to buy something. It's the business who calls the shots in the end, that is, they will accept the costs and choose the providers. (Aalto, Sanoma)*

Koivula also says that nowadays the selection process can be completely led by people who don't have a technological role nor have the technological background.

*The decision maker can be whoever in these new ventures if the technologies won't require heavy integrations with our current systems. And therefore, the business is normally in direct relationship with the providers. They can do it by themselves easily if we are, for instance, buying a cloud service. It's not necessary to get IT department's approval for all the details. We rather aim to deliver added value to the projects with other methods. On the other hand, it's a different story if we are developing a new advertising management system which we have to be able to live with for the next 20 years. But in those cases the business is highly involved as well. For instance, now we have a major project where both I and Rotko are members of the steering group and then we have people from both of our units choosing the best CRM for us. And it is Rotko who make the last decision in that steering group. But I do give my own, strong recommendations to him. (Koivula, MTV MEDIA)*

Moreover, he adds that the e-commerce challenges are of the chicken-egg problems, which in turn requires overlapping, iterative and coaching roles and relationships.

*I would describe our co-operation being very iterative and including plenty of dialogue. It's a part of our corporate culture. We discuss a lot about everything, what would be the costs and so on. In the end most of the cases are chicken-egg phenomenon. (Koivula, MTV MEDIA)*

On the other hand, Harjula argues that the role of the CIO might be in the front line of the business at least in the future.

*If we are talking about whether the CIO would be a kind of front line leader among the business people, I'd say that we are not that far yet. The way I see it is that the role of the IT is to build even stronger relationships with business in the future. And I have been taking us all the time towards that direction in the past years. It is important to acknowledge that IT itself does not have any value but we have to be the best possible partner for the business. End of story. (Harjula, Veho)*

According to Koivula, having a background in business role helps CIO to contribute better and build more fruitful relationships with the business. Contrariwise, if the CMO has a comprehensive understanding about technological aspects the relationship can be built even stronger.

*Well yes, Rotko does have a good understanding about the technological opportunities. That is to say, I think our dialogue would be on the same level as it is now if he would be a total outsider without any experience. On the other hand, I have been 10 years as a CEO and responsible for the sales so I feel that I can contribute to that side as well. In order to have good dialogue you need to have a common language and understanding. It's impossible to gain anything out of the discussions if you are living in totally different worlds. (Koivula, MTV MEDIA)*

When talking about the issue on organizational level the respondents argued that there is no doubt that business people should come closer to the technology. For instance, Rotko described the overlapping roles and technological orientation, expertise and experience as the organization's future competitive advantage. Doe also agreed on this statement.

*The technology used to be in a minor role but nowadays I'd say that it sometimes is the most crucial part of the projects. I sure hope that our people, even those who have been here for a long time will start to understand this technological revolution what we are having right now. We need to be able to change our way of thinking so that we are not afraid of the technological aspects. We need to have a genuine interest to it. All of us should be able to contribute more and more. Of course you don't have to know how to code but you know what I mean. I think it's highly important. This also helps to get some realism to the projects and plans so that no one will just come and say "let's just do it and tell me tomorrow when everything is up and running." (Rotko, MTV MEDIA)*

*Own technological expertise, competence and vision will become more and more important in the future. If we didn't have so much of that I don't think that this could be working as smoothly as it works now. (Doe, Company X)*

To sum it up, the analysis of roles and relationships, one could argue that especially the descriptions about the transition phase are not the cause but the outcome of the transformations described in the previous sections. In other words, due the various factors there has been a great pressure to close the gap between technology and marketing. Therefore, the roles and relationships seem to become more overlapping. Moreover, according to the interviews it seems that there is no stop for the transformation in the near future.

## 6. Conclusive discussions

This study aimed to give insight into the sales of e-commerce innovations by describing the roles and relationships of Chief Marketing Officer (CMO) and Chief Information Officer (CIO) in the e-commerce adoption process. Furthermore, the paper aspired to provide information how CMOs and CIO describe e-commerce as an investment and how do they describe the e-commerce adoption process. The data of this study was collected by interviewing the CMOs and CIOs of four large Finnish companies. In the following sections the key findings together with the academic contribution, limitation of the study and suggestions for further research are presented. The last section of this Chapter focuses on providing managerial implications for selling e-commerce innovations.

## 6.1 Poor experiences with the e-commerce investments drive the transformation of the adoption process, roles and relationships

The empirical part of this study shows that especially the CMOs express very openly their dissatisfaction with the IT and e-commerce investments. The investments tend to miss the timelines and exceed the budgets. In addition to falsely estimated cost structure and schedules, the end results of the projects have often been wrong and unwanted. Moreover, the difficulties to set measurable targets for the investments have increased the amount frustration.

This study has found that generally there have been various reasons why organizations have not been able to succeed with their e-commerce investments at a satisfactory level. Moreover, there are multiple, inter-related factors that have a great impact on the organizational buying behavior and innovation adoption process. Nevertheless, the main finding of this study is that the poor experiences with the e-commerce investments have forced the organizations to change and find better adoption processes and roles for CMOs and CIOs. All of the respondents described that their e-commerce adoption and investment processes are quite different currently comparing to near past. Moreover, it is expected

that the transformation will continue radically in the future as the e-commerce adoption may become one of the most essential success factors for the companies.

## 6.2 Will the CMO take back the expert role of the customer behavior and competitive environment in the digital era?

The results of analysis show that that the customers and competitive environment as a whole is by far the most important factor influencing on the e-commerce adoption process and success of the investments. The companies would not be investing in the e-commerce if they would not expect to create value for their customers or gain competitive advantage. However, it seems that the organizations have not been very successful within this sphere. The respondents argued that the digital world around them and the needs and wants of their customers are changing in an increasingly fast pace and the organizations are having problems to keep up and forecast the future. At the same time the competitive environment has become on some level more intense, international and challenging.

If the organizations should be more competent to align their e-commerce adoption process and investments with the needs and wants of the customers and competitive environment, it is hard to ignore the fact that should not the Marketing and CMOs be the ones who have traditionally understood the customer behavior and dynamics of the competitive environment? It was very evident that the CMO and other business people were expected to be the experts and have the strongest role regarding the customer and competitive environment related issues. Therefore, one could argue whether Marketing and CMOs have failed in their traditional roles and are they the ones that suppose to have such a role. On the other hand, it seems that the organizations do not have any other options. Consequently, the attitudes of the CMOs may have been affected by the dilemma and they are looking for new solutions to tackle the issue. They emphasized how they and the whole organization should learn to accept the failures and rather take risks than to play it too safe. Moreover, the CMOs explained that the channel approach in marketing is out-dated and the organizations should start focusing on managing the comprehensive business

model transformation. In other words, the traditional and digital channels should not be treated as a separate business models but they should form an integrated concept and an uninterrupted interface for the customer experience. In order to master the integrated customer experience and the competitive environment in the digital era the CMOs felt that they need gain more thorough understanding about the digital environment and technical aspects, and thus expand their role to the CIO's traditional playground.

It was argued that the e-commerce adoption process is a long, explorative journey that is essential to start early enough in order to stay competitive in the future. In that sense, one could expect that changes in CMOs role will not happened over night but slowly, step by step. That is to say, at the moment the CMOs feel themselves rather ignorant and insecure talking about the technical aspects of the investments. However, the evidence shows that the CMOs have acknowledged the necessary changes that need to be done in the roles and small but concrete actions have been made.

## 6.3 The role of CIO involvement has been inherently self-managed but are those days soon behind?

It was also shown that the company CIO is traditionally the one who is exclusively responsible for the technical aspects and the practical implementation of the e-commerce investments and adoption process. In other words, they lead the designing of the technical architectures and decide the framework for the technical implementation. Even though it was shown that the CMOs and Business Management have in theory the last call in decision making it seems that the core parts of the decision making processes for e-commerce investments have been mainly developed by CIOs. One could even argue that their role in budgeting and decision making when choosing the solution providers have been the most crucial since the CMOs and business people have strongly based their decisions on the CIO's recommendations. Moreover, the CMOs and Business Management have expected the CIOs to be inherently the experts and responsible for the procurement process, project management and implementation. It shall remain open to debate whether this is just one

way for the non-technical persons to stay in the comfort-zone and delegate the overall responsibility of the e-commerce adoption to the CIOs

It was evident that the initial planning of the e-commerce projects has often stared like marketing and business investments. However, during the technical planning, development and implementation the essence of the investment has changed from marketing and business to IT which in turn has created various problems. Moreover, it was shown that the relationships with solution providers have not been provided enough value for the organizations. Therefore, the traditional self-managed role of the CIO may not be the long term solution for organizations because the success of the e-commerce adoption in the end is not just about high quality technical implementation in a given budget and timeline but designing a channel independent and unbroken interface for the customer experience. On the other hand, one must underline the fact that it was not just the CMOs who expressed their dissatisfaction with the current adoption processes. That is, the CIOs argued as well that their role should be expanded out from its traditional framework. In order to contribute better they saw that it was necessary to get closer to frontline which has traditionally belonged only to Marketing and Business Management. Just like in the CMOs' case, it was very clear that the CIOs have also already starting to transform their role.

## 6.4 Academic contribution, limitation of the study and suggestions for further research

Even though companies have brought innovative solutions to the markets since the beginning of the world's commercial activities, innovation selling as an academic concept is rarely new and left on a quite minor attention. Therefore, only a few researchers have given their contribution to the topic. Due the lack of previous academic researches about innovation selling the foundation for the empirical contribution was laid on the theoretical discussions of industrial buying behavior and innovation adoption.

