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Determinants of successful new package development proces

Kaupan strateginen johtaminen

Master's thesis

Iida Heikkinen

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ABSTRACT
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Purpose of the study

Innovative packaging and new package development are becoming more and more important factors in highly competitive fast-moving consumer goods market were the number of products is high and the need for differentiation is vital in getting consumers' attention. In order to develop successful package innovations that lead to sales increase, the success factors of new package development process need to be identified. Although the determinants of new product development process have been widely studied, academic literature lacks research in new package development process. This study aims to fill the research gap by exploring and identifying success factors of new package development process.

Methodology

The data used in this study was collected via a web-based questionnaire, targeted to decision makers in supplier companies in Finnish fast-moving consumer goods sector. 92 managers and specialists participated in survey questionnaire investigating new package development process and attitudes towards packaging innovations within target companies. The data was analyzed by using correlation analysis and one-way ANOVA test to find relations between independent and dependent variables. The hypotheses were formulated based on the theoretical insights of NPD process success factors.

Findings

The study succeeded in finding statistically significant correlations between success of new packages and certain factors of new package development process. More precisely, the study suggests that innovation-friendly company climate and attitude have positive influence on new package success. Furthermore, the results indicate that significant amount of internal resources allocated to new package development has a positive influence on new package success. Moreover, the study found that packaging innovations are widely reckoned as an essential factor for product success. However, it also revealed that new package development process is still significantly less developed and organized than new product development process. In addition, the measurement and goals of packaging innovation process should be better defined in Finnish fast-moving consumer goods supplier companies.

Keywords: New package development process, new product development process, packaging innovations, fast-moving consumer goods sector, one-way ANOVA

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ABSTRACT
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Pakkausuudistusprosessin menestystekijät

Tutkimuksen tarkoitus

Innovatiivisten pakkausten ja pakkausuudistusprosessin merkitys korostuu jatkuvasti erittäin kilpaillulla vähittäiskaupan alalla, jossa tuotteiden lukumäärä on suuri ja differentiaatio tärkeä tapa saada kuluttajien huomio. Pakkausuudistusprosessin kriittisten menestystekijöiden tunnistaminen on keskeistä onnistuneiden, menekin kasvuun johtavien pakkausuudistusten kehittämiseksi. Vaikka tuotekehitysprosessin menestystekijöitä on tutkittu laajalti, pakkausuudistusprosessia ei ole akateemisessa kirjallisuudessa käsitelty. Tämä tutkimus pyrkii tunnistamaan pakkausuudistusprosessin kriittisiä menestystekijöitä ja siltä osin täyttämään aukon akateemisessa tutkimuksessa.

Metodologia

Tutkimuksessa käytettävä aineisto kerättiin Internet-pohjaisella kyselytutkimuksella, joka kohdistettiin suomalaisen vähittäiskaupan alan tavarantoimittajayritysten päätöksentekijöille. 92 johtajaa ja asiantuntijaa osallistui kyselyyn koskien yritysten pakkausuudistusprosesseja ja yleistä asenneilmastoa pakkausinnovaatioita kohtaan. Aineiston analysoinnissa hyödynnettiin korrelaatioanalyysia sekä yksisuuntaista varianssianalyysia, joiden avulla pyrittiin löytämään riippuvuussuhteita testattavien muuttujien välillä. Hypoteesit muodostettiin aiempaan tuotekehitysprosessin menestystekijöitä koskevaan akateemiseen tutkimukseen pohjautuen.

Tulokset

Tutkimuksessa löydettiin tilastollisesti merkitseviä riippuvuussuhteita pakkausuudistusten onnistumisen ja tiettyjen, prosessiin liittyvien tekijöiden välillä. Tulokset osoittavat, että innovaatiomyönteinen ilmapiiri organisaatiossa vaikuttaa edistäen pakkausuudistusprosessin onnistumista. Lisäksi resurssiallokaation ja pakkausuudistusprosessin välillä löydettiin merkittävä positiivinen korrelaatio. Tutkimus osoittaa, että suomalaisissa vähittäiskaupan tavarantoimittajayrityksissä pakkausinnovaatioiden keskeinen merkitys on tunnistettu, ja pakkausinnovaatioita pidetään tuotteen menestyksen kannalta tärkeinä. Siitä huolimatta pakkausuudistusprosessi on edelleen huomattavasti kehittymättömämpi ja jäsentymättömämpi kuin tuotekehitysprosessi. Pakkausuudistusprosessin onnistumisen mittaamiseen ja tavoitteiden asettamiseen tulisikin kiinnittää jatkossa enemmän huomiota.

Avainsanat: Pakkausuudistusprosessi, tuotekehitysprosessi, pakkausinnovaatiot, vähittäiskauppa, yksisuuntainen varianssianalyysi

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1 Introduction

Nowadays, companies all around the world are trying to come up with creative ways to develop new products in order to grow and be able to compete in the changing market environment (Calantone & di Benedetto 1998; Kotler & Keller 2008). New product development has long been identified as one main factor in gaining and maintaining a strong competitive position, especially in highly saturated and competed markets, such as food industry (Vernuccio et al. 2010; Underwood 2003). In order to differentiate one from competitors and catch more and more demanding customers' attention, in addition to new product development, packaging innovations have been found to be an effective way to gain competitive advantage in the highly saturated fast-moving goods market (Underwood 2003; Young 2004).

Product packaging is an issue that has got a wide attention in the academic discussion during the recent years. Particularly in the grocery food industry the demand for a higher level of customization has aroused the need to further concentrate on more innovative packaging designs (Olsson et al. 2004). Several studies show, controversial to the traditional mindset, that packaging today has a significant role in product marketing and brand identity (e.g. Schoormans & Robben 1997; Underwood 2003; Clement 2007).

Thus, several factors are driving businesses to pay more attention to product packaging. Increasing competition, changes in consumers' consumption behaviour, new technologies and environmentalism, to name a few, are drivers that have forced decision-makers especially in the retail grocery sector to see product packaging as a potential source of competitive advantage and a way of differentiation (Underwood & Klein 2002; Vernuccio et al. 2010).

However, introducing successful new package designs to market is not simple or risk-free. Extensive academic literature on new product development has shown new product failure rates of as high as 50% - 90% (Kotler & Keller 2008). Therefore, potential determinants of product development success have emerged as an important focus of research inquiry to provide insights that may help managers reduce the failure rates of new product development (e.g., Kotler & Keller 2008; Ernst 2002; Ernst et al. 2010; Chesbrough 2010). Although various aspects of new product development success factors have been examined, a limited amount of academic research is found on the critical drivers of new package development process. Thus, this study utilizes findings from

new product development literature as a theoretical background for new package development process.

The significance of packaging to company success in fast-moving consumer goods sector has increased remarkably. In order to succeed in new package development, the drivers of new package development process should be identified and utilized. However, prior academic literature doesn't provide any research on success factors of new package development. Hence, the objective of this study is to fill the research gap by exploring determinants of new package development process that are associated with new package success. Thus, the main research question this paper aims to address is:

What are the determinants of successful new package development process?

The study seeks to answer the research problem by examining the following sub questions:

What are the drivers of successful new package development process in organizational level and how should they be addressed?
How does integrating package development with NPD process affect the success of the process?
What kind of company culture promotes the success of new package development process?

This study focuses on fast-moving consumer goods sector where, as indicated earlier, packaging innovations are becoming more and more vital for company success. More precisely, the study examines the success factors of new package development particularly in supplier companies of the Finnish fast-moving consumer goods industry. Retail supplier companies were selected to the sample group due to their essential role in package development; they can be considered as the "owners" and initiators of the new package development process. The research hypotheses are tested using quantitative analysis on empirical data from a survey directed to decision makers in target group companies. The survey was conducted with the goal to explore packaging innovation process of supplier companies in the Finnish grocery industry and to assess the drivers that lead to new package success.

The paper is structured as follows. First, a review on new product development process and an overview on success factors of the process identified in the academic literature are provided. Moreover, the concept of packaging, packaging innovations and their significance are discussed in

the literature review. The paper pursues to merge these two themes and build up an understanding of determinants of successful packaging development process. Methodology and research design are introduced and validated in the third part of the paper. Fourth, the results are presented and analysed in detail. In conclusion, the theoretical and managerial implications are discussed with potential future research topics.

2 Theoretical background

2.1 Innovations and new product development process

Innovations are vital for today's companies of all sizes. With current market conditions, companies are faced with more demanding consumers, increased level of competition and constantly changing market environment (Griffin 1997; Rainey 2005; Ernst 2002). Hence, continuous development is fundamental in order to survive in a more and more demanding market. Successful product development is one of the most essential competitive factors that can create a possibility to differentiate oneself from competitors and provide customers with added value. Most important drivers for innovations are thus adding value, attaining competitive advantage and long term gain through successful commercialization of innovations. (Rainey 2005).

Innovation has several definitions in academic literature (Von Hippel 1988; Rainey 2005; Smith 2006; Kotler & Keller 2008). David Rainey defines the concept of innovation in his work as follows: a change or an improvement in a technology, product, process or service that has a positive effect on customers or some other stakeholder group of the company. Moreover, innovation is a new, creative solution that meets stakeholders' needs or desires in a current situation. One can state that product innovation as its best provides new solutions to old problems; generates new opportunities to exploit existing resources and creates new resources (Rainey 2005).

Offset for the innovation can be the market situation, customer or some other stakeholder group of the company. Often the demand for innovation arises from the business environment which consists of the economic, political, regulatory, ecological and social environment where the company operates on. Constantly changing environment not only brings challenges but also creates opportunities to develop and renew the ways of doing business. As an example, some of a certain business field regulating laws might change which can put a development process into operation so that customer demands can be addressed in a similar manner than before the law reform. Above

mentioned shifts in market environment affect product life cycle by creating possibilities for new products, ideas and developing current products into something that suit the new normal better.

Despite the fact that companies have realized the significant competitive advantage that innovations and new product development offer, innovations aren't born every day. New product development is not simple in any way, and successful NPD process is dependent on several factors. They are affected by the complexity and structure of the business environment, constantly changing demands of consumers, market trends, and competition in the industry as well as the difficulties to forecast the future (Rainey 2005).

Many companies have put serious efforts on trying to overcome the complexity of innovating and developing new ideas by creating methods and processes to facilitate innovating. Accordingly, there are developed information systems to support product development, analysis and decision making attached to it. Product innovations typically require close and constant coordination between distinctive departments within in an organization, such as marketing, sales, R&D, in order to develop and refine into functional concepts. Furthermore, in addition to internal integration and external conditions, innovations call for versatile knowhow, creativity and deep understanding of the nature of the industry (Rainey 2005, Kotler & Keller 2008).

