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Feasibility of loyalty-based metrics in customer-relationship management: A case study

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The objective of this case study was to assess the feasibility of adopting a customer-relationship management strategy which focuses on the maximization of customer loyalty. The assessment was based on the analysis of the statistical relationship between customer loyalty and customer value within the Finnish market of the case company.

The feasibility was assessed in the context of common statements associated with relationship marketing. Primarily, these statements conclude that companies should strive to increase the loyalty of their customers due to increasingly competitive market environments. For companies, the ability to create superior value to customers by forging stronger relationships with them is not only considered a perquisite for survival, but also as a way to increase profitability.

The validity of these statements was tested, and the results were used as a basis for evaluating whether increased customer loyalty increases with customer value within the Finnish market of the case company.

This study was implemented as a quantitative research by using RFM-analysis to evaluate Finnish customers based on two variables; value and loyalty. The evaluation was done based on sales data from 2015 and 2016. Because of the sensitiveness of the information, the collected customer data is not published.

The results indicate that an overall positive statistical relationship between value and loyalty exists. However, due to the limitations of the research methodology, the argument that increased customer loyalty will lead to greater customer value cannot be researched to the full extent.

In conclusion, this research has given valuable information about the composition of the customer base and it will be used to improve customer relationship management activities within the Finnish market.

Keywords	Customer value and loyalty, relationship marketing, customer-centrism, value proposition, RFM-analysis

Contents

1 Introduction

The purpose of this thesis is to evaluate the statistical relationship between customer loyalty and profitability within the Finnish market of the case company Nal von Minden. In essence, the focus is on identifying whether the most loyal group of customers is also the most profitable. Based on this information, an evaluation is made on whether increasing customer loyalty should be set as the guiding principle for the sales activities within the Finnish sales team.

Traditionally, companies have segmented their customer-bases according to a product-centric view (Kumar & Reinartz, 2012). The segmentation has been based on the products customers buy and/or the amount of sales they generate within a specific period of time. The relationship between the company and the customer has been seen as a one-sided relationship, in which case the customer is a passive agent who either accepts or rejects the offering of the company. Hence the company would look at the customer-relationship as a series of individually occurring transactions such as sales, and give little value to the time between these transactions. Competition is viewed as a battle of products, and price-cutting is the most used form of retaliation. Competitive advantages are short-lived since price reductions and product developments are quickly matched by competition (Pohjanmäki, 2005).

In order to achieve competitive advantage in the market, companies are increasingly turning their attention to the role of improving customer relationships (Pohjanmäki, 2005). Therefore the competition no longer occurs between the products, but instead between the customer relationships (Pohjanmäki, 2005). "In this new market, the distinction between success and failure may be reduced to two basic issues, first an understanding of customer needs, and second, the ability to deliver added value" (Baker:19). Thus, the relationship between the company and the customer changes from a simply transactional into a relationship based on mutual value-creation and cooperation. In order to stay competitive in this environment, companies have to abandon the traditional product-centric view, and adopt a customer-centric view which puts the customer at the center of the value-creation process.

This customer-centric view is argued to provide companies with the ability to build stronger and more profitable relationships (Gruen 1997: 33, Buttle 1996:4, Mittal & Kamakura 2001:131, Kotler 2012: 20, Reichheld, Markey & Hopton 2000: 135). This ability is based on the belief that by delivering superior value to the customer, the company is able to create customer satisfaction which results in customer loyalty. Eventually, loyal customers will increase their purchases overtime and are less price sensitive (Sheth & Parvatiyar 1995: 255, Sheth & Sisodia 1995:55, Reichheld, Markey & Hopton 2000: 135). Therefore, the adaptation of customer-centric principles can be regarded as a way for companies to adapt to the ever increasingly volatile market conditions. Although, the promises of customer-centrism appear logical, empirical evidence regarding their application in practical context has brought mixed results (Reinartz & Kumar 2000: 3,Storbacka, Strandvik & Grönroos 1994: 29, Dowling, Uncles 1997: 71).

1.1 Research objectives

The objective of this research is to assess the validity of adopting a loyalty-based approach to customer relationship management. This is done by evaluating the statistical relationship between customer loyalty and value by using a quantitative scoring system. In practice, this seeks to identify whether the most loyal group of customers are also the most profitable. Based on these findings, evaluation is made whether the customer relationship management activities of the Finnish sales team should be guided towards increasing customer loyalty.

Traditional view has been that increasing customer loyalty will eventually lead to increased profits (Kotler 2012: 21). This view is based on the idea that increased customer satisfaction leads to loyalty which eventually materializes in the form of profit (Reichheld, Markey & Hopton 2000: 135). One of the theoretical frameworks addressing the connection between loyalty and profitability is the satisfaction-profitability chain.

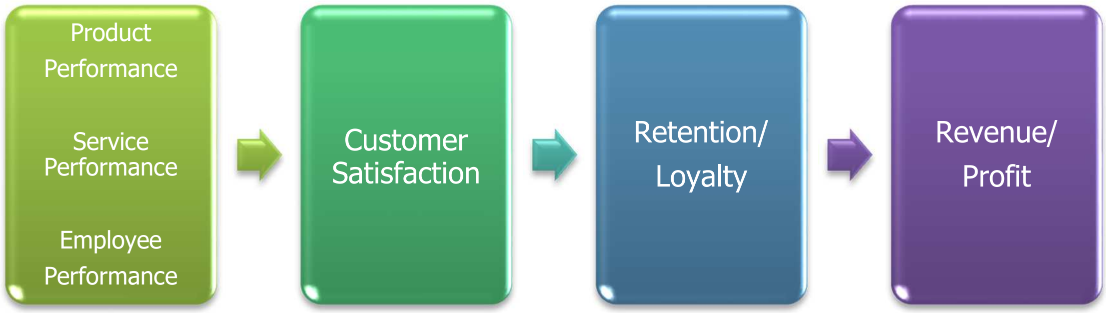

Figure 1. The satisfaction-profit-loyalty chain. Anderson & Mittal 2000.

Although this link between customer-satisfaction, loyalty and profitability is logical and partly supported by research, it is a simplified model that overlooks the different types of costs and benefits included in business-relationships. An example would be a loyal customer who requires extensive amount of customer service and product-specialization. Thus, this customer generates high-sales also consumes high-amounts of resources and reduce the net-value it brings to the company.

The focus of this research was to identify the statistical relationship between customer value and loyalty. Based on the nature of this relationship, an evaluation is made on the feasibility of adopting a loyalty-driven approach to customer relationship management. In other words, "should the customer relationship management activities be directed towards increasing customer loyalty?"

1.2 Case company

The case company, Nal von Minden GmbH is a Germany based medical diagnostics company. It was founded in 2008 when the nal24 GmbH from Regensburg, Germany and von Minden GmbH from Moers, Germany were merged. Altogether the company has more than 30 years of experience in diagnostics field.

The main markets are the European countries; however the company is currently operating in over 60 countries and employs roughly 250 people. Headquarters of the company is located in Regensburg, Germany. Sales teams are located in two locations in Germany, in Regensburg and in Moers where the logistics centre is also located, and in addition the sales office for the Benelux countries, Middle-East, and Scandinavia countries is located in Den Haag, the Netherlands.

Nal von Minden is specialized in Virto diagnostic products, which are tests for detecting diseases, conditions and/or infections. The main product lines of the company are rapid tests used for drug detection and ELISA tests for medical diagnostics in bacteriology, gynecology, infection diseases, pediatrics, and in toxicology. ELISA test are an enzyme-linked immunosorbent assay, which means that the test detects and measures antibodies in the blood. In addition, the company offers various laboratory diagnostics services, such as laboratory confirmation as well as product development and technical support. Customers include wide variety of health and drug clinics, hospitals, occupational health centers, youth homes, organizations and laboratories.

2 Theoretical framework

2.1 The changing nature of competition

Driven by more demanding customers, global competition and slow-growth economies and industries, many organizations have searched for new ways to achieve and retain competitive advantage (Woodruff 1997: 139). This need steams from the increasing competitive pressure in many markets which forces companies to rethink their competitive strategies (Conti, 2013: 227). As a consequence of these external forces, more markets are moving towards a state of hyper-competition. This state is characterized by more intense global competition, increasing fragmentation of markets, a generally high level of product quality, more demanding customers, and rapidly changing customer buying patterns (Buttle 1996: 1).

Success in this new volatile environment requires companies to possess both the ability to meet current competitive requirements, but also the ability to adapt quickly (Pohjanmäki, 2005). Traditionally, as the market matures, companies have turned their attention to compete with price, at the cost of profitability. The resulting cost-effectiveness and the associated competitive ability or product-excellence are not sustainable sources of competitive advantage in a hyper-competitive market (Pohjanmäki, 2005). As a result, traditional product-bound sources of competitive advantage are becoming increasingly short-lived. Technological advancements and reductions in production costs are quickly matched by competition (Pohjanmäki, 2005).

Following this development, companies in most mature markets have begun to adopt customer-centric strategies (Pohjanmäki, 2005). This shift represents new ways for these companies to seek a stable source of competitive advantage by turning their focus away from the products they are selling, and towards the customer. As a result, the ability to manage customer relationships has become an essential requirement for successful competition (Pohjanmäki, 2005).

This change in the external market dynamics has fundamental effects on the way companies compete and manage themselves. In essence, this change culminates as a transition away from traditional product-centric markets into markets that are driven by customer-relationships. As such, the strategic objectives of companies have also changed to mirror this transition. Now, traditional strategic objectives of gaining more market share or increased profit are not achieved purely by pushing more products to the market, but by assessing the value customer gains from the interaction with the company. The concept of value has therefore become a central theme in the competitive environment of the new dynamic market. The value created in the interaction between a company and a customer is regarded as a strategic element which forms the basis for stronger, more profitable customer relationships and thus creates protection for the increased volatility of the market.

2.2 The concept of value

Value is the relationship between the quality of a product or service, brand/corporate image and the price that the customer pays to acquire that product or service (Reidenbach & Goeke 2005: 13). Value can be defined simply as the ratio of perceived benefit to perceived cost arising from engaging in transactions with another party. (Reidenbach & Goeke 2005: 13). In a practical context, the concept of value can be defined as the ability of the product or service, to satisfy a perceived state of deficiency.