The findings of this study enhance our understanding of the roles and relationships of the CMO and CIO in the e-commerce adoption process. It would be fair to say that it also contributes to the scarce academic framework of innovation selling due the various reasons. Firstly, the overall understanding of the buying behavior of one's current and potential customers and market segments have been recognized as one of the most the most crucial success factors in the selling process of new products (e.g. Webster and Wind, 1972; Sheth, 1973; Cooper, 1979; Smith and Taylor; Anderson et al. 1987; Michaels et al. 1987; McQuiston, 1989; Bunn, 1993; Roberts, 2000). Secondly, the chosen qualitative research method enabled the means to reach a deep understanding and build thick, rather unique descriptions of the CMOs and CIOs' roles and relationships in the e-commerce adoption process. Thirdly, the present study confirms previous findings and contributes additional evidence that emphasizes the importance of multiple factors that have an impact on to the organizational buying behavior and innovation adoption process. In other words, the end-customers (Chakraborty et al. 2007), competitive environment (Tzokas and Saren, 1993), innovation suppliers (Frambach et al. 1998), organizational structure and climate (Baker and Freeland, 1970), organizational technology and systems (Anderson et al. 2000), technological orientation, expertise and experience (Webster and Wind, 1972), buying center (Robinson et al., 1967), individuals (Davis, 1986) and decision makers (Kauffman, 1996). Fourthly, the findings regarding the comprehensive business model transformation from channel orientation to an uninterrupted interface for the customer experience provide and interesting view on study done by Shainesh (2004). Finally, this research will serve as a base for future studies which are suggested after the next section.

The author chose to use qualitative approach as a research method in order to reach the objectives of the study. Therefore, it is important to acknowledge that the results are very specific to the research context alone and it is not possible to draw generalized conclusions. That is to say, the data of this study was gathered only from 4 companies and in total of 8 respondents in Finland during 14.6.2012-3.7.2012 and the results with other companies, respondents, markets and timeframe might be different. Moreover, another researcher might have end up to interpret the data differently and draw different conclusions. These factors and limitations are naturally always present with qualitative researches.

Consequently, this paper opens a wide range of interesting possibilities to study innovation selling and e-commerce investments further. Firstly, using quantitative methods and analyzing different factors and their influence on the buying behavior and innovation and e-commerce adoption would be highly interesting. Secondly, in order to establish a more thorough discussion about the research topic in this paper, it would be interesting to study how the e-commerce suppliers describe the current situation. By doing so, one would be to see the other side of the coin and conduct a comparison how the descriptions from the buyer and seller sides confront. Thirdly, studying the transformation of the e-commerce adoption process and the roles and relationships of the CMOs and CIOs on a longer timeframe would provide interesting perspective. Finally, as this study focused only on the CMOs and CIOs, the other members and roles of the buying center would make a meaningful framework.

## 6.5 Managerial implications

This paper started with the words of Sairanen and Hämäläinen (2010) that "selling innovations is challenging". Moreover, the challenges related to understanding industrial buying behavior have also been underlined throughout this paper. It would be fair to say, that the sales process of e-commerce innovations might be one of the most challenging concepts to analyze due the various factors that one must comprehend. Nevertheless, the findings of this study have managerial implications for all parties involved with sales process of e-commerce innovations. The results indicate that due the poor results of the e-commerce investments the e-commerce adoption process together with the roles and relationships of the CMOs and CIOs are in a great transformation. Moreover, various other, inter-related factors which have a major impact on the buying behavior and adoption process are also changing almost constantly. This gives the sales of e-commerce innovations its own nature where one must take a several factors into account.

Whatever the real reasons behind the failures and frustrations would be, dealing with individuals who have had poor experiences with e-commerce investments in general requires a different sales approach. That is to say, one needs to be ready to deal with persons that are prejudiced and might even have hostile attitude towards everything that has anything to do with IT in general. Therefore, one should avoid selling the e-commerce solutions as IT projects and emphasize the marketing and business values.

The organizations seemed to be rather unhappy with the essence of current relationships with their solution providers. That is to say, they are expecting the solution providers to have more comprehensive understanding about the organizations' business environment in order to be able to contribute more for their business challenges. The organizations are looking for real partnerships not just technical providers who deliver the output according the technical specifications. It seems that the current sales and procurement processes are not even enabling deep partnerships. Therefore, the solution providers should probably adjust their sales process so that it starts early enough and one would have the time to familiarize itself with the business environment — not just with the technical architecture. This would probably require more proactive sales process which aims to increase the understanding of the business environment step by step, before the competitors do it. Consequently, if the sales process is started when the organization sends out the RFTs to the providers it might already be too late.

An essential part of understanding the business needs is to know how the organizations approach the e-commerce as a business model. It seems that the traditional channel approach is out-dated. That is, the digital channels together with traditional channels should form an integrated, channel-independent concept and an uninterrupted interface for the customer experience. One could argue that this too emphasizes the requirements for acquiring thorough understanding of the organization's business environment in the sales process in order to be capable to sell the right solutions. The channel-independent approach also brings challenges for setting up measurable targets for the investments. Furthermore, especially the bigger organizations may have hundreds of different needs that could be tackled with e-commerce solutions. At same time, the organizations are

having challenges how to prioritize the needs and solutions for them. Ability to present a clear return on investment is the most certain way to get the suggested solution prioritized on the top of the pile. The solution providers should thus focus on developing their sales process so that they would have the means to provide measurable targets and metrics for the investments.

The CMOs and CIOs aim to expand their roles out from the traditional frameworks and increasingly overlapping with each other. In order to master the integrated customer experience and the competitive environment in the digital era the CMOs felt that they need gain more thorough understanding about the technical aspects, and thus expand their role to the CIO's traditional playground. This means that they also might take more profound role with the solution providers. On the other hand, CIOs aim to contribute more in the frontline, i.e. customer and competitive environment related factors. In practice the transformation shows already. The project teams have become more symbiotic and agile. The teams aim to have a very marketing and business orientated approach throughout the project and the team leader can be a person with either technical or commercials background. Needles to say, every organization and individual are in a rather unique phase in their process. In other words, there are various factors influencing on the adoption process, the phase and pace of the transformation. All of this is creating highly case sensitive contexts. For solution providers the key to success is to identify the current phase and evaluate how traditional vs. overlapping the roles and relationships are at the moment. Thus one could direct the sales efforts correctly. Moreover, it helps to forecast how the relationships will develop over time.  Already for a quite long time there has been a lot of discussion about the importance of sales and marketing integration and how organizations in general find it challenging. These discussions seem to have very similar elements as the issues that the IT-Marketing integration dilemma. Therefore from, the seller's point of view one might consider to gain better understanding about the buying behavior and adoption process of the e-commerce by learning from the more traditional integration dilemmas.

# 7. References

Abemathy, W. & Utterback, J. 1978, "Patterns of Industrial Innovations", *Technology Review*, Vol. 80 (June/July), pp. 41-47.

Abrahamson, E. 1996, "Management fashion", *Academy of Management Review*, Vol. 21, No. 1, pp. 254-286.

Abrahamson, E. & Rosenkopf, L. 1997, "Social Network Effects on the Extent of Innovation Diffusion: A Computer Simulation", *Organization Science*, Vol. 8, No. 3, pp. 289-309.

Acs, Z. & Audretsch, D. 1988, "Innovation and firm size in manufacturing", *Technovation*, Vol. 7, pp. 197-210.

Adam, N., Dogramaci, O., Gangopadhyay, A. & Yesha, Y. 1999, *Electronic Commerce – Technical, Business and Legal Issues*, Prentice Hall, Upper Saddle River.

Aiken, M. & Hage, J. 1971, "Organisation and Innovation.", *Sociology,* Vol. 5, pp. 63-82.

Aiken, M. & Hage, J. 1972, "Organizational Permeability, Boundary Spanners and Organizational Structure", paper presented at the 67th Annual Meeting of the American Sociological Association, New Orleans.

Akkeren, J. & Cavaye, A. 1999, "Factors Affecting the Adoption of E-commerce Technologies by Small Business in Australia – An Empirical Study"

Alba, J., Lynch, J., Weitz, B., Janiszewski, C., Lutz, R., Sawyer, A. & Wood, S. 1997, "Interactive Home Shopping: Consumer, Retailer, and Manufacturer Incentives to Participate in Electronic Marketplaces", *Journal of Marketing*, Vol. 61, No. 3, pp. 38-53.

Aldrich, H. 1979, *Organisations and Environments*, Prentice-Hall, Engelwood Cliffs, New Jersey.

Anderson, E., Chu, W. & Weitz, B. 1987, "Industrial purchasing: an empirical exploration of the buyclass framework", *Journal of Marketing*, Vol. 51, No. 3, pp. 71-86.

Anderson, E., Fornell, F. & Lehmann, D. 1994, "Customer satisfaction, market share, and profitability: findings from Sweden", *Journal of Marketing*, Vol. 58 No. 3, pp. 53-66.

Anderson, J. & Narus, J. 1999, *Business market management*, Prentice-Hall, New Jersey.

Anderson, P. 1982. "Marketing, Strategic Planning and the Theory of the Firm", *Journal of Marketing,* Vol. 46, No. 2, pp. 15-26.

Arnould, E.J. & Wallendorf, M. 1994, "Market-Oriented Ethnography: Interpretation Building and Marketing Strategy Formulation", *Journal of Marketing Research*, Vol. 31, No. 4, pp. 484-504.

Assel, H. 1984, *Consumer Behavior and Marketing Action*, Kent Publishing Co., Boston, Massachuttes.

Astley, G. & Sachdeva, P. 1984, "Structural Sources of Intraorganizational Power: A Theoretical Synthesis", *Academy of Management Review*, Vol. 9, pp. 104-13.

