

The Relationship between Service Quality and Customer Loyalty, and its Influence on Business Model Design

A study in the Dutch Automotive Industry

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Management Summary

This research is focusing on a customer loyalty problem of a wholesaler in car materials and accessories. The company Koskamp B.V. sells car materials and accessories to garages in the Dutch business-to-business automotive industry. Like other wholesalers, Koskamp has to deal with the threat of cheap Internet companies and the growing power of buyers due the Internet technology. Koskamp wants to create a loyal customer relationship without decreasing their prices.

Some reputable journals presented scientific evidence about positive relationship between service quality, customer loyalty and customer loyalty. However, most of these results are conducted in different business-to-consumer industries. This study fill in the theoretical gap by testing these relationships in the industry mentioned above. Besides, it gains managerial relevance by answering the follwoing research question for Koskamp:

'To what extent does service quality influence a loyal customer relationship and how does Koskamp have to change their business model in order to increase customer loyalty?'

Service quality is made measurable by using the SERVQUAL model of Parasuraman et al (1988). Customer loyalty is made measurable using the model of Dick and Basu (1994). Both models have been proven in previous research studies, supported by a high reliability and validity. Within several workshops the construct service quality (15 indicators, Cronbach's $\alpha = 0.95$), customer satisfaction (5 indicators, Cronbach's $\alpha = 0.83$) and customer loyalty (4 indicators, Cronbach's $\alpha = 0.914$) are made measureable for this specific industry.

Eventually 114 respondents filled in an online questionnaire about actual service quality of, satisfaction about and loyalty towards a current wholesaler. Statistical analysis of questionnaire confirms the following relationships:

- ✓ There is a positive relationship between service quality and customer satisfaction within the Dutch automotive parts industry ($r = 0.912$).
- ✓ There is a positive relationship between customer satisfaction and customer loyalty within the Dutch automotive parts industry ($r = 0.921$).
- ✓ There is a positive relationship between service quality and customer loyalty within the Dutch automotive parts industry ($r = 0.943$).
- ✓ There is no direct positive relationship between service quality and customer loyalty which exist due the influence of customer statisfaction.

The statistical analysis of the questionnaire indicates that wholesalers have the opportunity to create loyal and satisfied customers by delivering high service quality. Research about the judgment of service quality indicates that service quality dimensions are often intangible and they cannot be examined with the senses (Cavana et al, 2007; Parasuraman et al, 1988; Fogli, 2006, Chao & Kao, 2009). The most logical reference to judge service quality is using the customer expectations. Therefore, the same 114 respondents filled in questions about expected service quality.

Analysis of this expected service quality show that both universal and dealer garage do expect a high level of service quality. With respect to the main objective of Koskamp, which is increasing customer loyalty, the correlations of the five service quality dimensions with

customer loyalty are calculated. Tangibles ($r = 0.736$) and Assurance ($r = 0.799$) have the lowest correlation with customer loyalty. Empathy ($r = 0.882$), Responsiveness ($r = 0.894$) and Reliability ($r = 0.903$) are highly positive related to customer loyalty. Between 77% and 82% of the variability in customer loyalty is explained by these three dimensions.

The current business model of Koskamp is reviewed by the business model theory of Osterwalder and Pigneur (2010). Koskamp should continue with their concept of fast supply of products. Within two (or one) hour(s) a wide product range can be delivered to customers. This ensures a high level of reliability and responsiveness, as garages expect.

Within the current business model of Koskamp there is a lack of paying real individual attention to each single customer. A lot of customers are only visited on request. But results of this study show that garages do expect attention of Koskamp. A solution for this problem is the IREL. The newly developed program IREL can play an important role in providing more empathy to customers. IREL is a customer information program which allows sales representatives to have a better customer oriented work approach. The program calculates in which product group a garage has the most potential for Koskamp. This insight can be shared with the garage owner as part of individual attention. Together with the customers, sales representatives can provide business model improvements for them. Furthermore sales representatives can track and discuss ongoing actions and capture special notes.

To provide this empathy, Koskamp need to contract new sales representatives. In order to visit more customers, new sales representatives are needed. In addition to their current tasks, sales representatives should visit customers more frequent and gain response of expected and delivered service quality. Koskamp should monitor this feedback and if necessary improve their business model.

The new value proposition design focuses includes providing more personal attention to customers. Therefore, there are some changes in key resources and key activities. A new key resource of Koskamp is the IREL program. As stated before, this program is the solution to pay more individual attention to customers. Therefore it needs to be continually updated. Visiting more customers, provide more individual attention (knowledge) to customers and gain more response of Koskamps performances are new key activities. Therefore, it is interesting to take a look at several consulting methods. Hicks (2010) stated that there are different ways to transfer skills and provide expertise. 'Important is to give solutions to problems of garages in such a way garages feel confidential' (Hick, 2010, p. 156). This is an interesting field for further research. Key partners of Koskamp stay their own suppliers which keep their inventory and delivery system intact.

In conclusion, Koskamp needs to focus on providing a more personal oriented customer approach. Paying individual attention is the missing link within the current business model of Koskamp. Of course, focusing on visiting more customers and paying more attention to them will lead to more wages. But, results of this study show that customers expect this individual attention. Besides, the results show that a high service quality is positively correlated with customer loyalty. In this context, increasing labor costs should be seen as an investment in customer loyalty.

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Preface

With this master thesis I complete the Master Program Innovation and Entrepreneurship at the University of Twente, the Netherlands. This master thesis is the end result of exploring the relationship between service quality and customer loyalty within the automotive industry. Based on several articles and theory, a questionnaire is developed by which service quality of a wholesaler and the loyalty of a garage, towards this wholesaler, are measured. Furthermore, this research is designed to make the result of this questionnaire applicable for wholesalers in the Dutch business-to-business market by giving them advice about business model design. Additionally this study contributes to the theory development of customer loyalty.

In the past few months, I have had several in-depth interviews with Koskamp B.V. and other wholesalers in the Dutch automotive industry. The goal was to identify the market and operationalize Koskamp's problem. I would like to thank these wholesalers for sharing their time and business difficulties with me. Especially Tim Heinen, who introduced me to Koskamp and many people in the business field. Additionally I would like to thank all 114 different garages who participated in the research. They offered their time and supported me with valuable information for this study. Mainly due to their high response the value of the results is increased to a higher level.

I would also like to thank Bjorn Kijl and Kasia Zalewska-Kurek, supervisors of the University of Twente, for their positive and helpful comments during the writing of my thesis. In addition, I want to express appreciation to several sparring partners.

I hope you enjoy reading this report.

Ruud van Es

Enschede, 2012

1. Introduction

This research is conducted for Koskamp. Koskamp is a wholesaler within the Dutch business-to-business automotive parts industry. The company is facing challenging times. This first chapter enables readers to put the scope of the research into perspective. Besides, it explains the problem and the purpose of this study. Chapter 1.2 contains the research approach, including the research questions, the research structure, the theoretical and practical relevance of this research and the thesis outline.

1.1 Background

Koskamp B.V. is founded in 1969 by Johan Koskamp and currently is one of the largest wholesalers in the business-to-business automotive parts industry. Koskamp has about 300 (178 fulltime) employees and has eight big distribution centers. Their central office is settled in Den Ham (Overijssel). In 2011 Koskamp had 1,338 paying customers with a total turnover of €39,000,000.

Currently Koskamp is coping with challenging times. The competitive rivalry is growing among the industry. There are developments in the industry which force them to evaluate their current business model. In the next paragraph these developments are fully described.

1.1.1 Developments in the Industry

There are two different types of developments which influence the industry. ‘Technological and economical developments within the automotive parts industry strongly influence the traditional relation between garages and wholesalers’ (Veldhuisen, 2011). First there is the emergency and acceptance of the Internet technology as (main) communication technology within the Dutch automotive industry. Garage owners become more accustomed to compare, to order and to pay their car materials on the Internet. Second there is an economic crisis in the Netherlands which influences the profit margins of wholesalers’ customers (Veldhuisen, 2011). Both developments influence the competitive environment of wholesalers. To describe this influence properly, the five forces model of Michel Porter (1980) is used. Porter (1980) identified five general competitive forces by which each industry and market can be analyzed.

First, the power of buyers. Currently there are economic challenging times in Europe and this also applies to the Dutch automotive part industry. As a consequence, the gross profit margins of garages are under pressure (Veldhuisen, 2011). Managers of garages do not matter anymore where they buy their products. Loyalty to specific wholesalers is decreasing, because these managers are always looking for low prices (with an acceptable quality). Managers try to increase their own margin by this strategy. Therefore the Internet technology provides a lot of transparency. So, in general the power of buyers is increasing.

Second, the power of suppliers. Large wholesalers have a lot of different suppliers, which are often the producers of different goods. Those suppliers are partly dependent on the results of wholesalers. Normally suppliers do not want to lose wholesalers as their customers, because they order a large quantity of products. Most of the time large wholesalers conduct a special contract with a supplier so that they have both certainties for future times. In general, the power of suppliers can be described as relatively low.

Third, the threats of new entrants. There is high threat of new entrants. As stated before, the gross profit margins of the wholesalers’ customers are under pressure and the Internet has

become an acceptable ordering and communication mechanism among the industry. Additionally the threshold of starting an online (web) shop is lowered, because entrepreneurs do not necessarily need to hire offices and sales people anymore. The smaller wholesalers become formidable competitors.

Fourth, the threats of alternatives. Currently there are no big threats of alternatives. Car parts need to be repaired and garages will need the products of wholesalers. So the threat of alternatives can be described as relative low.

Finally, the competitive rivalry within the industry. Inherent to the establishment of an enormously amount of product specialized trade companies on the Internet, the competitive rivalry is growing. The relatively small wholesalers used the Internet and a web shop to sell their products. They often have no personnel and housing costs. Therefore they can use the price mechanism to increase their customer base. And in economic challenging times, managers of garages are sensitive for this.

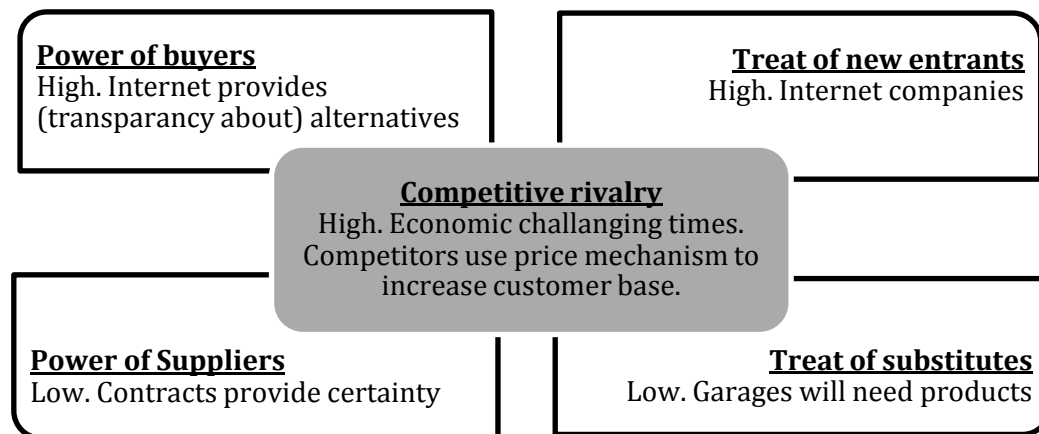


Figure 1: Five Competitive Forces of the Industry

For wholesalers these different developments mean that the competitive rivalry is getting intense. Also Koskamp has to deal with the threat of cheap (internet) wholesalers and the growing power of buyers due the Internet technology. These developments indicate that a strong relationship with their customers is becoming more and more important for wholesalers (Veldhuisen, 2011).

Customer loyalty is used among almost every profit organization. In a normal situation each company wants to have loyal customers. 'Loyal customers have a high repeat purchase behavior and a positive attitude towards a company' Dick and Basu (1994, p. 23). It is often hard to identify which factors affect loyalty.

In 2011, Koskamp has a database of 2236 customers. More than 35% (848 garages) did not even order one product in this year. Their repeat behavior is zero. 278 customers (20%) ensured Koskamp for 80% of their total revenues. So 80% of the customers ensures Koskamp of 20% of their revenues. Koskamp wants to increase the purchase behavior and attitude towards their company. Therefore it need to know how to increase this loyalty. Price level is such a factor. 'A low price strategy ensures more repeat behavior' (Veldhuisen, 2011). This is already

known by Koskamp, but they want to investigate if their service quality is a way to distinguish themselves and to increase customer loyalty.

1.1.2 Problem Description

A lot of wholesalers distinguish themselves with a low priced business model. The business model of Koskamp is a value adding business model, based on delivering added value to customers (fast delivery, fast ordering, technical support, wide product range). The question arises whether this type of extra services influences the strength of the customer loyalty (Veldhuisen, 2011). Does a high service quality provide a loyal customer base?

The starting point of this research is that there is no insight or research done in customer loyalty within the Dutch business-to-business automotive parts industry. When we do a quick scan into articles about customer relationship and service quality in other industries, a lot of researchers show a correlation between service quality, customer satisfaction and customer loyalty. For example, Prabhakaran and Satya (2003) mentioned that a high customer satisfaction is important in maintaining a loyal customer base in the banking industry. Besides they argue that there is a link between service quality and customers satisfaction. More recently Kumar, Kee and Manshor (2009) did a study in the hotel sector and they found that a high quality of service will result in a high customer loyalty. Besides they found a high customer satisfaction will increase customer loyalty. In the same year, Naeem and Saift (2009) found that customer satisfaction is the outcome of high service quality within the banking sector. Heskett, Sasser and Schlesinger (1997) argued that profit and growth are stimulated primarily by customers loyalty and loyalty is a direct result of customer satisfaction. Yi (1990) did a large and comprehensive review of different customer satisfaction studies and he concluded that many studies conclude that customer satisfaction influences purchase intention as well as post-purchase attitude. Therefore, we can assume that there is scientific evidence that the quality of services, customer satisfaction and customer loyalty are related to each other within several industries. But what does this mean for the wholesalers and their problems which remain in the Dutch automotive parts industry?

1.1.3 Problem Statement and Purpose of Research

Based on the articles (Heskett, Sasser & Schlesinger, 1997; Naeem & Saift (2009); Yi, 1990; Kumar, Kee, & Manshor, 2009; Prabhakaran & Satya, 2003; Veldhuisen, 2011) we can assume that customer satisfaction, service quality and customer loyalty are related to each other. However, most research results are specifically conducted in specific business-to-consumer industries (for example the hotel and banking sector). The question arises if the Koskamp and other wholesalers should anticipate on these results shown in the articles. No study has yet investigated these links within this type of industry. The purpose of this study is to fill in that gap and offer advice to Koskamp and other wholesalers about designing their business model. Besides this study tries to contribute to the theory development of customer loyalty.

1.2 Research Approach

This subchapter describes the research approach of this study. A research approach, or research design, serves to set goals, give a research a clear focus and a clear structure (Verschuren & Doorewaard, 2005).

1.2.1 Main Research Question

From an analysis of the problem statement and the purpose of this study as stated in the previous paragraphs, the following research question is conducted:

To what extent does service quality influence a loyal customer relationship and how does Koskamp have to change their business model in order to increase customer loyalty?

Based on the answers of several sub research questions (see next paragraph) the elements of service quality and customer loyalty are operationalized for the automotive industry. Next a special made questionnaire for garages will be conducted for this purpose, this questionnaire provides input for answering the main research question.

1.2.2 Sub Research Questions

In addition, three sub research questions are formulated to support the main research question above.

Research question 1: *What is a business model and how are customer relationship management and service quality related to it?*

This study goes beyond testing a single theory. If the relationships between service quality, customer satisfaction and customer loyalty are tested, it is important to structure the results and give wholesalers a clear advice about how to deal with the results. This advice is given on a strategic level. Therefore the business model concept will be used. Firstly, it is needed to be clear on what the business model concept is and how service quality and customer loyalty are related to it. The answer to this question will be provide by an in-depth literature study.