In academic literature (e.g. Dewar & Dutton 1986; Song & Montoya-Weiss 1998; Rainey 2005; Smith 2006; Kotler & Keller 2008) innovations are traditionally divided in terms of the degree of novelty associated with them into incremental and radical innovations. The correlation between innovation's degree of novelty and its success has been studied to some extent (Song & Montoya-Weiss 1998; Sorescu & Spanjol 2008) but the influence of innovation's degree on the success is excluded from research scope in this paper.

2.1.1 New product development process

New product development process (also referred as NPD process in this paper) is an extensively studied field of academic research, and several models have been developed in the process progress (Kotler & Keller 2008; Rainey 2005; Song & Parry 1997b; Afuah 2003). A widely used model on new product development process by Kotler & Keller (2008) divides the process into eight phases. However, the concept more generally utilized in this paper is Song and Parry's (1997b) model that divides the process into three distinct phases. The paper uses this particular model prior to two

reasons; the model is simplified but adequate and well suited for studying success factors of the process in its different stages.

According to Song & Parry, three phases of NPD process consist of 1) concept development stage, 2) product development stage and 3) implementation stage. *Concept development stage* typically includes the idea generation and evaluation and further enhancement and development of the most promising ideas. The aim of this stage is to capture the most capable ideas and to refine them into new product concepts. Critical activities in concept development stage involve collecting customer information, making decision on product concepts and design before they go into product development stage. The amount of R&D resources committed in the process in product development stage makes the project more challenging to terminate. Hence, the groundwork should be properly and carefully followed through in concept development stage. Therefore at this stage, according to Ernst et al. (2010), sales – R&D cooperation has a significant, positive effect on overall NPD project. In addition to sales – R&D coordination, also sales – marketing interaction seems to play a central role in concept development stage in terms of the success of the process because of their complimentary orientations and knowledge base.

Product development stage involves the actual technical development of the new product, executing the prototype tests as well as test marketing. In this phase of the NPD process, Research and development play an essential role, and also getting access to right customers for testing the product is vital. Wide network and meaningful contacts are something that experienced salespeople typically have. Hence, the study by Ernst et al. (2010) states that in the product development stage, sales - R&D cooperation has a significant positive impact on new product success.

The last phase of the NPD process according to Song and Parry is called the *implementation stage.* It typically comprises of activities such as market launch, product training, after-sales support and monitoring. Therefore, sales and marketing play a critical role in this last stage of the process, and hence the cooperation between them can have a remarkable impact on the success of the new product.

The Figure 2 below illustrates the three different stages of the new product development process according to Song and Parry (1997b) and process-wise essential cooperation relationships by Ernst et al. (2010). The figure is a modification from the original one by Ernst et al. (2010).

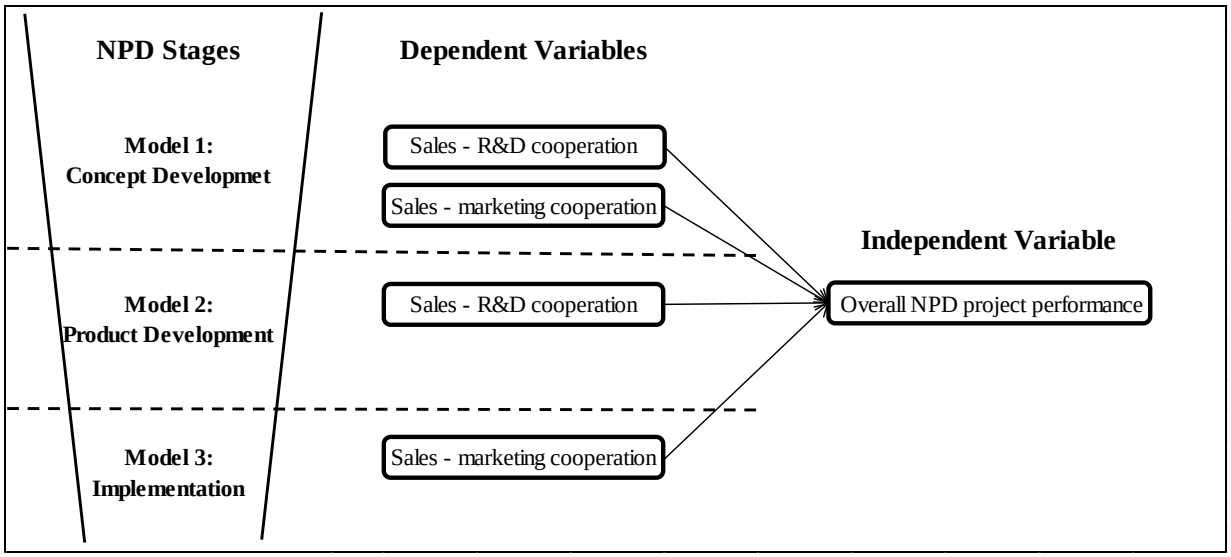

Figure 1. New product development process stages and dependent variables (Ernst et al 2010).

2.1.2 New product success factors

As aforementioned, continuous development and market introduction of new products are important determinants of sustained company performance. However, empirical studies point out high failure rates of new product launches (e.g. Ernst 2002, Kotler & Keller 2008). Therefore academic literature and company management have long been interested in learning about and identifying factors that impact the success of new product development (Barton 1992; Cooper & Kleinschmidt 1995; Ernst 2002).

This paper aims to recognize and define determinants of successful new package innovation process. However, as stated earlier, the academic research in the field of packaging innovations is somewhat limited and lacks studies, especially of success factors in the new package development process. Therefore the paper utilizes the literature in success factors of NPD process which is somewhat extensive and rich in number.

In this section an overview on the academic literature of drivers in the new product development process is provided. In order to structure the factors logically, five categories introduced by Cooper and Kleinschmidt (1995) and later utilized by Ernst (2002) are presented. The five categories used in this section are 1) NPD process; 2) organization; 3) culture; 4) role and commitment of the senior management and 5) strategy. Of these five categories I will focus especially on the success factors identified in the NPD process, organization and culture, which are of a significant interest for this particular study. By doing this, the study addresses activities that are directly amenable to managerial action.

The early work in the field (until the end of 1970s) distinguishes two main aspects having a significant positive influence on the success of new products (Cooper 1990, Cooper and Kleinschmidt 1995). They are proficiency of activities carried out in the individual phases of new product development, especially in development, test marketing and market introduction, and the use of market information along the entire NPD process. The later work divides the process and vital factors in it into more detailed phases. It is shown that preparatory work in the early phases of the process has significant positive influence on new product success (Song and Parry 1997a). Furthermore, researchers argue that in order to succeed, the new product development process should be shaped by a specific business model, whether explicitly considered or implicitly embodied in the act of innovation (Chesbrough & Rosenbloom 2002). Reflecting to the NPD process model of Song and Parry (1997b), this remark underlines the importance of the concept development stage of the NPD process. The concept of preparatory work is further defined as clear definition of the product before the development begins; identifying the potential target market and detailed technical and market-oriented feasibility studies (Cooper and Kleinschmidt 1993). To summarize, several studies (e.g. Song & Parry 1997b, Cooper 1990, Ernst 2002, Kahn et al. 2006) show that the existence of a formal, well-defined NPD process that involves constant monitoring has positive influence on the success of a new product.

Numerous studies mention the market orientation of the process as an important factor to process success. Furthermore, they consider actions such as extensive, high-quality market research, evaluation of market potential and observing the competition essential to process success. (E.g. Calantone & di Benedetto 1998; Song & Parry 1997b; Kahn et al. 2006; Ernst et al. 2010; Young 2004). One interesting aspect in NPD process research is the role of customer integration into the process. Without going more deeply into the subject, the significance of using pilot customers remains argued. Some researchers find customer orientation and lead user utilization vital for the success of new products (e.g. Baker & Sinkula 1999; von Hippel 2001; Salomo et al. 2003), when some studies find that sweeping statements cannot be drawn (Hauschildt 1993).

Organization-wise findings in studies of success factors differ significantly less compared to those in NPD process. Five significant aspects are identified to have a positive effect on new product success: 1) a cross-functional NPD-team; 2) a strong and responsible project leader; 3) an NPD team responsible for the entire project; 4) commitment of the project leader and the team members to the project and 5) intensive communication among team members during the course of the process (Ernst 2002, Kahn et al. 2006; Ernst et al. 2010). The cross-functionality of the NPD team

has received extensive attention in academic literature. Even though it is widely argued that it has positive influences on process performance, some researchers suggest that the effect depends on several factors, such as the formality of the team and coordination methods. Therefore, the positive effects cannot be generalized (Olson et al. 1995). In summary, what can be noted of the list of organization-related factors is that the five success factors are not significantly distinctive to new product development, rather than to any project in general. Nevertheless, it becomes clear that a strong and committed organization is vital also for NPD process and its success.

With respect to cultural aspects, new product development process is faced with significantly less empirical study compared with the two aforementioned. However, the research shows signs that an innovation-friendly climate in the organization together with risk-taking behavior is identified as premise for new product success (Voss 1985; Chesbrough 2010). In addition, some studies have found that the existence of a systematic scheme for suggesting new products can have a positive effect on new product success. This is tightly linked to a finding that possibility to use time to informally develop new ideas at the workplace as well as work on unofficial project that may have already been terminated influence positively on the success of new product (Cooper and Kleinschmidt 1995). Furthermore, prior research addresses the role of management in creating premises for new product development; according to Gemser & Leenders (2001) new product development managers should constantly consider the changing nature of competition by developing innovative strategies to better support the needs of new product development. One explanation for the limited number of studies conducted on cultural aspects and their effects on new product success might be the difficulty to measure their influence. Culture by definition embraces values, perceptions and assumptions in the organization that are difficult to recognize and identify.

As mentioned earlier in the chapter, the support and commitment of the management are essential to the progress of a new product development process, and that way they have a positive effect on new product success as well. However, it becomes evident from the literature that the impact of senior management's role and commitment have not been studied to adequate extent (Cooper and Kleinschmidt 1995) – the analysis should go beyond reviewing solely the R&D budget. Nevertheless, that being said, economical resources allocated to market research and new idea development are meaningful for the new product success. One interesting remark is that senior management's increased commitment decreases the probability of the termination of the project (Balachandra 1984). This might be seen as a positive or negative factor for the process depending on the project potential – the higher commitment, the more resources will be allocated and time

spent. However, sometimes the ability to make a decision on terminating the project is justified and improves the probability of success of other projects through effective reallocation of resources.

2.2 Packaging and packaging innovations

2.2.1 Package, its function and role

"Never underestimate the importance of packaging. Marketers often measure consumer brand perceptions and ignore the pack. Yet we know from the way that consumers react to unbranded products that packaging plays a huge role in reinforcing consumer perceptions. Packaging helps to drive the way consumers experience a product. Yet, we spend little time researching the connections between packaging and the direct experience of the product" (Hofmeyr & Rice 2000)

The European Parliament and Council Directive 94/62/EC define packaging as all products made of any materials of any nature to be used for the containment, protection, handling, delivery and presentation of goods, from raw materials to processed goods, from the producer to the user or the consumer (Olsson et al. 2004). In general terms, packaging is defined as the container of the actual product itself which not only holds, protects, preservers and facilitates handling but also identifies the product (Vidales Giovanetti 1995). Package design is generally referred having two components; graphics (e.g. color, typeface, logos) and structure (shape, size, materials) (Hine 1995). The traditional definition of packaging concentrates on its primary functions; protecting and containing the actual product.