Figure 2: Value equation

Value stems from a perceived state of deficiency. This refers to a state in which the actor considers his state as being unsatisfactory. This feeling of dissatisfaction is considered as being comprised of two elements; needs and wants. In modern marketing literature, the state of deficiency is considered to be consisting of needs and wants.

Human needs are states of felt deprivation. They include basic physical needs for food, clothing, warmth, and safety; social needs for belonging and affection; and individual needs for knowledge and self-expression (Kotler 2012: 6). The defining characteristics of needs are that they are considered fundamental elements of the human psyche. Wants are the form human needs take as they are shaped by culture and individual personality (Kotler 2012: 6).

These wants are considered the initiators of the buying action, in which the customer begins to seek a solution to his state. The customer seeks to satisfy the perceived state of deficiency with a product offering available on the market. The value derived from the use of a product is based on the ability of the product to satisfy the wants of the customer.

Naturally, the company aims to satisfy these wants through a product-offering. The concept of product-offering refers to a combination of products, services and information offered to a market to satisfy a need or a want (Kotler 2012: 6). In modern marketing thinking, the value proposition is expressed with the concept of "the 4P's model". This model expresses the product offering as being comprised of four elements; price, product, promotion and place.

Figure 3: 4P's model

For the customer, value derived from the use of a product is based on the ability of the product to solve the particular problem. The evaluation of this ability is done by the customer by comparing the benefits and costs arising from the acquisition and the use of the product (Reidenbach & Goeke 2005: 22). And for the company, the product offering forms the basis for the concept of value proposition. The value proposition is the set of benefits or values the company promises to deliver to consumers to satisfy their needs (Kotler 2012: 9). As such, the value proposition is a strategic measure which the company uses to position itself in the market in relation to competitors (Reidenbach & Goeke 2005: 8).

As discussed earlier, the changes taking place in competitive environments have emphasized the role of value as a strategic element which forms the basis for sustainable competitive advantage in modern markets. As a result, understanding how customers perceive the value proposition of the company has become a key requirement for successful competition. This change has fundamental effects on both the management and marketing functions of the companies, as the delivery and management of value becomes the defining characteristic of competition.

2.2.1 Implications for marketing and management

In a time characterized by increasing acceleration of change and keeping the organization fit for purpose requires full immersion in the environment where the customers of the company operate (Conti 2013: 227). For the majority of the 20th century, companies have been structured and managed around the products and services they create and sell (Peppers & Rogers 2011: 3-4). Product innovation, therefore, was the important key to business success (Peppers & Rogers 2011: 4). As a result, these traditional marketing structures which characterized industrial markets in the 20th century, focused on the adaptation of product or offering to external market structures. Thus, the starting point when approaching the market was the product (Sheth and Sisodia, 1995: 57).

This approach services led to mass-market, product-focused marketing strategies, in which businesses tried to sell the same product to as many people as possible (Kumar & Reinartz 2012: 11-12). In order to increase overall market share, the 20th century company would use mass marketing and mass advertising to reach the greatest number of potential customers. As a result, most 20^{th} century products and services eventually became highly commoditized. (Peppers & Rogers 2011: 4). This strategy increased the cost of acquiring new customers but lowered switching costs for customers. Alongside the lowered switching costs to customers, technological advancement and globalization of markets have increased bargaining power of customers. Thus, many product-centric companies are introduced into an environment where the effectiveness of product-centric management structures is becoming increasingly obsolete. This obsolescence stems from the inefficiency and ineffectiveness of standardized product-offerings in hyper-competitive markets which are characterized by rapidly changing and individual customer needs and wants. In order to stay competitive in this new environment, companies have to adopt new marketing and management structures which address these new market conditions. As a result, companies are increasingly turning towards customer-centric principles in their management and marketing activities.

Customer-centrism is the sufficient understanding of one's target buyers to be able to create superior value for them continuously (Narver & Slater 1990: 21). Customer orientation refers to a management philosophy in which all parts of the organization are managed in a way that aims to create and deliver value to the customer. This means that the decision making of the company is driven by the wants of the customer instead of just the products and services of the company. The defining distinction of customer-centrism is the renewed understanding of the value proposition of the company.

As explained earlier, the traditional understanding of the value proposition would consider it as a sum of four product-bound attributes. Customer-centrism adds on this understanding by expanding the role of value. Instead of being comprised of product-bound attributes, customer-centrism sees value as stemming from the relationship between the company and the customer. Specifically, value arises from an interaction where both of the parties create value to each other in different ways, forming a mutually beneficial relationship (Pohjanmäki, 2005). From the context of customer-centrism, the value proposition is understood as two-dimensional; from the perspective of the company and from the perspective of the customer (Pohjanmäki, 2005).

The desire to create superior value to customers and to attain sustainable competitive advantage drives a business to create and maintain the culture that will produce the necessary behaviors (Narver & Slater 1990: 21). A market oriented business continually examines alternative sources of sustainable competitive advantage to see how it can be the most effective in creating sustainable superior value for its present and future target buyers (Narver & Slater 1990: 21).

A seller creates value for the buyer in two ways: by increasing benefits in relation to the buyer's costs and by decreasing the costs of the buyer in relation to the benefits of the buyer (Narver & Slater 1990: 21). Creating value for buyers is more than just a marketing function - it is a process where each department of the organization acts in harmony to utilize human and capital resources to deliver superior value for buyers (Narver & Slater 1990: 22). Any point in the value chain of the buyer affords an opportunity for the seller to create value for the buyer (Narver & Slater 1990: 22). This value creation process entails discerning what value the company might offer customers, ascertaining what value customers provide the company, and maximizing the lifetime value of the customer (Payne & Frow 2005: 172). Thus, the concept of customer-centrism can be considered as an opposite to product-centric transactional thinking. Primarily, the founding difference between the two philosophies is the understanding of the path to economic profits.

A product-centric organization aims to operate most economically by serving "a typical" customer through a standardized product-offering (Gruen 1997: 33). This allows the company to reduce their production and marketing costs since the product offered are standardized and the differences between the needs and wants of individual customers are ignored, allowing standardized marketing operations (Gruen 1997: 33). The customer remains faceless and is treated as a "target"; the important measure is market share, and product or brand managers manipulate the marketing mix, the 4P's: product, price, place, and promotion, as the foundation of marketing management (Gruen 1997: 33). Thus, the decision-making process of the organization is driven by the product and the decisions are made within the company. As a result, these decisions are made in isolation of the external environment. In an environment characterized by rapid change and individual needs and wants, such decision-making process is unable to match external market conditions.

However, the customer-centric model turns this setting upside down. Instead of focusing on the product, customer-centric marketing focuses on the needs, wants and resources of customers as the starting point of the planning process (Sheth & Sisodia 1995: 57). A customer-centric organization would consider the needs and wants of customers on an individual basis, and use this knowledge as the basis for their value proposition. Instead of aggressively marketing standardized products to as many customers as possible, a customer-centric organization aims to establish mutually-beneficial relationships with selected group of customers.

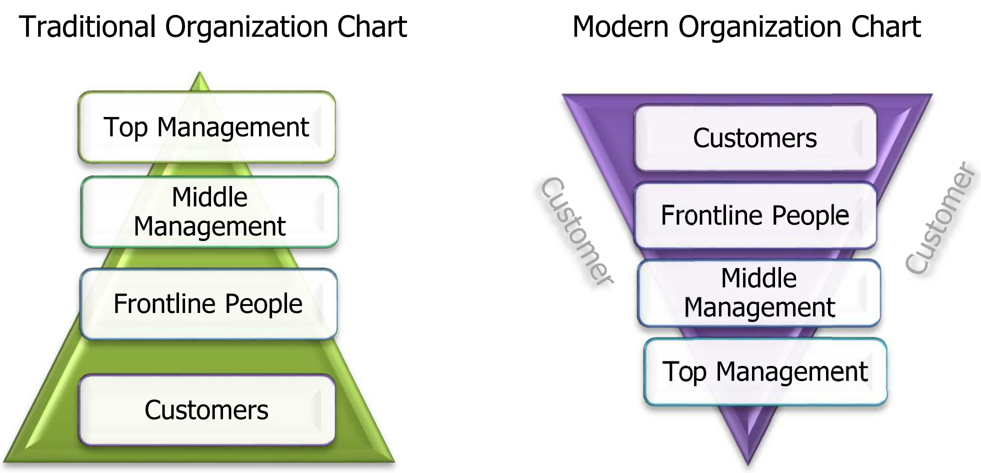

Figure 4. Traditional versus Modern Customer Oriented Company Organization

In essence, a customer-centric organization addresses the volatility of the market by placing the customer at the center of the organization. This allows the organization to address changing customer needs quickly and produce value by addressing their individualized needs and wants through on-going tracking (Jaworski & Kohli 2003: 53). In their work, Jaworski and Kohli presented three environmental characteristics that influence the market orientation of the company (Jaworski & Kohli 2003: 57-58):

- **Market turbulence:** The rate of change in the composition of customers and their preferences. Companies operating in more turbulent markets are likely to have to modify their products and services continually in order to satisfy changing customer preferences.

- **Competitive intensity:** In the absence of competition a company may perform well even if it is not market oriented due to lack of options faced by customers.

The greater the competitive intensity, the stronger the relationship between market orientation and business performance.

- **Technological turbulence:** The greater the technological turbulence, the weaker the relationship between a market orientation and business performance.

In academic research, the adoption of customer-centrism is argued on the basis of economic benefits. Primarily, these arguments relate to customer retention. The importance of customer retention is that it is much more costly to acquire new customers than to retain the existing ones (Reichheld & Sasser 1990). A common argument is that an improvement in customer perceived value will lead to the customer to feel more satisfied and thus reduce his willingness to change the supplier (Gummesson 2011: 258). The ability of the supplier to satisfy the needs and fulfill promises is considered as a determinant for the chances of retaining a customer (Gummesson 2011: 258).