Atuahene-Gima, K. & Li, H. 2002, "When Does Trust Matter? Antecedents and Contingent Effects of Supervisee Trust on Performance in Selling New Products in China and the United States", *Journal of Marketing*, Vol. 66, No. 3, pp. 61-81.

Atuahene-Gima, K. 1995, "An Exploratory Analysis of the Impact of Market Orientation on New Product Performance", *Journal of Product Innovation Management*, Vol. 12, No. 4, pp. 275-293.

Avlonitis, G. & Papastathopoulou, P. 2001, "The Development Activities of Innovative and Non-Innovative New Retail Financial Products: Implications for Success", *Journal of Marketing Management*, Vol. 17 , No. 7/8, pp. 705-738.

Bacharach, S. & Lawler, E. 1980, *Power and Politics in Organizations*, Jossey-Bass Publishers Inc., San Francisco.

Baker, N. & Freeland, J. 1970, "Information and Innovation in Research Organisations" paper delivered at a meeting of the Operations Research Society of America, Detroit, Michigan.

Baker, M. 1975. *Marketing New Industrial Products*, Macmillan Press Ltd, London.

Baldridge, J. & Burnham, R. 1975,  "Organisational Innovation: Individual, Organisational and Environmental Impacts", *Administrative Science Quarterly*, Vol. 20, pp. 165-17

Baldwin, W. & Scott, J. 1987, *Market structure and technological change*. Harwood Academic Publishers, Chur, Switzerland.

Barclay, D. & Bunn, M. 2006, "Process heuristics in organizational buying: Starting to fill a gap", *Journal of Business Research*, Vol. 59, No. 2, pp. 186-194.

Barwise, P. & Meehan, S. 2010, "The One Thing You Must Get Right When Building a Brand", *Harvard Business Review*, Vol. 88, No. 12, pp. 80-84.

Bass, F. 1969, "A New Product Growth For Model Consumer Durables", *Management Science*, Vol. 15, No. 5, pp. 215-227.

Bass, F. 1980, "The Relationship Between Diffusion Curves, Experience Curves, and Demand Elasticities for Consumer Durable Technological Innovations", *Journal of Business*, Vol. 53, pp. 551-557.

Baumgartel, H., Dunn, L. & Sullivan, G. 1976, "Management Education, Company Climate and Innovation", *Journal of General Management*, Vol. 4 No. 2, pp. 17-26.

Beaudry, A. & Pinsonneault, A. 2010, "The Other Side of Acceptance: Studying the Direct and Indirect Effects of Emotions on Information Technology Use", *MIS Quarterly*, Vol. 34, No. 4, pp. 689-703.

Becker, S. & Stafford, F. 1967, "Some Determinants of Organisational Success", *Journal of Business*, Vol. 40, No. 4, pp. 511-518.

Bellizzi, J. 1981, "Organizational Size and Buying Influences", *Industrial Marketing Management,* Vol. 10, No. 1, pp. 17-21.

Bellizzi, J. & Belonax, J. 1982, "Centralized and decentralized buying influences", *Industrial Marketing Management,* Vol. 11, No. 2, pp. 111-115.

Bettman, J. 1979, *An Information-Processing Theory of Consumer Choice*, Addison-Wesley Publishing Company, Reading, MA.

Beukema, P. 1974. "Predicting Organisational Effectiveness with a Multivariate Model of Organic and Mechanistic Value Orientation", University of Southern California.

Biggam, J. 2008, *Succeeding with Your Masters Dissertation: A Practical Step-by-Step Handbook*, Open University Press, Buckingham, GBR.

Bilkey, W. & Nes, E. 1982, "Country-of-Origin Effects on Product Evaluations", *Journal of International Business Studies*, Vol. 13, No. 1, pp. 89-99.

Blau, J. & Alba, R. 1982, "Empowering Nets of Participation", *Administrative Science Quarterly*, Vol. 27, No. 3, pp. 363-79.

Boeck, H., Bendavid, Y. & Lefebvre, E. 2009, "Evolving B2B e-commerce adaptation for SME suppliers" *Journal of Business & Industrial Marketing*, Vol. 24, No. 8, pp.561-574.

Bonoma, T., Zaltman, G. & Johnston, W. 1977, *Industrial Buying Behavior*, The Marketing Science Institute, Boston, MA.

Brass, D. 1984, "Being in the Right Place: A Structural Analysis of Individual Influence in an Organization", *Administrative Science Quarterly*, Vol. 29, No. 4, pp. 518-39.

Brown, L. 1981, *Innovation Diffusion: A New Perspective,* Methuen, New York.

Bryman, A. & Bell, E. 2003, *Business research methods*, Oxford University press.

Brynjolfsson, E. & Hitt, L. 1998, "Beyond the productivity paradox", *Communications of the ACM*, Vol. 41, No. 8, pp. 49-55.

Bunn, M. 1993, "Taxonomy of Buying Decision Approaches", *Journal of Marketing*, Vol. 57, No. 1, pp. 38-56.

Bunn, M. 1994, "Key aspects of organizational buying: conceptualization and measurement", *Journal of the Academy of Marketing Science*, Vol. 22, No. 2, pp. 160-169.

Cachon, G. & Fisher, M. 1997, "Campbell Soup's continuous replenishment program: Evaluation and enhanced inventory decision rules", *Production and Operations Management*, Vol. 6, No. 3, pp. 266-276.

Cardozo, R. & Cagley, J. 1971, "Experimental Study of Industrial Buyer Behavior" *Journal of Marketing Research,* Vol. 8, No. 3,pp. 329-34.

Carter, C. & Williams, B. 1957, *Indtustry and Technical Progress*, Oxford University Press, London, GBR.

Chaffey, D. 2006, *E-Business and E-Commerce Management,* 3$^{rd}$ Edition, Prentice Hall, Harlow.

Chaffey, D., Ellis-Chadwick, F., Mayer, R. & Johnston, K. 2009, *Internet marketing: strategy, implementation and practice*, 4$^{th}$ edition, Pearson Eduction Limited, London, GBR.

Chakraborty, G., Srivastava, P. & Marshall, F. 2007, "Are drivers of customer satisfaction different for buyers/users from different functional areas?", *Journal of Business & Industrial Marketing*, Vol. 22, No. 1, pp. 20-28.

Chaudhury, A., & Kuilboer, J. 2002, *E-Business and Infrastructure*, McGraw-Hill, Boston, MA.

Chiesa, V. & Frattini, F. 2011, "Commercializing Technological Innovation: Learning from Failures in High-Tech Markets", *Journal of Product Innovation Management,* Vol 28, No. 4, pp. 437-454.

Chesher, M., Kaura, R. & Linton, P. 2003, *Electronic business & commerce*, Springer, London, GBR.

Ching, H. & Ellis, P. 2004, "Marketing in Cyberspace: What Factors Drive E-Commerce Adoption?", *Journal of Marketing Management*, Vol. 20, No. 3-4, pp. 409-429.

Chitura, T., Mupemhi, S., Dube, T. & Bolongkikit, J. 2008, "Barriers to Electronic Commerce Adoption in Small and Medium Enterprises: A Critical Literature Review", *Journal of Internet Banking and Commerce,* Vol. 13, No.2, pp. 1-13.

Clanton, R., Chan, K. & Cui, A. 2006, "Decomposing Product Innovativeness and Its Effects on New Product Success" *Journal of Product Innovation Management*, Vol. 23, No. 5, pp. 408-421.

Clemens, J. 1974, "Decision Making in Industrial Selling". *European Research.*

Cloete, E., Courtney, S. & Fintz, J. 2002, "Small business acceptance and adoption of e-commerce in the Western Cape Province of South Africa", *Electronic Journal on information systems in Developing countries*, Vol. 10, No. 4, pp. 1-13.

Coch, L. & French, J. 1948, "Overcoming resistance to change", *Human Relations*, Vol. 1, pp. 1512–1532

Constantinides, E. & Fountain, S. 2008, "Web 2.0: Conceptual foundations and marketing issues", *Journal of Direct, Data and Digital Marketing Practice*, Vol. 9, pp. 231-244.

Cooper, L. 2000, "Strategic Marketing Planning for Radically New Products", *Journal of Marketing*, Vol. 64, No. 1, pp. 1-16.

Cooper, R. 1979, "The Dimensions of Industrial New Product Success and Failure", *Journal of Marketing*, Vol. 43, No. 3, pp. 93-103.

Cooper, R. & Kleinschmidt, E. 1995, "New Product Performance: Keys to Success, Profitability & Cycle Time Reduction", *Journal of Marketing Management,* Vol. 11, No. 4, pp. 315-337.

Corbett, C., Blackburn, J. & Van Wassenhove, L. 1999, "Partnerships to improve supply chains", *Sloan Management Review*, Vol. 40, No. 4, pp. 71-82.

Corwin, R. 1972. "Strategies for Organisational Innovation: an Empirical Comparison", *American Sociological Review*, Vol. 37, pp. 441-54.

Crawford, C. 1977, "Marketing Research and the New Product Failure Rate", *Journal of Marketing*, Vol. 41, No. 2, pp. 51-61.

Cyert, R., Simon, H. & Trow, D. 1956, "Observation of a Business Decision", *Journal of Business*, Vol. 29, No. 4, Human Aspects of Management, pp. 237-248.

Goswami, S. & Mathew, M. 2005, "Definition Of Innovation Revisited: An Empirical Study On Indian Information Technology Industry", *International Journal of Innovation Management*, Vol 9, No. 3, pp. 371-383.