Research question 2: *What is customer satisfaction and customer loyalty and what are predictors of them?*

Before dropping conclusions about customer loyalty and customer satisfaction, it needs to be clear what is really mentioned by these elements and what are the models or factors to measure them effectively. The answer of this question will be provide by an in-depth literature study.

Research question 3: *What is service quality and how could service quality be measured effectively?*

There is a need to clarify what is really mentioned by service quality within the context of this research. Besides attributes to measure the quality of services must be indicated. The answer of this question is provided by an in-depth literature study and a special workshop with branch organization Bovag.

1.2.3 Research Structure

This research is structured according to the design techniques of Verschuren and Doorewaard (2005). There are different parts (chapters) in this research. Chapter I indicates the introduction of this research and the research approach, Chapter II indicates the theoretical part, Chapter III presents the methodological part and chapter IV the practical findings. Eventually chapter V represents the conclusion, implications and ideas for further research (see figure 2).

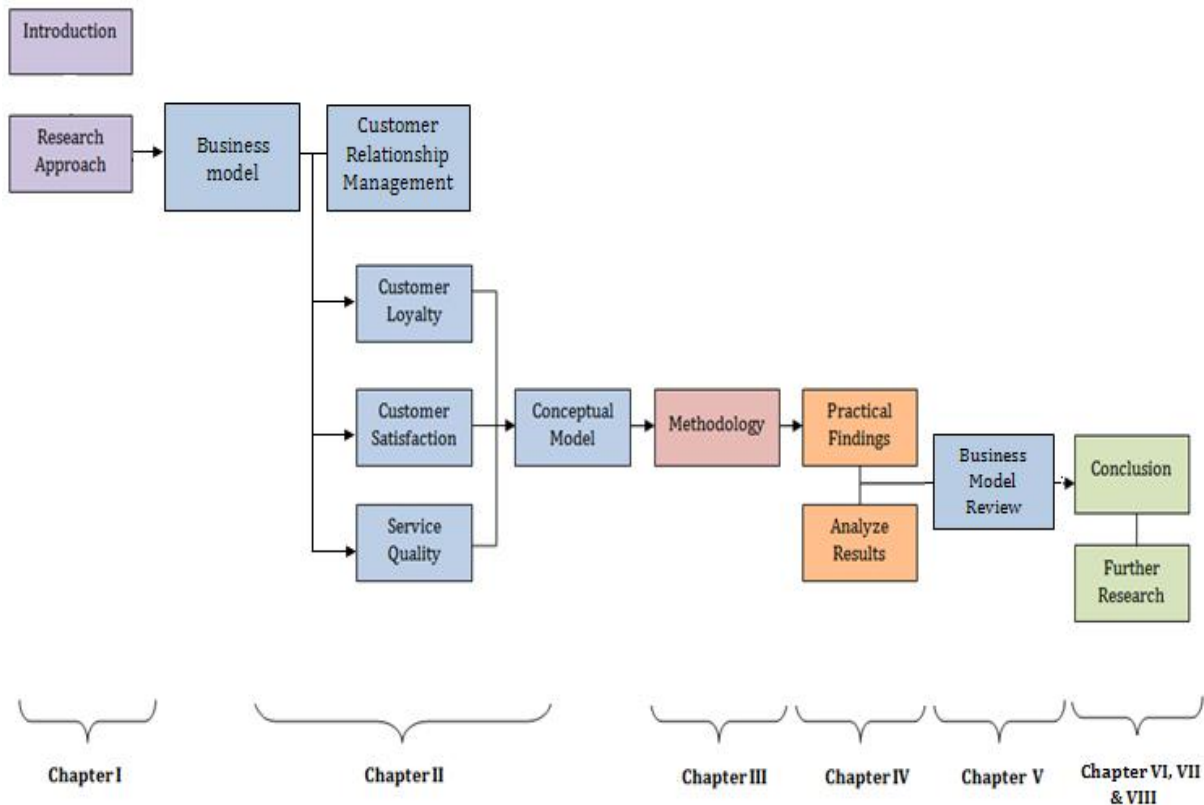


Figure 2: Structure of the Research

A business model and the concepts of service quality, customer satisfaction and customer loyalty do not occur in a vacuum (Veldhuisen, 2011). Service quality is depending on a specific service provider and its industry. Therefore it is preferable to collect data from wholesalers by using semi-structured interviews. In this way, the different concepts can be adjusted to the industry. Eventually these concepts are the input for the questionnaire. The questionnaire will provide quantitative data, and this type of data allows statistical programs to calculate if there are relationships between the concepts.

Chapter I of this research consists of two subchapters. The first subchapter (1.1) provides the background information about the research field and its problem. A short literature review will search if there is an answer in articles for the problem. Eventually the problem statement will indicate that there is a need for this research. The second subchapter (1.2) describes the research approach. Several research questions are presented and the research approach is elaborated. Which type of data and research methodology is used? What is the theoretical and managerial relevance of this study? The answers are given in chapter 1.2.

Chapter II of this research will provide an in-depth theoretical understanding about the different elements in this research. Articles are collected by a desk research strategy. A desk research is a strategy where a researcher will make use of the data and reports of other researchers (Verschuren & Doorewaard, 2005). Several books, articles and papers, in which scientists have put their knowledge about the subject of service quality, customer satisfaction, customer loyalty and business modeling, are used. Academic journals like Journal of Academy of Marketing Science, Journal of Marketing, Harvard Business Review and Long Range Planning will

provide input about the business model concept and how customer loyalty, customer satisfaction and service quality are related to it.

Eventually a lot of researchers (Cavana et al, 2007; Garland & Gendall, 2004; Henkel et al, 2006; Heskett et al, 1997; Kao, 2009; Lai, 2004; Naeem & Saif, 2009; Rauyruen et al, 2007; Yu & Dean, 2001; Ziethalm et al, 2008) conclude that there is a relationship between service quality and customer loyalty. Customer satisfaction is an important mediator variable in some industries. Based on their articles a conceptual model is drawn. This model is tested by conducting different hypotheses and a questionnaire.

Chapter III of this research will elaborate on the methodological part. Chapter III is divided into two subchapters. The first subchapter provides the research design to test the different hypotheses. For this study a web-based survey strategy is used. A web-based survey strategy is relative useful as it is an inexpensive to collect a large number of data of multiple variables within a short period of time (Verschuren & Doorewaard, 2005). The second chapter will provide the operationalization of the variables service quality, customer loyalty and customer satisfaction. These operationalization's of these variables are verified within the automotive industry by several interviews with large wholesalers and branch organization Bovag. Eventually suitable variables are input for different statements which are going to be tested within the questionnaire. The conceptual model is tested in practice.

Chapter IV of this research consists of presenting and analyzing the results of the survey. To test the conceptual model SPSS 16.0 is used. SPSS 16.0 is a statistical tool for Windows XP. The output derived from these statistical analysis is the input for both answering research question three and answering the main research question.

Chapter V of this study presents a case study of wholesaler Koskamp. The current business model is reviewed and there is managerial advice for Koskamp.

Chapter VI of this research will present the general managerial advice to Koskamp and chapter VII will present a list of recommendations for Koskamp.

Chapter VII will end up with limitations of this research, ideas for future research, reflection on the theory and models used and the practical relevance for Koskamp.

1.2.4 Scientific and Managerial Relevance

This research provides information about the relations between service quality, customer satisfaction and customer loyalty. Measuring the strength of these relationships is of importance for large wholesalers. Perhaps they should re-evaluate their business model and design it in other efficient ways. The relevance of this study is viewed from a theoretical and practical point of view.

Scientific (theoretical) relevance of this research is that it contributes to the theory development of customer loyalty. There is a lot of research done to find the possible (inter)relationships between service quality, customer satisfaction and customer loyalty. However, most reearch results are conducted in specifically business-to-consumer industries (for instance the hotel and banking sector of Asia, the Middle East and America). This study

contributes to the theory development of customer loyalty with a sample of 114 respondents out of the Dutch business-to-business automotive parts industry.

Managerial (practical) relevance of this research is an advice about how important the quality of services are within the Dutch automotive industry. Thereby wholesalers get an strategic advice on business model level. The results of this research lead to a strategic advice of how wholesalers should design their business model, particular the customer part of the business model, whereby they can increase customer loyalty.

1.2.5 Thesis Outline

Chapter I includes two subchapters. Subchapter 1.1 introduces the research problem with background information of the research topic and developments in the research field. They are coming together in the problem statement and purpose. Subchapter 1.2 follows with the main research questions, the sub research questions, the research model and the relevance of this study.

Chapter II of this research exists of three subchapters. Chapter 2.1 provides a theoretical understanding of customer relationship management and the business model concept and how both are related to each other. Chapter 2.2 provides an in-depth theoretical understanding about what customer loyalty and customer satisfaction and how these items could be measured. Chapter 2.3 provides an in-depth theoretical understanding about service quality and how to measure service quality. Chapter 2.4 draws a conceptual model where different relations between the elements of this research become clear. These relationships are stated in three main hypotheses which are empirically tested.

Chapter III includes three subchapters about the research methodology. First, sub chapter 3.1 provides the research design (including the research environment, the research population, the sample size and the procedure for the questionnaire). The operationalization of the different variables and items are stated in subchapter 3.2. Subchapter 3.3 shows how this research deals with the threats of validity.

Chapter IV consists of four subchapters. Subchapter 4.1 provides an introduction to the empirical findings by presenting the descriptive statistics of the respondents and their response. Additionally reliability calculations are presented. In subchapter 4.2 the three main constructs are analyzed if they are normal distributed. Furthermore there is a selection of the right statistical test for testing the three hypotheses. Subchapter 4.3 presents the tests of H1, H2 and H3. Subchapter 4.4 digs deeper into the main construct of this research: Service Quality. It draws the most important conclusions about the empirical findings and provides input for answering the main research question.

Chapter V, exist of two subchapters. Subchapter 5.1 and 5.2 presents a company Koskamp, which will be used as a case study, and describes its current business model. Subchapter 5.3 reviews the current business model of Koskamp by translating the findings of chapter 4 into business model advice for Koskamp. The same structure will be used.

Chapter VI presents the conclusions by answering the main research question. Chapter VII presents a list of the main recommendations for Koskamp.

Chapter VIII reflect the managerial relevance, the practical relevance and the research limitations. Besides there are some suggestions for future research presented.

2. Customer Relationship and Business Models

This chapter exists of four subchapters. Subchapter 2.1 will indicate and elaborate Customer Relationship Management and why business models are a great tool for understanding these relationships. Subchapter 2.2 will elaborate on the customer relationship management aspects by providing an in-depth theoretical understanding of the variables of importance for this study. Subchapter 2.3 will elaborate on service quality and how to measure service quality. Subchapter 2.4 will illustrate a conceptual model based on the theory. Besides, three hypotheses, which are going to be tested in this study, are mentioned.

2.1 Customer Relationship Management

In general there are two types of marketing strategies: Transactional marketing strategy and customer relationship marketing strategy.

A transactional marketing strategy is a business strategy that focuses on “single point of sale” transactions. The emphasis is on maximizing the efficiency and volume of each individual sale. Developing a relationship with buyer was less important. This strategy is used by almost every organization during the ‘60s till the ‘80s. In the ‘90s researchers Reichheld and Sasser (1996) show that it was more profitable to retain current customers than recruit for new customers. A reduction in customer churn with 5% will increase the profit between 25 and 80 percent. Due the results of their study a lot of organizations changed their strategy. Customer retention became an important goal. The new way of marketing strategies was called Customer Relationship Management (from here: CRM).

CRM is a relative new marketing strategy. The strategy seeks to establish long term relationship with its customers rather than focusing on single economic transaction. Often the main goal in this strategy is adding value to products and services in order to keep customers satisfied and loyal to the company (Grönroos, 2000). The underlying thought is that the customer is the determining factor of a profitable organization rather than a critical success factor. Therefore a company needs to know how to satisfy customers. Peelen and Payne defined CRM as followed:

Customer relationship management is dealing with the development, building and maintenance of a long-term relationship between a company and its customers. It is about structural activities to have a sustainable and mutually beneficial relationship.

Payne, 2006; Peelen; 2003

Regarding to this research customer relationship marketing (and management) seem to be the type of strategy that wholesalers should use, while loyalty relationships are the most important goals for wholesalers. If wholesalers want to manage this relationship, the business model concept is a useful conceptual tool.

2.2 The Business Model Concept

The business model (from here: BM) concept have been integral to trading and economic behavior since pre-classical times (Teece, 2010). BMs had risen up to prominence with the advent of the Internet by the end of 1990s. Stähler (2001) stated that BMs originally designed to map business processes and information patterns within companies that could be used to build

IT systems. Since the '90s several definitions of the BM concept are presented. Some authors describe the BM concept based on value components (Osterwalder & Pigneur, 2010; Teece, 2010) and others based on actors and their roles, relationships and communication patterns (Al-Debei and Avison, 2010).

Most authors state that the BM concept provides powerful ways to understand, analyze, communicate and manage strategic choices (Shafer, Smith & Linder, 2005; Chesbrough, 2010; Osterwalder & Pigneur 2010; Teece, 2010). Some authors write about the logic of creating and capturing value (Chesbrough, 2010; Linder & Cantrell, 2000; Osterwalder & Pigneur, 2010; Margretta, 2002; Shafer et al, 2005; Teece, 2010).

Shafer et al (2005) proposed that business model exist of four components: strategic choices, value network, creating value and capturing value. They proposed the following definition:

'A business model is a representation of a firm's underlying core logic and strategic choices for creating and capturing value within a value network'.

Schafter et al, 2005, p. 202

Recently Al-Debei and Avison (2010) did a literature review on BM definitions in order to create a unified understanding of the BM concept. According to these authors, a BM is a way to describe the gap between business strategy and business processes. After reviewing information system related literature, different BM definitions are classified based on the elements which show up in the definitions. Eventually Al-Debei and Avison (2010) provide a general conceptual framework by which they show that value proposition, value network, value architecture and value finance are the main dimensions of the BM concept.

Osterwalder (2004) also did a wide-ranging literature review. He grouped various aspects of the BM concept into four 'pillars': product, customer interface, infrastructure management and financial aspects. Those four pillars are composed of nine building blocks. Osterwalder's definition of the BM concept is as followed:

'A business model is a conceptual tool that contains a set of elements and their relationships and allows expressing a company's logic of earning money. It is a description of the value a company offers to one or several segments of customers and the architecture of the firm and its network of partners for creating, marketing and delivering this value and relationship capital, in order to generate profitable and sustainable revenue streams'

Osterwalder, 2004, p. 15

2.2.1 Business Model Canvas

For this research the BM canvas of Osterwalder and Pigneur (2010) is useful to illustrate the business model design. There are several reasons for that.

First, they created a flexible and user-friendly canvas, based on the nine BM building blocks which Osterwalder (2004) stated. Most authors tend to concentrate upon a more limited set of BM elements and therefore apply to a overly general level. Generally, most authors agree on two elements: how value is created and how value is captured (Chesbrough, 2010; Linder & Cantrell,

2000; Osterwalder et al, 2005; Osterwalder & Pigneur 2010; Margretta, 2002 Schafer et al, 2005; Teece, 2010)

Second, the authors did not use specific nature of articles, while other authors, like Al-Debei and Avison (2010), did. These authors have only reviewed information system literature. Osterwalder & Pigneur have reviewed literature from different industries and their model is co-created by 470 practitioners from 45 countries. Also several Dutch practitioners like E. Blom, M. Castricums, B. Kijl, J. Sol and H. Raemakers participated.