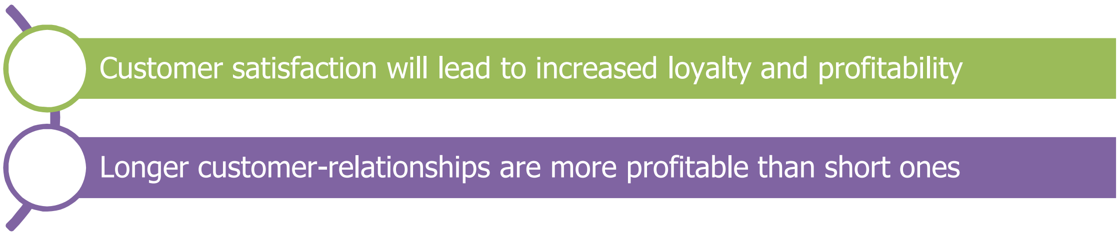

Figure 5: Arguments associated with customer-centrism and relationship marketing

As a result, the formation and maintenance of long-run and mutually beneficial relationships is considered as a basis for the long-run performance of the company (Narver & Slater 1990: 21). The growing importance of relationships is reflected in the use of relationship based metrics when measuring the performance of customer-centric management and marketing (Sheth & Sisodia 1995: 58). These metrics include return-on relationships (ROR), customer equity, and share of wallet.

These metrics highlight the changing role of relationships in a new competitive environment. As competition revolves increasingly around relationships, they become assets for the company. Like any other asset, relationships are understood as investments requiring active management in order to bring economic benefit for the company.

Following this development, the concept of relationship marketing has emerged. Relationship marketing (RM) can be considered as an element of customer-centrism. In RM, the marketing activities of the company are aimed towards establishment of profitable relationships with customers, instead of simply focused on selling activities. Reflecting the notions of customer-centrism, relationship marketing sees satisfaction and loyalty as the requirements for the longevity of the relationship. These are considered to be the results of delivering superior value to the customer.

2.2.2 Relationship marketing

Relationship marketing (RM) constitutes a shift in marketing practice away from transactions and toward customer relationships. The premise behind this shift is that, as a result of exchange efficiencies, long-term relationships are more profitable than short-term relationships (Kale 2004: 45). Relationship marketing focuses on meeting the needs of customers and aims to develop long lasting relationships with customers. If properly executed, it will lead to higher customer loyalty and thus increased sales and profits. Relationship marketing is based on two economic arguments.

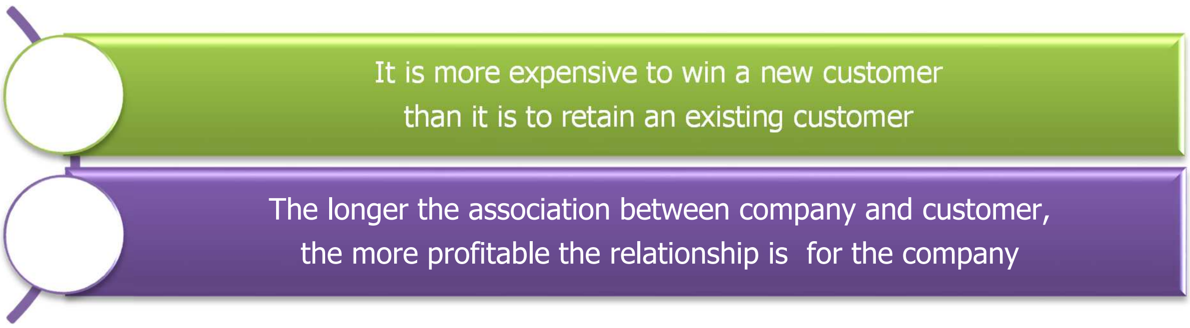

Figure 6: Economic arguments. Buttle 1996.

The key difference between transaction marketing and relationship marketing is loyalty. Loyalty is considered to be a result of customer satisfaction. The importance of customer satisfaction has been emphasized as a measure to lower customer defection and thus improve profitability (Mittal & Kamakura 2001: 131).

Customer satisfaction refers to the extent to which the perceived performance of the product matches the expectations of the buyer (Kotler 2012: 13).

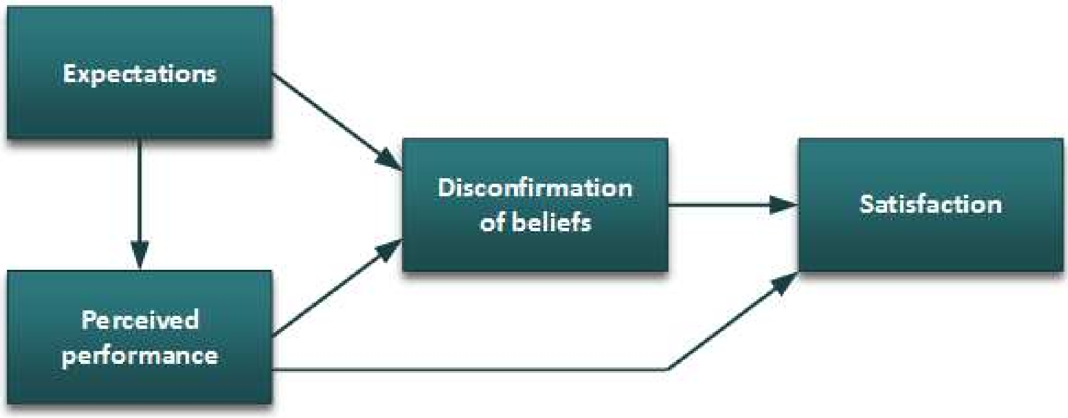

Figure 7: Expectations-confirmation theory.

As such, satisfaction is subjective in nature. The cognitive evaluation process which forms the perception of value has been widely researched in academia. Among the models explaining satisfaction is the expectations-confirmation theory (Oliver, 1977). The model explains satisfaction as stemming from the relationship between expectations and perceived performance of the product.

Expectations are defined as the anticipations of the customer about the performance of the product or service prior to usage (Kotler, 2012: 7). First, the customers have an initial expectation based on their previous experience with using specific product or service (Elkhani, Bakri, 2012: 97). **Perceived performance** refers to the experience felt by the customer following the usage of the product or service (Elkhani, Bakri, 2012: 97). This experience can be either better or worse than the expectations prior to usage. The difference between expectations and perceived performance is known as **Disconfirmation**. This can be either positive or negative. Negative disconfirmation forms when the actual performance of the product or service cannot meet the expectations held by the customer prior to usage. Positive disconfirmation stems from the opposite situation in which the actual performance of the product or service exceeds the expectations prior to usage (Elkhani, Bakri, 2012: 97). Disconfirmation is considered as the underlying driver for customer satisfaction and dissatisfaction.

In relationship marketing, the development of customer satisfaction and loyalty is approached through an active and strategic manner. This is done by setting the development of increased customer loyalty as a strategic objective in order to drive better organizational performance. Reflecting this goal is the application of frameworks which aims to model the level of loyalty on a per customer basis. These frameworks are believed to help the organization to approach the development of customer loyalty in a more systematic manner. Among these frameworks is the concept of loyalty-ladder.

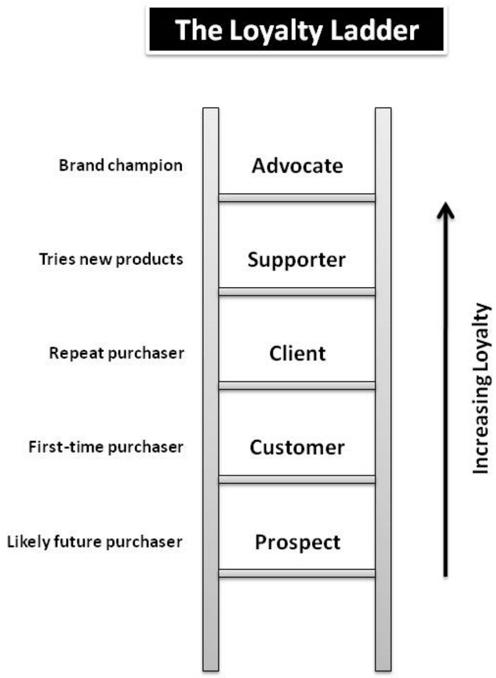

Figure 8: The loyalty ladder.

In this model, the relationship is seen as being comprised of different levels based on customer loyalty. The guiding principle for the company is to actively manage the relationship in order to "push" the customer upwards on the ladder. As a result of these actions, the customer is believed to become more loyal and thus more profitable in the process. This increased profitability stems from the belief that loyal customers increase their purchases overtime due to satisfaction stemming from the value generated by the relationship (Reichheld, Markey & Hopton 2000: 135).

Thus, the underlying argument in favor of relationship marketing and customer-centrism in general is based on the connection between satisfaction, loyalty and profitability. This analogue is expressed in the form of satisfaction, loyalty, profitability chain:

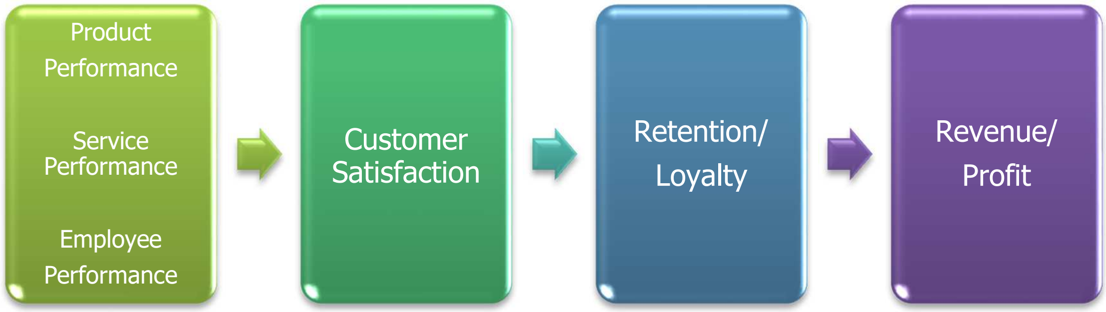

Figure 9: The satisfaction-loyalty-profitability chain.

The analogue of the chain states that the company can create superior value to the customer through customer-centric management which in turn leads to customer satisfaction. By addressing the customer as an individual, the company can create a value proposition which caters to the needs and wants of the specific customer more accurately than a standardized market offering. This value proposition is then perceived as matching or exceeding the expectations of the customer and thus leading to the feeling of satisfaction by the customer. This satisfaction incentives the customer to maintain the relationship with the company. Overtime, the company maintains a close and actively managed relationship with the customer. This allows the company to effectively adjust their value-proposition according to the changing needs and wants of the customer. As the relationship progresses, the constant delivery of superior value by the company creates a sense of loyalty on the customer. In practice, the customer is unwilling to switch to another supplier due to perceived switching costs. These switching costs can be both tangible and intangible. Thus, by active loyalty-driven management of the relationship, the company is able to "push" the customer upwards on the loyalty-ladder and "tie-in" the customer, protecting them from competition. Overtime, the increased loyalty makes the customer more open to increase their purchases since the relationship is regarded as "safe".