Damanpour, F. 1996, "Organizational Complexity and Innovation: Developing and Testing Multiple Contingency Models", *Management Science*, Vol. 42, No. 5, pp. 693-716.

Daniel, E., Wilson, H. & Myers, A. 2002. "Adoption of E-Commerce by SMEs in the UK : Towards a Stage Model", *International Small Business Journal*, Vol. 20, No. 3, pp. 253-270.

Dawes, P. Patterson, P. & Midgley, D. 1997, "Involvement of technical consultants in high technology business markets", *Journal of Business & Industrial Marketing*, Vol. 12, No 2, pp. 83-102.

Davis, F. 1986, "A technology acceptance model for empirically testing new end-user information systems: theory and results", Doctoral dissertation, Sloan School of Management, MIT.

DeBruicker, S. & Summe, G. 1985, "Make Sure Your Customers Keep Coming Back", *Harvard Business Review*, Vol. 63, pp. 92-98.

Dellarocas, C. 2003, "The Digitization of Word of Mouth: Promise and Challenges of Online Feedback Mechanisms", *Management Science,* Vol. 49, No. 10, pp. 1407-1424.

Delre, S., Jager, W., Bijmolt, T. & Janssen, M. 2007, "Targeting and Timing Promotional Activities: An Agent-Based Model for the Takeoff of New Products", *Journal of Business Research*, Vol. 60, No. 8, pp. 826-835.

Dickerson, M. & Gentry, J. 1983. "Characteristics of Adopters and Non-Adopters of Home Computers", *Journal of Consumer Research*, Vol. 10, No. 2, pp. 225-35.

Doyle, P., Woodside, A. & Mitchell, P. 1979, "Organizations Buying in New Task and Rebuy Situations", *Industrial Marketing Management*, Vol. 8, No. 1, pp. 7-11.

Dupont, 1963, "Profiles in Purchasing: How Large Manufacturers Buy", *Sales Management*, January, February, April and August.

Easingwood, C. Moxey, S. & Capleton, H. 2006, "Bringing High Technology to Market: Successful Strategies Employed in the Worldwide Software Industry", *Journal of Product Innovation Management*, Vol. 23, No 6, pp. 498-511.

Ebadi, Y. & Utterback, J. 1984, "The Effects of Communication on Technological Innovation", *Management Science*, Vol. 30, No. 5, pp. 572-85.

Edelman, B. 2009, "Red Light States: Who Buys Online Adult Entertainment?" *Journal of Economic Perspectives*, Vol. 23, No. 1, pp. 209-220.

Eisenhardt, K. 1990, "Speed and Strategic Choice: How Managers Accelerate Decision Making", *California Management Review*, Vol. 32, No. 3, pp. 1-16.

El Sherbeny, A. 1978, "Behavioral and Organizational Influences upon the Adoption of Industrial Product Innovation", PhD thesis, Department of Marketing, University of Strathclyde, Glasgow.

Elberse, A. 2010, "Bye-Bye Bundles: The Unbundling of Music in Digital Channels", *Journal of Marketing*, Vol. 74, No. 3, pp. 107-123.

Eliashberg, J. & Chatterjee, R.1985, "Analytical Models of Competition with Implications for Marketing: Issues, Findings, and Outlook", *Journal of Marketing Research*, Vol. 22, No. 3, pp. 283-296.

Emerson, R. 1962, "Power-Dependence Relations", *American Sociological Review*, Vol. 27, No. 1, pp. 31-41.

Eskola, J. & Suoranta, J. 1998, *Johdatus laadulliseen tutkimukseen*, Vastapaino, Tampere.

Farrell, J. & Saloner, G. 1985, "Standardization, Compatibility, and Innovations," *Rand Journal of Economics,* Vol. 16, No. 1, pp. 70-83.

Fink, D. 1998, "Guidelines for the successful adoption of information technology in small and medium enterprises", *International Journal of Information Management*, Vol. 18, No. 4, pp. 243-253.

Fombrun, C. 1983, "Attributions of Power Across a Social Network", *Human Relations,* Vol. 36, No. 6, pp. 493-508.

Fortin, A. & Ritchie, J. 1980, "Influence Structure in Organizational Buying Behavior", *Journal of Business Research*, Vol. 8, No. 3, pp. 1-23.

Foxhall, G. 1984, *Corporate Innovation: Marketing and Strategy*, St Martin's Press, New York.

Frambach, R., Barkema, Nooteboom, B. & Wedel, M. 1998, "Adoption of a service innovation in the business market: An empirical test of supply-side variables", *Journal of Business Research*, Vol. 41, No. 2, pp. 161-174.

Frederick, J. 1934. *Industrial Marketing*, Prentice-Hall Inc., New York.

Frolich, M. & Westbrook, R. 2002, "Demand chain management in manufacturing and services: Web based integration, drivers and performance", *Journal of Operations Management*, Vol. 20, No. 6, pp. 729-746.

Fu, F., Jones, E. & Bolander, W. 2008, "Product innovativeness, customer newness, and new product performance: a time-lagged examination of the impact of salesperson selling intentions on new product performance", *Journal of Personal Selling & Sales Management*, Vol. 28, No. 4, pp. 351-364.

Fu, F., Richards, K., Hughes, D. & Jones, E. 2010, "Motivating Salespeople to Sell New Products: The Relative Influence of Attitudes, Subjective Norms, and Self-Efficacy", *Journal of Marketing*, Vol. 74, No. 6, pp. 61-76.

Ganesan, S. 1994, "Determinants of Long-Term Orientation in Buyer-Seller Relationships", *Journal of Marketing*, Vol. 58, No. 2, pp. 1-19.

Gatignon, H. 1984, "Competition as a Moderator of the Effect of Advertising on Sales", *Journal of Marketing Research*, Vol. 21, No. 4, pp. 387-398.

Gatignon, H., Eliashberg, J. & Robertson, T. 1985a, "Determinants of Diffusion Patterns: A Cross-Country Analysis," working paper, The Wharton School, University of Pennsylvania.

Gatignon, H. & Robertson, T. 1985b, "A Propositional Inventory for New Diffusion Research" *Journal of Consumer Research*, Vol 11, No. 4, pp. 849-67.

Gatignon, H. & Robertson, T. 1989, "Technology Diffusion: An Empirical Test of Competitive Effects", *Journal of Marketing*, Vol. 53, No. 1, pp. 35-49.

Gordon, W. & Weber, D. 1984, "A Transaction Cost Approach to Make-or-Buy Decisions", *Administrative Science Quarterly*, Vol. 29, No. 3, pp. 373-391.

Gorman, R. 1971, "Role Conception and Purchasing Behaviour", *Journal of Psychology*, Vol. 7, No. 2, pp. 57-61

Grabowski, H. & Baxter, N. 1973, "Rivalry in Industrial Research and Development", *Journal of Industrial Economics*, Vol. 21, No. 3, pp. 209-235.

Grandon, E. & Pearson, J. 2004. "Electronic commerce adoption: an empirical study of small and medium US businesses", *Information & Management*, Vol. 42, No. 1, pp. 197-216.

Grønhaug, K. 1975a, "Search Behavior in Organizational Buying," *Industrial Marketing Management,* Vol. 4. No. 1, pp. 15-23.

Grønhaug, K. 1975b, "Autonomous vs. Joint Decisions in Organizational Buying", *Industrial Marketing Management*, Vol. 4, No. 9, pp. 265-271.

Grønhaug, K. & Venkatesh, A. 1991, "Needs and Need Recognition in Organisational Buying", *European Journal of Marketing*, Vol. 25, No. 2, pp. 17-32.

Grashof, J. & Thomas, G. 1976, "Industrial Buying Center Responsibilities: Self Versus Other Member Evaluations of Importance", *Marketing 1776-1976 and Beyond,* American Marketing Association, pp. 344-349.

Gummesson, E. 2000, *Qualitative methods in management research*, 2<sup>nd</sup> Edition. Sage publications, Thousand Oaks, CA.

Ha, L. 2000, "Globalization via the Internet: Myths and Realities", Proceedings of the 2000 Annual Conference of the Academy of International Business Southeast Asia Region, Oliver, H. M. Yau, (Ed.), City University of Hong Kong, Hong Kong SAR, (23-26 July), pp.515-526.

Hage, J. & Aiken, M. 1970, *Social Change in Complex Organisations*, Random House, New York.

Hall, A. & Rist, C. 1999, "Integrating Multiple Qualitative Research Methods (or Avoiding the Precariousness of a One-Legged Stool)", *Psychology & Marketing*, Vol. 16, No. 4, pp. 291-304.

Han, J., Namwoon K. & Srivastava, R. 1998. "Market orientation and organizational performance: is innovation a missing link?", *Journal of marketing*, Vol. 62, No. 4, pp. 30-35.

Hannan, M. & Freeman, J. 1977, "The population ecology of organizations", *American Journal of Sociology*, Vol. 82, No. 5, pp. 929-964.

Harrison, D., Mykytyn, P. & Rienenschneider, C. 1997, "Executive Decisions About IT Adoption in Small Business: Theory and Empirical Tests", *Information Systems Research*, Vol. 8, No. 2, pp. 171-195.

Henard, D. & Szymanski, D. 2001, "Why Some New Products Are More Successful Than Others", *Journal of Marketing Research*, Vol. 38, No. 3, pp362-375.

Hickson, D., Hinings, J., Lee, C., Schneck, R. & Pennings, J. 1971, "A Strategic Contingencies Theory of Intraorganizational Power", *Administrative Science Quarterly*, Vol. 16, No. 2, pp. 216-29.

Hirsjärvi, S & Hurme, H. 1980, *Teemahaastattelu*, 4<sup>th</sup> Edition, Gaudeamus.