Third, Schafer et al (2005) conclude that neither value creation (service quality) nor value capturing (customer loyalty) occurs in a vacuum. 'Value creation and capturing act in a business network that includes suppliers, partners, distribution channels and the firms own resources. 'One of the biggest mistakes entrepreneurs can make is not understanding their own industries. Entrepreneurs should take time to learn where the opportunities are and how distribution channels work' (Allen, 1999). Osterwalder and Pigneur (2010) noticed this and therefore they provided the dimension of key partners, key resources, customer relationships and distribution channels to their BM framework.

Finally Osterwalder & Pigneur (2010) put the value proposition building block central to the BM concept. A value proposition is a bundle of products and services that an organization offers to a customer. Regarding to this research, where the service (quality) is central, the BM framework of Osterwalder and Pigneur (2010) is particularly useful.

As stated before, CRM is a strategy to create a mutual beneficial relationship between an organizations and a customer (Peelen, 2003). The BM Canvas of Osterwalder and Pigneur (2010) consists of nine different building blocks. The nine basic building blocks show the logic of how a company intends to create, deliver and capture value from the products and services they offer.

The model of Osterwalder and Pigneur (2010) created a general understanding of how business works. Within every block of the canvas there are a lot of theories and models that go deeper into the subject.

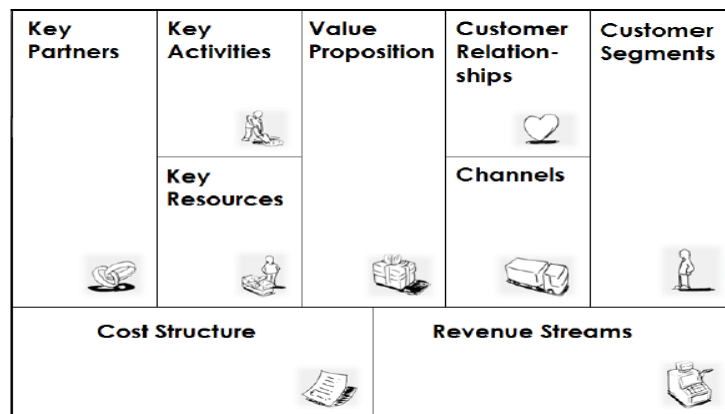


Figure 3: The Business Model Canvas (Osterwalder & Pigneur, 2010)

The offer part is presented by the value proposition building block. It has a central function in the BM canvas of Osterwalder and Pigneur (2010). A value proposition is the bundle of products and services a company offers to a specific customer segments. This bundle of products and services creates value for a segment and therefore they are willing to pay a specific price.

This study tests if the quality of a service (value proposition block) can influence customer satisfaction and customer loyalty (customer relationship block).

The customer part exists of customer relationships, customer segments and channels. Customer relationship refers to CRM. Customer segment refers to the segmentation of customers into homogenous groups (Panagopoulos & Avlonitis, 2010). Generally spoken, a company can choose for three segmentation options (Kotler & Armstrong, 2010).

1. No customer segmentation. A company uses the same strategy to each segment.
2. Complete segmentation. A company uses a different strategy for each segment.
3. A mix between no segmentation and complete segmentation.

Kotler and Armstrong (2010) stated that there are several advantages of segmentation. First, customer segmentation provides a way for better serving and response towards customers' needs. To satisfy a variety of customer needs is difficult. Clear customer segments with a suitable serving strategy make this a lot easier. Second, customer segmentation can generate higher profits. When customers are divided into different equal segments, it is possible to offer a more suitable strategy towards this segment. Customers can be reached and informed in the way they prefer. Third, customer segmentation also ensures wholesalers opportunities for growth. With a specialized approach it is possible to be more effective in customer retention and acquisition.

The infrastructure part exists of key partners, key activities and key resources. Key partners are the network of suppliers and partners that make the BM work. There are four types of partnerships distinguished: strategic alliances between non-competitors, strategic partnerships between competitors, joint ventures and buyer – supplier relationships. Key activities are the most important activities in executing a value proposition. Key resources are the most important assets required to make a BM work. Key resources can be physical, financial, intellectual, or human.

The financial part refers to the building blocks cost structure and revenues stream. The cost structure describes the most important cost regarding to a particular BM. A BM can be cost driven (for example Aldi supermarkets) or value driven (for example Rolex watches). Besides, cost structures can have different characteristics (for example variable costs). Revenue streams are logically related to the cash flow a company generates from each customer segment. The revenue stream block is describing the way a company generates money from each single customer segment. There are several ways to generate a revenue stream; asset sale, usage fee (service), subscription fee (selling continuous services), licensing (permission to use protected intellectual property), advertising, brokerage fee (intermediate service between two or more parties) and lending, leasing or renting (give temporary right to use an asset).

2.2.3 Customer Relationships and Selling Models

Selecting the right selling model is important for creating a loyal customer relationship. Services can range from pure transactional (in the transactional selling strategies) to collaborative (in the consultative selling strategies). Besides, there is a distinction between short-term objectives and long-term objectives.

Selling models refer to the systematic activities that firms pursue in order to develop different relationship objectives and to reach each customer (Spiro & Santon, 2008). Selling models deeply influences the overall customer experience (Osterwalder & Pigneur, 2010; Wilson, 2000) and should be established before selecting the channels to sell value propositions

(Panagopoulos & Avlonitis, 2010, p. 50). Ingram, Laforge and Leigh (2002) stated seven general types of selling models especially for business-to-business markets. There are exceptions possible towards these selling models. For example a combination of two models is possible. The article of Ingram et al (2002) is particularly useful, because this study focuses mainly on the business-to-business market.

The *traditional selling model* is based on selling products. With a short-term focus this type of selling model has the following key activity: Get products into the marketplace on a daily acquisition basis and hope the offer is good enough to make a sale. This method includes a high expense factor due to the facts that companies do not have a relationship with a buyer or even understand the buying criteria. The selling model focuses on (short) contact with as many as possible customers a day. (Wilson, 2000; Ingram et al; 2002).

The *order-taker selling model* is a process whereby the customer calls into a customer service (center) or an inside sales team to place an order. This model is somewhat related to the traditional selling model due to the fact the focus is on selling products on short-term. But, however, this model is not only about outside salesmen (Ingram et al, 2002). Also inside sales calls can be used to drive orders (like a call center, a fax module, mailings direct mail offers and more recently the web shop technology).

The *commodity selling model* is closely related to the traditional, but makes one exception. The customers of a business do not believe that their products and services can be differentiated by anything other than its price. The nature of this model is beating competitors on a low pricing mechanism. There is usually less loyalty (Ingram et al, 2002).

The *relationship selling model* is tries to built relationships with its customers, which is very important in most industries. When a relation is established, it does not mean that the business is keep going on. The relationship in most cases opens a door. The offer that a company makes is the base for success (Ingram et al, 2002; Wilson, 2000).

Consultative selling has many origins and the term is used quite frequently (Ingram et al, 2002). The thesis of Hicks (2010) is used to show different types of consultative selling approaches. Hicks (2010) made a distinction between the conception of 'self' and the conception of 'organizing'. The conception of organizing refers to how consultants think of organizations. Are organizations designed entities which are controllable, or do consultants think an organization has dynamic processes and therefore is less controllable. The conception of self refers to how consultants look to themselves. Are they integrated to an organization, do they think meaning is to be jointly constructed or do they think they are an exclusive, separated from others and discrete entity.

The *return on investment selling model* is often used as a basis for selling large or expensive products. The objective of the selling company is to show a return in the form of either increased revenue for the customer or cost savings equal to or greater than the amount of purchase. (Ingram et al, 2002)

The *value adding selling model* is one of the most over used, but least understood selling model (Ingram et al, 2002). The model requires a more professional approach based upon the questioning system to uncover problems of customers and what are related issues. Regarding to these problems either a bundling approach or a combination of solutions can be given. Often this model includes a 'success factor' fee, which acts as a bonus plan for a sale offer (Wilson, 2000; Ingram, 2002).

Selling model	Focus	Relationship objective	Role of sales force
Traditional	Short-term	Boosting sales	Persuader
Order taker	Short-term	Boosting sales	Persuader
Commodity	Short-term	Boosting sales	Persuader
Relationship	Long-term	Develop relationship	Relationship Builder
Return on investment	Long-term	Develop relationship	Relationship builder
Consultative	Long-term	Satisfy customer needs	Problem solver
Value adding	Long-term	Satisfy customer needs	Value creator

Table 1: Overview Of Selling Models

2.3 Customer Loyalty and Customer Satisfaction

'Due the fast growing communication technologies garage owners are faced with multiple choices to choose who they purchase car materials and car accessories from. Therefore customer satisfaction and customer loyalty are becoming important objectives for wholesalers' (Veldhuisen, 2011).

2.3.1 Customer Loyalty

Customer loyalty has been largely studied in consumer and service market context. A common used definition is given by customer loyalty pioneers Dick & Basu (1994)

Customer loyalty is viewed as the strength of the relationship between an individual's relative attitude and repeat patronage.

Dick and Basu, 1994, p 16

Dick and Basu (1994) pointed out that customer loyalty is not only a behavioral phenomenon, besides the behavior aspects, loyalty refers to the attitude of a customer. The two dimensions of customer loyalty, relative attitude (high or low) and repeat patronage (high or low) will indicate four types of loyalty (see figure 4). Garland and Gendall (2004) tested the framework of Dick and Basu and they confirmed their typologies. They stated that both attitude and behavior are important determinants of customer loyalty.

		Repeat patronage	
		High	Low
Relative attitude	High	True loyalty	Latent loyalty
	Low	Spurious loyalty	No loyalty

Figure 4: Typology by Dick And Basu (1994)

In line with Dick and Basu (1994), Rauyruen, Miller and Barrett (2007) stated that there are three fields of research in customer loyalty: behavioral loyalty, attitudinal loyalty and composite loyalty. Where behavior loyalty is focussing on the patterns of repeat purchasing, attitudinal loyalty is focussing on the willingness to recommended a product or service and the positive

word of mouth. Composite loyalty is a mix of both. This study will focus on composite loyalty, because it fully explains the concept of customer loyalty.

The importance of customer loyalty is endorsed by a lot of researchers and profit organizations. For example authors Walsh, Groth, and Wiedmann (2005), Cavana, Corbett, and Lo (2007) and Pfeifer (2005) all conclude their research with the statement that the cost of serving a loyal customer are less than the serving cost of a new customer. Gee, Coates and Nicholson (2008) mentioned several advantages of customer loyalty:

- Loyal customers have a less service cost
- Loyal customer will pay higher cost for a product / service
- Loyal customers will act as a marketing agent by word-of-mouth marketing

Heskett et al (1997) developed the 'Service Profit Chain' which indicates strong relations between customer loyalty, customer satisfaction and the value of goods or services. Their conclusion was that loyalty is a direct result of customer satisfaction and that satisfaction is largely influenced by the quality of services. A key element of loyalty is the exchange of information. The exchange of information can provide a positive behavior and state of mind regarding to the information sender. Therefore managing customer loyalty is very important.

2.3.2 Customer Satisfaction

Satisfied customers are a key factor in the formation of a customer's desire to purchase future products. Nowadays, customer satisfaction is considered as the corporate level strategy and it is a source of successful entrepreneurship. Regarding to customer satisfaction, there are some differences in the definitions. Sureshchandar, Rajendran and Anantharaman (2002) did a comprehensive review of customer satisfaction literature and they showed that there are three general components: response, focus and time. The authors defined customer satisfaction as followed:

Customer satisfaction is a response (emotional or cognitive), pertains to a particular focus (expectations, product, consumption experience), and occurs at a particular moment in time (after experience or consumption).

Sureshchandar et al , 2002, p. 23

In customer satisfaction articles several authors show empirical evidence for the relationship of customer satisfaction with customer loyalty (Yu & Dean, 2001; Heskett et al, 1997; Rauyrueen et al, 2007). Henkel et al (2006) found that customers who are satisfied with a service provided are intent to increase the usage and purchase in future times. Parasuraman, Zeithalm and Berry (1988) and Naeem and Saif (2009) found that customer satisfaction is the outcome of service quality, and Sureshchandar (2002) suggest that there is a double connection between service quality and customer satisfaction.

2.4 Service Quality

Service quality of an organization is becoming an important competition factor in the business field (Veldhuisen, 2011). In service quality literature the first model to measure service quality was presented by Gronroos (1984). Gronroos (1984, p. 27) stated that a service is 'an activity or series of activities of more or less intangible nature that normally, but not necessarily, take place

in interactions between the customer and service employees and /or systems of the service provider, which are provided as solutions to customer problems.'

Gronroos used a two-dimensional model to study the quality of service. The first dimension was 'technical-quality', by which the outcome of service performance was meant. The second dimension was 'functional-quality', meaning subjective perceptions of how service is delivered. Functional quality reflects consumers' perceptions of their interactions with the service providers. The model of Gronroos compares the two dimensions of service performance with the expectations of customers. Gronroos' general conclusion was that each single customer has its own single perception of the quality of a service.

A few years later, researchers Parasuraman et al (1988) defined service quality as:

'A global judgment, or attitude, relating to the superiority of the service'.

Parasuraman, Zeithalm and Berry, 1988, p.16

Based on this conceptualization they proposed a model for measuring the quality of services, which is called the SERVQUAL model. SERVQUAL is an acronym for service quality. The framework of Parasuraman et al (1988) tries to diagnose service shortfalls and thereby opportunities for improvement can be derived. This model is relatively useful for this study, because one of the objectives for this study is to give BM advice to wholesalers.

After research in different kind of industries, the authors found five important predictors of the quality of a service: tangibles, empathy, reliability, assurance and responsiveness. Tangible refers to the appearance of the physical facilities, equipment, personnel and communication material within a service. Empathy refers to caring and individual attention of the service provider towards its customers. Reliability refers to the ability of the service provider to perform the promised service dependently and accurately. Assurance refers the trust in the knowledge and proficiency in the service provider. Responsiveness reflects the willingness to help a customer and provide a quick service (Parasuraman et al, 1988, p. 23).