Although appearing logical, the satisfaction-loyalty-profitability chain, along with customer-centrism in general, has become under criticism when applied to real market environment. Primarily, the criticism relates to difficulties in measuring monetarily the effects of relationship marketing. Specifically, the issue relates to the subjective nature of satisfaction and loyalty (Mittal, Kamakura 2001: 131). Research has highlighted the differences in nature between satisfaction and loyalty. Satisfaction relates to the internal cognitive evaluation process done by the customer whereas loyalty refers to practical actions done as a result of satisfaction. In essence, the focus of satisfaction is internal whereas loyalty is considered external. Thus, the link between satisfaction and loyalty is based on how well the internal feelings of satisfaction materialize in the form of practical actions, mainly purchase-behavior.

Another critique can be aimed towards the idea that a highly subjective concept such as satisfaction could be incorporated into the decision-making of the company. In essence, the difficulty lies in accurately measuring the elements which contribute to positive disconfirmation. In addition, if these elements could be successfully identified and incorporated into practical decision by the company, they could prove to useless to other customers since they are a result of subjective evaluation. Based on this observation it can be observed.

Research has aimed to analyze this link between different elements of customer loyalty and profitability (Storbacka, Strandvik & Grönroos 1994: 21, Reinartz & Kumar 2000: 4, Reichheld, Markey & Hopton 2000: 135, Dowling & Uncles 1997: 71). These elements of customer loyalty refer to different buying-actions by the customers, and include such factors as the length of the relationship (Reinartz & Kumar 2000; 25, Storbacka, Strandvik & Grönroos 1994: 21), and changes in repeat purchasing behavior (Mittal & Kamakura 2001: 131, Dowling & Uncles 1997:71). These studies have primarily focused on drawing conceptual models between a specific element of loyalty and profitability.

The results of these studies have been mixed, with several studies questioning the key tenants of customer-centric thinking. For example, in their study, Dowling and Uncles discovered that long-term relationship often lead to higher customer expectations, thus requiring increased investments in the form of value-added services on the behalf of the company in order to maintain the relationship (Dowling & Uncles 1997: 71).

Studies have also highlighted the weak connection between the subjective notion of customer satisfaction and practical actions taken by the customer. In their study, Mittal and Kamakura studied the correlation between customer satisfaction and repurchase intent. The study showed that even though the link between satisfaction and repurchase intent appears logical, in real-life situations this link is difficult to identify (Mittal & Kamakura 2001: 131). The cause for this was identified as being due to varying customer characteristics which can introduce variability in the satisfaction-retention relationship (Mittal & Kamakura 2001: 131). The major characteristics affecting the repurchase behavior were satisfaction thresholds and response bias. Satisfaction thresholds refer to the notion that the level of satisfaction required for the customer to actually go forth with a repurchase varies between customers (Mittal & Kamakura 2001:132). Response bias means that the level of satisfaction reported by the customer itself does not accurately reflect the latent satisfaction level (Mittal & Kamakura 2001:132).

This difference is often the result of external elements affecting the buying-decision of the customer which the company cannot influence. Examples of these elements are social-elements such as the influence of co-worker friends or opinion-leaders. A highly satisfied customer might feel social pressure to switch to another supplier even though the new product offers less satisfaction. The lack of correlation between satisfaction and new purchases can also be observed the other way around. A customer who buys large quantities and displays the characteristics of loyalty might do so only because of lack of knowledge or alternatives. Therefore, in order to assess the validity the founding principles of customer-centrism, the concept of a customer relationship should be analysed in greater detail.

2.3 The concept of a customer relationship

A customer relationship can be considered as a series of activities between a buyer and a seller directed toward the development, design, and control of a mutually intended transfer of property rights (Kleinaltenkamp, Plinke, Wilkinson & Geiger 2015: 4). This definition highlights two important factors which set a customer relationship apart from random encounters with a customer.

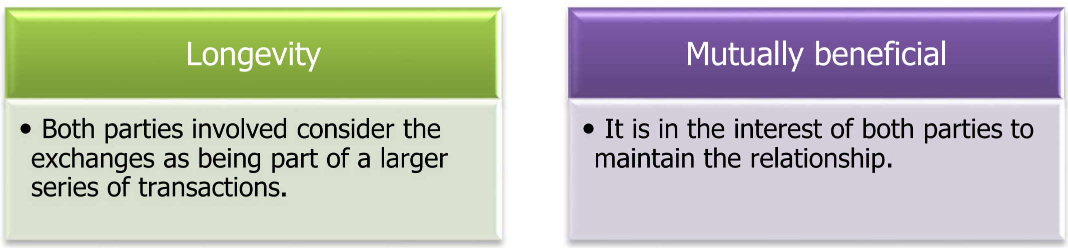

Figure 10: Characteristics of a customer relationship.

Longevity refers to the notion that both parties consider the relationship as on-going and consider their interactions with the other party as a part of continuity. Thus, all interactions between a supplier and a buyer are not considered as business relationships. An example of such a situation would be a case where a buyer makes a one-time purchase to the supplier due to temporary shortage from their primary supplier. In such case, the buyer is not considering the purchase of being a part of a larger set of interactions. Another defining characteristic of a business relationship is the mutual-creation of value. It refers to the notion that both parties perceive the relationship as beneficial to them. In practice, both parties perceive themselves as better off after completing a transaction.

Following this analogue, a relationship is understood as being comprised of a series of exchanges between two parties based on the mutual creation of value. Thus, it can be observed that the value of the relationship as a whole arises from the value created in each individual exchange between the buyer and the seller.

Figure 11: Elements of a transaction. Suematsu 2014.

Following is an explanation of these stages and their characteristics as presented by Suematsu.

- **Connection** – a transaction partner is searched, selected, accessed, and communicated with.

- **Presentation** – The presentation element starts after both transaction partners agree to communicate. Presentations of information are bilateral, and the information is provided from both the supplier and customer sides. The information required by the customer side is regarding the potential supplier's products and capabilities, such as the quality, cost, and delivery.

- **Negotiation -** After the bilateral presentation for basic understanding of each other, the transaction partners negotiate and agree about concrete specifications and detailed conditions of the transaction that they are going to execute and conclude contract documents. It usually requires internal coordination on both sides.

- **Exchange -** According to the agreed transaction conditions, the delivery and acceptance of the product, the inspection, the payment, and so forth are executed administratively and technically.

- **Ex-post processing -** It is not the end of a transaction when the exchange is completed. The transaction can include after-sales activities, such as monitoring of the product performance or handling of any possible problems.

In the simplest form, an exchange can be understood as a transfer of property rights. However, this definition narrows the concept of an exchange as a simple transfer of a physical good. In practice, the objects transferred in exchange cover a complex bundle of material as well as nonmaterial assets, including social symbols, services, favors, gestures, information, support and guarantees (Kleinaltenkamp, Plinke, Wilkinson & Geiger 2015: 9). Therefore, the act of exchange is not simply a process where the ownership rights of a physical good are transferred, it also involves reaching an agreement on affecting an exchange of tangible and intangible values (Kleinaltenkamp, Plinke, Wilkinson & Geiger 2015: 5). In essence, an exchange includes the transferring of both tangible and intangible elements.

The primary tangible element of the exchange is the product itself. This so called core-product acts as a basis for the formation of value in the exchange since it is the reason why the exchange was originally initiated. Thus, the core-product determines any other tangible costs arising from the exchange. These other costs are tied into the core-product as either in the form of supporting activities or as by-products arising from the use of the core-product.

An example of this concept in the medical diagnostics industry could be a GC/MS machine. GC/MS stands for gas chromatography–mass spectrometry. These machines are often used in laboratories to identify different substances at great detail. These machines are technically complex and represent a large investment for most laboratories. As such, a laboratory which decides to purchase one of these machines would incur tangible costs that are not directly linked to the actual process of identifying different substances via the GC/MS method. In practice, the laboratory would have to invest in training of personnel needed to operate the machine. In addition, investments would be required to data-management systems needed the process the data created by the machine. Therefore, when the laboratory decides to purchase a GC/MS machine, the transaction involves other tangible costs in addition to the cost of the actual machine. For the seller of this machine, the direct tangible costs of the transaction would be the production cost of the machine. However, the in-direct tangible costs for the seller would include the research and development, marketing, and selling costs among others.

The intangible costs of this exchange for both sides are not so evident. Similar to tangible costs, these costs can come in many forms and are incurred throughout the relationship. For the buyer, the direct intangible costs would include costs arising directly from the use of the machine, but which could not be recorded or allocated in a tangible monetary form. An example could be the temporary decrease in the overall productivity of the lab as personnel and processes are changed to accommodate the new machine. Assigning a monetary sum to this cost would be difficult since accurate measurement of the effect on overall productivity would be difficult. The indirect intangible costs of the machine would be the intangible costs arising from the support activities, or from as by-products stemming from the use of the machine.

A major cost element arising from an exchange is the transaction cost. A transaction cost is the cost related to exchanges of goods and information (Suematsu 2014: 1). Transactions, besides buying and selling activities between and inside companies, include all communication and interactions within companies. (Suematsu 2014: 26). In practice, both parties incur transaction costs when engaging in an exchange with the other. For the company, these transaction costs include the direct cost related to the production of a good, but also the costs related to all supporting activities needed to deliver the product to the customer. Examples of these costs rising from supporting activities include costs arising from marketing, logistics, selling, and post-sale processes. The buyer also incurs a variety of transaction costs. For the buyer, the most obvious of these is the monetary sum being paid of the product or service. Examples of costs arising from supportive activities include the time and resources invested in learning about the product, researching the supplier, and monitoring the product performance after purchase.

Therefore, the creation of value in the exchange process follows the value equation presented earlier. The drastic growth in the complexity and significance of information processing in the current business environment has increased the value of analyzing transaction costs enormously. (Suematsu 2014: 1). In the past, the concept of costs was related to production costs, meaning costs that can be quantified and allocated to the production of physical goods. Examples of production costs include: materials, parts and labor. The adaptation of transaction cost analysis supports the changing nature of business relationships. It reflects the shift in competitive dynamics from product-centrism towards customer-centrism by taking into consideration the intangible costs which cannot be quantified, but which are still essential in the formation of value in business relationships.