However, the conventional view on packaging's functions is not sufficient in perceiving all the aspects of today's packaging. Constantly changing market environment, increasing competition and more demanding customers have given packaging several new meanings. (E.g. Löfgren et al. 2008; Ampuero & Vila 2006; Underwood 2003). Furthermore, packaging today has a significant role in product marketing and brand identity (e.g. Underwood 2003; Olsson et al. 2004, Vernuccio et al. 2010).

Today the exact definition of packaging remains under disputation in academic literature. It is stated that package actually is a property or characteristic of the product (Evans & Berman 1992), while some researchers suggest it being an extrinsic attribute – product-related but not part of the product itself (Olson & Jacoby 1972). Zeithaml (1988) sees it as both an intrinsic and extrinsic attribute that cannot be changed without altering the nature of the actual product. Underwood (2003) defines

packaging as a product-related attribute, an aspect that is critical to the creation and communication of the product's brand identity. Keller (1993) suggests package being a non-product-related attribute not directly relating to the product performance but playing a significant role in purchase and consumption process.

According to Johnsson (1998), there are two components in the added value of a package; a service value and a product value. The service value refers to package's functions that make the product's distribution chain more cost-effective. The product value means attributes of packaging that can be used to increase the price of the actual product. Vernuccio et al. (2010) and Schoormans & Robben (1997) make the similar categorization; they divide package function into physical and communicative. The first mentioned, physical function refers to containment, protection and conservation of the actual product and the facilitation of use. Communicative function is defined as factors such as information, visibility, persuasion, dialogue and social involvement that the package communicates. Thus, academic literature suggests that product value and communicative function are constantly gaining more attention in company's marketing decisions and in new package development (Johnsson 1998; Vernuccio et al. 2010; Underwood 2003). Furthermore, researchers suggest that the role of packaging in the future will further develop, and it will be more integrated with the image of the product. For this reason, new package development should take place in parallel with the development of the product and should be more integrated into the new product development process.

Thus, the role of packaging in the marketing mix has changed over time. Today packaging can be seen as an important marketing tool for several reasons (e.g. Coles & Beharrell 1992; Louw & Kimber 2007; Ampuero & Vila 2006). Firstly, it is an effective tool for reaching the target market since packaging is something that all buyers experience (Louw & Kimber 2007). Secondly, research suggests that packaging can be the most important communication tool since it is present at the crucial moment when the purchase decision is made (Nickels & Jolson 1976). Furthermore, customers are often actively involved with packaging as they examine it to obtain the information they need (Ampuero & Vila 2006). Moreover, packaging plays a key role in creating and reinforcing brand image since it is the only part of marketing that the consumer takes home (Louw & Kimber 2007; Underwood 2003). It is also an important tool for differentiation; an innovative package design can help to set a brand apart from its competitors (Coles & Beharrell 1992; Schoormans & Robben 1997; Louw & Kimber 2007).

2.2.2 Packaging innovation and new package development process

As earlier indicated, changes is business environment have led to increasing interest towards packaging design and packaging innovations (Underwood et al. 2001; Olsson et al. 2004; Vernuccio et al. 2010). Packaging is critical for the success of the product not solely because of the symbolic value it creates but because it adheres to the product throughout the entire food service supply chain. Therefore innovative packaging solutions can create competitive gain in many aspects (Nickels & Jolson 1976). However, limited amount of research is found on packaging innovations and especially on the new package development process.

Coles and Beharrell (1992) have developed a conceptual framework for packaging innovation. According to aforementioned, packaging innovations can be classified by considering them consumer driven, distribution driven and technology driven. Consumer and distribution driven refer to factors such as package design, convenience, package security and environmental issues. Technology driven innovations can be understood to be linked to advances in packaging machinery and other process developments. They suggest that balance between these exists, with one of them taking the lead depending on the situation. The researchers introduce the concept of packaging and distribution mix (PDM), a subset of marketing mix which is to offer companies a framework to exploit the potential of packaging innovations.

The model suggests that external factors, such as economic climate, environment and technology work as the base for decisions and direction for packaging and packaging innovations. Consumer demand, distribution chain needs or technological advancements drive the need for new package development. These factors lead to packaging innovation, which, together with marketing mix form the packaging mix.

However, packaging innovations and new package development process still lack extensive academic research. No research has been conducted on the drivers of success in new package development. Thus, this study aims at incorporating new product development literature to packaging innovations in order to untangle whether the success drivers in NPD process apply also to new package development process.

2.3 Hypotheses formation

In this chapter the statistical hypotheses will be formulated based on the theoretical insights of NPD process introduced earlier in the paper. The hypotheses are designed to discover whether the characteristics of relationship in the sample data can be expected to exist in a population (McGivern 2009). A number of propositions concerning the relations among the variables were developed based on prior research.

As indicated earlier, the paper is based on theoretical insights on new product development process and academic research on packaging. The aim of the study is to find and identify factors and drivers that affect the new package development process and that way lead to new package success. Although academic research lacks studies that examine the success drivers of new package development process, extensive research has been conducted on determinants of successful new product development process. Hence, several studies (e.g. Johnsson 1998; Coles & Beharrell 1992) suggest that new package development process has similar stages and nature as NPD process. Furthermore, researchers (Johnsson 1998; Olsson et al. 2004) stress the need for integrated product and package development. Thus, it is justified to utilize prior research on NPD process as a base for formulating hypotheses for this study.

Earlier research has divided NPD process success factors into five categories (Cooper & Kleinschmidt 1995; Ernst 2002); 1) NPD process; 2) organization; 3) culture; 4) role and commitment of the senior management and 5) strategy. The hypotheses in this study are formulated to focus on the three first mentioned; NPD process (hypotheses 1 & 2), organization (hypotheses 3 & 4) and culture (hypothesis 5). These three sections are most widely studied and form a reliable base for hypotheses formation.

Several studies (e.g. Calantone & di Benedetto 1998; Song & Parry 1997a; Young 2004; Ernst et al. 2010) address orienting the NPD process to the needs of the market. More precisely, prior research has identified extensive, high-quality market research to be a vital driver for new product development process success. In addition, it has been noted that evaluation of market potential as well as observing the competition and competitors affect positively to process success. The impact of these actions is often connected to early stages of the NPD process; they increase the probability that the NPD process focuses on right things from the very beginning of the process and decreases

the failure rate (Calantone & di Benedetto 1998). Thus, the first hypothesis relates to significance of market research:

H_1: Thorough market research and market observation have positive influence on new package development success.

The second hypothesis addresses the need to integrate package development process with new product development process. When package development is started in line with new product development, the probability of these two processes having same goals and same phase of progress increases. That way the processes can be evaluated and developed in line which makes them more unite (Johnsson 1998). Furthermore, Olson et al. (2004) argue that tight integration between NPD and package development process would make the cost and resource allocation between the two processes more effective and create economies of scale when the processes can me developed in line. Hence, numerous studies (e.g. Johnsson 1998; Olsson et al. 2004) state that the integration of the two processes could be one success determinant. Hence;

H_2: Starting the new package development process as early as possible and integrating it with new product development process have a positive influence on new package success.

Organization-wise research findings of success factors differ significantly less compared to those related to NPD process. Five significant aspects are identified to have a positive effect on new product success: 1) a cross-functional NPD-team; 2) a strong and responsible project leader; 3) an NPD team responsible for the entire project; 4) commitment of the project leader and the team members to the project and 5) intensive communication among team members during the course of the process (Ernst 2002). Especially the cross-functionality of the new product development team is emphasized in several studies (Wind & Mahajan 1997; Kahn et al. 2006). Thus, internal resources from different departments of the company allocated to NPD process seem to affect positively to success of the new product. Two hypotheses can be drawn from prior research:

H_3: Significant amount of internal resources allocated to new package development has a positive influence on new package success.

H_4: Cross-functional new package development team affects positively on new package success.

As indicated earlier, with respect to cultural aspects, new product development process is faced with significantly less empirical study compared to the two aforementioned. However, the research shows signs that an innovation-friendly climate in the organization together with risk-taking behavior is identified as a premise for new product success (Voss 1985; Chesbrough 2010). In addition, some studies have found that the existence of a systematic scheme for suggesting new products can have a positive effect on new product success. This is tightly linked to a finding that a possibility to use time to informally develop new ideas at the work place as well as work on unofficial project that may have already been terminated influence positively on the success of new product (Cooper and Kleinschmidt 1995).

H_5: Innovation-friendly company climate and attitude have a positive influence on new package success.

3 Methodology

3.1 Sample and data collection

The empirical survey study conducted in spring 2010 was designed to investigate supplier companies in Finnish fast-moving consumer goods (FMCG) sector. Prior research suggests that the role of packaging and packaging innovations is especially important for relatively homogenous low involvement consumer nondurables, such as products in FMCG segment. (e.g. Underwood 2003; Phillips & Bradshaw 1993). FMCG market poses extremely interesting premises for packaging innovations for several reasons. Firstly, the competition in the industry is extremely intense, among the fiercest in the consumer goods sector (Phillips & Bradshaw, 1993). The competition and the large number of players set severe requirements for any company to survive and succeed in the market. Thus, getting a product noticed poses a great challenge for producers. Other interesting characteristic of the market is the consumer behavior in the point of purchase. Research suggests that the amount of unplanned purchases, decided upon no earlier than at the grocery store, can be as high as two thirds of all purchases (Schoormans & Robben 1997). Third factor making the retail grocery market an interesting subject of analysis are the limitations and requirements the market place poses. On average, a shopper passes by 300 products per minute (Rundh 2005) while shopping for groceries. Furthermore, a typical consumer spends 8, 5 seconds per product choice and only one of those seconds actually making a final decision (Schoormans & Robben 1997).

Aforementioned factors and limitations create several requirements for product packaging. The packaging needs to be unique or special in order to stand out from the mass of products (Underwood & Klein 2002). In addition, whatever information a consumer wishes to extract from a product should be easily found in the package due to little time consumed for decision-making. The significant amount of unplanned purchasing creates opportunities for marketers; it is possible that the customer makes the purchase decision due to appealing package design. Due to these reasons, package development forms an interesting subject of investigation in the context of FMCG sector.