The idea behind the SERVQUAL model (Parasuraman et al, 1988) is that a service provider tests his service quality by using several statements about the five predictors of service quality. Eventually possible gaps between expected and delivered service quality could be identified. There are five possible gaps:

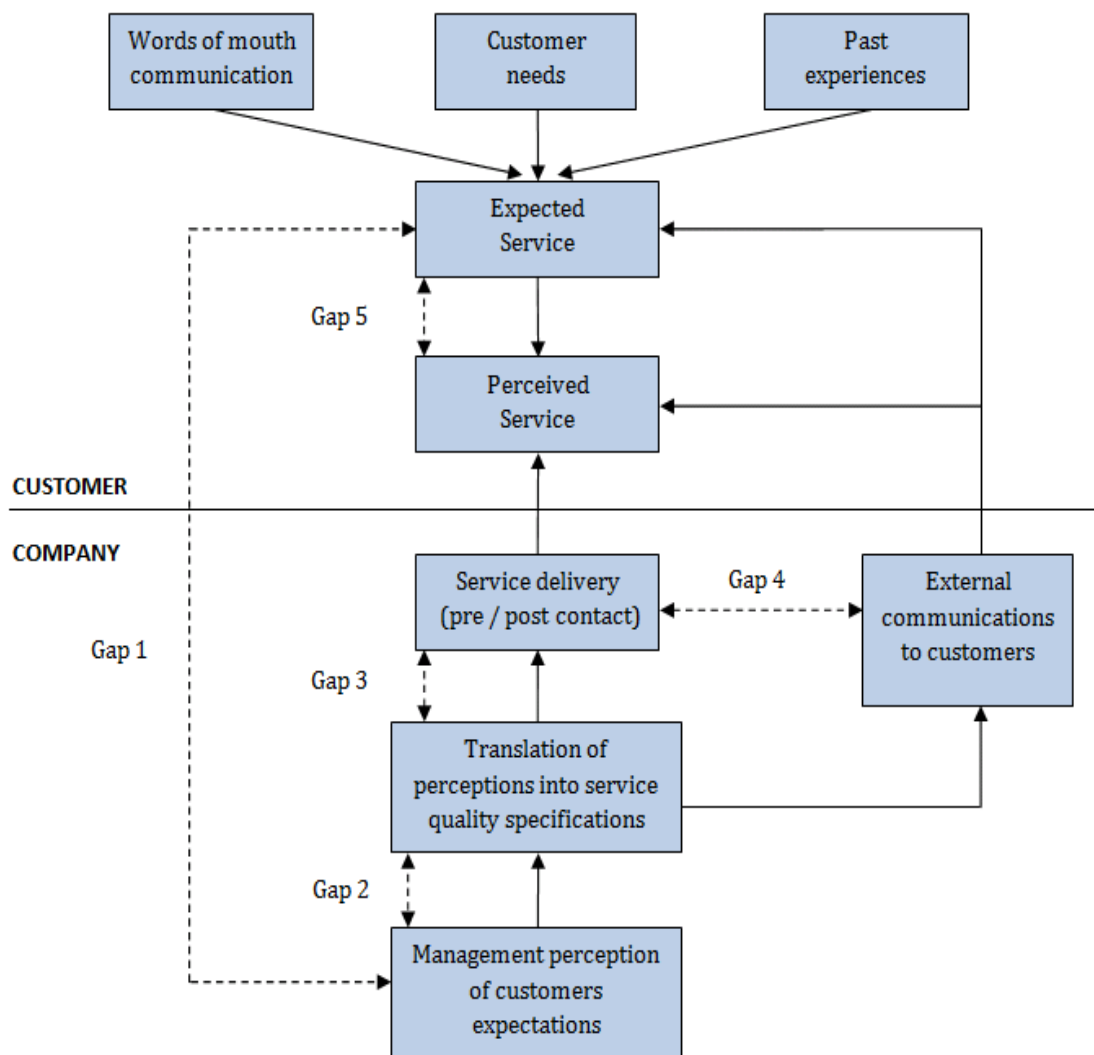


Figure 5: SERVQUAL Model (Parasuraman et al, 1988)

Gap 1; Not knowing what the customer want. The management of a company does not exactly know their customer's demands. This can be a result of insufficient use of market information, too little contact between the management and customers or too many hierarchical layers, which holding back information, between the salesman and the management.

Gap 2; 'Wrong service guidelines. Even if the management knows the needs of their customers, it is not obvious that strategic principles are properly converted into specifications for the employees which provide the service. There could be insufficient commitment to improve the quality of the service or perhaps there is a lack of confidence of the feasibility of service improvement. Besides an insufficient standardization of tasks or a lack of service objectives can be a barrier.

Gap 3; Difference between specifications and performance. This gap arises when employees who should provide the service according to guidelines do not follow the guidelines. There could be several causes. Uncertainty of their role in the process is an important factor. Do employees have sufficient information to fulfill their role adequately? Employees could feel that they are not able to cover all the customer needs. Role conflicts will arise. Another cause is that sometimes

the skills and experience of employees do not reflect the demand of the job. Or they do not have access to technologies or the right tools.

Gap 4: There are promises that could not be delivered. This gap is often caused by insufficient communications between the employees or advertising style and customers. Sometimes the capabilities of the serving processes are overestimated.

Gap 5: The customer has a difference in expectations of the service quality and the reality of the quality.

Recent studies confirm the findings of Parasuraman et al (1988). For example Cavana et al (2007) and Zeithalm, Wilson and Bitner (2008) confirm the findings. In the view of Ziethalm et al (2008) only without one exception, service quality is also predicted by the convenience a customer experiences. Cavana et al (2007) furthermore stated that convenience and reliability do not have any significant relationship with customer satisfaction, while responsiveness, assurance and empathy have a strong relationship. Kao (2009) suggested that service quality and its dimensions have a direct bearing on customers' evaluation of an organization and the intentions to choose the service provider. Lai (2004) stated that there is a significantly positive relationship between the quality of the service and customer satisfaction, as well as with future purchase intentions of customer

2.5 Conceptual Model and Hypotheses

As stated before, the main objective for Koskamp is creating a loyal relationship with its customers. The outcome of this research is valuable input for business model (re)design. How should Koskamp create value? Are there any differences between the different type of customers? What are the important factors to focus on? In other words: how should Koskamp design its business model to increase customer loyalty?

An in-depth literature review pointed out that service quality, customer satisfaction and customer loyalty are related to each other. Service quality is positively related to customer satisfaction and to customer loyalty. Besides there is a positive relationship between customer satisfaction and customer loyalty. So literature suggest that customers satisfaction has a mediation role in the relationship between service quality and customer satisfaction (Cavana et al, 2007; Garland & Gendall, 2004; Henkel et al, 2006; Heskett et al, 1997; Kao, 2009; Lai, 2004; Naeem & Saif, 2009; Rauyruen et al, 2007; Yu & Dean, 2001; Ziethalm et al, 2008).

In business model language the focus of this research is on how the offer part of the business model (value proposition) affects the customer part of the business model (customer relationships with different customer segments). The service quality of Koskamp is the value propositions which can be designed. The different types of respondents indicate the customer segments. Perhaps they have a different expectations about service quality.

Based on the findings in the literature review, the following conceptual model can be drawn (figure 6). To measure the relationships within the Dutch automotive parts industry, several hypotheses are conducted. The different variables of the conceptual model are operationalized in terms of a wholesalers within chapter 3.2.

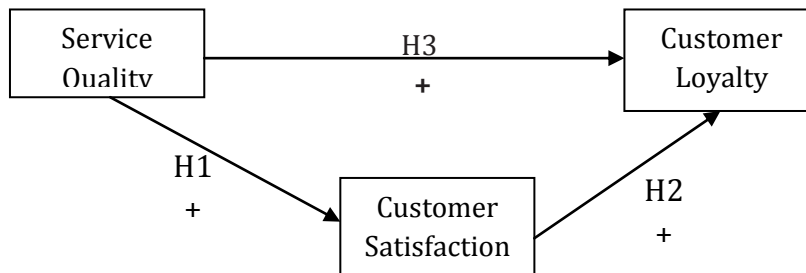


Figure 6: Conceptual Model

There are four hypotheses which are to be tested. The hypotheses are expressed in terms of two variables: the proposed cause and the proposed outcome (Field, 2009). If the first three hypothesis are proven then H4 can be tested, because significant relationship between all the three variables is a prerequisite for testing the mediating effect in H4.

- H1: There is a positive relationship between service quality and customer satisfaction within the Dutch automotive parts industry
- H2: There is a positive relationship between customer satisfaction and customer loyalty within the Dutch automotive parts industry
- H3: There is a positive relationship between service quality and customer loyalty within the Dutch automotive parts industry
- H4: There is a indirect positive relationship between service quality and customer loyalty which exist due the influence of customer satisfaction

3. Research Methodology

This chapter provides information about the research methodology. Subchapter 3.1 will describe the research design. Subchapter 3.2 will describe the operationalization of the different variables and hypotheses as stated in subchapter 2.5. Subchapter 3.3 will assess the four types of validity.

3.1 Research Design

Verschuren and Doorewaard (2005) stated that there are three key decisions to make when conducting a research: Using a quantitative or qualitative approach, do a broad or in-depth research and use an empirical or non-empirical setting.

For this study an empirical setting is used. Regarding to the large amount of potential respondents (6.831) a quantitative approach with an ordinal level of measurement is chosen. It is a relative broad research and its results are used to give a business model advice for wholesalers in the Dutch automotive parts industry.

3.1.1 Research Environment

This study focuses on the Dutch business-to-business automotive parts industry. The market for automotive parts and accessories in the Netherlands is characterized by the traditional strong separation between the bound and the universal channel.

Within the bound channel (or so-called dealer channel) there are about 30 importers of new cars. These importers select a number of dealer garages which they give the exclusive rights for selling their new cars of a specific brand in a particular region. For maintenance and repair of these new cars, dealers primarily use so-called 'Original Equipment (OE)' products. These car parts are often marketed under the name of the car brand and car importers sell these products directly to the dealer garages.

The universal channel offers a wide variety of brands and price levels. Some of those brands are produced by the factories that also make OE-products. Currently there are approximately 100 importers of universal parts active in the Netherlands. Research shows that about 80% of the importers distribute these products through wholesales (Veldhuisen, 2011).

The price of dealers channel is generally higher than the price level of the universal channel. Normally, it is more attractive for customers with a car older than four years to go to the universal garage instead of the dealer garage. Prices of OE products become relatively too high, because the value of the car is significantly reduced (Bovag, 2011). Logically the variable 'type of garages' is of importance to design the business model of a wholesaler. Therefore type of garage is measured as a demographic variable.

3.1.2 Research Method

Regarding to the resources of this research (relative less time, money and manpower) a web-based questionnaire strategy is quite useful for this study; it is an inexpensive way of collecting a lot of data within a short period (Verschuren & Doorewaard, 2005).

To conduct a valid and relevant questionnaire, the variables are verified in practice and become suitable for wholesalers in the Dutch automotive industry. Several interviews with wholesalers are planned. Aim of these interviews is to collect the right item indicators about the variables. To study the internal consistency and the reliability of the three main variables

(service quality, customer loyalty and customer satisfaction) the Cronbach's alpha (α) is calculated for each item of it.

Besides testing the relations between service quality, customer satisfaction and customer loyalty this study also tries to gain insight in how a large wholesaler should design its business model. Therefore SPSS 16.0 for Windows XP is used. Combining the demographical factors of a respondent with the answers to the different statements will provide powerful input for how to design the business model.

3.1.3 Research Population

The research population for this study exists of all the (universal and dealer) garages within the Netherlands. In 2012 organization 'Kamer van Koophandel' stated that there are 20.181 garages in the Netherlands. So there are 20.181 potential respondents for this study.

3.1.4 Sample Size

According to Field (2009) the interests of researchers is to find results that apply to the entire population. Because of the limited resources (relative less time, money and manpower), there is no access to every member of the population. For this study there are contact details (email addresses) of 439 garages available.

3.1.5 Procedure

The invitations to participate in the questionnaire were sent towards 439 garages. All the respondents are contacted via e-mail by which they receive an invitation to fill in the questionnaire. Within the e-mail an introduction about the research and the researcher is given. Next a garage is asked to choose one of his suppliers as an object for the questionnaire. There are three criterions: The supplier should be a wholesaler in car materials and accessories, the garage should be familiar with, or make use of the services of this wholesaler and the wholesalers should act only on the business-to-business market.

Subsequently, a hyperlink which links the respondent to the online questionnaire appears. The 439 invitations were sent on the 1th of March 2012. The questionnaire was online till 15th of March. To increase the response rate, a reminder email was sent on 8th of March.

3.2 Operationalization of Variables

Before testing the hypotheses, the different variables need to become measurable separately. Variables are 'things' that can change (or vary), might vary between people (e.g. IQ) or locations (e.g. unemployment) or time (e.g. mood, profit). In this research service quality, customer satisfaction and customer loyalty are the main variables.

3.2.1 Service Quality

Within this research service quality is treated as the proposed cause of customer satisfaction (H1) and customer loyalty (H3). This study used the theoretical SERVQUAL model of Parasuraman et al (1998) to measure service quality. The model has been proven in previous research studies, supported by a high reliability and validity. Parasuraman et al (1998) selected more than 20 variables and eventually they found five terms which significantly influence service quality within several different industries. Important to point out is that SERVQUAL is not a clear tool. 'The different items of service quality need to be translated into statements for the type of industry (Parasuraman et al, 1988, p. 35)'.

The SERVQUAL model indicates service quality by the five items: tangible, empathy, reliability, responsiveness and assurance. Within a workshop with several wholesalers from the industry, and within an interview with branch organization Bovag, the five items of service quality are operationalized for the service quality of a wholesaler in the Dutch automotive market. In total 15 different item indicators will cover the five items of the concept of service quality (see table 2).

Variable	Concept	Item	Item indicator large wholesalers
Service quality	Difference between quality expectation and the delivered quality	Tangible	Appearance of employees
			Appearance website/ web shop
			Appearance of transport
		Empathy	Interest in solving problems
			Understandable communication
			Individual attention
		Reliability	Accuracy of deliver on time
			Range of products
			Consistency of service
		Responsive-ness	Speed of order fulfillment
			Speed response to complaints
			Speed of deliveries
		Assurance	Competence
			Correct billing
			Confidentiality employees

Table 2: Operationalization of Service Quality

The different item indicators are measured by several statements (see Appendix A). Garages have to score their wholesalers service quality and additionally they fill in an expectation about service quality of a wholesaler. For the managerial relevance (see chapter 1.2) some comparable statements between items of service quality are added. They will indicate which items of service quality are the most important within the industry. The answers to these questions are input for the business model advice.

Service quality is treated as the proposed cause of customer loyalty (H1) and customer loyalty (H3). To test these hypotheses, garages have to score their wholesaler on customer loyalty and customer satisfaction as well. Eventually statistical analysis within SPSS 16.0 may or may not confirm the hypotheses.

There are different levels of measurement. The items of expected service quality are qualitative items. To measure them effectively different quantitative categories are ranked on a 7-point Likert scale where 1 stands for total disagreement and 7 stands for total agreement.

3.2.2 Customer Loyalty

Customer loyalty is defined as the strength of the relationship between a relative attitude and the repeat patronage behavior of a customer. Customer loyalty is indicated by four item indicators (table 3).

Variable	Concept	Item	Item indicator wholesaler
Customer loyalty	Strength of the relationship between	Relative attitude	Recommendation to colleagues / other garages

an individual's relative attitude and repeat patronage behavior	Positive comments on service	
	Repeat	Repurchase products
	patronage behavior	Intentions to continue using service in future

Table 3: Operationalization of Customer Loyalty

The different items are measured separately (see Appendix A). Theoretically relative attitude can be classified as high or low. In this research relative attitude is measured by two statements within a 4-point scale. For example 'Recommendation to colleagues or other garages': 'We always recommend our wholesaler to other garages' (4), 'We often recommend our wholesaler to other garages' (3), 'We sometimes recommend our wholesaler to other garages' and 'We never recommend our wholesaler to other garages' (1). The relative attitude is high when the average score of both statements is above 2.5 points and low when the average score is below 2.5.

Repeat patronage is measured by two item indicators: 'Intention to continue use service in future' and 'repurchase behavior'. First, the intention is measured by using a 4 point scale including the following statements

- (1) 'We certainly have no intention to continue use the service of our wholesaler'
- (2) 'We probably have no intention to continue use the service of our wholesaler'
- (3) 'We probably have the intention to continue use the service of our wholesaler'
- (4) 'We certainly have the intention to continue use the service of our wholesaler'

Second the repurchase behavior is measured by using a 4 point scale including the following statements:

- (1) 'We will repurchase no products'
- (2) 'We will repeat purchase some products'
- (3) 'We will repeat purchasing many products'
- (4) 'We will purchase as much as possible products'

Eventually, the repeat patronage behavior is defined as low when average score is of both statements is equal to or below 2.5 points and high when the average score is above 2.5. This made it possible to classify all respondents based on the loyalty types of Dick and Basu (1994). During a workshop with wholesalers it became clear that loyalty types 'True loyalty' is the most attractive for them, followed by 'Spurious loyalty', 'Latent loyalty' and 'No loyalty'. The main reason for this arrangement lies in the economic challenging times, where high repeat patronage behaviors of garages are preferable above high relative attitudes.

3.2.3 Customer Satisfaction

Satisfaction is a broad concept. Within this study customer satisfaction is a response (emotional or cognitive), pertains to a particular focus (expectations, product, consumption experience) and occurs at a particular moment in time (Sureschandar et al, 2002).

Customer satisfaction is – in this study - treated as the response to a wholesaler. To test customer satisfaction about wholesalers different statements are added to the questionnaire. During semi-structured interviews with several wholesalers it became clear that five items are influence customer satisfaction: (1) Overall satisfaction, (2) Satisfaction about the price of the products, (3) satisfaction about the product range, (4) satisfaction about the product quality and (5) satisfaction about the service quality.