Hitt, M., Hoskisson, R. & Ireland, R. 1990, "Mergers and Acquisitions and Managerial Commitment to Innovation in M-form Firms", *Strategic Management Journal,* Vol. 11, (S). pp. 29-47.

Horsky, D. & Simon, L. 1983, "Advertising and the Diffusion of New Products", *Marketing Science*, Vol. 2, No. 1, pp. 1-17.

Hultink, E. & Atuahene-Gima, K. 2000, "The Effect of Sales Force Adoption on New Product Selling Performance", *Journal of Product Innovation Management*, Vol. 17, No. 6, pp. 435-450.

Hurley, R. & Hult, T. 1998, "Innovation, market orientation, and organizational learning: an integration and empirical examination", *Journal of Marketing*, Vol 62, No. 3, pp. 42-54.

Håkansson, H. 1982, *International marketing and purchasing of industrial goods: An interaction approach*, Wiley, New York.

Iacovou, C., Benbasat, I., & Dexter, A. 1995, "Electronic Data Interchange and Small Organisations: Adoption and Impact of Technology", *MIS Quarterly*, Vol. 19, No. 4, pp. 465-485.

Im, S. & Workman J. 2004, "Market Orientation, Creativity, and New Product Performance in High-Technology Firms", *Journal of Marketing*, Vol. 68, No. 2, pp. 114-132.

Jackson, B. & Bund, B. 1985, *Winning and Keeping Industrial Customers: The Dynamics of Customer Relationships*, Lexington Books, Lexington, MA.

Jarach, D. 2002, "The digitalisation of market relationships in the airline business: the impact and prospects of e-business", *Journal of Air Transport Management*, Vol. 8, No. 2, pp 115-120.

Jaworski, B. & Kohli, A. 1993, "Market Orientation: Antecedents and Consequences", *Journal of Marketing*, Vol. 57, No. 3, pp. 53-70.

Jeffcoate, J., Chappell, C. & Feindt, S. 2002, "Best practice in SME adoption of e-commerce", *Benchmarking, An International Journal,* Vol. 9, No. 2, pp. 122-132.

Johansson, J. 1989, "Determinants and Effects of the Use of 'Made in' Labels", *International Marketing Review*, Vol. 6, No. 1, pp. 47-58.

Johnston, W. 1981, "Industrial Buying Behavior: A State-of-the-Art Review", *Annual Review of Marketing, American Marketing Association*, pp. 75-88.

Johnston, W. & Bonoma, T. 1981, "The Buying Center: Structure and Interaction Patterns", *Journal of Marketing*, Vol. 45, No. 3, pp. 143-156.

Johnston, W. & Lewin, J. 1996. "Organizational buying behavior: Toward an integrative framework", *Journal of Business Research*, Vol. 35, No. 1, pp. 1-15.

Julien, P. & Raymond, L. 1994, "Factors of New Technology Adoption in the Retail Sector", *Entrepreneurship: Theory and Practice*, Vol. 18, No. 5, pp. 79-90.

Kalakota, R. & Whinston, A. 1996, *Frontiers of Electronic Commerce*, Addison-Wesley, Reading, MA.

Kalish, S. & Lilien, G. 1986, "A Market Entry Timing Model for New Technologies", *Management Science,* Vol. 32, No. 2, pp. 194-205.

Kamien, M. & Schwartz, N. 1982, *Marketing Structure and Innovation*, Cambridge University Press, Cambridge, GBR.

Kauffman, R. 1996, "Influences on organizational buying choice processes: future research directions", *Journal of Business & Industrial Marketing*, Vol. 11 No. 3/4, pp. 94-107.

Kellog, C. 1970, "The Human Element in Industrial-Technical Purchasing", *Industrial Marketing Research Association Journal,* pp. 76-85.

Kelly, P. 1974, "Functions Performed in Industrial Purchasing Decisions with Implications for Marketing Strategy", *Journal of Business Research*, Vol. 2, No. 4, pp. 420-434.

Kennedy, A. 1983(a). "The Adoption and Diffusion of New Industrial Products: A Literature Review", *European Journal of Marketing*, Vol. 17, No. 3, pp. 31-88.

Kennedy, A. 1983(b), "The complex decision to select a supplier: a case study", *Industrial Marketing Management*, Vol. 12, No. 2, pp. 43-56.

Kerin, R., Varadarajian, P. & Peterson, R. 1992, "First-Mover Advantage: A Synthesis, Conceptual Framework and Research Propositions", *Journal of Marketing,* Vol. 56, No. 4, pp. 33-52.

Kim, N. & Pae, J. 2007, "Utilization of new technologies: organizational adaptation to business environments", *Journal of the Academy of Marketing Science*, Vol. 35, No. 2, pp. 259-269

Kimberly, J. 1976. "Organizational size and the Structuralist Perspective: a review, critique and proposal", *Administrative Science Quarterly*, Vol. 21, No. 4, pp. 571-597.

Kimberly, J. 1978, "Hospital Adoption of Innovation: The Role of Integration Into Extemal Informational Environments", *Journal of Health & Social Behavior,* Vol. 19, No. 4, pp. 361-73.

Kimberly, J. & Evanisko, M. 1981, "Organizational Innovation: The Influence of Individual, Organizational, and Contextual Factors on Hospital Adoption of

Technological and Administrative Innovations", *The Academy of Management Journal*, Vol. 24, No. 4, pp. 689-713.

Kirby, D. & Turner, M. 1993, "IT and the Small Retail Business", *International Journal of Retail and Distribution Management*, Vol. 21, No. 7, pp. 20-27.

Kirsch, W. & Kutschker, M. 1982. "Marketing and Buying Decisions in Industrial Markets", *Studies in Decision Making*, Martin Irle, ed. Walter de Gruyter, New York, pp. 443-88.

Klass, B. 1961, "What Factors Affect Industrial Buying Decisions?", *Industrial Marketing,* pp. 33-38.

Kotha, S. 1998, "Competing on the Internet: The case of Amazon.com", *European Management Journal*, Vol. 16, No. 2, pp. 212-222.

Kotler, P. 1965, "Behavioural Models for Analysing Buyers", *Journal of Marketing*, Vol. 29, No. 4, pp. 37-45.

Kotler, P. 1984, *Marketing Management,* Prentice Hall, Engelwood-Cliffs, New Jersey.

Kotter, J. 1995, "Leading change: Why transformation efforts fail", *Harvard Business Review*, Vol. 73, No. 2, pp. 59–67.

Kozinets, R., de Valck, K., Wojnicki, A, & Wilner, S. 2010, "Networked Narratives: Understanding Word-of-Mouth Marketing in Online Communities", *Journal of Marketing,*Vol. 74, No. 2, pp. 71-89.

Kumar, V., Sunder, S., & Ramaseshan, B. 2011, "Analyzing the Diffusion of Global Customer Relationship Management: A Cross-Regional Modeling Framework", *Journal of International Marketing*, Vol. 19, No. 1, pp. 23-39.

Laaksonen, T., Jarimo, T. & Kulmala, H. 2009, "Cooperative strategies in customer–supplier relationships: The role of interfirm trust",  *International Journal of Production Economics*, Vol. 120, No. 1, pp. 79-87.

Lane, M., Vyver, G., Delpachitra, S. & Howard, S. 2004, "An electronic commerce initiative in regional Sri Lanka: the vision for the central province Electronic commerce Portal", *Electronic Journal on information systems in Developing countries*, Vol. 16, No. 1, pp. 1-18.

Lawson, R., Alcock, C., Cooper, J. & Burges, L. 2003, "Factors affecting adoption of electronic technologies by SMEs: an Australian study", *Journal of small business and enterprise development,* Vol. 10, No. 3, pp. 265-276.

Leavitt, H. 1951, "Some Effects of Certain Communication Patterns on Group Performance", *Journal of Abnormal and Social Psychology*, Vol. 46, No. 1, pp. 38-50.

Leavitt, H., Dill, W., Eyring, H. 1973. *The Organizational World*, Harcourt, New York.

Leonard-Barton, D. 1985, "Experts as Negative Opinion Leaders in the Diffusion of a Technological Innovation", *Journal of Consumer Research*, Vol. 11, No. 4, pp. 914-26.

Levin, R. 1978, "Technical Change, Barriers to Entry and Market Structure" *Econometrica*, Vol. 45, No. 180, pp. 347-61.

Levin, S., Levin, S. & Meisel, J. 1987, "A Dynamic Analysis of the Adoption of a New Technology: The Case of Optical Scanners", *The Review of Economics and Statistics*, Vol. 69, No. 1, pp. 12-17.

Levy, D. 2001, *Europe's digital revolution: broadcasting regulation, the EU and the nation state,* Routledge, London, GBR.

Levy, M., Powell, P. and Worrall, L. 2005, "Strategic intent and e-business in SMEs: Enablers and inhibitors", *Information Resources Management Journal,* Vol. 18, No. 4, pp. 1-20.

Lilien, G., Rao, A., & Kalish, S. 1981, "Bayesian Estimation and Control of Detailing Effort in a Repeat Purchase Diffusion Environment", *Management Science,* Vol. 27, No. 5, pp. 493-506.

Lincoln, Y. & Guba, E. 1985, *Naturalistic Inquiry*, Sage Publications Ltd, Bevery Hills, CA.

Link, A. & Bozeman, B. 1991, "Innovative Behavior in Small-sized Firms", *Small Business Economics*, Vol. 3, No. 3, pp. 179-184.

Lunsford, D. & Fussell, B. 1993, "Marketing business services in Central Europe", *Journal of Services Marketing*, Vol. 7, No. 1, pp.13-21.