Figure 12: Value arising

Value arising from the transfer of property rights to material and non-material assets can be understood as value arising directly from the use function of the product(s) being exchanged. The value arising from the side effects of the exchange include a wider variety of benefits. These include all the positive or negative effects on the other party, including any assistance provided and any good or bad effects on the relationships between the parties involved, such as their attitudes toward and perceptions of each other (Kleinaltenkamp, Plinke, Wilkinson & Geiger 2015: 8).

Assessing the key tenant of customer-centrism in the context of transaction costs, it can be concluded that companies achieve superior value creation with their customers by actively managing both the costs and benefits arising from transactions. In practice, a company that is able to lower the transaction costs incurred by the customer, while increasing the benefits received by the customer more than their competitors, would achieve market leadership due to superior value creation ability.

The practical actions of the company to actively manage these costs and benefits arising from transactions are explored in the area of customer-relationship management (CRM). Since relationships are based on mutual-creation of value, companies divide their scarce resources and attention between the two fundamental processes: value creation and value appropriation (Mizik, Jacobson, 2003: 63).

Goal of customer-relationship management (CRM) is to maximize the lifetime value of each individual customer to the company, thereby increasing company profitability. (Kumar & Petersen 2012: 3). Customer equity can be estimated by adding the future revenue stream received from each customer (a customer's lifetime value, or LTV) and adding to it all the lifetime values of current and future customers. By calculating the return on capital (ROC), businesses will better know where they need to concentrate their resources and where they need to improve. A customer equity model allocates customer profits through the analysis of customer revenues offset by true cost to serve. A customer equity model is a descriptive model: it describes past behavior without making assumptions about future behavior. Also, by knowing the potential future cash flows a customer is likely to generate over time, companies will know if the level of investment involved in acquiring that customer is justified.

2.3.1 Customer-relationship management

Customer-relationship management (CRM) is valued as the key to developing profitable and long-term relationships with customers that enhance a company's competitive advantage (Kotler 2012: 12). Customer-relationship management is based on the principles of relationship marketing and consists of the practical actions the company undertakes to manage the interactions with customers. A key goal of customer-relationship management is to efficiently and effectively increase the acquisition and retention of customers by selectively building and maintaining mutually satisfying relationships with them (Payne & Frow 2005: 172).

In a simple form, customer-relationship management can be understood as "an enterprise-wide approach to understanding and influencing customer behavior through meaningful analysis and communications to improve customer acquisition, customer retention, and customer profitability "(Peppers & Rogers 2011: 6).

In practice, customer-relationship management refers to both the strategies and technologies companies use to implement the principles of relationship marketing.

Figure 13: The CRM process.

Specifically, customer-relationship management relates to strategy, managing the dual-creation or value, the intelligent use of data and technology, the acquisition of customer knowledge and the diffusion of this knowledge to the appropriate stakeholders, the development of appropriate (long-term) relationships with specific customers and/or customer groups, and the integration of processes across the many areas of the company and across the network of companies that collaborate to generate customer value (Boulding 2005: 157). As such, it includes the concepts of strategy, infrastructure, and operational actions (Dwarkanath 2007:1, Chan 2005: 32).

Companies can build customer relationships at many levels, depending on the nature of the target market (Kotler 2012: 21). Beyond offering consistently high value and satisfaction, marketers can use specific marketing tools to develop stronger bonds with specific customers (Kotler 2012: 21). Example of these practical actions is *frequency marketing programs* that reward customers who buy frequently or in large amounts (Kotler 2012: 21). Therefore, customer-relationship management is the application of customer-centric principles, since it is active, and goal oriented in nature.

Active means that the company adopts an active role in the relationship by incorporating varying customer wants into their decision-making process. Practical examples of these active measures include offering personalized offers or recommendations based on past purchase history. By doing this, the company acknowledges the customer as an individual, and seeks to use meaningful analysis to deliver value to the customer. In addition, activity can also refer to managing the overall direction the relationship is heading. For example, the company might offer new customers additional product-support in order to build trust on the relationship. Another example would be to seek ways to continue a relationship which is faltering by offering additional discounts.

Goal oriented means that the company has set strategic targets for the relationship, and draws goals based on these targets. Goal orientation can be seen relating more to the management of the entire customer-portfolio. The delivery of customer value through customer-relationship management is based on classification of customers and deriving relevant relationship objectives based on these classes. The portfolio of customer-relationship management processes includes cross-selling and up-selling, marketing and fulfillment, customer service and support, field service operations and retention management (Chan 2005: 34).

Customer-relationship management highlights the interactive nature of relationships (Chan, 2005: 32). "An important part of customer-relationship management is identifying the different types of customers and then developing specific strategies for interacting with each one. Examples of such strategies include developing better relationships with profitable customers, locating and enticing new customers who will be profitable, and finding appropriate strategies for unprofitable customers, which could mean terminating those relationships that cause a company to lose money" (Kumar & Reinartz 2012: 4). Therefore by actively managing interaction with customers, the company aims to steer the relationship in the preferred direction.

Customer-relationship management tries to find the specific elements of the exchange process that produce value to the customer (Boulding 2005: 156). In modern business context, customers interact with the company through several different channels. Value creation entails discerning what value the organization might offer customers, ascertaining what value customers provide the company, and maximizing the lifetime value of the customer (Payne & Frow 2005: 172).

The concept of customer lifetime value is based on the notion that a business relationship is comprised of different stages. These stages of the relationship define the CRM strategy relevant to the customer. The commonly used relationship stages in customer-relationship management literature are as follows (Kumar & Petersen 2012).

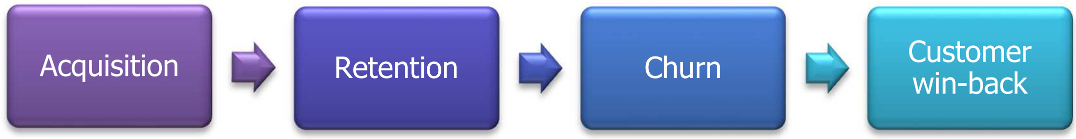

Figure 14: Stages of a customer relationship.

Customer acquisition, the first step, is the foundation of the whole customer-relationship management process and is also a cornerstone in the development of the business of a company. Acquiring new customers is considered to be the most expensive part of the customer lifecycle process. It is at this process that the company should have a clear understanding of which customers have the highest potential value. The company should thus segment the market and decide which customers are worth pursuing.

Customer retention refers to the act of managing an on-going relationship with current customers. The importance of customer retention is that it is much more costly to acquire new customers than to retain them. Reichheld and Sasser (1990) stated that a 5% improvement in customer retention can cause an increase in profitability between 25 and 85%, in terms of net present value, depending upon the industry.

In order for the company to capture value from the relationship, it has to adjust the investment to the relationship with the costs involved in maintaining it. These investments are the costs of a relationship discussed in the previous part this thesis.

Growing customers refers to the notion of increasing the profitability of customers. At this stage the suggested link between customer-loyalty and profitability becomes highly relevant, since loyal-customers are believed to be more open to dedicate more of their purchasing to the company due to their favorable experiences with the company.

A company´s value, aside from its capital assets, relies on the sum total of its customers' combined lifetime value (LTV). Customer value emerges through interactions over time, where the company and customer continuously learn from and adapt to each other as the relationship evolves (Håkansson 1982: 26). The statement that acquiring a new customer is several times more costly than retaining an existing customer has clearly shown the importance of a successful customer acquisition program.

To attain optimization of customer-relationship management performance, metrics need to be defined across the enterprise driven by customer-centric goals (Chan 2005: 32). A unified view of customer-relationship management is an enterprise view that looks at the customer from the customer's value chain's perspective and not the perspectives of the company or the product. They include the many touch points that are possible for customer interactions (Chan 2005: 34).

A better term that gives managers an idea of how the value of a client has evolved over time is customer lifetime value (CLV). This refers to the net economic value of a customer to a company over his/her entire lifetime (Kumar & Petersen 2012: 2).

3 Research

The objective of the research was to quantitatively analyse how well customer value correlates with customer loyalty within the Finnish market of Nal von Minden. The research followed the lines set by the study conducted by Mittal and Kamakura (2001). In other words, the research set out to analyze the nature of the statistical relationship between customer value and loyalty by using a quantitative scoring system in which the customers were evaluated on the basis of two variables; value and loyalty. The aim was to test two common hypotheses associated with relationship marketing and customer-centrism (Sheth & Parvatiyar 1995: 263, Reinartz & Kumar 2000: 6):

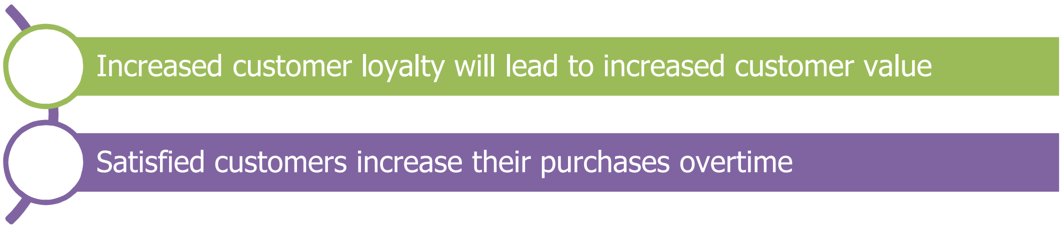

Figure 15: Hypotheses of relationship marketing and customer-centrism

The two hypotheses were meant to mirror the key argument of customer-centrism that increased customer loyalty will lead to increased profitability (Kotler 2012: 119 and 21, Mittal & Kamakura 2001: 131, Gruen 1997: 33, Reichheld, Markey & Hopton, 2000: 135). As stated earlier in this thesis, for the company, the profitability of the relationship is the difference between the costs and benefits arising from it. For this research, access to sales data meant that the monetary benefits arising from each relationship could be calculated. However, due to practical limitations, accurate figures concerning the costs incurred by the company when serving each customer were not available. Therefore, "profitability" was changed to "customer-value" since the sales figures used reflect the benefits received by the company and do not take into consideration the costs of serving the customers. Due to these limitations, the connection between loyalty and value was approached through the use of two hypotheses which could be tested by using the available sales data.

The first of these hypotheses reflects the notion that overtime, the transaction costs of the relationship decline due to greater exchange efficiencies between the company and the customer (Sheth & Parvatiyar 1995: 265). The second hypothesis is meant to supplement the first by focusing on the underlying logic behind the satisfaction-loyalty-profitability chain. If customer loyalty is indeed the result of the customer perceiving the value of the product as being superior, it should act as an incentive to increase purchases overtime (Reichheld, Markey & Hopton 2000: 135).