Variable	Description	Item	Item indicator wholesaler
Customer Satisfaction	A response, pertains to a particular expectation and occurs at a particular moment in time	Satisfaction wholesaler	Overall satisfaction
			Satisfaction about price
			Satisfaction about product range
			Satisfaction about product quality
			Satisfaction about service quality

Table 4: Operationalization of Customer Satisfaction

The different indicators are measured by statements within a web-based survey. The statements are mentioned in Appendix D. Answers are ranked on a 7-point Likert scale where 1 stands for total disagreement and 7 stand for total agreement.

3.3 Validity

Validity refers to the extent to which an empirical measurement adequately reflects the real meaning of the concept under consideration (Babbie, 2004). A valid measure measures what it is intended to measure. Shadish, Cook and Campbell (2002) define validity as "the approximate truth of an inference" (p. 34). There are four types of validity: statistical conclusion validity, construct validity, internal validity and external validity. In the next paragraphs each type is explained and they are assessed for this study.

3.3.1 Statistical Conclusion Validity

Statistical conclusion validity is "the validity of inferences about the correlation (co-variation) between treatment and outcome" (Shadish et al, 2002, p. 38). There are five main threats which might affect the validity of the statistical conclusion.

First, there is a threat of low statistical power. This is addressed by using a large sample size (439) and make use of a strong research design. Besides we can make use of a one tailed test, because thy hypothesis are directional (positive).

In the second place, there is a threat of violated assumptions of statistical tests. This is addressed by using the book 'Discovering statistics. Using SPSS by Field (2009)' in which assumptions of each test will be notice. For example, the Kolmogorov-Smirnov test will look after the assumption of normality which is a prerequisite of some statistical tests (subchapter 4.2).

At third there is a threat of unreliability of measure. This is addressed by using and testing item indicators' Cronbach's Alpha (α). In general, alpha values about 0.7-0.8 or higher are good (Field, 2009, p. 681).

At fourth there is a threat of heterogeneity of the units. There are some differences between the respondents which can influence the results. This is addressed by asking the most important demographical characteristic of each respondent (the type of garage). Type of garage is used as factor list variables in the calculations.

Eventually there is a threat of inaccurate effect size estimation. This threat is addressed by explaining why, and which statistical tests to use (paragraph 4.2.2),

3.3.2 Construct Validity

Construct validity is defined as "the validity of inferences about the higher order constructs that represent sampling particulars" (Shadish et al, 2002, p. 38). Service quality, customer loyalty and customer satisfaction are the constructs in this study. There are five main threats which deal with construct validity. We don't use a two group or test-re-test design there are no threats of resentful demoralization, treatment diffusion, treatment sensitive factorial structure, compensatory equalization of treatments and reactive self-report changes.

The first and the second threat are addressed in the same way. The threat of inadequate explication of construct and the threat of construct confounding. This is addressed by using the empirical validated theoretical model of SERVQUAL. This model is been proven within several industries to measure service quality. Different workshops with wholesalers and branch organization Bovag¹ makes clear that the constructs of service quality, customer loyalty and customer satisfaction become suitable to the industry and the type of services.

Third there is a threat social desirability response bias. This is addressed by introducing that the answers are confidential and that respondents do not have to fill in personal data.

Fourth and fifth there is a threat of mono-method and mono-operation bias. This is a threat which can't be addressed due time and resources that are available.

3.3.3 Internal Validity

Internal validity is defined as "the validity of inferences about whether observed co-variation between A (the presumed treatment) and B (the presumed outcome) reflects a causal relationship from A to B as those variables were manipulated or measured" (Shadish et al, 2002, p. 38). Since we don't use a test-re-test design, there are no threats of maturation, regression artifacts, testing and group selection. For this research there are two important threats to the internal validity

First, there is an important threat called ambiguous temporal precedence. First of all, other researchers found positive relationships between service quality and customer satisfaction or customer loyalty. They stated that these satisfaction and loyalty are a reaction to a certain focus (expectation). However, there still is a need to address this threat, because there are other focuses available (e.g. price / product quality). Within a special workshop with some garages and branch organization Bovag, it became clear that customer satisfaction and loyalty of garages are a reaction to a wholesaler's performance on price, service quality, product range and product quality. So since the object of this study is service quality, that precedents the wholesalers performance, temporal precedence is ensured.

In the second place there is a threat of history. What has happened between the wholesaler and the garage in the past is unknown; there could be some other reasons for lack of loyalty or dissatisfaction (like ethical reasons) than only a low service quality. The consequences should be acknowledged in the conclusions.

3.3.4 External Validity

External validity is defined as "the validity of inferences about whether the cause-effect relationship holds over variation in persons, settings, treatment variables, and measurement variables" (Shadish et al, 2002, p. 38). There are four threats to external validity.

¹ Bovag is the main branch association in the Dutch Automotive industry.

First, there is a threat of interaction of causal relationship with units. The units are dealer and universal garages within the Dutch automotive industry. Consequences should be acknowledged in the conclusion part.

In the second place there is a threat of interaction of causal relationship with outcome. The outcomes within this research are customer loyalty and customer satisfaction. Consequences should be acknowledged in the conclusion part.

At third there is a threat of interaction of causal relationship with settings. The setting is the Dutch automotive industry. There are possible consequences of these setting like for instance law regulations. Consequences should be acknowledged in the conclusion part.

Eventually there is a threat of context-dependent mediation. Service quality or customer loyalty may not moderate within another type of industry. So the outcome depends on the Dutch automotive industry. However, the results of this study will only be generalized within this specific industry.

4. Empirical Findings

Chapter 4 provides an analysis of the empirical findings. First, subchapter 4.1 provides an introduction to the empirical findings by presenting the descriptive statistics of the respondents and their response. Additionally reliability calculations are presented. In subchapter 4.2 the three main constructs are analyzed and the right statistical test for testing the three hypotheses is chosen. Subchapter 4.3 presents the tests of the hypothesis. Subchapter 4.4 digs deeper into the main construct of this research: Service Quality. It draws the most important conclusions about the empirical findings and provides input for answering the main research question.

4.1 Response

The data analysis starts with an exploration of the response, the respondents and the reliability of the item indicators of service quality, customer loyalty and customer satisfaction.

4.1.1 Response Rate

The invitations to participate in the questionnaire were sent to 439 garages on the 1st of March 2012 and were online till 15th of April. In this period 114 out of these 439 garages actually filled in the questionnaire. To increase the response rate, a reminder email was sent on 8th of March. Five respondents respond the e-mail and tell that they didn't were a garage for car maintenance anymore. Eventually a response percentage of 25.96 % can be calculated. 'A response rate above 15% can be indicated as a relative high response for social and economic science' (Field, 2009).

4.1.2 Respondents

To make statements about the external validity of this study, the representativeness of the sample is compared with data of branch organization Bovag. The different characteristics of the sample are compared with those of the whole population.

	Questionnaire	Population (2012)
	N = 114	N = 20.181
Type of garage		
Universal garage	72 %	70 %
Dealer garage	28%	30 %

Table 5: Comparing Sample and Population

The table above illustrates that the data have a sufficient match with the data of the whole population. This means that the results of this study can be generalized to the entire population. The entire population within this study exists of all the garages within the Dutch automotive market.

This study knows two different types of respondents: Universal garages and dealer garages. As stated before, 82 (72%) of the respondents were a universal garage. A universal garage in this study has on average 2.76 employees with a standard deviation of 1.635. 32 (28%) of the respondents were a dealer garage. A dealer garage has on average 5.87 employees with a standard deviation of 3.011. Based on the means and there standard deviations the assumption

can be made that dealer garages have a significantly higher amount of employees. Bovag (2012) confirms this assumption.

4.1.3 Reliability

Reliability is defined as the extent to which a questionnaire, test, observation or any measurement procedure produces the same results on repeated trials (Babbie, 2004). Of course validity (subchapter 3.3) is more critical to research. 'Validating that something is measured properly makes more sense than relying on that something is measured properly' (Field, 2009). A good measure must not only be reliable, but also valid. So a measure cannot be valid unless it is reliable, but a reliable measure may not be valid. Nevertheless, to be complete, the reliability of the answers is measured by studying the Cronbach's alpha (α).

The Cronbach's alpha ranges from zero to one, with zero indicating complete unreliability and a value of one indicating perfect reliability. In general, alpha values lower than 0.70 are not desirable (Field, 2009). The Cronbach's Alpha for the three constructs are mentioned in table 6.

Construct	Number of items	Cronbach's Alpha
Service Quality	15	0.950
Customer Satisfaction	5	0.830
Custom Loyalty	4	0.914

Table 6: Reliability Statistics

There is a high level of internal consistency between the items of service quality, customer satisfaction and customer loyalty. To dig deeper into the validity of the three constructs the Item-total statistics are presented in Appendix B. The column 'Cronbach's alpha if item deleted' indicates what the value of the alpha would be if a single item is deleted from the questionnaire. For all the three constructs there is no need to remove a item in order to increase the internal validity.

4.2 Analysis of Constructs

In this subchapter the constructs will face the test of normality in paragraph 4.2.1. The constructs are even faced with the test of normality. Additionally the descriptive statistics of each construct is illustrated in paragraph 4.2.2 and there is a choice of the statistical tests for testing the hypotheses in paragraph 4.2.3. In all the paragraphs the separation between the two types of respondents is added, in order gather information if there is a need for wholesalers to conduct two different kinds of business models.

4.2.1 Normal Distribution

The assumption of normality is of importance. To choose the right statistical test, it needs to be clear if the constructs of this study are distributed normally. In this research we use want to use regression analysis. Regression models assume that errors in the model are normally distributed (Gaussian distribution). Field (2009, p. 134) stated that 'the sample distribution will tend to be normal, regardless of the population distribution, in samples of 30 or more. As the sample gets bigger, researchers can be more confident that the distribution is normal.

This research uses a sample of 114. To be sure, the Kolmogorov-Smirnov test of normality is used. Within this test a significant value indicates a deviation from normality (Field, 2009). The

percentage on the Service Quality, Customer Loyalty and Customer Satisfaction are all non-significant in the Kolmogorov-Smirnov Test (table 7).

Sample	Construct	Statistics	Degrees of Freedom	Significant
Total (N=114)	Service Quality	.061	114	.200
	Customer Satisfaction	.065	114	.200
	Customer Loyalty	.081	114	.081
Universal (N=82)	Service Quality	.072	82	.200
	Customer Satisfaction	.095	82	.200
	Customer Loyalty	.086	82	.200
Dealer (N = 32)	Service Quality	.072	32	.200
	Customer Satisfaction	.096	32	.200
	Customer Loyalty	.081	32	.200

Table 7: Kolmogorov-Smirnov Test of Normality

The findings confirm that scores of service quality, satisfaction and loyalty are all distributed normally both in the total sample and in the different groups.

4.2.2 Descriptive Statistics of Constructs

The descriptive statistics of the three constructs are presented to get a overview of the rated service quality, satisfaction and loyalty. Besides the results of the different groups is mentioned. To test if there are differences between the two groups of respondents an independent-Sample T Test is used. If there is a significant differences in their scores, this would be important for business model advice.

Within this research service quality is a predictor variable within hypothesis 1 and hypothesis 3. It is a continuous variable on a 1-7 scale. Service quality made use of five items. The descriptive statistics and of the five items are stated in table 8 (next page). The minimum, maximum and standard deviation scores of service quality indicate that there are great differences in the service quality of the wholesalers. It appears that some wholesalers do better jobs than others. The averages are around 3.45 - 4.39.

Sample		N	Min.	Max.	Mean	Standard Deviation
Total (N=114)	Empathy	114	1.00	6.33	3.58	1.39
	Tangible	114	1.00	7.00	3.84	1.37
	Reliability	114	1,00	7.00	4.07	1.42
	Responsiveness	114	1,33	7.00	3.96	1.34
	Assurance	114	1,67	7.00	4.25	1.27
	Service Quality	114	1,00	7.00	3.94	1.33
Universal (N=82)	Empathy	82	1.00	6.33	3.62	1.04
	Tangible	82	1.00	7.00	3.84	1.45
	Reliability	82	1.67	7.00	4.17	1.32
	Responsiveness	82	1.67	7.00	4.05	1.26
	Assurance	82	1.67	7.00	4.19	1.28
	Service Quality	82	1.00	7.00	3.97	1.21
Dealer (N = 32)	Empathy	32	1.33	6.00	3.45	1.31
	Tangible	32	1.33	5.33	3.83	1.17
	Reliability	32	1.00	7.00	3.80	1.64
	Responsiveness	32	1.33	6.33	3.70	1.54
	Assurance	32	2.00	6.67	4.39	1.24
	Service Quality	32	1.00	7.00	3.83	1.29

Table 8: Descriptive Statistics Service Quality

An Independent sample T-test indicates if there are significant differences between the two type of garages. Within SPSS the following steps are taken: Analyze / Compare Means / Independent-Samples T Test. The results shows that there are no significant differences between the two type of garages regarding to service quality. There are no significant differences between the means on the service quality and its construct items.

	T	Significant	Mean Difference
Empathy	.598	.552	.175
Tangible	.045	.964	.012
Reliability	1.083	.285	.369
Responsiveness	1.094	.280	.351
Assurance	-.723	.466	-.200
Service Quality	.540	.592	.140

Table 9: Test of Differences Service Quality

Customer satisfaction can be classified as a continuous variable on a 1-7 scale. The descriptive statistics D(114) of customer satisfaction and its concept items are stated in table 10. The scores indicate that there are great differences in satisfaction items.

Sample		N	Min.	Max.	Mean	Standard Deviation
Total (N=114)	Overall	114	2.00	7.00	4.00	1.16
	Price	114	1.00	7.00	3.92	1,54
	Product Range	114	1.00	7.00	3.85	1,99
	Product Quality	114	4.00	7.00	5,92	0,80
	Service Quality	114	1.00	7.00	4,22	1,96
	Customer Satisfaction	114	2.00	7.00	4.38	1,25
Universal (N=82)	Overall	82	2.00	7.00	4.16	1.57
	Price	82	1.00	7.00	3.10	1.52
	Product Range	82	1.00	7.00	4.05	1.98
	Product Quality	82	4.00	7.00	5.91	0.83
	Service Quality	82	1.00	7.00	4.25	1.99
	Customer Satisfaction	82	2.00	7.00	4.55	1.25
Dealer (N = 32)	Overall	32	2.00	7.00	3.59	1.40
	Price	32	1.00	7.00	3.95	1.64
	Product Range	32	1.00	7.00	3.34	1.95
	Product Quality	32	5.00	7.00	5.95	0.73
	Service Quality	32	1.00	7.00	4.15	1.91
	Customer Satisfaction	32	2.00	6.00	4.28	1.13

Table 10: Descriptive statistics Customer Satisfaction

An independent sample T-test indicates if there are significant differences between the two types of garages. The results show that there are no significant differences between the two type of garages regarding to customer satisfaction.

	T	Significant	Mean Difference
Overall	1.610	.113	.513
Price	-.397	.693	-.140
Product Range	1.557	.126	.369
Product Quality	-.549	.586	-.091
Service Quality	-.038	.970	-.016
Customer Satisfaction	.847	.401	.216

Table 11: Test of Differences Customer Satisfaction

Customer loyalty is the depending variable and is classified into four categories: true loyalty, spurious loyalty, latent loyalty and no loyalty. During a workshop with wholesalers it became clear that loyalty types 'True loyalty' is the most attractive for them, followed by 'Spurious loyalty', 'Latent loyalty' and 'No loyalty'. The main reason for this arrangement lies in the economic challenging times, where high repeat patronage behaviors of garages are preferable above high relative attitudes.

Table 12 indicates the distribution of the different loyalty types among the different samples. There are no big differences between samples. Each type is occur in approximately 25% of the cases.