Lynn, G., Maltz, A., Jurkat, P. and Hammer, M. 1999, "New media in marketing redefine competitive advantage: A comparison of small and large firms", *The Journal of Services Marketing*, Vol. 13, No.1, pp. 9-18.

Mahajan, V., Muller, E. & Kerin, R. 1984, "Introduction Strategy for New Products with Positive and Negative Word-of-Mouth", *Management Science*, Vol. 30, No. 12, pp. 1389-404.

Mahajan, V., Muller, E. & Srivastava, R. 1990, "Determination of Adopter Categories by Using Innovation Diffusion Models", *Journal of Marketing Research*, Vol. 27, No. 1, pp. 37-50.

Mahmood, A., Bagchi, K. & Ford C. 2004, "On-line Shopping Behavior: Cross-Country Empirical ResearchInternational", *Journal of Electronic Commerce*, Vol. 9, No. 1, pp. 9-30.

Mansfield, E. 1985, "How rapidly does new industrial technology leak out?" *Journal of Industrial Economics*, Vol. 34, No. 2, pp. 217-223.

March, J. & Olsen, J. 1984, "Garbage Can Models of Decision Making in Organizations", Workshop on Decision Making in Military Organizations, Naval Postgraduate School, Monterey, CA.

Mayer, W. 1983, "Situational Variables and Industrial Buying", *Journal of Purchasing and Materials Management,* Vol. 19, No. 4, pp. 21-25.

McDade, S., Oliva, T. & Pirsch, J. 2002, "The organizational adoption of high-technology products "for use": Effects of size, preferences, and radicalness of impact", *Industrial Marketing Management*, Vol 31, No. 5, pp. 441-456.

McMillan, J. 1972, "The Role of Perceived Risk in Industrial Marketing Decisions", Proceedings of the American Marketing Association, American Marketing Association, Chicago, Vol. 34, pp. 412-17.

McMillan, James R. 1973, "Role Differentiation in Industrial Buying Decisions", AMA Proceedings, Chicago: American Marketing Association, pp. 207-211.

McQuiston, D. 1989, "Novelty, Complexity, and Importance as Causal Determinants of Industrial Buyer Behavior", *Journal of Marketing*, Vol. 53, No. 2, pp. 66-79.

Meuter, M., Ostrom, A., Roundtree, R. & Bitner, M. 2000, "Self-Service Technologies: Understanding Customer Satisfaction with Technology-Based Service Encounters", *Journal of Marketing*, Vol. 64, No. 3, pp. 50-64.

Meyer, M., Marion, T. & Crane, F. 2010, "Selling Innovation to the C-Suite", *Research Technology Management*, Vol. 53, No. 4, pp. 15-20.

Michaels, R., Day, R. & Joachimsthaler, E. 1987, "Role Stress among Industrial Buyers: An Integrative Model", *Journal of Marketing*, Vol. 51, No. 2, pp. 28-45.

Miller, R. 1971, "Innovation Organisation and Environment", Institut de Récherche and de Perfectionement en Administration, Université de Sherbrooke, Sherbrooke.

Mitchell, V., Moutinho, L. & Lewis, B. 2003, "Risk Reduction in Purchasing Organisational Professional Services", *The Service Industries Journal*, Vol. 23, No. 5, pp. 1-19.

Mizerski, W. 1982, "An Attribution Explanation of the Disproportionate Influence of Unfavorable Information", *Journal of Consumer Research,* Vol. 9, No. 12, pp. 301-310.

Moch, M. & Morse, E, 1977, "Size, Centralization, and Organizational Adoption of Innovations", *American Sociological Review,* Vol. 42, No. 5, pp. 716-725.

Mohr, L. 1969,  "Determinants of Innovation in Organisations", *American Political Science Review*, Vol. 63, No. 1, pp. 111-26.

Moorman, C. 1995, "Organizational Market Information Processing: Cultural Antecedents and New Product Outcomes", *Journal of Marketing Research*, Vol. 32, No. 3, pp. 318-35.

Moriarty, R. & Bateson, J. 1982, "Exploring complex decision-making units: a new approach", *Journal of Marketing Research*, Vol. 19, No. 2, pp. 182-91.

Moriarty, R. 1983, *Industrial Buying Behavior*, Lexington Books, Lexington, MA.

Murray, J. & Chao, M. 2005, "A Cross-Team Framework of International Knowledge Acquisition on New Product Development Capabilities and New Product Market Performance", *Journal of International Marketing*, Vol. 13, No. 3, pp. 54-78.

Mytinger, R. 1968, "Innovationin Local Health Services: A Study of the Adoption of NewProgramsby Local Health Departments, with particular reference to Newer Medical Care Activities", Government Printing Office, US PHS, Publication No. 1664-2. Washington DC, US.

Narver, J. & Slater, J. 1990, "The Effect of a Market Orientation on Business Profitability", *Journal of Marketing*, Vol. 54, No. 4, pp. 20-35.

Narver, J., Slater, S. & MacLachlan, D. 2004, "Responsive and Proactive Market Orientation and New-Product Success", *Journal of Product Innovation Management*, Vol 21, No. 5, pp. 334-347.

Naumann, E., Lincoln, D. & McWilliams, R. 1984, "The Purchase of Components: Functional Areas of Influence", *Industrial Marketing Management*, Vol. 13, No. 2, pp. 113-22.

Nooteboom, B., Zwart, P. & Bijmolt, T. 1990, "Problems in Advising Medium-sized and Small Companies", *Maandblad voor Accountancy en Bedriifseconomie,* Vol. 64, No. 10, pp. 387-87.

Olson, E., Slater, S., & Hult, G. 2005, "The Performance Implications of Fit Among Business Strategy, Marketing Organization Structure, and Strategic Behavior", *Journal of Marketing*, Vol. 69, No. 3, pp. 49-65.

Olson, J. & Boyer, K. 2002, "Factors influencing the utilization of internet purchasing in small organizations", *Journal of Operations Management*, Vol. 21, No. 2, pp. 225-245.

Ozanne, V. & Churchill, G. 1971, "Fice Dimensions of Industrial Adoption Process", *Journal of Marketing Research*, Vol. 8, No. 3, pp. 322-328.

Palvia, P., Means, D. & Jackson, W. 1994, "Determinants of computing in very small businesses", *Information and Management*, Vol. 27, pp. 161-174.

Parasuraman, A. 2000, "Technology Readiness Index (Tri): A Multiple-Item Scale to Measure Readiness to Embrace New Technologies", *Journal of Service Research*, Vol. 2, No. 4, pp. 307-320.

Patchen, M. 1974, "The Locus and Basis of Influence in Organizational Decisions", *Organizational Behavior and Human Performance*, Vol. 11, No. 2, pp. 195-211.

Patton, M. 2002, *Qualitative research and evaluation methods*, 3rd edition, Sage, Thousand Oaks, CA.

Pauwels, K. Silva-Risso, J., Srinivasan, S. & Hanssens, D. 2004, "New Products, Sales Promotions, and Firm Value: The Case of the Automobile Industry", *Journal of Marketing*, Vol. 68, No. 4, pp. 142-56.

Payne, R. 1971, "Organisational Climate: The Concept of Some Research Findings", *Prakseologia,* Vol. 39/40, pp. 143-158.

Payne, R. & Mansfield, R. 1973, "Relationships of Perceptions of Organisational Climate to Organisational Structure, Context and Hierarchical Position", *Administrative Science Quarterly*, Vol. 18, No. 4, pp. 515-526.

Pennings, J. & Harianto, F. 1992, "The Diffusion Of Technological Innovation In The Commercial Banking Industry", *Strategic Management Journal*, Vol. 13, No. 1, pp. 29-46.

Perrow, C. 1970, "Departmental Power and Perspectives in Industrial Firms. Power in Organizations", Mayer N. Zaid, ed. Nashville, TN: Vanderbill University Press, pp. 59-89.

Peters, M. & Venkatesan, M. 1973, "Exploration of Variables Inherent in Adopting an Industrial Product", *Journal of Marketing Research*, Vol. 10, No. 3, pp. 312-15.

Pfeffer, J. 1981, *Power in Organizations*, Pitman, Marshfield, MA.

Pingry, J. 1974, "The Engineer and Purchasing Agent Compared", *Journal of Purchasing*, Vol. 10, No. 11, pp. 33-45.

Porter, M. 1980, *Competitive Strategy*, The Free Press, New York.

Porter, M. 1985, "Technology and Competitive Advantage", *The Journal of Business Strategy*, Vol. 5, No. 3, pp. 60-78.

Premkumar, G., Ramamurthy, K. & Nilakanta, S. 1994, "Implementation of electronic data interchange: An innovation diffusion perspective", *Joumal of Management Information System,* Vol. 11, No. 2, pp. 157-186.

Premkumar, G. & Roberts, M. 1999, "Adoption of new information technologies in rural small businesses". *Omega, International Joumal of Management Science*, Vol. 27, No. 4, pp. 467-484

Prescott, M. & Conger, S. 1995, "Information technology innovations: A classification by IT locus of impact research approach", *The Database for Advances in Information Systems*, Vol. 26, No. 2-3, pp. 20-41.

Prins, R. & Verhoef, P. 2007, "Marketing Communication Drivers of Adoption Timing of a New E-Service Among Existing Customers", *Journal of Marketing*, Vol. 71, No. 2, pp. 169-183.

Puto, C., Patton, W. & King, R. 1985, "Risk Handling Strategies in Industrial Vendor Selection Decisions", *Journal of Marketing,* Vol. 49, No. 4, pp. 89-98.

Rackham, N. 1998, "From Experience: Why Bad Things Happen to Good New Products", *Journal of Product Innovation Management,* Vol. 15, No. 3, pp. 201-207.