3.1 Research methodology

The research was conducted by using metrics derived from the sales data from the years 2015 and 2016. The research studied the behaviour of the 180 Finnish customers who had purchased a product from the drug rapid test product-line between 1st of January 2015 and 24th of December 2016.

This correlation between customer value and loyalty was analysed quantitatively by using RFM scoring systems. In this system, the behaviour of each customer was analysed by using two different sets of metrics; value and loyalty. Value was analysed by recency, frequency and monetary value scoring system, known as a RFM analysis and for the loyalty analysis, the RFM scoring was modified for more suitable metrics. The results of these analyses were then compared to each other to see if the customers who were deemed the most valuable also showed the most signs of loyalty.

RFM analysis is a marketing technique used for analyzing customer behavior such as how recently a customer has purchased (recency), how often the customer purchases (frequency), and how much the customer spends (monetary value). RFM analysis provides a simple framework for quantifying customer behavior.

RFM analysis depends on Recency (R), Frequency (F), and Monetary (M) measures which are three important purchase-related variables that influence the future purchase possibilities of the customers. *Recency* refers to the interval between the time, that the latest consuming behavior happens, and present. *Frequency* is the number of transactions that a customer has made within a certain period. This measure is used based on the assumption that customers with more purchases are more likely to buy products than customers with fewer purchases. *Monetary* refers to the cumulative total of money spent by a particular customer during the analysis period.

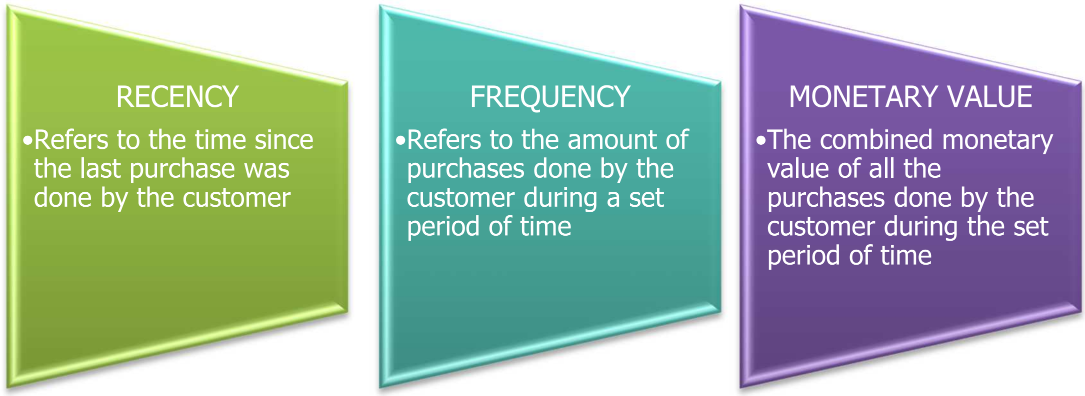

Figure 16: The elements of RFM-analysis

The RFM-analysis assigns a value-score to each customer on the three variables on the basis of the past behavior. The scoring is done by using a quintile system. In this system, each customer is assigned a score between 1-5 on recency, frequency, and monetary value. The score of 5 represents the maximum value and is considered as "preferred" behavior by the customer.

This quintile system allows the assignment of 125 different scores (5x5x5). The assigned score can range between 111 being the lowest to 555 being the highest. The best customers are in quintile 5 for each factor (555) that have purchased most recently, most frequently and have spent the most money. This three digit score format allows the firm to gain an easy overview of the behavior of each customer. For example, a customer who received a score of 515 is a customer who has brought recently and with a high amount, but does not purchase often. This information allows the company to adjust their CRM-activities for the customer, and seek ways to increase the purchase frequency through more regular contacts with the customer.

For this research, this scoring system was modified. Instead of classifying customers using a three-digit score, each customer was assigned a score representing the sum of the scores from each category. For example, a customer who had received a three-digit score of 515 would receive a score of 11.

The reason for this modification was added simplicity. Since this research focused on analysing the overall statistical relationship between value and loyalty instead of each category separately, the author considered the three digit system as being more prone to errors of interpretation. For example, in the thee-digit system, customers who scored the highest in recency would appear among the group of most valuable customers, even though their scores in frequency and monetary value would be the lowest. Although this is the original logic behind the RFM- analysis, it would not represent customer-value in a meaningful way in the context of this research. Classifying customers based on the sum of their scores in each category can be considered as providing a more realistic picture of the value and loyalty shown by the customer.

The scoring was conducted with the following parameters for each variable.

Recency:
When did the customer place their most recent order in the analysis period.
5: October - December 2016
4: July - September 2016
3: April - June 2016
2: April - June 2016
1: Most recent order placed in 2015

Frequency:
The number of times the customer placed an order during the analysis period.
5: Purchases 5 or higher
4: 4 purchases
3: 3 purchases
2: 2 purchases
1: 1 purchase

Monetary value:
The customers were sorted in a descending order based on the total monetary value of their combined orders during the analysis period. The sorted list of customers was then divided in to five groups, each group consisting of 20% of the total number of customers. The top 20% highest grossing customers received the highest score of 5. The remaining scores were then given to each following group.

5: Top 20% of highest grossing customers
4: The following 20%
3: The following 20%
2: The following 20%
1: The lowest grossing 20% of customers

After each customer had been assigned a score, the score was converted into a sum amount. This meant that the customers who scored five in all three categories would receive a score of 15. This simplified expression of the score allowed for an easier analysis of the correlation between value and loyalty. Following this, the customers were divided into value groups based on their new two digit score. The group intervals are shown in the following table.

Score	Group
15	1
12-14	2
9-11	3
6-8	4
3 -5	5

Table 1: Intervals for the value groups

Group 1 represents the most valuable customers who scored the maximum amount in all three categories. Group 5 represents the customers with the lowest amount of value.

After each customer had received a score representing their value, the RFM-analysis was conducted again with modified metrics. For this occasion, the metrics of recency, frequency, and monetary value were changed to metrics commonly associated with customer loyalty (Kotler 2012: 21, Mittal & Kamakura 2000: 131, Reinartz & Kumar 2000: 6).

The customer loyalty metrics were

Figure 17: Customer loyalty metrics

These specific metrics were drawn from previous research and arguments focusing on the relationship between loyalty and profitability (Kotler 2012: 21, Mittal & Kamakura 2000: 131, Reinartz & Kumar 2000: 6, Sheth & Parvatiyar 1995: 263). Primarily, these metrics are associated with notions that longer-relationships are more profitable then shorter ones (Sheth & Parvatiyar 1995: 263). As such, these metrics aim to quantify the level of loyalty the customer shows towards the company.

For this second analysis, the scoring parameters were as follows.

The length of the customer relationship:

The parameters were chosen based on the analysis period of two years, and the limitations set by the quintile system used.

A score given based on the first order made by the customer.

5: 2009 December- 2011 April

4: 2011 May- 2012 September

3: 2012 October – 2014 February

2: 2014 March – 2015 July

1: 2015 August – 2016 December

Increase in purchase frequency:

A score given based on the change in the purchasing frequency of the customer. This variable mirrors the statement that loyal customers will increase their purchasing frequency over time.

5: Customers whose buying frequency increased over 50% between 2015 and 2016
4: Customers buying frequency increased between 1 and 50%
3: Customers whose buying frequency did not change between 2015 and 2016
2: Customers whose buying frequency decreased between 1 and 50% between 2015 and 2016
1: Customers whose buying frequency decreased by over 50% between 2015 and 2016

Growth in monetary value of sales:

Score given based on the percent change in the combined value of orders during 2015 and 2016. The percent change was calculated from the sales figures at the end of 2015 and at the end of 2016. The resulting difference was used as a basis for scoring. This variable is often associated with the previous variable.

5: Customers whose gross sales increased over 50% between 2015 and 2016
4: Customers whose gross sales increased between 1 and 50%
3: Customers whose gross sales did not change between 2015 and 2016
2: Customers whose gross sales decreased between 1 and 50% between 2015 and 2016
1: Customers whose gross sales decreased by over 50% between 2015 and 2016

Following, the scores were again converted into a sum amount. The customers were then divided into five groups based on the same intervals as in the first analysis. The groups formed in this second analysis are referred to as loyalty groups. Customers belonging to group 1 are considered the most loyal, whereas group 5 consists of the least loyal customers.

Score	Group
15	1
12-14	2
9-11	3
6-8	4
3 -5	5

Table 2: Intervals for the loyalty groups.

3.2 Results

In both analyses, in value and in loyalty, the group 1 was considered the best group: the most valuable and the most loyal. And group 5 was considered to have least value and to be least loyal. The distribution of customers in the analyses was as follows:

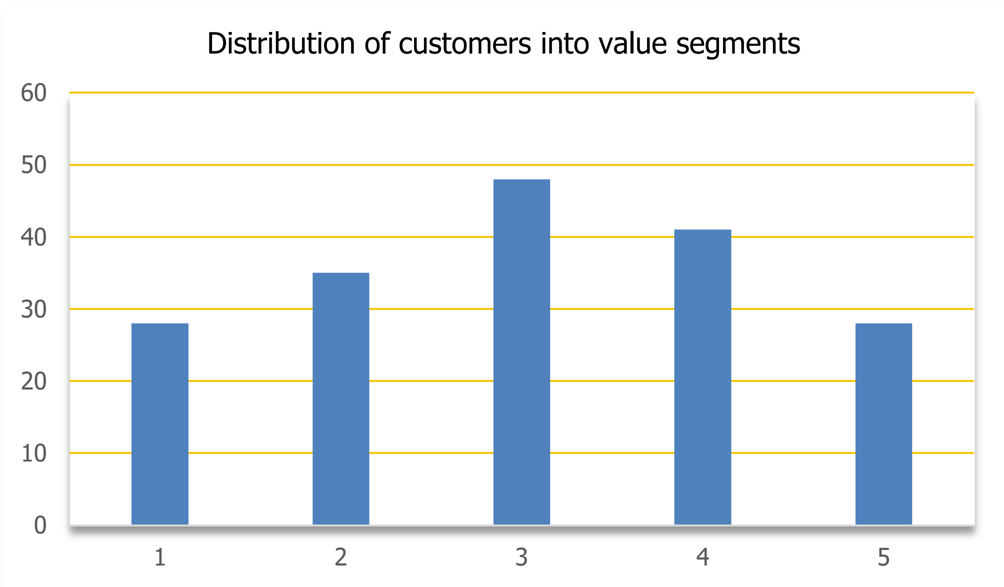

Table 3: Stage one - number of customers in each value segment.