The scope of the focus group was further delimited to include suppliers especially in the fields of daily groceries and hygiene products. Population among these companies was chosen on a basis that the potential respondents would be linked to the company's product packaging innovation at least in some way. The decisions were made based on job positions and titles. Hence, total of 1000 decision makers in Finnish grocery store supplier companies were contacted. The titles of potential respondents varied form CEO's and R&D managers to marketing directors and packaging specialists.

The sampling was conducted as a quota sampling, a widely used approach of non-probability sampling (Malhotra & Birks 2007). It can be viewed as two-stage restricted judgmental sampling. First stage consists of developing control characteristics, quotas. In this study these characteristics are the sector and companies where the potential respondents have been selected from. In the second stage, sample elements are based on convenience or judgment. In this case, the potential respondents in the second stage are selected based on their job position in their organization. Quota sampling was used in order to ensure an extensive sample that would represent the target population as accurately as possible.

The empirical data for the study was gathered via Internet-based Webropol-system, a common tool for conducting both limited and extensive survey questionnaires. The survey was designed in a way that it asked the respondents clearly structured questions related to their attitudes, behavior, intentions and demographic factors on the observed topic. The questionnaire was sent out to a chosen focus group as an invitation to the survey via email. Out of 1000 sent invitations 83 returned due to incorrect email address. Thus, the sample size was limited down to 917 potential respondents. 92 responses were received leading to response rate of 10%.

In the respect of this study, the survey questionnaire consists of questions exploring respondents' background information, e.g. demographical factors; and of closed attitude questions measuring respondents' views and attitudes towards certain package innovation related statements. The background information section involves 9 questions (Q1 – Q9) on company field, size, and respondents' position within the company, to mention a few. Furthermore, closed attitude statements are posed. So called Likert type 1-to-5 attitude scale, where a respondent has 5 different opinions to choose from to describe his/her attitude best, was used in most of the attitude questions. The questionnaire required respondents to be familiar enough with the new package innovation process so that s/he could provide detailed information for the survey. The survey questionnaire in the respect of this study can be viewed in total in the end of this paper (Appendices 1 and 2).

In this study, quantitative, a descriptive survey method was used by reason of two factors; the significant number of representatives in the focus group would have made conducting of a qualitative study difficult and time-consuming. Furthermore, several studies have found an Internet-based survey to be an accurate and effective way to gather data and get reliable results (Malhotra & Birks 2007). Due to the sample group being completely Finnish, the survey was conducted in Finnish.

3.2 Data analysis

The purpose of data analysis is to extract meaningful insights from the data and to produce findings that help addressing the research problem (McGivern 2009, 439). In order to achieve valid and reliable results, data analysis should be designed and executed in a thorough and systematic manner.

First, the analysis began with sorting, organizing and summarizing the data gathered through the Webropol survey. This was carried out utilizing univariate descriptive analysis which stands for describing one variable at a time with the aim to summarize and display the research data (McGivern 2009, 441). The frequency distributions were examined. Frequency distribution is a mathematical distribution whose objective is to obtain a count of the number of responses associated with different values of one variable (Malhotra & Birks 2007, 506).

Second, the main analysis was conducted via bivariate descriptive analysis that signifies describing and measuring relationship and relation between two variables (McGivern 2009, 456). This was carried out using correlations, the most common way of doing bivariate analysis (McGivern 2009,

459). Correlation stands for the level of dependency between two variables. If correlation between two variables is strong, the values of one variable can be predicted from the values of the other variable somewhat accurately (KvantiMOTV 2011). The paper utilizes the most typically used correlation key ratio; Pearson's correlation coefficient (r). Pearson's correlation measures the strength of linear dependency between two ordinal variables. Correlation analysis was selected as an analysis method because of its convenience and lucidity, and because it was seen as a practical method to address the research questions of this study; finding relations between independent and dependent variables.

Furthermore, correlation analysis gives an indication of relation or association between variables. However, correlations do not enable inferring the cause or finding causalities (McGivern 2009, 460). Thus explanatory analysis was utilized to offer suggestions for causalities and causal directions. Analysis of variance (ANOVA) is used for examining the differences in the mean values of the dependent variable associated with the effect of the controlled independent variables (Malhotra & Birks 2007, 546). Thus, ANOVA is a method that tests the means for two or more populations. The null-hypothesis is that all the means are equal, and alterative hypothesis that at least one mean is different. Moreover, a particular ANOVA technique, one-way analysis of variance is utilized in the study. One-way ANOVA test can be used with only one categorical independent variable and one continuous dependent variable. Before ANOVA test, a Levene test of homogeneity of variances was used to measure whether ANOVA test is reliable for the variables studied. (Malhotra & Birks 2007, 547.) To conclude, one-way analysis of variance is used when there is a categorical independent variable with two or more categories and a normally (or almost normally) distributed interval dependent variable and the aim is to test for differences in the means of the dependent variable broken down by the levels of the independent variable (Mellin 2006).

Significance levels in this paper are generally used in quantitative research (e.g. Malhotra & Birks 2007; McGivern 2009). Symbols *, **, and *** denote levels that are significantly different from zero at 10%, 5%, and 1% levels, respectively.

The data analysis in this study was mainly conducted using statistical analysis software, SPSS. SPSS (which stands for Statistical Package for the Social Sciences) is a computer program that can be used in authoring and deployment of a survey, data mining, text analytics, statistical analysis, and collaboration & deployment. SPSS is widely used for analyzing quantitative data in marketing research. (Malhotra & Birks 2007, 497.)

3.3 Measures

The study aims to identify drivers affecting new package development process and that way, new package success. Therefore a natural selection for the dependent variable in the analysis was the success of new package. Hence, it is essential to define how the new product or package success is assessed (Calantone & di Benedetto 1998). Product or package success is a rich and multidimensional construct. Failure rates reported are highly conflicting, ranging from 20% to 98% depending on the study (Calantone & di Benedetto 1998). This might be explained by inconsistencies in defining product success. Prior empirical research in the field has generally dealt with the question of assessment by relying on the subjective evaluation of respondents. Moreover, the success of a new product has been measured by asking the respondents to rate the product quality and its ability to achieve its goals (Calantone & di Benedetto 1998). However, it is possible that this measure is not always a valid one. Subjectivity might lead to reduced validity of the results thus leaving the definition of success ambiguous and open to interpretations. One significant argument is also that the assessment of success by respondents – typically company managers – is more likely to be biased and over-optimistic compared to customers' view.

One other – also widely used - way of measuring new product success is profitability standpoint (Calantone & di Benedetto 1998). It is clear and reasonable to measure, however leaving the assessment of success somewhat one-dimensional. Nonetheless, this discussion is important to take into account when identifying success drivers for new products.

Hence, regardless of the potential challenges of subjective evaluation, the assessment of new package success in this study is measured with two dependent variables; goal achievement of new package and sales increase, from the respondents' viewpoint. The variables are tested with questions Q8 "Evaluate which percentage of your new package development processes achieve their original goals" and Q9 "Evaluate which percentage of your new packages lead to increase in product sales", respectively. These questions give two dimensions to the success assessment; the profitability standpoint and goal achievement point of view. The responses for the questions are given in percentage form, ranging from 0 – 100%. In the summary statistic section responses are distributed to three categories; 0 – 33% (the minority of company's new packages lead to increase in sales/ achieve their set goals); 33 – 66% (a fair part of company's new packages lead to increase in sales/ achieve their set goals) and 66 – 100% (the majority of company's new packages lead to increase in sales/ achieve their set goals). This is done in order to better illustrate the assessment of

success. In one-way ANOVA test the results are analyzed in a percentage form as in order to give valid results, the test requires using a continuous dependent variable.

The validity of the dependent variables is at a reasonable level as they both aim at measuring the success of new package. Reliability risk does exist though since both of the dependent variables are questions where respondents' subjective view on the success is measured.

The independent variable used in the first hypothesis, "*H_1: Thorough market research and market observation have a positive influence on new package development success"* is the use of market research within the organization. The second hypothesis "*H_2: Starting the new package development process as early as possible and integrating it with new product development process have a positive influence on new package success."* is based on independent variable "starting phase of the company's new package development process (in relation to new product development process)" It is tested by selecting question A23: "Evaluate, in which stage the package development is typically started within your organization" as an independent variable. The test aims to measure whether there is a correlation between early start of the package development and the success of new package.

The third independent variable is the resource allocation for the new package development process. Resource allocation is used as an independent variable is hypothesis *"H_3: Significant amount of internal resources allocated to new package development has a positive influence on new package success"*. It is tested with an attitude statement A7: "Packaging innovation is an important investment that uses a significant amount of resources in different departments."

The fourth independent variable is the cross-functionality of the new package development team. It is measured by asking the respondents which functions within their organization participate in the new package development process. Respondents are given 5 alternatives, one of them being "some other department/s, what?". Multiple alternatives could be chosen, and the responses are summarized. This way the value of the independent variable can range from 1 to 5; 1 symbolizing the lowest level of cross-functionality (only one function within the organization participates in the process) and 5 representing the highest possible level of cross-functionality. The significance of particular functions in the package development process is not addressed. The fifth independent variable is company climate towards package innovations. It is measured with 1-to-5 Likert scale statement A14: "How important do you consider packaging development to product success?". The

correlation between the argued importance and package success is tested. The respondents' assessment on the importance of innovations can be seen to measure the attitude towards innovations moderately. Thus, validity of the test can be considered decent. The measures of dependent and independent variables are summarized in the Table 1 below.

TABLE 1. Summary of variables and measures

Variable	Measures	Scale	Hypotheses
Goal achievement of new package[d]	Which percentage of your new package development processes achieve their original goals?	Continuous, percentage	H_1-H_5
Sales increase caused by new package[d]	Which percentage of your new package development processes lead to increase in product sales?	Continuous, percentage	H_1-H_5
Use of market research in the new package development[i]	Market research is an essential way for our company to find out whether a new package in a development stage works as wanted from consumers' perspective.	Categorical, Likert-scale[1]	H_1
Starting phase of new package development process[i]	In which stage is the package development typically started within your organization?	Categorical, 5 alternatives[2]	H_2
Resource allocation[i]	Packaging innovation is an important investment that uses a significant amount of resources in different departments.	Categorical, Likert-scale[1]	H_3
Cross-functionality of the new package development team[i]	How many organizational functions participate in packaging development during the process?	Categorical, 1-to-5	H_4
Company climate towards innovations[i]	How important do you consider packaging development to product success?	Categorical, Likert-scale[3]	H_5

[d] dependent variable; [i] independent variable

[1] 1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree

[2] 1. We conduct constant packaging development separately from product development 2. Before starting the product development 3. In line with starting the product development 4. When the product concept is ready 5. When the product is ready for manufacturing/ production

[3] 1. Unimportant 2. Of Little Importance 3. Neither Important or Unimportant 4. Important 5. Very Important

3.4 Research reliability and validity

Validity is the key concept in evaluating the quality of research. It refers to the ability of the research design to deliver accurate, clear and unambiguous evidence with which to answer the research problem. (McGivern 2009). Two aspects of the validity have to be taken into account in research design; internal and external validity. *External validity* means that the results can be generalized from the sample to wider population or setting. *Internal validity* in a questionnaire-based study refers to the ability of the specific questions used in the research to measure what they claim to measure. This is a commonly used definition to internal validity, not only applicable to questionnaire design (McGivern 2009). Therefore I will assess it in evaluating the research validity of this particular study.