Reinganum, J. 1981, "Market Structure and the Diffusion of New Technology", *Bell Journal of Economics,* Vol. 12, No. 3, pp. 618-24.

Reinganum, J. 1981, "On the diffusion of new technology: A game theoretic approach", *Review of Economic Studies*, Vol. 48, No. 3, pp. 395-405.

Reve, T. & Johansen, E. 1982, "Organizational Buying in the Offshore Oil Industry", *Industrial Marketing Management.* Vol. 11, No. 4, pp. 275-82.

Reynolds, J. 2004, *The complete e-commerce book: design, build & maintain a successful Web-based business*, 2nd edition, CMP Books, San Francisco, CA.

Richins, M. 1983, "Negative Word-of-Mouth by Dissatisfied Customers; A Pilot Study", *Journal of Marketing,* Vol. 46, No. 4,  pp. 68-78.

Roberts, J. 2000, "Developing New Rules for New Markets", *Journal of the Academy of Marketing Science*, Vol. 28, No. 1, pp. 31-44.

Robertson, T. 1971, *Innovative Behavior and Communication,* Rinehart & Winston*,* Holt, New York.

Robertson, T. & Wind, Y. 1980, "Organizational Psychographics and Innovativeness", *Journal of Consumer Research,* Vol. 7, No. 1, pp. 24-31.

Robertson, T. & Wind, Y. 1983, "Organizational Cosmopolitanism and Innovativeness", *Academy of Management Journal*, Vol. 26, No. 1, pp. 332-338.

Robertson, T. & Gatignon, H. 1986, "Competitive Effects on Technology Diffusion", *Journal of Marketing*, Vol. 50, No. 3, pp. 1-12.

Robinson, P., Faris, C. & Wind, Y. 1967, *Industrial buying and creative marketing*, Allyn & Bacon, Boston, MA.

Rogers, E. 1962, *Diffusion of innovations*, 1$^{st}$ Edition, The Free Press, New York.

Rogers, E.. 1983, *Diffusion of Innovations*, 3$^{rd}$ Edition, The Free Press, New York.

Rogers, E. 1995, *Diffusion of innovations*, 5$^{th}$ Edition. Simon and Schuster, New York.

Ronchetto, J. Hutt, M & Reingen, P. 1989, "Embedded Influence Patterns in Organizational Buying Systems", *Journal of Marketing*, Vol. 53, No. 4, pp. 51-62.

Rosen, A. 2002, *The e-commerce question and answer book: a survival guide for business managers,* AMACOM Div American Mgmt Assn.

Rosner, M. 1968, "Administrative Controls and Innovation", *Behavioural Science*, Vol. 13, No. 1, pp. 36-43.

Rowley, J. 2008, "Understanding digital content marketing", *Journal of Marketing Management*, Vol. 24, No. 5/6, pp- 517-540.

Ruekert, R. & Walker, O. 1987, "Marketing's Interaction with Other Functional Units: A Conceptual Framework and Empirical Evidence", *Journal of Marketing*. Vol. 51, No. 1, pp. 1-19.

Rust, R. 1997, "The Dawn of Computer Behavior", *Marketing Management*, Vol. 6, No. 3, pp. 31-33.

Ryan, B. & Gross, N. 1943, "The diffusion of hybrid seed corn in two Iowa communities", *Rural Sociology*, Vol. 8, No. 1, pp. 15-24.

Sairanen, J. & Hämäläinen, O. 2010, "Katse kohti kasvua: Selvitys Suomen nopeimmin kasvavien teknologiayritysten tulevaisuuden näkymista", Delloitte, Helsinki.

Salancik, G.. & Pfeffer, J. 1974, "The Bases and Use of Power in Organizational Decision Making: The Case of a University", *Administrative Science Quarterly,* Vol. 19, No. 11, pp. 453-73.

Salter, W. 1960), *Productivity and Technical Change*, Cambridge University Press, Cambridge, GBR.

Samli, A., Grewal, D. & Mathur, S. 1988, "International buyer behavior: an exploration and a proposed model", *Academy of Marketing Science*, Vol. 16, No. 2, pp. 19-29.

Saunders, M. Lewis, P. & Thornhill, A. 2007, *Research Methods for Business Students*, 4th Edition, FT Prentice Hall, Harlow.

Scherer F. 1990, *Industrial market structure and economic performance*, Houghton Mifflin, Boston, MA.

Scupola, A. 2009, "SMEs' e-commerce adoption: perspectives from Denmark and Australia", *Journal of Enterprise Information Management*, Vol. 22, No. 1/2, pp.152-166.

Sells, S. 1963, *Stimulus Determinants of Behaviour*, Ronald Press, New York.

Shainesh, G. 2004, "Understanding buyer behaviour in software services – strategies for Indian firms", *International Journal of Technology Management*, Vol 28, No. 1, pp. 118-127.

Shaw, J., Giglierano, J. & Kallis, J. 1989, "Marketing complex technical products: The importance of intangible attributes", *Industrial Marketing Management*, Vol 18, No. 1, pp. 45-53.

Sheth, J. 1973, "A Model of Industrial Buyer Behavior", *Journal of Marketing*, Vol. 37, No. 4, pp. 50-56.

Silk, A. & Kalwani, M. 1982, "Measuring Influence in Organizational Purchase Decisions", *Journal of Marketing Research*. Vol. 19, No. 2, pp. 165-81.

Silverman, D. 2010, *Doing qualitative research*, 3rd Edition, Sage Publications Ltd, Boston, MA.

Simon, H. & Sebastian, K-H. 1987, "Diffusion and Advertising: The German Telephone Campaign", *Management Science,* Vol. 33, No. 4, pp. 451-466.

Simpson, P. & Swatman, P. 1999, "An exploratory study of small business Internet commerce issues", *Information & Management*, Vol. 35, No. 1, pp. 9-18.

Slater, S. & Narver, J. 1995, "Market orientation and the learning organization", *Journal of Marketing*, Vol. 59, No. 3, pp. 63-74.

Smith, D. & Taylor, R. 1985, "Organisational Decision Making and Industrial Marketing", *European Journal of Marketing*, Vol. 19, No. 7, pp. 56-69.

Sorescu, A. & Spanjol, J. 2008, "Innovation's Effect on Firm Value and Risk: Insights from Consumer Packaged Goods", *Journal of Marketing*, Vol. 72, No. 2, pp. 114-32.

Srinivasan, R., Lilien, G. & Rangaswamy, A. 2002, "Technological Opportunism and Radical Technology Adoption: An Application to E-Business", *Journal of Marketing,* Vol. 66, No. 3, pp. 47-60.

Srivastava, R., Shervani, T. & Fahey, L. 1999, "Marketing, Business Processes, and Shareholder Value: An Organizationally Embedded View of Marketing Activities and the Discipline of Marketing", *Journal of Marketing*, Vol. 63, Special Issue, pp. 168–79.

Stalk, K. 1988, "Time: The Next Source of Competitive Advantage", *Harvard Business Review*, July-August, pp. 41-51.

Stevenson, W., Pearce, J. & Porter, L. 1985, "The Concept of "Coalition" in Organizational Theory and Research", *Academy of Management Review*, Vol. 10, No. 2, pp. 256-68.

Stratopoulos, T. & Jee-Hae, L. 2010, "IT Innovation Persistence: An Oxymoron?", *Communications of the ACM*, Vol. 53, No. 5, pp. 142-146.

Stroetmann, K. 1979, "Innovation in Small and Medium-Sized Industrial Firms — a German Perspective", in M. J. Baker (ed.), *Industrial Innovation, Technology, Policy, Diffusion*, Macmillan, London.

Susan, H. 1993, "Dimensions of Success in New Product Development: an Exploratory Investigation", *Journal of Marketing Management*, Vol. 9, No. 1, pp. 23-41.

Susan, R. & de Brentani, U. 2010, "Market Vision and Market Visioning Competence: Impact on Early Performance for Radically New, High-Tech Products", *Journal of Product Innovation Management,* Vol. 27, No. 4, pp. 500-518.

Sutanonpaiboon, J. & Pearson, A. 2006, "E-Commerce Adoption: Perceptions of Managers/Owners of Small- and Medium-Sized Enterprises (SMEs) in Thailand", *Journal of Internet Commerce*, Vol. 5, No. 3, pp. 53-82.

Sweeney, T., Mathews, L. & Wilson, D. 1973, "An Analysis of Industrial Buyers' Risk Reducing Behavior: Some Personality Correlates", Proceedings of the American Marketing Association, Series #35. Chicago: American Marketing Association, pp. 217-221.

Taguiri, R.& Litwin, G. 1968, *Organisational Climate: Explorations of a Concept*, Harvard University Press, Boston, MA.

Thompson, J. 1967, *Organizations in Action*, McGraw-Hill, New York.

Thompson, V. 1964, "Bureaucracy and Innovation", *Administrative Science Quarterly*, Vol. 10, No. 1, pp. 1-20.

Thong, J. & Yap, C. 1995, "CEO characteristics, organizational characteristics and information technology adoption in small businesses", *Omega, Intemational Joumal of Management Science*, Vol. 23, No. 4, pp. 429-442.

Tigert, D. & Farivar, B. 1981, "The Bass New Product Growth Model: A Sensitivity Analysis for a High Technology Product", *Journal of Marketing*, Vol. 45, No. 4, pp. 81-90.

Tikkanen, H., Alajoutsijärvi, K. & Tähinen J. 2000, "The Concept Of Satisfaction in Industrial Markets: A Contextual Perspective and a Case Study from the Software Industry", *Industrial Marketing Management*, Vol. 29, No. 4, pp. 373-386.