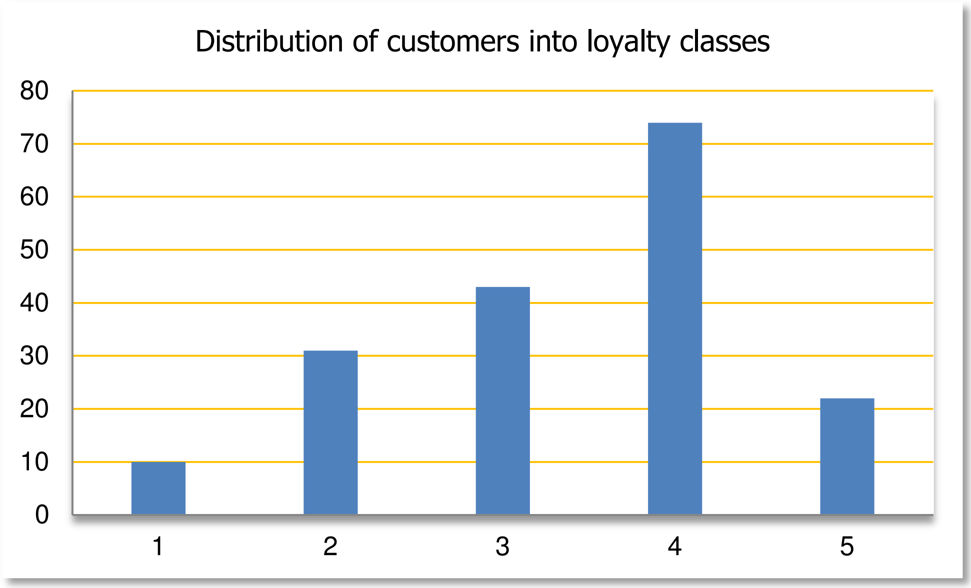

Table 4: Stage two - number of customers in each loyalty segment.

The results show a clear difference in the consistency of distribution between the two stages. Initial observation is that the correlation between the sizes of the classes is the lowest in the highest groups of 1 and 2 on both stages.

In order to gain a proper understanding of the overall correlation between the two sets of data, the excel correlation function was used. The correlation function provided a correlation coefficient of 0.604, showing that there is a positive correlation between the value and loyalty classes of the customer. In other words, there is a positive trend that customers who score higher in loyalty also score higher in terms of customer value. This positive correlation between value class and loyalty was also observed by looking at the average loyalty score in different value classes.

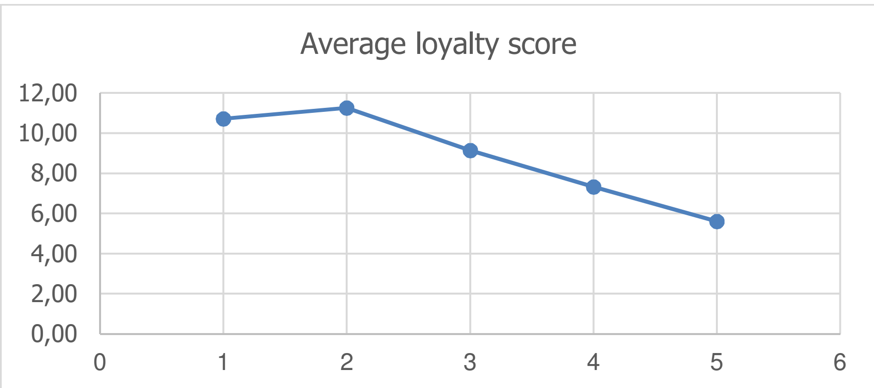

Table 5: The average loyalty score in different value classes

The results confirm that the average loyalty score decreases when moving towards groups which scored less in the value score category. The average loyalty scores and standard deviations for each value class are summarised on the table below.

RFM class	Avg. loyalty score	Standard Deviation
1	10.71	2.6367368
2	11.26	3.032596
3	9.15	2.5928673
4	7.32	1.8633173
5	5.61	1.6179385

Table 6: Average loyalty scores and standard deviations

The trend shows that despite positive correlation between the value and loyalty class, customers in value class two scored roughly 5 percent higher loyalty score than customers in the highest value class. Based on this average score, it can be concluded that on average, the most valuable group of customers is not the most loyal. However, it must be emphasized that the above graph was based on average loyalty scores of each value segment. In order to gain a more accurate understanding of the effects of loyalty in each value class, the standard deviations have to be taken into consideration.

From the standard deviations of the loyalty score, it can be observed that value group two had the least amount of intra-group cohesion in the loyalty scores. As such, this group also possessed the highest amount of variability in regards to loyalty. This relatively high standard deviation in the loyalty score undermines the argument of value class two as the most loyal group customers. This finding supports the findings of Reinartz and Kumar, who analysed the connection between relationship length and profitability in the general merchandise direct marketing industry (Reinartz & Kumar, 2000: 25). In their study, Reinartz and Kumar discovered that actual relationship length is primarily affected by the role of switching costs for the buyer (Reinartz & Kumar, 2000: 25). Therefore the lack of switching costs predisposes the relationship to competitive pressure and other market forces (Reinart & Kumar, 2000: 26). In the context of this study, this analogy can be seen as contributing to the reason why value group 2 showcases higher average loyalty. When observing the composition of value groups 1 and 2, the latter group contained a wider variety of customers operating in different industry sectors. As a result, the competitive situations in these different sectors can be seen as contributing to the higher standard deviation within value group 2.

Considering the relatively small difference in the average loyalty score between value classes one and two, combined with the high standard deviation within group, it can be stated that there is a downward trend in average loyalty when moving lower in the value group rankings.

The average loyalty and value scores for each value segments were also combined to one table. The similar downward trend of the two metrics supports the notion that average customer loyalty decreases alongside with customer value.

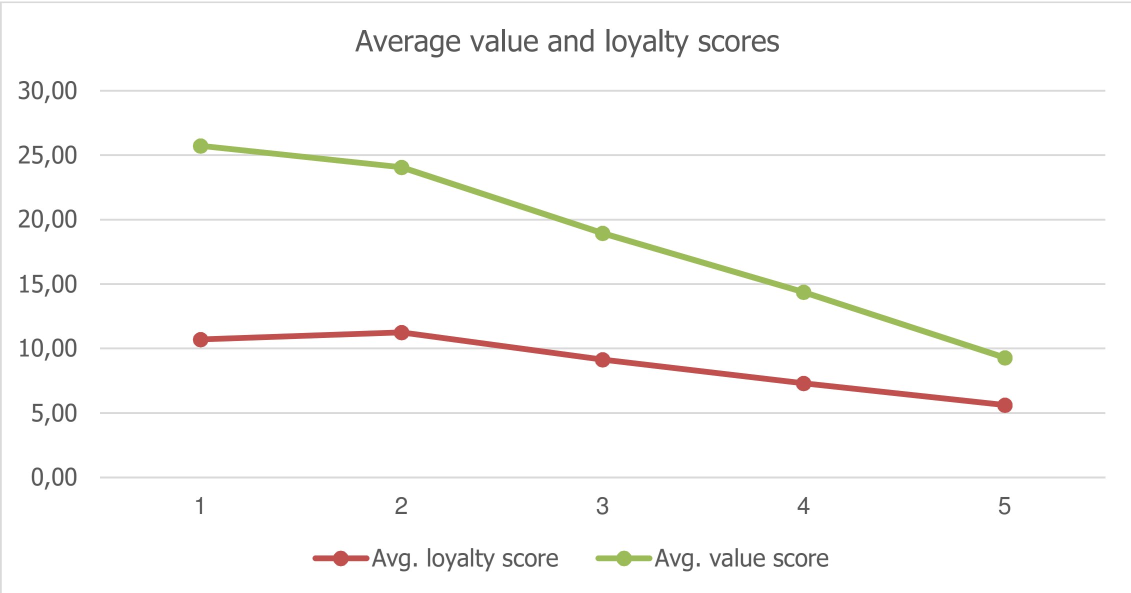

Table 7: The average value and loyalty score in different value classes

After establishing the overall relationship between customer value and loyalty, the attention was turned to seek how well the hypotheses regarding the links between customer value and loyalty apply in the context of this research. The testing of the hypotheses was built on the findings regarding the overall statistical relationship between loyalty and customer value. The testing of the hypotheses included closer examination of the different categories used for scoring. The aim of this was to provide more detailed and practical knowledge based on the initial overall findings.

3.2.1 Longer customer-relationships are more profitable (Hypotheses 1)

The first hypotheses focused on the primary argument associated with relationship marketing. As already stated, among the arguments of RM is that companies benefit from active value-based management of customer-relationship, since transaction-costs are reduced over the course of the relationship. The result of these reductions is the improved willingness of the customer to remain in the relationship due to improved transaction efficiencies. For the customer, these improved transaction efficiencies will increase the net value of the relationship since the amount of costs in the value equation is reduced. The resulting perceived value of the relationship by the customer will motivate it to not only remain in the relationship, but also to increase the purchasing amounts over time.

The creditability of this analogy was tested by measuring the correlation between relationship length and value class. This was done by calculating the overall correlation between value classes and the length of the relationship in years. The result showed an overall correlation of 0.27, indicating a very weak positive correlation. Next, following the methodology of the first part, the average relationship length and standard deviation was calculated for each value class separately.