	Dealer		Universal		Total	
	amount	%	amount	%	amount	%
No	10	31	22	27	32	28
Latent	8	25	21	26	29	25
Spurious	7	22	21	26	28	25
True	7	22	18	22	25	22

Table 12: Distribution Type of Loyalty

Subchapter (4.3) illustrates whether these types of loyalty are significant related to customer satisfaction and customer loyalty. Therefore customer loyalty is computed to a continuous variable on a 1-12 scale. 1-3 is no loyalty, 4-6 is latent loyalty, 7-9 is spurious loyalty and 10-12 is true loyalty.

4.2.3 Choice of Statistical Tests

To choose the right the statistical tests the book 'Discovering Statistics' of Field (2009) is used. Field describes how to calculate and report findings by using the statistical program SPSS, which is also used for this research.

Hypothesis 1, 2 and 3 all include one continuous outcome variable and one continuous predictor variable. The data of service quality, customer satisfaction and customer loyalty are significantly distributed normally and are measured independently. There are no difference between the two groups of respondents. The Pearson's correlation coefficient is calculated to test if there is a relationship between the different variables. The coefficient r has to lie between -1 and 1 and illustrates the magnitude and direction of the correlation between the variables.

The magnitude is the strength of the correlation. The closer the correlation is either to +1 or -1, the stronger the correlation is. If the correlation is very close to zero, there is no association. The direction of the correlation indicates how the two variables are related. If the correlation is positive, the two variables have a positive relationship (as one increases, the other also increases). If the correlation is negative, the two variables have a negative relationship

To test if there is a mediation effect caused by customer satisfaction between service quality and customer loyalty, the Verboon (2010) method is used. Verboon's method is based on the work of Baron and Kenny (1986), including an significance test for the mediation effect. Verboon's method exists of four steps.

Within the first step there is a test if service quality predicts customer satisfaction. Customer satisfaction is the dependent variable and service quality is the predictor variable. The p-value of a regression analysis indicates the (significant) correlation. The second step tests if there is a prediction of service quality on customer loyalty. The p-value of a regression analysis indicates this correlation. The third step adds customer satisfaction as predictor in the model of step 2. Again the p-values of a regression analysis indicate the correlation. Then the effect of customers satisfaction on the model 2 is clear. Finally this effect (difference in the p-values) will be test on significance with the so called Sobel Test. The p-value of this test indicates the significance of mediating effect.

4.3 Test of the Hypotheses

In this subchapter the different hypothesis will face their statistical tests and it becomes clear if the hypothesis can be confirmed. Since there are no significant differences between the different

types of respondents (See chapter 4.2), the whole sample is used to test the different hypotheses.

4.3.1 Relationships between Three Concepts

Table 14 shows the results of the Pearson's correlations coefficient test between the different concepts in the hypotheses:

- H1: *There is a positive relationship between service quality and customer satisfaction within the Dutch automotive parts industry*
- H2: *There is a positive relationship between customer satisfaction and customer loyalty within the Dutch automotive parts industry*
- H3: *There is a positive relationship between service quality and customer loyalty within the Dutch automotive parts industry*

There is a significant correlation between service quality and customer satisfaction (H1) with a correlation coefficient $r = .912$, between customer satisfaction and customer loyalty with a correlation coefficient $r = .921$ (H2) and between service quality and customer loyalty (H3) with a correlation coefficient $r = .943$.

Regarding to the maximum correlation of 1.0, these correlations coefficients are highly positive (Field, 2009). Therefore we can assume that a high score on the service quality will tend to be paired with a high customer satisfaction and a high customer loyalty. Besides a high customer satisfaction will tend to be paired with a high customer loyalty.

	Service Quality	R square	Customer Satisfaction	R square	Customer Loyalty	R square
Service Quality	-	-	.912 *	0.832	.943 *	0.889
Customer Satisfaction			-	-	.921 *	0.848
Customer Loyalty					-	-

* Significant at the 0.01 level (2-tailed)

Table 13: Pearson's Correlations Constructs (N=114)

Despite the high correlation coefficients, the results are not true for every garage. There still is a degree of uncertainty, called prediction error, in our predictions. To address this error, we squared the correlation coefficient and get a measure of how much of the variability in one variable can be 'explained by' variation in the other. In this case about 89% of the variability in customer loyalty can be explained by differences in service quality, 83% of the variability in customer satisfaction can be explained by the differences in service quality and 85% of the variability in customer loyalty can be explained by the differences in customer satisfaction. Together with the high correlation coefficients, the squared correlation coefficients are in agreement with the hypotheses. Therefore hypothesis 1, 2 and 3 are confirmed.

This outcome is extremely important for future business model design. Since there are challenging times on the market, wholesalers are looking for solutions to built loyal

relationships with garages. Our findings show that service quality and customer satisfaction are solutions to increase customer loyalty.

To dig deeper into the variable service quality, there is made a regression analysis between all the components of it, and customers satisfaction and loyalty (table 14). Results show that there are only positive correlations coefficients. Nevertheless, there is a clear difference visible in the strength of the correlation and R square scores. Some service quality components (tangibles and assurance) have a lower correlation coefficient and explain less variance of customer satisfaction and loyalty, than others (empathy, responsiveness and reliability). But, as Field (2009) suggest, a correlation above 0,7 is normally indicated as a strong correlation

	Customer Satisfaction	R square	Customer Loyalty	R square
Tangibles	0,713	0,508	0,736	0,542
Empathy	0,843	0,711	0,882	0,778
Responsiveness	0,868	0,753	0,894	0,799
Reliability	0,916	0,839	0,903	0,815
Assurance	0,784	0,615	0,799	0,638

* Significant at the 0.01 level (2-tailed)

Table 14: Pearson's Correlations Dimensions (N=114)

4.3.2 Mediation Effect of Customer Satisfaction

There still is a change for a mediation effect as stated in the conceptual framework (Chapter 2.4) and suggested by other researchers. In several industries the direct relationship between service quality and customer loyalty is caused by customer satisfaction. If a mediation effect is found in this research, Koskamp has to design is business model by focusing on creating satisfied customers instead.

The mediation effect is calculated by the different steps Verboon (2010) suggested (paragraph 4.2.3). First, a regression analysis of service quality on customer satisfaction indicates a positive regression coefficient of 0.912 ($p < .000$).

	Unstandardized		Standardized		
	B	Std. Error	Beta	t	Sig.
Service Quality*	,977	,029	,958	33,935	,000

* Dependent Variable: Customer Satisfaction

Table 15: Linear Regression Service Quality and Customer Satisfaction

The second step tests if there is a prediction of service quality on customer loyalty. The prediction of service quality on customer loyalty is high (0.992) and significant. The third step calculates the effect of customer satisfaction (the mediating variable) on the correlation between service quality and customer loyalty. There is a small effect visible. The service quality correlation coefficient lowers from 0.992 to 0.904 which indicate that customer satisfaction influences the relationship. These results suggest that there is a relative small mediation effect of customer satisfaction (0.243, $p < .000$). However, the Sobel test, which calculates the significance

of this mediation effect, shows that the small mediation effect is not significant (2.18, $p < 0.052$). Customer satisfaction has no added value in the prediction of dependent variable customer loyalty by independent variable service quality. So hypothesis 4 is not confirmed.

		Unstandardized		Standardized		
		B	Std. Error	Beta	t	Sig.
Model 1	Service Quality	2,677	,033	,992	81,073	,000
Model 2	Service Quality	2,440	,113	,904	21,653	,000
	Customer Satisfaction	,243	,111	,092	2,201	,052

* Dependent Variable: Customer Loyalty

Table 16: Linear Regression Service Quality (Model 1) and Customer Satisfaction (Model 2) on Customer Loyalty

The calculations show that there are significant relationships between service quality, customer satisfaction and customer loyalty. Hypothesis 1, 2 and 3 are confirmed and hypothesis 4 is not confirmed. This outcome is important for redesigning the customer part of the business model. Loyal customer relationships can be built by creating a value proposition focusing on a high service quality.

The next question is 'How to create high service quality? What qualities should wholesalers focus on? Are there any differences between the two groups of respondents? These questions suggest that there is a need to dig deeper into the concept of service quality. Therefore an analysis of service quality is provided in the next subchapter.

4.4 Analysis Service Quality

As we have seen, service quality is positively related to customer loyalty and customer satisfaction. Furthermore there is no significant mediation effect of customer satisfaction between service quality and customer loyalty. So a wholesaler has the opportunity to create loyal and satisfied customers by offering a high service quality. However, the results don't tell what service quality items are the most important for different type of garages or tell if there are any differences in expectation level of service quality. Answers to these questions are important for design value propositions. Therefore this study does not stop by the confirmation of the hypotheses. It digs deeper into the subject of service quality by the measurement of the five service quality dimensions on expectation level. Besides, the elements are measured in comparable statements to see which the most important service quality item is. Eventually there are suggestions for the business model design.

The expected service quality is measured by the same statements that are used for the actual service quality. Looking to the scores of expected service quality, the following results show up (table 17). The statements are answered on a 1-7 scale, where 1 is the lowest expectation and 7 is the highest.

Sample		N	Min.	Max.	Mean	Standard Deviation
Total (N=114)	Empathy	114	3.00	7.00	6.12	.858
	Tangible	114	3.00	7.00	5.49	.862
	Reliability	114	4.33	7.00	6.49	.579
	Responsiveness	114	3.67	7.00	6.54	.599
	Assurance	114	4.00	7.00	6.06	.527
Universal (N=77)	Empathy	77	3.00	7.00	6.29	.815
	Tangible	77	3.00	7.00	5.39	.888
	Reliability	77	4.33	7.00	6.46	.595
	Responsiveness	77	3.67	7.00	6.51	.654
	Assurance	77	4.00	7.00	6.18	.151
Dealer (N = 32)	Empathy	32	4.67	7.00	5.91	.843
	Tangible	32	4.00	7.00	5.65	.734
	Reliability	32	5.33	7.00	6.52	.544
	Responsiveness	32	5.33	7.00	6.56	.437
	Assurance	32	5.67	7.00	5.80	.099

Table 17: Descriptive Statistics Expected Service Quality

Table 17 illustrates that both the type of garages expect a high level of service quality. Responsiveness and reliability are seemed to be the most important items, followed by assurance, empathy and tangible. The low standard deviation indicates that the scores are close to the mean. Nevertheless, an independent sample T-test indicates if there are significant differences between the two types of garages.

	T	Significant	Mean Difference
Empathy	-2.295	0.025	-0.387
Tangible	-0.987	0.342	-0.129
Reliability	-0.872	0.387	-0.106
Responsiveness	-0.579	0.565	-0.089
Assurance	-2.085	0.042	-0.374

Table 18: Test of Differences in Expected Service Quality

The results show some interesting values. Both empathy and assurance score significant on the t-test. This indicates that dealer and universal garages think different about the expected empathy and assurance quality. Universal garages expect a significant higher level of empathy and assurance quality. This is interesting for business model design and will be discussed in chapter 5.

As stated before, responsiveness and reliability seem to be the most important service quality dimensions. But to be sure, twelve comparable statements (including two service quality items) are re-testing if these results are true. Each of the comparable statements is answered by a 1-7 scale in which 1 means totally disagree and 7 means totally agree. Any score greater than 3.5 suggests that the first important item is seen as more important, any score below 3.5

suggests that the second-mentioned item is perceived as more important. Example: A respondent gives a score of 5 for the following statement: 'Confidentiality of employees is more important than a quick delivery'. This score indicates +1.5 point for assurance and a -1.5 for responsiveness. Eventually, all the scores an item gets are counted and divided by the number of statements in which they occurs.

An independent sample T-Test is performed to test if the answers of dealer garages and universal garages are significantly different from each other. The test indicates that there are no significantly different scores.

Item	Score
Responsiveness	1.383
Reliability	0,775
Empathy	-0,293
Assurance	-0,587
Tangibles	-1,278

Table 19: Most Important Service Quality Items

In line with the findings in table 17, the comparable statements suggest that responsiveness and reliability are the most important service quality items. These two variables should be the pillars of the service. Value propositions should focus on these two aspects.

5. Analysis of the BM of Koskamp

To give Koskamp strategic advice about creating a business model design with a focus on delivering high service quality, first the current situation needs to become clear. Therefore, the canvas of Osterwalder and Pigneur (2010) is used. Next, based on the results in the previous chapter, strategic advice is given to Koskamp by which customer loyalty can be achieved.

5.1 Lack of Loyalty

The problem statement of this research shortly describes the lack of loyalty of current customers. In 2011 Koskamp had a database of 2236 customers. More than 35% of these customers did not even order one product in this year. Furthermore, research of 'Vereniging Rijwiel en Automobiël Industrie' (2010) indicates that each full time mechanic of the universal channel has a potential revenue of €50,000.- for wholesalers like Koskamp. The bound channel garages have a potential revenue of €25,000.- per mechanic. Internal research within Koskamp illustrates that only 6% of garages out of the 2236 reach this level of revenues. 91% of the customers can order more products and become more loyal to Koskamp. According to Dick and Basu (1994) their current repeat buying behavior is low and these customers are not true loyal to Koskamp.

5.2 Business Model Canvas

Now that we know that service quality and customer loyalty are positively related, it is tend to be logical that Koskamp can decrease the lack of loyalty by offering a high service quality. Next question is how the current business model is designed. How much does Koskamp actually offer high service quality? What items can be improved in order to deliver a higher service quality? The current business model of Koskamp is described by using the business model canvas of Osterwalder and Pigneur (2010). This choice for this business model canvas is argued in chapter 2.2.1 on page 19.

Value Proposition

Koskamp offers about 1.100.000 car materials and car parts which garages need. Koskamp offers unique delivery method. With eight distribution centers they can deliver products every two hours and for some big cities even every hour. Their delivering capacity is twenty-two deliveries a week and for the cities Assen, Emmen, Groningen, Kampen Leeuwarden, Lelystad & Steenwijk forty-two deliveries a week. Koskamp offers a 24 hour online ordering system. Besides there is a 72 hours a week available call center for product knowledge, product ordering and other questions.

Beside this, Koskamp organizes commercial and technical training. For example, the use of electronics in the automotive industry has developed enormously the last years. There are some workshops available to present technical advice.

Customer Segment

Customer segmentation within the market is done by using two criteria: geographical location and type of customer. First, Koskamp is only serving business customers. They do not sell products or services to individual persons. Second Koskamp has eight distribution centers. Koskamp want to deliver every two hours for each single customer. To continue this concept,

Koskamp can only serve customers who are located within an hour driving from a distribution centre.

Channels

Koskamp uses different types of channels to sell their products and services. The responsibility of customer acquisition is settled by six salesmen. Order fulfillment is regulated by a multifunctional web shop and a call center. Direct products information and technical support is available. In 2011, up to 80% of all orders were online orders. The last 20% of the orders is taken by phone. After-sales support is delivered by the marketing department and sales representatives.

Customer Relationship

Customers help themselves by self-services. Koskamp provide products and materials via an online order system. Besides this automated relationship there are about 100 employees who deliver the products. Next six salesmen visit customers scheduled. The salesmen are responsible for a personal customer relationship. The more revenues a garage generates, the more frequent salesmen visit them. Some customers are only visited on request.

Key Resources

The main key resources are eight distribution centers and the vans which Koskamp owns. These physical assets allow them to reach their market and earn revenues. Besides, Koskamp relies on the intellectual capital of the salesmen. They sell the Koskamp concept to new customers and maintain the relationship with current customers.

Key Activities

The key activities of Koskamp are stock management, order fulfillment, supply of products and keeping the website up-to-date.

Key Partnerships

Koskamp is a trade company. Therefore key partners of Koskamp are its own suppliers. A stable relationship with them assures a reliable stock level. It reduces the risk of to be temporarily sold out. No products can be a fatal reason for customer loyalty.

Revenue Streams

The main revenue stream is revenue from products sold. The gross profit margin of all 1,100,000 products is about 20%. Another revenue stream comes from technical and economical courses they sell to customers.