Research *reliability* refers to the consistency of research results. It addresses the question: "If the study is to repeated or different researchers continue with the field work, will the results remain the same?". In designing a questionnaire, preparing for conducting the survey and briefing possible interviewers or respondents, it is essential to bear in mind that the research should always aim at reliable results (McGivern 2009).

Internal validity of a study can be tested beforehand in order to identify possible misunderstandings and to avoid them. One option to improve the internal validity of a research is to use questions from previous studies (Malhotra & Birks 2007). The questions in this study are designed carefully utilizing prior academic literature. Some of the questions in this study are originally used in other studies and for that reason framed in English. For the purpose of this study, they have first been translated into Finnish, and then back to English, in order to ensure their validity. Furthermore, special attention was paid to linguistic intelligibility.

One factor influencing a study's internal validity is the length (e.g. the number of questions) of the survey. The entire questionnaire consisted of questions measuring also other study fields, which made it relatively long. This might have a slight negative influence on validity. Nevertheless, the large number of closed questions made the questionnaire quicker and easier to complete than an open question questionnaire. To conclude, internal validity of the study is at satisfactory level.

External validity – the ability to generalize from the research findings – is affected by a relatively low response rate of the survey. Only 10% of the potential respondents participated in the study which is likely to undermine the external validity of the study. However, in absolute terms, 92 responses is a reasonable number of observations, and that way one can state that the external validity of study is at an acceptable level. One important notion is that according to the feedback from potential respondents, a common reason for not answering the survey was that the recipients were not in touch with packaging development in their daily work. Hereby one can argue that the survey responses came from packaging development specialists and might actually be of a relatively high quality. Hence, the relatively low response rate might actually improve the study's reliability in that way.

One factor affecting the external validity of the study is that the survey was conducted among Finnish fast-moving consumer goods sector companies. Every country has its own special characteristics when it comes to FMCG sector and for that reason the results of the study cannot be directly generalized to apply in different cultural settings.

As aforementioned, one issue related to research reliability is the difficulty to define beforehand who in the organizations actually are the ones that are working with packaging development in reality. Nevertheless, as the feedback suggests, people not in charge of packaging development in many cases decided not to participate in the survey.

4 Research Findings

This part of the paper presents the empirical findings of the study. Firstly, the data is introduced with frequencies and finally, the hypotheses are tested and results of them presented.

4.1.1 Summary statistics

92 respondents from supplier companies in the Finnish retail grocery industry answered to the questionnaire about packaging innovations and new package development process. The two charts below present the main branches and the size of the companies that respondents represent. The majority of the respondents (84.8%) reported to work for groceries sector. The rest of the respondents' companies were somewhat evenly distributed between following main branches: technochemistry (5.4%), wholesale trade (5.4%), retail (2.2%) and chemistry industry (1.1%).

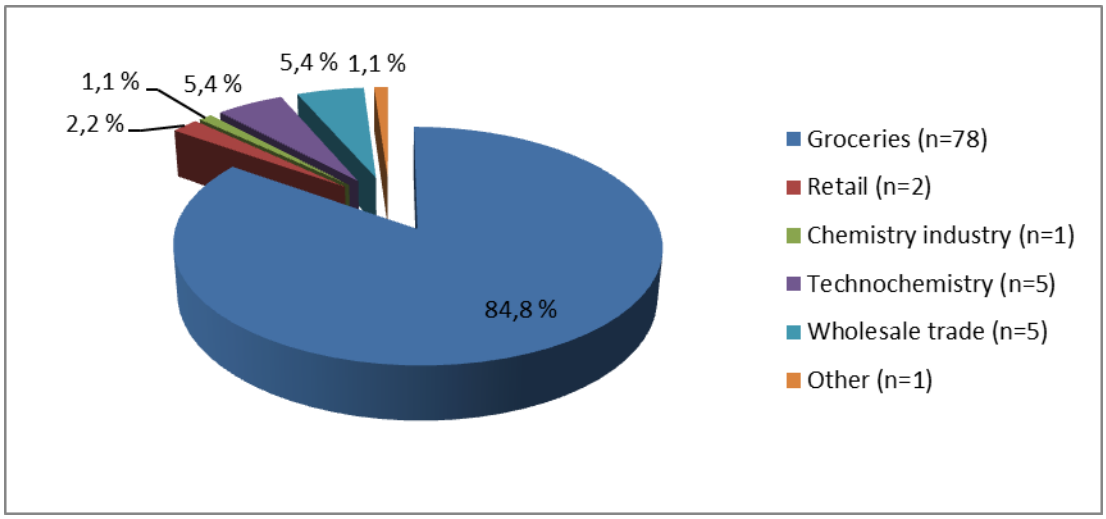

Chart 1. Respondents' distribution based on company branch

The size categorization of the companies is based on EU legislation which defines companies with 0-50 employees as small, companies with 50-250 employees as medium and companies with 250 or more employees as large (Europa 2011). Chart 2 displays the distribution of the companies based on this size categorization. 55.4 % of the respondents work in a large company, whereas 27.2 % in medium and 17.4 % in small companies.

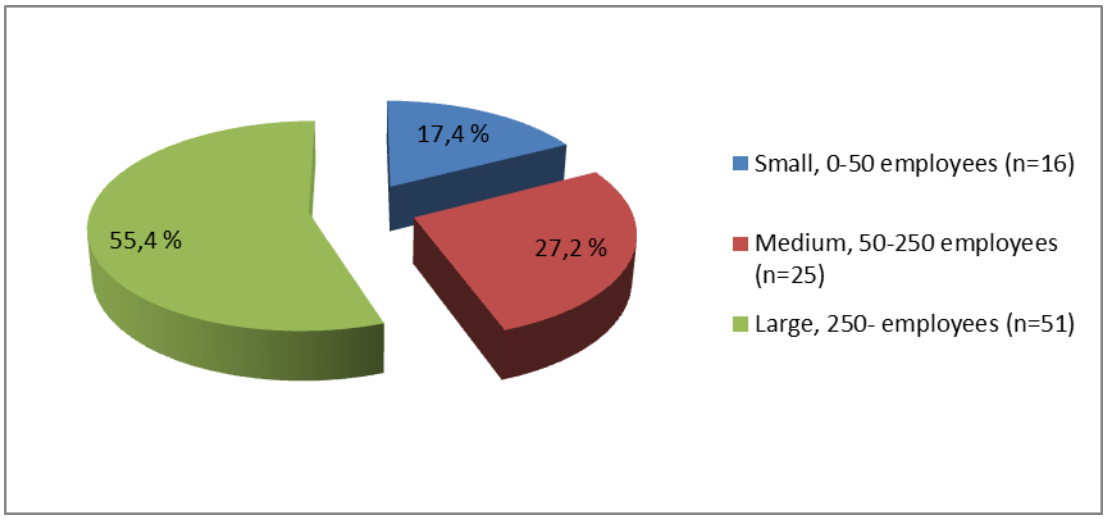

Chart 2. Respondents' distribution based on company size

As earlier indicated, the respondent sample consisted of employees in different positions within their organizations. Table 1 below divides respondents into 8 different categories based on the positions reported in the questionnaire. The majority of the respondents, 22% (n=20), reported to work as product managers. Category "Manager" consists of respondents that reported to work as managers without any particular prefixes in their title. Category "Others" comprises of respondents that reported to work as specialists, engineers or analysts. Two respondents did not answer the question on their job position.

TABLE 2. Respondents' occupational position

Occupational Position	*Frequency*	
	Absolute	Relative (percent)
Brand Manager	3	3.3
Customer Manager	5	5.6
Marketing Manager	13	14.4
Packaging Manager	5	5.6
Product Manager	20	22.2
Sales/ Purchase Manager	19	21.1
Manager	18	20.0
Other	7	7.8
TOTAL	90	100

Table 3 displays the respondents' views on the significance of packaging innovations to product success. The majority of the responses indicated that packaging innovations are seen as important (31.1%) or very important (66.7%) to product success. Only 2.2% of the respondents state that packaging innovations are not an important issue, and two respondents did not answer the question

at all. Hence, the results for this particular question suggest that the importance and potential of packaging innovations have been recognized in most companies.

TABLE 3. Respondents' view on importance of new package to product success

The importance of packaging to products success	*Frequency*	
	Absolute	Relative (percent)
Unimportant	0	0
Of little importance	2	2.2
Neither important or unimportant	0	0
Important	28	31.1
Very important	60	66.7
TOTAL	90	100

The respondents were asked the stage in which package development process is typically started in their company in relation to NPD process (Table 4). Answers varied to some extent, however the majority of the respondents (55.4%) reported that the package development was generally started in tandem with the product development. 18 respondents (19.6%) suggested that the package development takes place after the product concept has been designed. 15.2% of the respondents' companies conduct constant packaging development that is not necessarily connected with product development. The minority of the respondents told that packaging development was started only when the product was ready for production (4.3%) or already before starting the product development (3.3%). The question was left unanswered by two respondents.

TABLE 4. Starting phase of new package development in relation to NPD process

Starting stage of package development	*Frequency*	
	Absolute	Relative (percent)
We conduct constant packaging development separate from product development	14	15.6
Before starting the product development	3	3.3
In line with starting the product development	51	56.7
When the product concept is ready	18	20
When the product is ready for manufacturing	4	4.4
TOTAL	90	100

Table 5 displays the response distribution of typical department within the organization to start the package development process. Response alternatives for the question were marketing, R&D, manufacturing/ production, management or other. According to the responses, the marketing department is the most typical function to start the new package development launch in most organizations (60.9% of the responses). R&D section was the second most common response

(19.6%) whereas it seems that production/ manufacturing (5.4%) and management (8.7%) more rarely act as drivers for new package development process. 4.3% of respondents chose the alternative "Other" by stating that in their organizations package development was typically started by the package development department, product management or product manager. One respondent left the question unanswered.

TABLE 5. Typical initiator of the new package development process

Department typically starting package development	*Frequency*	
	Absolute	Relative (percent)
Marketing	56	61.5
R&D	18	19.8
Manufacturing/ production	5	5.5
Management	8	8.8
Other	4	4.4
TOTAL	91	100

Furthermore, the respondents were asked the typical reason leading to package innovation within the organisation. The alternatives were competitors' actions, change in product or product concept, results of a consumer survey, customer feedback, feedback from grocery stores or technological innovation. Results, displayed in Table 6, were interesting. Quite expectedly, the majority of the respondents (54.3%) argue that changes in products or product concepts lead to packaging innovations, and 16.3% state that technological advancements are the driver for new package development. However, what can be seen surprising is that customer feedback and especially the feedback from grocery stores are rarely seen as drivers for new package development. Furthermore, in an open question factors such as trends, employees' own initiatives, willing to maintain customers' interest, need for renewal and development arousing from external environment and ecologicality are mentioned.