RFM	Years	Standard Deviation
1	3.18	1.72
2	3.23	2.07
3	1.67	1.85
4	1.76	2.13
5	1.36	1.85

Table 8: Average relationship length and standard deviations for each value class

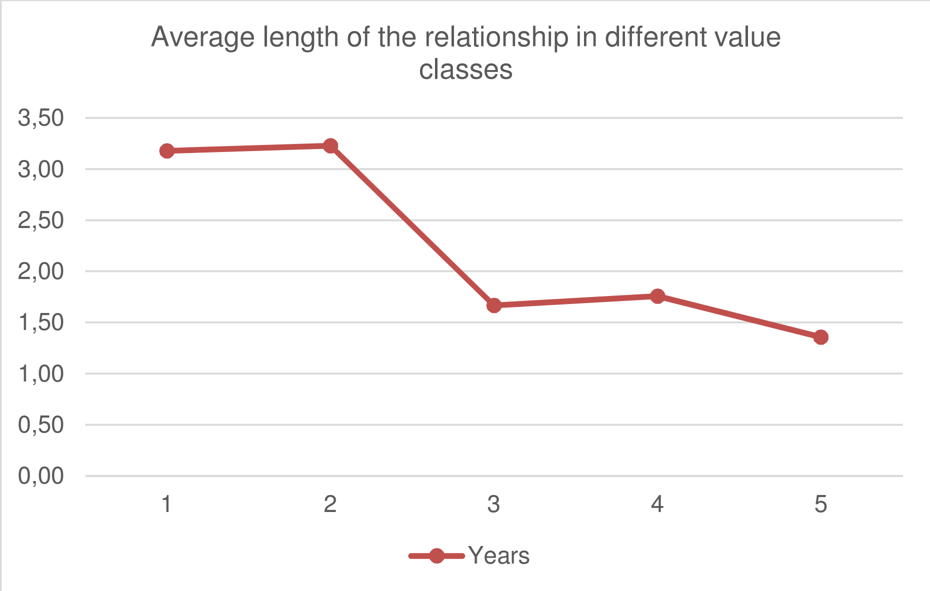

Table 9: Average length of the relationship in different value classes

The result indicates that on average, relationships tend to be roughly twice as long in value classes one and two compared to the rest of the value classes. As in overall correlation, the differences between value class one and two is small, with value class two showing higher standard deviation.

However, correlation between relationship length and value class was not linear. It can be observed that the five value classes form two separate groups in terms of average relationship length. The first two value classes have almost identical average relationship length and the difference to the remaining value classes is significant. The value classes three, four, and five show very close resemblance to each other, with classes three and five having the same standard deviation.

The weak positive correlation between value class and relationship length supports the findings of Mittal & Kumar, and Reinartz & Kumar. That is the role of customer characteristics and external factors as influences to the willingness of the customer to remain in the relationship (Reinartz & Kumar 2000: 26, Mittal & Kamakura 2001: 140). In this research, the effects of these varying customer characteristics and external influences can be considered as explanations for the weak connection between relationship length and value class.

3.2.2 Loyal customers increase their purchases overtime (Hypotheses 2)

Following the arguments of previous hypotheses, reduced transaction costs are believed to materialize in the form of increases in both size and frequency of purchases. The effect of customer loyalty on changes in purchase amounts and purchase frequencies was analysed by calculating the average changes for each loyalty class. The results are presented in the chart below.

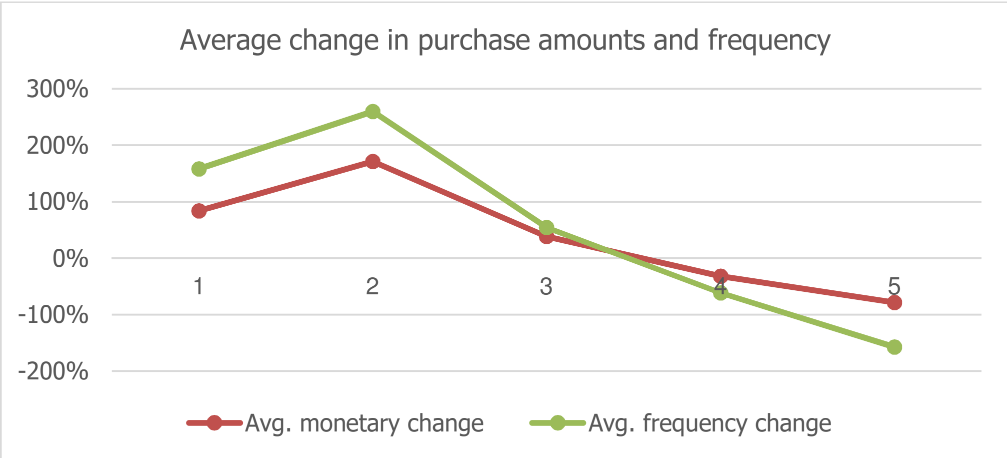

Table 10: Average changes in purchase amounts and frequencies in different loyalty classes.

The results indicate that value class two had the highest average increase in both purchase amounts and frequency. Again, a downward trend can be observed that customers in lower value classes increased their purchase amount and frequencies the least.

Analyzing the changes in purchase frequencies and amounts provides comparison to the findings of the previous hypothesis. This is due to the introduction of the time variable. Among the key characteristics of relationship marketing was the shift in understanding of the relationship as not as a series of single transactions but as an ongoing interaction. This meant an adoption of the lifetime-value concept. By comparing the developments of customer behavior over a period of time, a more coherent picture of the customer behavior can be gathered. These findings support the notion loyal customers will not only remain customers, but will also increase both their purchase amounts and purchase frequencies overtime.

However, it must be noted that this hypotheses was only tested based on sales figures collected from a period of two years. Thus, in a case of longer relationship, it does not take into account any previous declines or increases that have occurred outside this analysis period. As mentioned in the previous hypotheses, customer characteristics and external market conditions are known to influence the loyalty-profitability relationship.
Therefore, the changes in buying behaviour presented in this hypotheses should not be automatically associated with changes in loyalty.

4 Limitations and future research

The limitations of this research reflect the simplistic nature of the chosen research methodology. The RFM method used provided a simple way to assess the statistical relationship between the two variables. However, this simplicity meant that the results gained from such an analysis would also be simple in nature. In other words, the results gained from this simple analysis should not be interpreted as definitive answers, but rather as rough guidelines to take into consideration.

One of the major drawbacks of this simplicity became apparent when trying to incorporate the aspect of time into the analysis. As pointed by Reinart & and Kumar (Reinartz, Kumar, 2000: 6) correlational measures only provide a static picture of the lifetime-profitability relationship. It could be argued that this drawback predisposes the results to external market elements (Mittal, Kamakura 2001: 131) by providing a false image of the lifetime-profitability relationship. This could provide management with false guidance when assessing the profitability of relationships.

Another drawback rising from the simplicity of the research methodology is the inability to accurately measure causation between customer value and loyalty. As stated, the methodology was chosen in order to assess the mere existence of the relationship between customer value and loyalty. Although a relationship between the two can be observed, the results do not render themselves to practical use without careful consideration and acknowledgement of the drawbacks of the research method.

In order to draw value from these results, they have to be interpreted in a practical context from which actual implications can be drawn, described as "wide but shallow" in nature. This means that data could be collected from all current customers, but with the price of detail.

This lack of detail refers primarily to the time-aspect of the research. As was discussed earlier, the aspect of time is a key component in the understanding of a relationship in modern business context. Understanding the relationship as an ongoing and dynamic process which can last several years is among the key tenants of modern customer-relationship management. Due to practical limitations of this research, this aspect was somewhat overlooked.

The notions regarding the time-aspect were addressed by choosing the "relationship length" as one variable for customer loyalty, and by discussing average changes in purchase amounts and price in hypotheses number two. However, these notions do not provide the complete picture of the dynamics of the relationships. First, the variable "relationship length" was based on the difference in years between the first and last order made by the customer. This simplification does not offer any information regarding the time between these transactions. As such, the relationship is simply considered as on-going. In reality, this period between the transactions can include severe turbulence in the form of customer defection and changes in price. Therefore, the costs and benefits of the relationship might have varied greatly overtime, as was presented previously in this thesis.

A consideration for the practical usability of this research is the causal relationship between customer value and loyalty. Although the positive correlation supports the arguments of relationship marketing and customer-centrism, the mere existence of the correlation does not answer which of the variables will lead to the increase in another. In other words, based on these results, it cannot be said if higher loyalty arising from satisfaction will encourage the customer to spend more, or if high spending amounts will encourage the customer to act in a more loyal way.

As such, these results do provide a feasible starting point for further research into the relationship between customer value and loyalty. Based on the drawbacks of this particular research, future research should be based on a more coherent research method which takes into account the time aspect of relationships. In addition, this research could also be targeted at seeking a causal relationship between customer value and loyalty. With these improvements, the findings could provide more practical implications.

5 Conclusions

The positive correlation between customer loyalty and value provided support for the arguments commonly associated with relationship marketing and customer-centrism. However, these results must be interpreted in the light of the drawbacks of the research methodology presented earlier. As such, the results should not be considered as absolutes, but rather as an indication that an overall statistical relationship between loyalty and value exists.

Based on this notion, the findings do support the adaptation of a more strategic approach to customer-relationship management. The general idea that the purchase behavior of the customer changes by time during the relationship is supported by the correlation between relationship length and value class, but also by the correlation between average purchase amounts and frequency and loyalty class. Combining the results of the two hypotheses would show that the purchase amounts and frequencies increase as the relationship matures. Although the exact nature of the relationship between customer value and loyalty could not be measured by this research, the positive overall correlation between the two variables supports the premise that customers go through several stages during their relationship. An implication of this was the observed differences in changes in average purchase amounts and frequencies between different value classes. The differences between the aspects of different value classes conserving their perceived loyalty, and changes in buying-behaviour demonstrate that customers can be meaningfully segmented based on their value. This implies that instead of loyalty, customer value could provide a more feasible basis for the planning of customer-relationship management activities.

This feasibility of value instead of loyalty as the basis for planning activities is further supported by the perceived ambiguity of customer loyalty. As mentioned earlier, customer loyalty is considered to be a result of customer satisfaction which is subjective in nature. Based on this premise, it can be questioned whether it is feasible for the company to invest in analysing such a subjective concept. Even in the case were a clear correlation between loyalty and profitability is observed, a question can be raised about the possibilities of the company to manage it actively (Storbacka, Strandvik, Grönroos, 1994; 29).

Ironically, placing the increasing of customer-loyalty as the guiding principle of customer-relationship management activities could lead to practices commonly associated with product-centric transaction marketing. This possibility stems from the possible "over-eagerness" to rely simply statistical relationships without understanding the underlying dynamics guiding the buying-behaviour of each customer. Seeking an easy answer to the relationship between loyalty and profitability could lead to actions driven by generalizations about the expected level of customer loyalty, and thus, buying-behaviour. As a result, the key tenants of customer-centrism would be forgotten, since customers would no longer be seen as individuals with differing needs, but as mere correlations.

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