Cost Structure

Fixed cost of the products and workshop they offer. As stated before their gross profit margin is about 20%. Labor cost, equipment costs, overhead costs (like interest and insurance), other more variable cost like telephone bills and advertising need to be paid.

5.3 Business Model Advice

The results of the statistical analysis show that service quality is directly positively related to customer loyalty. Within the current business model, there is a focus on service quality (e.g. fast delivery, high product range). Nevertheless there still is a lack of customer loyalty. This chapter

uses the business model canvas of Osterwalder and Pigneur (2010) to review Koskamp's current business model. The managerial advice presented is related to the outcome of the statistical analysis. It focuses on sharing valuable information in order to improve the current situation and create more customer loyalty.

5.3.1 Value proposition

A value proposition has a central function in a business model design. It is the bundle of products and services a company offers, and which creates value, to a specific customer segment (Osterwalder, 2010). In the current value proposition, wide product range and fast delivery are the main reason for garages to turn to Koskamp.

Koskamp needs to design its value propositions in such a way that garages can capture the most value from it. An important question to address is how garages judge service quality. Research about the judgment of service quality indicates that service quality dimensions are often intangible and they cannot be examined with the senses (Cavana et al, 2007; Parasuraman et al, 1988; Fogli, 2006, Chao & Kao, 2009). The most logical reference to judge service quality is using the expectations of customers. If a wholesaler cannot at least meet garages' expectations of the service quality, it will struggle.

Figure 7 shows the results of the customer expectations and average service quality measured within the survey. 89 universal garages and 32 dealer garages ranked expected service quality. For comparison the current service quality of their wholesalers is also mentioned. In this figure, 1 stands for no high expectation and 7 stands for very high expectation. It shows clearly where the focus of the value proposition will have to lie. Garages have the highest expectations of responsiveness and reliability.

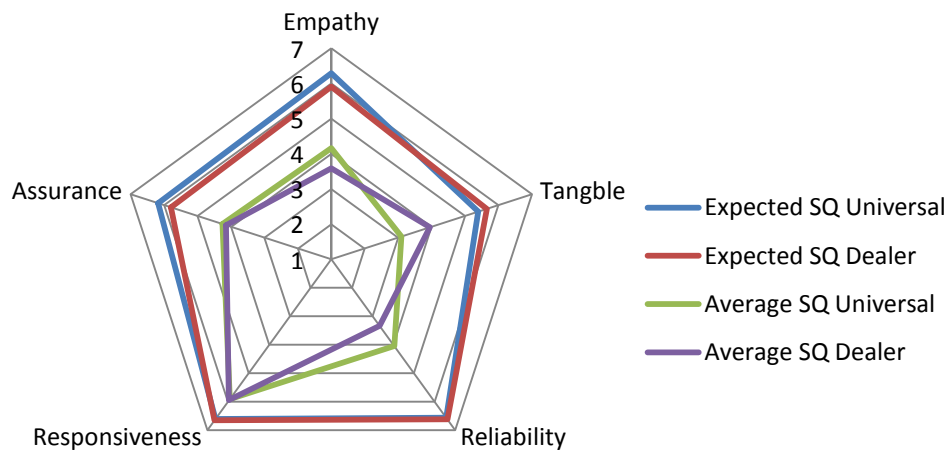


Figure 7: Service Quality Expectations

As the definition of a value proposition by Osterwalder (2010) states, capturing value is of great importance. Without the possibility to capture value from the offer, a value proposition creates no real value for a garage. The next paragraphs will argue where garages can capture value from this new focus.

Responsiveness and Reliability

Together with empathy, these dimensions of service quality are the most important variables of service quality to determine customer loyalty. Responsiveness ($r = 0.894$) and reliability ($r = 0.903$) have very high correlation coefficients with customer loyalty. About 80% of the variance in customer loyalty is explained by these constructs. Koskamp will have to pay a great deal of attention to these dimensions.

Responsiveness refers to the willingness to provide a quick service. Reliability refers to the ability to perform the promised service accurately. Both types of garages can capture value from a service which is delivered quickly and is of a reliable level. It becomes clearer when we move into the thoughts of a garage. The core business of a garage exists of repairing cars from their own customers. When a garage can complete this task quickly and accurately, supported by Koskamp, they garage can reach competitive advantage above their competitors. When there is no quick delivery of the products, there is slow response to complaints or placing an order takes too much time, garages will be less loyal to Koskamp.

The current value proposition of Koskamp shows the willingness to provide a quick service and the ability to perform the promised service. With more than 8 distribution centers, 178 full-time employees, a 24 hours a day online order system, 72 hours a week available call center and about 1.100.000 products Koskamp is reliable to deliver a wide range of products within two (or one) hour(s) to each single customer. Koskamp should continue with this value proposition focus. Eventually they will become an important business partner for each garage. This is a fundamental point for developing loyal relationships.

Tangibles

Tangible refers to the appearance of the physical facilities, equipment, personnel and communication material. Of the five service quality dimensions, tangibles have the lowest correlation coefficient with customer loyalty ($r = 0.736$). Garages can not directly capture value from tangibles and therefore it does not determine customer loyalty. So, tangibles of the service should be of a sufficient level, but they are more a basic requirement that is supposed to be present. Koskamp does already have a neat appearance of their equipment, personnel and communication material. Regarding to the current situation, there is no need to change.

Empathy and Assurance

Empathy refers to caring and individual attention of the service provider towards its customers. Together with responsiveness and reliability is empathy highly positively related to customer loyalty ($r = 0.882$). Assurance refers the trust in the knowledge of, and the proficiency in, the service provider. It is also positively related to customers loyalty, but the correlation is less strong ($r = 0.799$)

Dealer and universal garages expect a different level of empathy and assurance. The expectations of a dealer garage are lower than those of a universal garage. Reason for this is related to the business partners of dealer garages. Paragraph 3.1.1 explains that importers of new cars select a number of dealer garages which they give the exclusive rights for selling their new cars (in a particular region). As a consequence, dealer garages are supplied and supported by the importer. In contrast, an universal garage repairs a wide variety of car brands and uses much more different products. They receive no support from others (Veldhuisen, 2011).

Currently Koskamp does not offer individual attention to each single customer. Based on their total revenues in the past year, customers are scheduled to be visited. The more revenues a garage generates for Koskamp, the more often salesmen visit them. Only by this way, real

individual attention is paid to garages. A large group of customers is only visited on request (848 garages). With respect to the 78 % of the variance in customer loyalty which is explained by empathy, Koskamp must pay much more individual attention to customers who buy less or no products. Empathy is an important service quality item which can ensure more customers loyalty.

Koskamp needs to spend more time on visiting customers. 848 customers are visited on request. Koskamp need to pay more attention to the company of their customers and talk about their real problems. Salesmen should try to provide solutions to these problems. A goal for the sales representatives is to ensure customers, that working together with Koskamp, will increase their own operating profit.

The newly developed program IREL can play an important role in providing more empathy to customers. IREL is a customer information program which allows sales representatives to have a better customer oriented work approach (see figure 8).

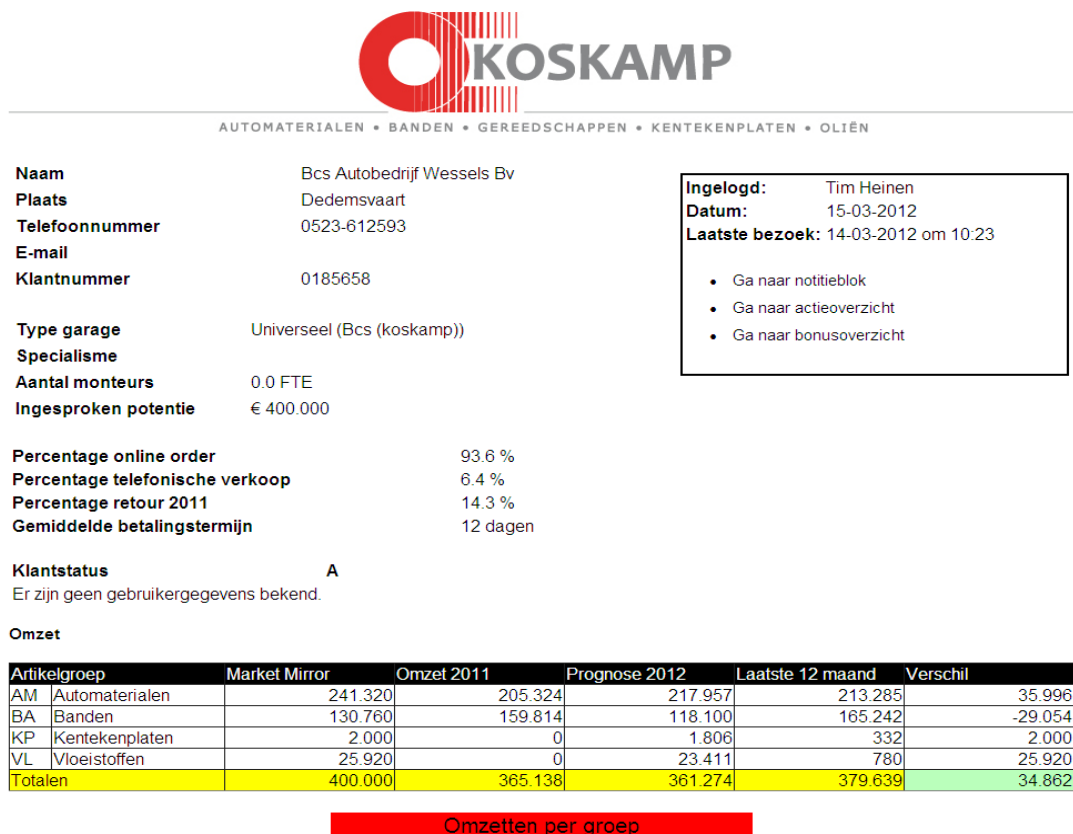


Figure 8: IREL

Within a difficult formula, potential revenues and sales forecast of each single customer are calculated (see Appendix C). The average revenue distribution of each customer segment is combined with the number of mechanics a customer has. Koskamp can calculate in which product group garages have high potential for them. This insight can be shared with the garage owner as part of the partnership which is established. Sales representatives provide business model improvements for the garage. Furthermore sales representatives can track and discuss ongoing actions and capture special notes. Eventually IREL is a tool by which Koskamp can offer a more professional and individual approach towards their customers.

5.3.2 Customer Segments, Customer Relationships and Channels

There are two customer segments within the industry. The goal for Koskamp is create a loyal relationship with both the dealer and the universal segment. Both types of garages have similar expectations about service quality. The only significant difference is in empathy and assurance. Nevertheless, the expectations of both segments are still high.

With respect to customer loyalty as main goal, Koskamp should not use strict customer segmentation. As we know, the service quality items are positive related to customer loyalty. To achieve loyalty with both dealer and universal garages, it needs to be clear if there are big differences in service quality expectations between them. For the expected value of responsiveness, reliability and tangibles there are no significant differences between the two types of respondents. Regarding to empathy and assurance, universal garages expect a significant higher quality. Nevertheless, dealer garages still expect high empathy and assurance values (figure 7).

For Koskamp, an important challenge is to select the right selling model for their customers. Selling models refer to the systematic activities that firms pursue in order to develop different relationship objectives and to reach each customer (Spiro & Santon, 2008). Selling models should be established before selecting the channels to sell value propositions (Panagopoulos & Avlonitis, 2010, p. 50).

There is a difference in the expected service quality items. It is impossible to achieve high empathy and provide a quick reliable delivery within one selling model. Individual attention needs a more personal approach, and quick delivery needs a more automated approach. These differences in service quality items indicate that two type of selling models are preferable for Koskamp.

First Koskamp should continue their transactional selling models which make use of self services and automated services. This type of selling model is based on a relationship with no personal contact. It is a sort of detached customer relationship where both universal and dealer garages order products and services via an automated service channel. Koskamp has already has this type of automated service. Their online web shop (80% of all orders) which is connected to the supply and delivery system. There is no personal contact with the customers. Koskamp should continue this selling model. It ensures reliability and provides a quick delivery.

The second type of selling model is consultative selling model which make use of personal contact with customers. To create customer loyalty, it is important to convince customers of the Koskamp concept (acquisition), to give attention to customers and solve problems by providing knowledge and expertise. Koskamp has already this type of selling model. Regarding to customer loyalty, there is only one problem. Koskamp only visited their most loyal customers. A lot of customers are visited on request. Koskamp should deeply invest in spend more time to individual attention of their (less loyal) customer. The IREL program gives salesmen a tool, but they do not have enough time to visited customers on a more frequent basis. Koskamp has six salesmen. Three of them are in managerial positions. They cannot offer full attention to their customers, because of other marketing or strategic work. There is a need for more customer attention in order to achieve the coveted loyal customer relationship. Koskamp should invest in create more time for (new) sales representatives to visit customers. Another fundamental question is if salesmen did use an approach to customers which customers prefer. Hicks (2010) suggested four different types of consultancy methods. This is an interesting field for further research.

Logically providing high service quality on a consistent level is difficult for Koskamp. However, there are some ways which increase the consistency of providing high service quality. Therefore, sales representatives should create a personal relationship with their customers, in order to gain response about their expectations about service quality. The SERVQUAL model of Parasuraman et al (1988) is quite useful for Koskamp (see Chapter 2.4, page 26-29). The idea behind the SERVQUAL model is that a service provider tests his service quality and identifies possible gaps between expected and delivered service quality. These gaps create suggestions for business model improvements. With internal feedback, Koskamp can continue improving its business model.

5.3.3 Key Resources, Key Activities and Key Partners

The key resources of the Koskamp will remain the eight distribution centers and the vans by which Koskamp can supply its customers within 2 hours. With respect to empathy and assurance, also the human resources remain key resources. Sales representatives manage the customer relationship, search for business model improvements and pay individual attention to customers. A new key resource is the IREL program. This program is a solution to pay more individual attention to customers. Eventually these key resources contribute to a high service quality, and indirectly increase customer loyalty.

The key activities of Koskamp are focusing on delivering high service quality and focus on the problems which garages have. Stock management, order fulfillment and fast supply of products remain of great importance. Maintaining customer relationship, visit more customers and gain response of Koskamp performance are new key activities. Therefore, it is interesting to take a look at several consulting methods. Hicks (2010) stated that there are different ways to transfer skills and provide expertise. 'Important is to give solutions to problems of garages in such a way garages feel confidential' (Hick, 2010, p. 156). This is an interesting field for further research.

Key partners of Koskamp stay their own suppliers which keep their inventory and delivery system intact. It is too expensive to own all products self. A possibility for business model innovation is to connect their own digital inventory management system to the delivery system of their supplier. When a minimum stock level is set, suppliers of Koskamp can automatically restock. This improved technological system needs some big investments in short term, but requires less work by employees and can be monitored and controlled by fewer people in longer term.

5.3.4 Revenue Stream and Cost Structure

Revenue streams are of great value for Koskamp. The business model suggestions of this study focus on a more professional, but personal, oriented customer approach. Recommendations are that customers will be visited more often by salesmen. This will lead to more wages. Of course, more wages change the cost structure of Koskamp. Nevertheless, results of these study show that service quality is positively related to customer loyalty. Loyalty, in this context defined as a high repeat patronage behavior and a high relative attitude, will ensure more revenue streams. For example, a high repeat patronage behavior continues or increases the revenue streams of a garage and a high relative attitude has a promotional effect towards new customers. Therefore the extra costs of labor are irrelevant regarding to the consequence that the average revenue stream per customer increases when customers are more loyal. These costs should be seen as an investment in customer loyalty.

6. Conclusion

The purpose of this study is to find a well-argued answer to the main research question:

To what extent does service quality influence a loyal customer relationship and how does Koskamp have to change their business model in order to increase customer loyalty?