TABLE 6. Typical drivers for new package development

Driver for starting package development process	*Frequency*	
	Absolute	Relative (percent)
Competitors' actions	5	5.6
Change in product/ product concept	50	55.6
Results of consumer survey	13	14.4
Customer feedback	3	3.3
Feedback from grocery store	4	4.4
Technological innovation	15	16.7
TOTAL	90	100

The survey questionnaire was aimed at measuring the success of package innovations and new package development process. As already stated, prior research has assessed new package success

through subjective evaluation of respondents'. In this paper, the success is measured similarly, by asking the respondents to evaluate the percentage of new packages that are successful compared to all packaging innovations. The respondents were asked to evaluate the percentage of companies' new packages achieving their set goals and targets, and the percentage of their new packages leading to sales increases. The results are displayed in Tables 7 and 8, respectively. Responses are categorized in three classes; 0 – 33%; 33 – 66% and 66 – 100%. The classes are chosen to be named as minor (0 – 33%); fair (33 – 66%) and major (66 – 100%). This way one can form a more clear view on the distribution of the responses. Furthermore, the limited number of responses is more easily analyzed when the frequencies on each category are at a reasonable level. What is noteworthy in evaluating the responses on the new package success is that 20 respondents did not answer the questions. This can be seen to weaken the reliability of the analysis.

The frequencies between classes in both questions Q8 and Q9 are somewhat even. The responses state that 41.7% of respondents evaluate that the majority (66 – 100%) of their packaging innovations achieve their set goals, whereas 31.9% of respondents think that a fair part (33 – 66%) succeed in achieving the goals. Still, 19 respondents (26.4%) told that only the minority (under 33%) of their new packages achieve their set goals. What the question doesn't tell are the goals that are set for the packaging innovations and what are the goals that are typically achieved. Furthermore, the respondents are more negative in evaluating the percentage of new packages leading to increased sales; only 31.9% assess that the majority of their new packages lead to sales increase, whereas 34.7% of the respondents state that only 1/3 or less of the new packages lead to increase in sales.

TABLE 7. Success rate of new packages, measured by goal achievement

Percentage of new packages achieving their set goals	*Frequency*	
	Absolute	Relative (percent)
Minority (0 - 33%)	19	26.4
Fair part (33 - 66%)	23	31.9
Majority (66 - 100%)	30	41.7
TOTAL	72	100

TABLE 8. Success rate of new packages, measured by increase in sales

Percentage of new packages leading to increased sales	*Frequency*	
	Absolute	Relative (percent)
Minority (0 - 33%)	25	34.7
Fair part (33 - 66%)	24	33.3
Majority (66 - 100%)	23	31.9
TOTAL	72	100

4.1.2 Empirical findings

The hypotheses' testing was conducted by analyzing the correlations between dependent and independent variables. Moreover, the hypotheses were further tested with one-way analysis of variance (one-way ANOVA). The findings are presented in this chapter.

Table 9 displays the means, standard deviations, correlation and significances for all dependent and independent variables utilized in the study.

TABLE 9. Means, standard deviations and correlations between dependent and independent variables

Variable	*Mean*	*s.d.*	*1*	*2*	*3*	*4*	*5*	*6*
1 Success of new package, goal achievement [d]	2.15	.816						
2 Success of new package, sales increase [d]	1.97	.822	.263**					
3 Cross-functionality [i]	2.22	.660	-.068	.015				
4 Resource allocation [i]	2.14	.933	.270**	.028	.393***			
5 Starting phase of package development [i]	2.94	1.021	-.175	.184	-.182*	-.276*		
6 The use of market research [i]	3.86	1.277	-.032	-.135	.236**	.398***	-.265**	
7 Company climate towards package development [i]	4.62	.610	.056	.196*	-.058	-.021	-.197*	.146

* Significant at level $p < 0.10$ ** Significant at level $p < 0.05$ *** Significant at level $p < 0.01$
[d] Dependent variable [i] Independent variable

Analyzing the variables at individual level, the table shows that respondents were especially unanimous about the high significance of package development on product success (mean 4.62, s.d. 0.610). Furthermore, market research was considered as an important factor for new package development process, even though the responses varied relatively much (mean 3.86, s.d. 1.277). What is noteworthy in the analysis on individual variables is the relatively low number of participants in the new package development process (mean 2.22, s.d. 0.660).

Table 9 shows a statistically significant, positive correlation between two dependent variables; the assessment on the percentage of new packages achieving their set goals and the percentage of new packages leading to sales increase ($r = 0.263$, $p < 0.05$). Moreover, the table illustrates interesting correlations between independent variables. Quite naturally, there is a relatively strong positive correlation between the number of participants in the package development process and the resources allocated to the process ($r = 0.393$, $p < 0.01$). Additionally, there is a clear positive correlation between resource allocation and the attitudes towards market research ($r = 0.398$, $p < 0.01$).Thus, the correlation suggests that the more significant market research is considered for new package development success, the more resources are allocated to the process. However, the direction of the correlation cannot be derived from the correlation table.

Furthermore, Table 9 shows statistically significant relation between market research and the starting phase of the package development process ($r = -0.265$, $p < 0.265$). The correlation suggests that the earlier the package development process is started (in relation with new product development process), the more important the market research is considered within the organization. Nevertheless, conclusions on the direction of the relationship cannot be drawn. Moreover, the analysis states that the attitude towards market research and the number of participants in package development process are positively correlated. Hence, organizations that see market research as an important tool in package development are more likely to have more participants from different departments in their package development process ($r = 0.236$, $p < 0.05$).

Furthermore, the data suggests that the starting phase of the package development process is negatively correlated with the number of participants in the process and with resources allocated to the process. Hence, the earlier the process is started within the company, the more resources are allocated ($r = -0.276$, $p < 0.10$) and more functions participate in the process ($r = -0.182$, $p < 0.10$). Moreover, also the attitudes towards packaging seem to correlate with the starting phase of the process ($r = -0.197$, $p < 0.10$). Hence, the correlation suggests that the more important packaging is considered for product success; the earlier the package development process is started.

4.1.2.1 Package success drivers

Contrary to prior research, first hypothesis *H_1: Thorough market research and market observation have positive influence on new package development success* doesn't get statistical support from the empirical data. Table 10 shows that the correlations between the independent variable and two

dependent variables are not statistically significant. Furthermore, Table 10 below displays the results of the one-way analysis of variance test. Although the F-value of the independent variable and the dependent variable "percentage of new packages leading to increased sales" seems statistically significant ($F = 3.017$, $p < 0.05$), Levene's Test for Equality of Variances indicates that the variances are different at a statistically significant level, which leads to the one-way ANOVA test not being reliable (3.05, $p < 0.05$). Thus, the one-way ANOVA test cannot be further analyzed. However, as the correlations presented earlier suggest, positive correlations exist between independent variables and market research, e.g. resource allocation and market research are positively correlated. This way there is a possibility that market research has indirect effects on package success.

TABLE 10. Effect of the use of market research to package success: one-way ANOVA

Use of market research	*Success of new package, sales increase (%)*		*Success of new package, goal achievement (%)*	
	Mean	s.d.	Mean	s.d.
Very low	61.67	17.224	48.60	29.997
Low	65.56	28.880	61.11	27.131
Not low nor high	55.00	63.640	55.00	25.000
High	37.92	23.027	52.96	26.358
Very high	53.45	21.260	59.04	21.167
Total	50.43	25.234	56.04	24.377
F	3.017		.407	
Significance	.024**		.803	

** Significant at level $p < 0.05$

Furthermore, empirical findings show no statistical support to hypothesis *H_2: Starting the new package development process as early as possible and integrating it with new product development process have a positive influence on new package success.* Correlations shown in the Table 9 are not statistically significant, neither are the results of one-way ANOVA, displayed in Table 11. Nevertheless, as earlier stated, the starting phase of the new package development process is correlated with resource allocation and the number of participants in the process. Thus, it may affect the new package success indirectly.

TABLE 11. The effect of the starting phase of the new package development process to package success: one-way ANOVA

Starting phase of the process[1]	*Success of new package; sales increase (%)*		*Success of new package; goal achievement (%)*	
	Mean	s.d.	Mean	s.d.
1	40.45	26.875	65.91	20.835
2	35.00	13.229	61.67	12.583
3	51.46	26.628	54.63	25.357
4	50.00	21.573	52.14	22.250
5	70.00	20.000	44.33	38.812
Total	49.58	25.381	55.74	24.232
F	1.156		.784	
Significance	.338		.539	

[1] 1. Constant packaging development; 2.Before starting the product development; 3. In line with starting the product development; 4. When the product concept is ready; 5. When the product is ready for manufacturing/ production

Hypotheses *H_3: Significant amount of internal resources allocated to new package development has a positive influence on new package success* tests the relation between how much internal resources allocated to package development affects the success of the process. Correlation table (Table 9) displays statistically significant positive correlation ($r = 0.270$, $p < 0.05$) between the independent variable and the percentage of new packages achieving their goals. The positive correlation indicates that the more resources are allocated, the bigger percentage of new packages achieves their goals. The hypothesis is further tested with one-way ANOVA which confirms the finding. F-value from ANOVA test states that the increase in the independent variable leads to increase in the dependent variable "the percentage of new packages achieving their goals" ($F = 5.162$, $p < 0.01$). Thus, the empirical data supports the hypothesis that significant amount of internal resources allocated to new package development have a positive influence on the goal achievement ratio of new packages. However, no significant correlation was found between the resource allocation and th number of new packages leading to increase in sales.

TABLE 12. Resource allocation and package success: one-way ANOVA

Cluster	*Success of new package; sales increase (%)*		*Success of new package; goal achievement (%)*	
	Mean	s.d.	Mean	s.d.
1	48.28	28.188	49.32	24.704
2	63.33	28.868	35.00	17.321
3	50.00	23.299	64.64	19.670
Total	50.00	25.441	55.84	23.514
F		.456		5.162
Significance		.636		.009***

*** Significant at level p < 0.01

Hypothesis *H_4: Cross-functional new package development team affects positively on new package success* suggests that there is a positive correlation between the number of participants in the new package development process from different functions within the organization and the success of new package. Empirical analysis doesn't support the presumption. Table 12 shows that no significant correlations are reported between the number of participants in the process and the percentage of new packages leading to increase in sales, or the percentage of new packages achieving their goals.