Tolbert, P. & Zucker, L. 1983, "Institutional sources of change in the formal structure of organizations: The diffusion of civil service reform 1880–1935", *Administration Science Quarterly*, Vol. 28, No. 1, pp. 22-39.

Tornatzky, L. & Klein, K. 1982, "Innovation characteristics and innovation adoption implementation: A meta-analysis of findings", *IEEE Transactions on Engineering Management*, Vol. 29, No. 1, pp. 28-4.

Tripsas, M. 1998, "Unraveling the Process of Creative Destruction: Complementary Assetsand Incumbent Survivalin the Typesetter Industry", *Strategic Management Journal*, Vol. 18 No. 1, pp. 119-42.

Trusov, M, Bucklin, R, & Pauwels, K. 2009, "Effects of Word-of-Mouth Versus Traditional Marketing: Findings from an Internet Social Networking Site", *Journal of Marketing*, Vol. 73, No 5, pp. 90-102.

Waarts, E., van Everdingen, Y. & van Hillegersberg, J. 2002, "The dynamics of factors affecting the adoption of innovations", *Journal of Product Innovation Management*, Vol. 19, No. 6, pp. 412-423.

Van Slyke, C. 1996, "The Diffusion of Technology Cluster Innovation: The Case of the Internet", Working Paper, Hankamer School of Business, Dallas.

Wartella, E. & Jennings, N. 2001, "New Members of the Family: The Digital Revolution in the Home", *Journal of Family Communication*, Vol. 1, No. 1, pp. 59-69.

Wattal, S., Schuff, D., Mandviwalla, M. & Williams, C. 2010, "Web 2.0 and Politics: The 2008 U.S. Presidential Election and an E-Politics Research Agenda", *MIS Quarterly*, Vol. 34, No. 4, pp. 669-688.

Weber, L. 2009, *Marketing to the Social Web: How Digital Customer Communities Build Your Business*, John Wiley & Sons, New York.

Webster, F. 1965, "Modeling the Industrial Buying Process", *Journal of Marketing Research,* Vol. 2, No. 4, pp. 370-376.

Webster, F. 1969, "New Product Adoption in Industrial Markets: A Framework for Analysis", *Journal of Marketing*, Vol. 33, No. 3, pp. 35-39.

Webster, F. 1970, "Informal Communication in Industrial Markets", *Journal of Marketing Research,* Vol. 7, No. 2, pp. 186-189.

Webster, F. & Wind, Y. 1972, "A General Model for Understanding Organizational Buying Behavior", *Journal of Marketing*, Vol. 36, No. 2, pp. 12-19.

Weigand, R. 1968, "Why Studying the Purchasing Agent is Not Enough", *Journal of Marketing,* Vol. 32, No. 1, pp. 41-45.

Weiss, A. & Heide, J. 1993, "The nature of organizational search in high technology markets", *Journal of Marketing Research*, Vol. 30, No. 2, pp. 220-233.

Wertime, K. & Fenwick, I. 2008, *DigiMarketing: The Essetial Guide to New Media & Digital Marketing*, John Wiley & Sons, New York.

Whetten, D. 1987, "Organizational Growth and Decline Process", *Annual Review of Sociology*, Vol. 13, pp. 241-262.

White, M., Abels, E. & Gordon-Murnane, L. 1998, "What constitutes adoption of the Web: A methodological problem in assessing adoption of the World Wide Web for electronic commerce", *Journal of the American Society for Information Science*, Vol. 35, No. 3, pp. 217-226.

Wilson, D. 2000, "Why divide consumer and organizational buyer behaviour?", *European Journal of Marketing*, Vol. 34, No. 7, pp. 780-796.

Wilson, H., Daniel, E. & Davies, I. 2008, "The diffusion of e-commerce in UK SMEs", *Journal of Marketing Management*, Vol. 24, No. 5-6, pp. 489-516.

Wind, J. & Mahajan V. 2000, "The Challenge of Digital Marketing", *European Business Forum,* Vol. 1, No. 1, pp. 20-27.

Wind, Y. 1978, "On The Interface Between Organizational And Consumer Buying Behavior", *Advances in Consumer Research*, Vol. 5, No. 1, pp. 657-662.

Vollmann, T., Cordon, C. & Heikkila, J. 2000, "Teaching supply chain management to business executives", *Production and Operations Management,* Vol. 9, No. 1, pp. 81-90.

Wymbs, C. 2011, "Digital Marketing: The Time for a New ''Academic Major'' Has Arrived", *Journal of Marketing Education*, Vol. 33, No. 1, pp. 93-106.

Yin, R. 2003, *Case Study Research: Design and Methods*, 3rd Edition, Sage Publications Ltd., Thousand Oaks, CA.

Yip, G. 2000, "Global Strategy in the Internet Era", *Business Strategy Review*, Vol. 11, No. 4, pp. 1-14.

Yu, C-S. & Yu-Hui, T. 2009, "Understanding business-level innovation technology adoption", *Technovation*, Vol. 29, No. 2, pp. 92-109.

Zaltman, G., Duncan, R. & Holbek, J. 1973, *Innovation and Organizations*, John Wiley & Sons, New York.

Zaltman, G. & Wallendorf, M. 1983, *Consumer Behavior*, John Wiley & Sons, New York.

Zeithaml, V., Berry, L. & Parsuraman, A. 1996, "The behavioral consequences of service quality", *Journal of Marketing*, Vol. 60, No. 2, pp. 31-46.

Zhu, F. & Zhang, X. 2010, "Impact of Online Consumer Reviews on Sales: The Moderating Role of Product and Consumer Characteristics", *Journal of Marketing*, Vol. 74, No. 2, pp. 133-148.

Zysman, J. & Newman, A. 2006, *How revolutionary was the digital revolution? National responses, market transitions, and global technology*, Stanford University Press, Stanford, CA.

## Appendix 1 — Interview guide for CMOs

**E-commerce investments**

- Describe e-commerce investment projects and compare them to other investments projects that you have been involved with.

- How do you describe e-commerce as an investment?

- Describe your own role in the e-commerce investment projects.

- How do you describe the CMO-CIO relationship and its impact on the adoption process?

**Customers**

- Describe the impact of the end-customers on the e-commerce adoption process.

- Describe your own role when you analyzed your customers' preferences for e-commerce.

- How would you describe CIO's role and your relationship in this theme?

**Competitive environment**

- Describe the impact of the competitive environment on the e-commerce adoption process.

- Describe your own role when you analyzed your competitive environment?

- How would you describe CIO's role and your relationship in this theme?

**Innovation sellers and other suppliers**

- Describe the impact of the solution providers on the e-commerce adoption process.

- Describe your own role when you analyzed your competitive environment?

- How would you describe CIO's role and your relationship in this theme?

**Organizational structure and climate**

- Describe your organization's management and decision making processes and their influence on the e-commerce adoption process.

**Organizational technology and systems**

- Describe your organization's technologies and technical processes and their influence on the e-commerce adoption process.

- Describe your own role in your organization's technologies and technical processes.

- How would you describe CIO's role and your relationship in this theme?

**Technological orientation, expertise and experience**

- Describe your organization's technological orientation, expertise and experience and their influence on the e-commerce adoption process.

- Describe your own technological orientation, expertise and experience.

- How would you describe CIO's technological orientation, expertise and experience?

**Buying center**

- Describe how the buying center was formed and how it influenced on the adoption process?

- How did the formation of this buying center was different comparing to other projects?

- Describe your own role in the buying center.

- How would you describe CIO's role in the buying center and your relationship?

**Individuals**

- Describe your own background and how it influenced on the adoption process?

- How would you describe CIO's background?

- How did your backgrounds influenced on your relationship?

**Decision makers**

- Describe your role in the decision making.

- How would you describe CIO's role in the decision making?

- How did the decision making roles influenced on your relationship?

# Appendix 2 — Interview guide for CIOs

**E-commerce investments**

- Describe e-commerce investment projects and compare them to other investments projects that you have been involved with.

- How do you describe e-commerce as an investment?

- Describe your own role in the e-commerce investment projects.

- How do you describe the CMO-CIO relationship and its impact on the adoption process?

**Customers**

- Describe the impact of the end-customers on the e-commerce adoption process.

- Describe your own role when you analyzed your customers' preferences for e-commerce.

- How would you describe CMO's role and your relationship in this theme?

**Competitive environment**

- Describe the impact of the competitive environment on the e-commerce adoption process.

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**Innovation sellers and other suppliers**

- Describe the impact of the solution providers on the e-commerce adoption process.

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**Organizational structure and climate**

- Describe your organization's management and decision making processes and their influence on the e-commerce adoption process.

**Organizational technology and systems**

- Describe your organization's technologies and technical processes and their influence on the e-commerce adoption process.

- Describe your own role in your organization's technologies and technical processes.

- How would you describe CMO's role and your relationship in this theme?

**Technological orientation, expertise and experience**

- Describe your organization's technological orientation, expertise and experience and their influence on the e-commerce adoption process.

- Describe your own technological orientation, expertise and experience.

- How would you describe CMO's technological orientation, expertise and experience?

**Buying center**

- Describe how the buying center was formed and how it influenced on the adoption process?

- How did the formation of this buying center was different comparing to other projects?

- Describe your own role in the buying center.

- How would you describe CMO's role in the buying center and your relationship?

**Individuals**

- Describe your own background and how it influenced on the adoption process?

- How would you describe CMO's background?

- How did your backgrounds influenced on your relationship?

**Decision makers**

- Describe your role in the decision making.

- How would you describe CMO's role in the decision making?

- How did the decision making roles influenced on your relationship?