TABLE 13. The effect of cross-functionality of new package development team to package success: one-way ANOVA

Cross-functionality of the team [1]	*Success of new package; sales increase (%)*		*Success of new package; goal achievement (%)*	
	Mean	s.d.	Mean	s.d.
1	48.13	26.449	54.78	28.512
2	50.71	25.871	55.68	24.272
3	48.62	25.351	56.15	23.635
Total	49.58	25.381	55.74	24.232
F		.067		.011
Significance		.935		.989

[1] Displays the number of different functions within the organization taking part in the new package development process. The variable was measured with 1-to-5 scale but all the responses in the sample get values of 1, 2 or 3.

The last hypothesis, *H_5: Innovation-friendly company climate and attitude have a positive influence on new package success*, tested the relation between how important the respondents considered packaging innovations to new product success, and how successful the new package development

has been in terms of sales increase and goal achievement. As the Table 8 indicates, statistically significant positive correlation between the importance of new package development and the number of new packages leading to increased sales exists ($r = 0.196$, $p < 0.10$). One-way ANOVA test supports the finding. As Table 13 confirms, the more important package development is seen to product success, the bigger percentage of new packages in the company are assessed to lead to sales increase ($F = 2.960$, $p < 0.10$). The finding gives an indication that company climate and attitude towards innovations may have positive influence on the success of new package. Nevertheless, empirical data doesn't show relation between how important package development is seen and the percentage of new packages achieving their goals.

TABLE 14. The effect of company climate towards package development to package success: one-way ANOVA

Company climate towards package development [1]	*Success of new package; sales increase (%)*		*Success of new package; goal achievement (%)*	
	Mean	s.d.	Mean	s.d.
High	42.17	25.621	52.61	21.840
Very high	53.06	24.766	57.20	25.358
Total	49.58	25.381	55.74	24.232
F	2.960		.559	
Significance	.090*		.457	

[1]Company climate towards package development was measured with 1-to-5 Likert-scale but all the responses in the sample get values of 4 or 5.
* Significant at level $p < 0.1$

TABLE 15. Summary of hypotheses

Hypothesis	***Support***
H_1: Thorough market research and market observation have positive influence on new package development success.	No
H_2: Starting the new package development process as early as possible and integrating it with new product development process have a positive influence on new package success.	No
H_3: Significant amount of internal resources allocated to new package development has a positive influence on new package success.	Yes
H_4: Cross-functional new package development team affects positively on new package success	No
H_5: Innovation-friendly company climate and attitude have positive influence on new package success.	Yes

5 Discussion

5.1 Theoretical implications

The aim of this study was to explore new package development process within supplier companies in Finnish fast-moving consumer goods sector. Furthermore, the primary purpose of the paper was to uncover critical drivers and factors influencing the success of package development process. Literature review shows that although new package development is studied to some extent (e.g. Nickel & Jolson 1976; Coles & Beharrell 1992; Ampuero & Vila 2006; Vernuccio et al. 2010), the research is limited especially in respect of new package development process and its success factors. Moreover, prior research has focused on finding determinants for successful new product development process.

Hence, due to the lack of prior academic research in the field of new package development process, this study made an assumption that based on the similarities between package development process and NPD-process, they are expected to share same success factors. Moreover, literature review supports the assumption by suggesting that packaging can be seen as an essential part of the product (Ampuero & Vila 2006; Rundh 2005), as an extension of a product (Underwood 2003) or as an extrinsic or intrinsic attribute of the product, and thus it should be integrated with product development process (Olsson & al. 2004). Therefore, the hypotheses were formed in order to discover whether the success factors of NPD-process identified by prior research apply to new package development process as well.

The study found statistically significant results that show that new package development process shares some same success factors with NPD process, and thus it managed to bring something novel to the academic field. The study found empirical support to positive influence of resource allocation on new package success. More precisely, the study suggests that a significant amount of resources allocated to new package development process increases the rate of new packages achieving their goals. The finding seems reasonable and might have some overtones, such as the significant resource allocation indicates that packaging is seen important for the company and that way it's getting attention and time from the management. Probably the resource allocation also forces the company to pay attention to goal setting and measurement of success, and that way it can be evaluated more precisely.

An intriguing finding in the study is that the more important package development is considered within the organization, the more likely new package is to lead to increase in sales. Furthermore, the finding suggests that an innovation-friendly climate within the organization has a positive influence on the success of new package development process. The finding supports prior research on NPD process which suggests that companies should create a working environment that supports informal intercourse and inventing ideas. However, innovation-friendly climate is an abstract concept which makes it difficult to measure and further develop in companies.

Quite interestingly, the study found no support to propositions that the amount of market research, cross-functional team or the starting phase of the new package development process would have a positive influence on the new package success. One explanation for the surprising result can be that new package development process is still a new concept in many organizations. Hence, the respondents' evaluation on starting phase or the amount of market research connected to package development can be somewhat unclear. Nevertheless, the study provides interesting information on interrelations between the tested success factors. According to empirical data, the more resources allocated to new package development process, the more market research is conducted and the more participants the process is likely to have. Thus, this refers to these two factors having at least some influence on the success of the process since they are quite obviously connected to each other. Moreover, the study suggests that the more important package development is seen to product success, the earlier the process is started within the organization. Hence, the starting phase of the process may have an indirect effect on process success.

Thus, the findings of this study indicate that similarities between NPD-process and new package development process exist. Although not all the hypotheses did get statistical support from the empirical data, the study suggests that there exist certain drivers that have positive influence on new package development process, which is a completely new finding in the field. Furthermore, the determinants of successful new package development process have several correspondences with NPD-process success factors. Moreover, the literature review states that in many companies new package development process is less developed compared to NPD process in several ways. Hence, one could argue that larger attention to new package development within organizations is likely to make the process more organized and structured in the future, and that way even more similar with NPD process.

This study indicates that the new package development processes are evaluated to quite rarely lead to increase in sales. This is interesting in respect to study findings that 95.6% of the respondents see package development important or very important to product success. The study doesn't give direct answer to the inconsistency of the responses but one possible explanation could be that the effects of new package development are somewhat difficult to measure. Quite surprisingly as many as 56.7% of companies start their package development process in line with product development process. This indicates that the significance of package as one product attribute is reckoned in many companies.

What is significant in this study is that the determinants of new package development process have not been researched before. The paper succeeded in finding statistically significant results. Hence, it managed to fill some of the prior research gap and bring something novel to the academic field.

5.2 Managerial implications

As prior research shows, innovative packaging has the potential to create genuine competitive advantage to companies and thus should not be ignored in today's market environment. The significance of package development to product success has been identified among company managers to some extent. However, in order to capture the entire potential of packaging, more attention needs to be drawn to the issue.

This study was conducted in Finnish retail industry where market is highly mature, and thus growth can be achieved mainly through increasing the market share. In an industry where the number of players is significant and product offerings are relatively homogenous, innovativeness and especially package innovations are an effective way to differentiate from competitors and that way attract more customers. As the prior research states, visual package elements play a major role in purchase decision, especially in low involvement products, such as retail groceries (Silayoi & Speece 2004).

There are clear implications to product managers seeking to increase the success rate of new package development processes. Companies need to concentrate on creating a more innovative-friendly climate in order to change the mindset of the employees towards the new package development process. Prior research suggests that the innovation-friendly climate can be achieved for instance by giving employees the opportunity to use time informally to develop new ideas during the work day or continue working with innovation projects that have already been officially

terminated (Cooper and Kleinschmidt 1995). Furthermore, the processes should be designed in a more structured manner and integration with NPD process should be highlighted.

Moreover, resource allocation is shown to increase the success rate of new package development process. Thus, more internal resources should be allocated to the process, including market research and participants from different functions of the organization.

However, this study showed that the success and effectiveness of company's package innovations are not extensively on the record within the company representatives. In order to design package development processes that lead to sales increases, the measurement methods of new package effectiveness and success of new package development process should be improved and further developed.

5.3 Limitations and further research

Although this study has some potentially interesting implications, certain limitations do exist; some of them relating to the context of the study, and some being characteristic to the research methods used.

It should be noted that the study was conducted in Finnish fast-moving consumer goods sector which limits the geographical generalizability of the findings. Furthermore, the results are not automatically applicable to other industries than FMCG sector. However, as earlier stated, the observed sector is particularly interesting research field for package innovations due to their significant role for product success in the industry. Therefore, the target of the study is justifiable.

Furthermore, wider perspectives and more information could have been achieved with a larger sample size. The remote number of responses poses the most significant limitation for the study. Moreover, the questionnaire design posed some limitations to the measurement of the success of new package development process. However, the success of new package development was measured with two dependent variables which increases the reliability of the measurement. The potential limitation of the self-completed survey also exists. However, a genuine need for further research in the field is identified in the study, and a more extensive empirical data could afford intriguing findings. Besides, as this study was conducted using quantitative research methods, some valuable findings on the field could be discovered with qualitative research approaches.

The novelty of package development process as a research field indicates that much is left to be uncovered. This particular study could be extended to several directions. The study measured the success of the new package development process via asking how well new packages succeed in achieving their goals. What it didn't untangle were the objectives of new package development processes within organizations. Useful findings could be made by exploring the goals of package development process and how they are being measured. One interesting extension to this paper would be conducting a longitudinal study to examine how the attitudes towards packaging innovations develop in time within the organizations observed in this study. Moreover, this study focused on the determinants of successful package development process but did not discuss the barriers for package innovations. The topic has been studied to some extent (Calantone & di Benedetto 1998) but further research is needed. Moreover, as the paper indicates, the cross-functionality of the new package development team is positively correlated with several other factors within the process, such as the level of market research conducted and the starting phase of the process. Even though this study didn't find a significant correlation between cross-functionality and new package success, an interesting future research topic would be exploring the significance of different functions to the process success; and the meaning of coordination between different functions in different phases of the process. The subject has been studied in the context of NPD process (Ernst et al. 2010) but new package development lacks empirical research in the field.

Furthermore, some valuable findings could be achieved by studying the new package development process between small and large companies; do factors such as the degree of formality or organization's hierarchy – which naturally differ in organizations of different sizes – affect the process success. Also dividing company's packaging innovations into radical and incremental based on the degree of their novelty (Dewar & Dutton 1986) and comparing their success factors could provide an interesting field of study.

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7 Appendices

Appendix 1. The questionnaire form in Finnish

I	**Taustakysymykset**
Q1	Yrityksenne päätoimiala
Q2	Vastaajan asema yrityksessä
Q3	Yrityksen koko työntekijöinä
Q4	Arvioi, montako eri tuotepakkausta yrityksellänne / yksiköllänne kaikkiaan on valikoimissa
Q6	Arvioi, montako pakkausuudistusta olette toteuttaneet viimeisen vuoden aikana
Q7	Arvioi, montako täysin uutta pakkausta olette toteuttaneet viimeisen vuoden aikana
Q8	Montako oman mielipiteenne mukaan innovatiivista pakkausta olette toteuttaneet viimeisen vuoden aikana? (innovaatiot voivat liittyä brändiviestintään, tuotteen käytettävyyteen, materiaaleihin, muotoon yms.)
Q9	Arvioi, kuinka suuri osa pakkausuudistusprojekteistanne saavuttaa alkuperäiset tavoitteensa (prosenttilukuna)
Q10	Arvioi, kuinka suuri osa pakkausuudistuksista johtaa tuotteen kasvaneeseen menekkiin (prosenttilukuna)
II	**Suljetut asenneväittämät (Likertin 5-portainen asteikko)**
	1 - täysin eri mieltä; 2 - jokseenkin eri mieltä; 3 - en osaa sanoa; 4 - jokseenkin samaa mieltä; 5 - täysin samaa mieltä
A1	Yrityksessämme pyrimme mieluummin välttämään riskinottoa pakkausuudistuksissa, kuin kehittämään täysin uusia pakkausominaisuuksia (liittyen esim. brändiviestintään, tuotteen käytettävyyteen, muotoon yms.)
A2	Yrityksessämme tuotteen pakkaus nähdään kilpailuaseena, jota kehittämällä pyritään voittamaan vastaavat kilpailevat tuotteet
A3	Markkinatutkimus on yrityksellemme tärkeä keino selvittää, toimiiko suunnitteluvaiheessa oleva uusi pakkaus halutulla tavalla kuluttajien näkökulmasta
A4	Yrityksemme ei juuri käytä sisäisiä resursseja pakkausuudistuksiin
A5	Pakkausuudistus on enemmän pakollinen kulu kuin investointi
A6	Yrityksessämme pakkausuudistuksella pyritään aina kasvattamaan tuotteen brändin arvoa
A7	Pakkausuudistus on tärkeä investointi, johon käytetään yrityksessämme paljon resursseja eri osastoilla
A8	Yrityksessämme pakkausuudistuksilla vastataan usein kilpailijoiden toimenpiteisiin
III	**Pakkausuudistuksen näkökulmat**
	1 - ei lainkaan tärkeä; 2 - hieman tärkeä; 3 - en osaa sanoa; 4 - tärkeä; 5 - erittäin tärkeä
A9	Arvioi seuraavien pakkausuudistuksen eri näkökulmien tärkeyttä yrityksessänne vallitsevan käsityksen mukaisesti: Brändiviestinnän kehittäminen
A10	Arvioi seuraavien pakkausuudistuksen eri näkökulmien tärkeyttä yrityksessänne vallitsevan käsityksen mukaisesti: Pakkauksen tuotteelle luoman lisäarvon kehittäminen (esim. käytettävyyden parantaminen)
A11	Arvioi seuraavien pakkausuudistuksen eri näkökulmien tärkeyttä yrityksessänne vallitsevan käsityksen mukaisesti: Jakelun tehostaminen ja/tai uuden teknologian hyödyntäminen

A12 Arvioi seuraavien pakkausuudistuksen eri näkökulmien tärkeyttä yrityksessänne vallitsevan käsityksen mukaisesti: Kilpailijoiden voittaminen ja tuotteen myynnin lisääminen

A13 Arvioi seuraavien pakkausuudistuksen eri näkökulmien tärkeyttä yrityksessänne vallitsevan käsityksen mukaisesti: Kustannusten karsiminen

A14 Kuinka tärkeänä pidätte pakkausta tuotteen menestykselle?

IV Aloitusvaihe

1 - teemme jatkuvaa pakkauskehitystä irrallaan tuotekehityksestä; 2 - tuotteen suunnittelun/ kehityksen alkaessa; 3 - tuotekonseptin valmistuttua; 4 - tuotteen ollessa valmis tuotantoon; 5 - ennen tuotesuunnittelun alkua

A15 Arvioi, missä vaiheessa uuden tuotteen pakkaussuunnittelu tyypillisimmin aloitetaan organisaatiossanne?

V Uudistuksen syyt

1 - kilpailijoiden toimet markkinoilla; 2 - tuotteen/ tuotekonseptin muutos; 3 - kuluttajatutkimuksen tulokset; 4 - kuluttajapalaute; 5 - kaupan palaute; 6 - teknologinen uudistus

A16 Arvioi, mikä syy tyypillisimmin johtaa pakkausuudistukseen organisaatiossanne?

A17 Arvioi, mikä syy tyypillisimmin johtaa pakkausuudistukseen organisaatiossanne? Muu, mikä?*

VI Pakkausuudistusprosessiin osallistuvat tahot (asteikko 0 - ei; 1 - kyllä)

A18 Ketkä osallistuvat pakkaussuunnitteluun koko prosessin aikana? Markkinointi

A19 Ketkä osallistuvat pakkaussuunnitteluun koko prosessin aikana? Tuotekehitys

A20 Ketkä osallistuvat pakkaussuunnitteluun koko prosessin aikana? Tuotanto

A21 Ketkä osallistuvat pakkaussuunnitteluun koko prosessin aikana? Ylin johto

A22 Ketkä osallistuvat pakkaussuunnitteluun koko prosessin aikana? Joku muu

A23 Jos vastasit "joku muu", kuka tai ketkä?

VII Uudistuksen aloittaja

1 - markkinointi; 2 - tuotekehitys; 3 - tuotanto; 4 - ylin johto; 5 - joku muu

A24 Mikä taho organisaatiossanne tyypillisimmin laittaa pakkausuudistusprosessin käyntiin?

A25 Jos vastasit "joku muu", kuka tai ketkä?

VIII Pakkausuudistuksen keskeiset ajurit

1 - ei lainkaan tärkeä; 2 - hieman tärkeä; 3 - en osaa sanoa; 4 - tärkeä; 5 - erittäin tärkeä

A26 Miten tärkeänä näette seuraavat asiat pakkausuudistusta suunniteltaessa? Kilpailijoista erottautuminen

A27 Miten tärkeänä näette seuraavat asiat pakkausuudistusta suunniteltaessa? Tuoteryhmän konventioiden säilyttäminen

A28 Miten tärkeänä näette seuraavat asiat pakkausuudistusta suunniteltaessa? Uusien kuluttajaryhmien tavoittaminen

A29 Miten tärkeänä näette seuraavat asiat pakkausuudistusta suunniteltaessa? Visuaalisuuden säilyttäminen lähellä vanhaa

A30 Miten tärkeänä näette seuraavat asiat pakkausuudistusta suunniteltaessa? Täysin uudenlaisten ideoiden luominen

A31 Miten tärkeänä näette seuraavat asiat pakkausuudistusta suunniteltaessa? Hinta

A32 Miten tärkeänä näette seuraavat asiat pakkausuudistusta suunniteltaessa? Pakkauksen myymälänäkyvyys

A33 Miten tärkeänä näette seuraavat asiat pakkausuudistusta suunniteltaessa? Ekologisuus

Appendix 2. The questionnaire form translated into English

I	**Background information**
Q1	Company's main branch
Q2	Job position of the respondent
Q3	Company size in number of employees
Q4	Evaluate, how many different product packages your company/ unit has altogether
Q6	Evaluate, how many package innovations you have executed during the past year
Q7	Evaluate, how many completely new packages have you established during the past year
Q8	How many, based on your opinion, innovative packages have you established during the past year?
Q9	Evaluate, which percentage of your new packages achieve their original goals
Q10	Evaluate, which percentage of your new packages lead to increase in sales
II	**Closed attitude statements (Likert 5-scale)**
	1 - Strongly disagree; 2 – Disagree; 3 - Neither agree nor disagree; 4 – Agree; 5 - Strongly agree
A1	Market research is an essential way for our company to discover whether a package in a development stage works from consumers' perspective
A2	Packaging innovation is an important investment that uses a significant amount of resources in different departments
A3	Market research is an important way for our company to find out whether a new package in development stage works as wanted from consumers' perspective
A4	Our company hardly uses internal resources to packaging innovations
A5	Package renewal is more of an obligatory cost than investment
A6	Our company always aims at increasing product brand value with packaging innovations
A7	Package innovation is an important investment that utilizes large number of resources in different departments of the company
A8	Package developments in our company often aim at responding competitors' actions
III	**Perspectives on package innovations**
	1 – Unimportant; 2 - Of Little Importance; 3 - Neither Important nor Unimportant; 4 – Important; 5 - Very Important
A9	Evaluate the importance of the following perspectives on packaging innovations based on your company's view: Developing brand communication
A10	Evaluate the importance of the following perspectives on packaging innovations based on your company's view: Developing brand communication: The added value that package brings to product
A11	Evaluate the importance of the following perspectives on packaging innovations based on your company's view: Enhancing the effectiveness of logistics and/or exploiting new technology
A12	Evaluate the importance of the following perspectives on packaging innovations based on your company's view: Overcoming competitors and increasing sales
A13	Evaluate the importance of the following perspectives on packaging innovations based on your company's view: Cost cutting
A14	How important you consider packaging to products success?
IV	**Starting phase**

1 - We conduct constant packaging development separately from product development; 2 - Before starting the product development; 3 - In line with starting the product development; 4 - When the product concept is ready; 5 - When the product is ready for manufacturing/ production

A15 Evaluate in which stage package development process is normally started within your organization.

V Drivers for innovations

1 - Competitors' actions; 2 - Change in product/product concept; 3 - Results of consumer survey; 4 - Customer feedback; 5 - Feedback from grocery store; 6 - Technological innovation

A16 Evaluate what typically leads to package innovation within your organization?

A17 Other, what?

VI The departments participating in package development (scale 0 - no; 1 - yes)

A18 Which departments participate in package development during the entire process? Marketing

A19 Which departments participate in package development during the entire process? R&D

A20 Which departments participate in package development during the entire process? Manufacturing/ production

A21 Which departments participate in package development during the entire process? Management

A22 Which departments participate in package development during the entire process? Other

A23 If you replied "Other", which department/s?

VII Initiator of innovation

1 -marketing; 2 - R&D; 3 - manufacturing/production; 4 - management; 5 - Other

A24 Most typically, which department within your organization is the initiator of the new package development process?

A25 If you replied "Other", which department/s?

VIII Essential factors in new package development process

1 – Unimportant; 2 - Of Little Importance; 3 - Neither Important nor Unimportant; 4 – Important; 5 - Very Important

A26 How important do you consider following factors when planning a new package development process? Differentiation from competitors

A27 How important do you consider following factors when planning a new package development process? Maintaining the conventions of the product category

A28 How important do you consider following factors when planning a new package development process? Reaching new consumer categories

A29 How important do you consider following factors when planning a new package development process? Maintaining the visual look

A30 How important do you consider following factors when planning a new package development process? Creating totally new ideas

A31 How important do you consider following factors when planning a new package development process? Price

A32 How important do you consider following factors when planning a new package development process? The point of purchase coverage of the package

A33 How important do you consider following factors when planning a new package development process? Ecology