To present an answer to the main research question, service quality and customer loyalty are operationalized within the Dutch business-to-business automotive industry. This research uses five dimensions to measure service quality: tangibles, empathy, reliability, assurance and responsiveness (Parasuraman et al, 1988). Tangible refers to the appearance of the physical facilities, equipment and personnel within the service. Empathy refers to caring and individual attention of the wholesaler towards the garage. Reliability refers to the ability of the wholesaler to perform the promised service accurately. Assurance refers to the trust in the knowledge and proficiency in the wholesaler and responsiveness reflects the willingness to help a garage and provide a quick service. These dimensions are operationalized with 3 statements. In total 15 statements indicate service quality. Reliability statistics (Cronbach's alpha) can be found in Appendix B. Customer loyalty is measured with two dimensions: relative attitude and repeat patronage behavior (Dick and Basu, 1994). Both dimensions are operationalized with 2 statements. Reliability statistics can be found in Appendix B.

Statistical analysis of 114 returned questionnaires show a high correlation coefficient between service quality and customer loyalty ($r = 0.943$). Regarding to the maximum correlation of +1, this coefficient is highly positive (Field, 2009). Therefore we can assume that a high service quality score tends to be paired with customer loyalty score. This indicates that garages which rate a wholesaler's service quality as high, we can predict that loyalty towards this garage is also high. Conversely, garages who rate a wholesaler's service quality as low; we can predict a low loyalty. Of course, the results are not true for every garage (there is a small error). To address this error, we squared the correlation coefficient and get a measure of how much of the variability in one variable can be 'explained by' variation in the other. In this case about 89% of the variability in customer loyalty can be explained by differences in service quality. So service quality can influence customer loyalty, but we need to find out how.

To present more insight in the influence of service quality for the coveted customer loyalty, this study also calculated the correlations coefficients between customer loyalty and the different service quality dimensions, and tests if there are differences in the scores between the two groups of respondents.

Results show only positive correlations coefficients between the different service quality dimensions and customer loyalty. Yet, there is a difference in the strength of the correlation. Tangibles ($r = 0.736$) and Assurance ($r = 0.799$) have lower correlations than Empathy ($r = 0.882$), Responsiveness ($r = 0.894$) and Reliability ($r = 0.903$). These three dimensions are highly positive related to customer loyalty. They have much influence on customer loyalty, because between 77% and 82% of the variability in customer loyalty is explained by them.

Koskamp knows to what extent service quality influences customer loyalty. But to design a suitable business model which ensures a more clear focus on service quality, Koskamp also needs to know how service quality is judged by dealer and universal garages. Research about the judgment of service quality indicates that service quality dimensions are often intangible and

they cannot be examined with the senses. Therefore, the most logical reference to judge service quality is customer expectation (Cavana et al, 2007; Parasuraman et al, 1988; Fogli, 2006, Chao & Kao, 2009).

The expected service quality is measured by the same statements that are used to measure the actual service quality. In line with the correlations coefficients, results show that garages have the highest expectations of responsiveness and reliability, followed by empathy, assurance and tangibles (table 17).

An independent t-test compares the expectations between the dealer and universal garages. Both empathy and assurance score significant on the t-test. This result indicates that dealer and universal garages have different expectations about the empathy and assurance quality. A close look to the results shows that universal garages expect a significant higher level of empathy and assurance quality. However, despite the differences in expectations, dealer garages still expect a high level of empathy and assurance quality.

The second part of the main research question is related to Koskamp B.V. There is a lack of loyalty to Koskamp. 91% of the customers can order more products and become more loyal to Koskamp. According to Dick and Basu (1994) their current repeat patronage behavior is low and these customers are not true loyal to Koskamp. Their current business model is described in chapter 5.1. Within the current business model, there is a focus on service quality (e.g. fast delivery, high product range). Nevertheless there still is a lack of customer loyalty.

With respect to customer loyalty as main goal, Koskamp should not use strict customer segmentation. As we know, the service quality items are positive related to customer loyalty. To achieve loyalty with both dealer and universal garages, it needs to be clear if there are big differences in service quality expectations between them. For the expected value of responsiveness, reliability and tangibles there are no significant differences between the two types of respondents. Regarding to empathy and assurance, universal garages expect a significant higher quality. Nevertheless, dealer garages still expect high empathy and assurance values (figure 7).

The current value proposition of Koskamp shows the willingness to provide a quick service (responsiveness) and the ability to perform the promised service (reliability). With more than 8 distribution centers, 178 full-time employees, a 24 hours a day online order system, 72 hours a week available call center and about 1.100.000 products Koskamp is reliable to deliver a wide range of products within two (or one) hour(s) to each single customer. Besides, Koskamp make use of a neat appearance of their equipment, personnel and communication materials. There is no real need to change this part of the value proposition to order increase customer loyalty. Koskamp should continue with this offering these values.

Regarding to the empathy part, which is for about 75% explaining the variance in customer loyalty, there seem to be a lack of individual attention to each single customer. Based on the total revenues a year, Koskamp classify garages in groups. The more revenues a garage generates for Koskamp, the higher the group in which they are classified and the more often salesmen visit them. Only by this way, real personal and individual attention is paid to garages. Regarding to the current situation, a large group of customers only visits on request (848 garages).

With respect to the 78 % of the variance in customer loyalty which is explained by empathy, Koskamp must pay much more individual attention to customers who buy less or no products. Empathy is an important service quality item which can ensure more customers loyalty. The newly developed program IREL can play an important role in providing more empathy to customers. IREL is a customer information program which allows sales representatives to have a

better customer oriented work approach. The program calculates in which product group garages have high potential for them. This insight can be shared with the garage owner as part of the individual attention. Sales representatives provide business model improvements for the garage. Furthermore sales representatives can track and discuss ongoing actions and capture special notes. Eventually IREL is a tool by which Koskamp can offer a more professional and individual approach towards their customers.

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Logically providing high service quality on a consistent level is difficult for Koskamp. However, there are some ways which increase the consistency of providing high service quality. Therefore, sales representatives should create a personal relationship with their customers, in order to gain response about their expectations about service quality. The SERVQUAL model of Parasuraman et al (1988) is quite useful for Koskamp (see Chapter 2.4, page 26-29). The idea behind the SERVQUAL model is that a service provider tests his service quality and indentifies possible gaps between expected and delivered service quality. These gaps create suggestions for business model improvements. With internal feedback, Koskamp can continue improving its business model.

The new value proposition design focuses on providing more personal attention to customers. Therefore, there are som changes in key resources and key activities. A new key resource of Koskamp is the Irel program. This program is a solution to pay more individual attention to customers. It needs to be continually updated. Maintaining customer relationship, visit more customers and gain response of Koskamp performance are new key activities. Therefore, it is interesting to take a look at several consulting methods. Hicks (2010) stated that there are different ways to transfer skills and provide expertise. 'Important is to give solutions to problems of garages in such a way garages feel confidential' (Hick, 2010, p. 156). This is an interesting field for further research. Key partners of Koskamp stay their own suppliers which keep their inventory and delivery system intact.

In conclusion, Koskamp needs to focus on providing a more professional, but personal, oriented customer approach. Paying individual attention is the missing link within the current business model of Koskamp. Of course, focusing on visiting more customers and paying more attention to them will lead to more wages. But, results of this study show that customers expect this individual attention. Besides, the results show that a high service quality is positively correlated with customer loyalty. In this context, increasing labor costs should be seen as an investment in customer loyalty.

7. Recommendations

The main recommendations for Koskamp are:

1. Continue with the Koskamp concept

Fast supply of products within two or one hour and offering a wide product range will ensure a high level of reliability and responsiveness.

2. Use IREL

IREL is a tool for sales representatives to ensure more empathy to customers. Therefore the input of IREL needs to be continually updated.

3. Offer the same value proposition to each market segment

There are no big differences visible in customers' expectations about service quality. Despite a small difference in empathy and assurance between dealer and universal garages, the average expectations are still high.

4. Contract new sales representatives

848 current customers are only visited on request while individual attention is preferred. A new task of sales representatives is to gain more feedback about the expected and delivered service quality (recommendation 6). Therefore Koskamp need to contract new sales representatives in order to visit more customers and pay more attention.

5. Use the SERVQUAL model

The model gains response of expected and delivered service quality. Koskamp should carefully monitor feedback to their business model and if necessary improve.

8. Discussion

This last chapter presents reflection on this research. The first chapter presents some limitations and ideas for further research. Subchapter 8.2 presents a reflection on the theoretical model and methods used. Besides it will become clear how and why this research is useful for Koskamp and other researchers.

8.1 Limitations and Directions for Further Research

The research conducted in this thesis has led to some useful conclusions for Koskamp. However, it has also uncovered some areas that have limitations and perhaps need additional study. The purpose of this subchapter is therefore to identify the limitations and discuss the need for further research.

The results of this study are measured at one single moment in time. Despite loyalty and customer satisfaction are measured dependently and separately, there still is the possibility that temporally variables influence customer loyalty. In this study, loyalty is measured with 4 statements about repeat patronage behavior and relative attitude according to the theory of Dick and Basu (1994). There still could be some other reasons for lack of loyalty. Examples of these reasons could be located in the personal or ethical field. The reliability of this study will grow when, under the same respondents and circumstances, a future questionnaire will be administered.

Another limitation is that the managerial advice is on a broad strategic level. There is a need for future research about how to implement these suggestion made by this research. For example the question of how a sales representative should offer more individual attention. Jeff Hicks, researcher from the University of Twente, suggested four different types of consultancy methods: Expert consulting, advisory consulting, co-manager consulting and co-constructive consulting (Hicks, 2010, p. 202). Research is needed to clarify which type of approach is preferable by different customer segments.

There is a limited focus of this paper to wholesalers trade in car materials and accessories on the Dutch business-to-business market. Therefore, researchers need to be cautious if they want to generalize the findings of this study for other wholesalers who act on the business-consumer market and/or to wholesalers who sell other products or services besides car materials and accessories. Nevertheless, future research can illustrate the same results for wholesalers in the business-consumer market, or even for wholesalers which sell other products too.

8.2 Managerial and Scientific Relevance

This research uses the business model theory introduced by Osterwalder and Pigneur (2010) to review the current business model of Koskamp. Osterwalder and Pigneur stated that they introduce a clear business model canvas by which researchers can be guide to evaluate a current business. Furthermore, they stated that their business model canvas is a generic model that can be used among each industry. This study supports their claim with a case of a company in the Dutch business-to-business automotive industry. It is a very interesting concept to explore a business problem from many angles. But despite the usefulness, the theory of Osterwalder and Pigneur has some important shortcomings.

One of the main shortcomings of the business model canvas of Osterwalder and Pigneur is that there is no clear strategic purpose in it. The canvas does not taken into account the strategic objectives of Koskamp. It partly assumes that making revenues is the most important objective of each company. In this case, customer loyalty is the main objective. Therefore, combining the theory of Dick and Basu (1994) and Osterwalder and Pigneur (2010) was quite useful. Dick and Basu connect making revenues with their customer loyalty theory by means of relative repeat patronage behavior. The other component of customer loyalty is relative attitude. Nevertheless, in other cases, increasing market share may be the strategic goal. In my opinion, that strategic purpose is an essential part of business modeling, because it deeply influences other business model components.

Another shortcoming found is that the model does not mention any competitive information. Garages will always compare the value proposition of Koskamp (focusing on high service quality) with other wholesalers (perhaps focusing on low price). Koskamp renounces the low price strategy and searched for alternative ways in order to increase customer loyalty. But perhaps no competitor uses the low price strategy. So when a company wants to be distinctive, it must know the value propositions of their competitors. Therefore the model of Osterwalder and Pigneur need a notion of the competition.

Another important element of this study was service quality. Service quality is measured by the SERVQUAL model of Parasuraman et al (1988). The authors mention some advantages of the model. It is quick and easy to use for a lot large group of respondents in several service situations. The model is already proven within several industries.

In this study, the SERVQUAL model was an effective tool in assessing garages' perceptions of service quality of Koskamp. Of course, the five dimensions of SERVQUAL need to become operationalized. In this study they were reliable for measurement (see reliability statistics in Appendix B). Therefore this study contributes to the claim that it can be used in several industries.

A shortcoming of the model is that users need to be aware that the model is only focusing on the process of service delivery. The model does not contain any focus on the outcome of the service. For the company in case, relative attitude and repeat patronage behavior are important outcomes. This will mean that customer are more loyal to them. Within this study, customer loyalty is investigated. Without measuring customer loyalty at the same time, it is impossible to connect service quality with customer loyalty. Koskamp needs to be aware of this.

Besides the reflection on the theory and the models, this study fill in a theoretical gap by testing the relationships between service quality, customer satisfaction and customers loyalty in the Dutch business-to-business automotive industry. This study prove the positive correlation between service quality and customer loyalty with a sample of 114 garages. It presents statistical evidence that service quality is highly positively related to customer loyalty ($r = 0.943$) and customer satisfaction ($r = 0.912$), and between customer satisfaction and customer loyalty ($r = 0.921$). Furthermore, there is no mediation effect of customer satisfaction on the correlation between service quality and customer loyalty. These findings are in line with the conclusions of Kee and Manshor (2009), Naeem and Saift (2009) and Prabhakaran and Satya (2003).

The results of this research are useful for Koskamp. Koskamp has problems with customer loyalty. The management of Koskamp already knows that a low price strategy is an opportunity

to increase customer loyalty. However, Koskamp wants to investigate if their service quality is a way to distinguish themselves from their competitors and to increase customer loyalty. This study has proved the correlation between service quality and customer loyalty with a sample of 114 garages (response rate about 26%). It presents statistical evidence that service quality is highly positively related to customer loyalty ($r = 0.943$).

Furthermore this research illustrates the management of Koskamp what service quality items are the most important to focus on (reliability, responsiveness and empathy) and that there are no remarkable differences between the different type of garages.

Appendices

Appendix A: Questionnaire (Dutch)

Representing the questions of the online questionnaire.

Beste garagehouder,

Zoals in de mail reeds uitgelegd zijn er een aantal stellingen over de service kwaliteit van groothandelaren in automaterialen. In algemene zin bedoelen we met een service van een automaterialen grossier het aanbieden en bezorgen van automaterialen en accessoires. Het is de bedoeling dat u een van uw grossiers (leveranciers) in gedachten neemt en hierover enkele vragen invult. Deze grossier moet alleen handelen in automaterialen en accessoires en zich alleen begeven op de business-to-business markt.

Deze vragenlijst is volledig anoniem dus probeer zo eerlijk mogelijk te zijn. Het invullen ervan duurt circa 10 minuten. Alvast bedank voor uw moeite en tijd!

Met vriendelijke groeten,

Ruud van Es

1. Algemeen

- a) Over hoeveel monteurs beschikt uw garage?
0-10
 - b) Tot welke type behoort uw garage?
Dealer garage
Universal garage
-

2. Vragen over gekozen grossier. Beantwoord ze op een 1-7 schaal waarbij geldt dat 1 is zeer mee oneens en 7 is zeer mee eens.

- a) Mijn grossier heeft medewerkers die een verzorgd uiterlijk hebben en verschijnen met gepaste (bedrijfs-) kleding
- b) Mijn grossier heeft een overzichtelijke en verzorgde website / webshop
- c) Mijn grossier maakt gebruik van schone en verzorgde transportmiddelen
- d) Mijn grossier is geïnteresseerd in eventuele (technische) problemen die wij hebben
- e) Mijn grossier schenkt individuele aandacht aan onze garage
- f) Mijn grossier heeft medewerkers die op een begrijpelijke manier met ons communiceren
- g) Mijn grossier heeft een breed productaanbod in automaterialen en accessoires
- h) Bij mijn grossier kunnen we snel en eenvoudig een order plaatsen
- i) Mijn grossier heeft een hoog aantal leveringen per dag
- j) Mijn grossier reageert altijd snel op ontstane problemen
- k) Mijn grossier levert de producten of service op de afgesproken tijdstippen
- l) Mijn grossier heeft een snelle levertijd
- m) Mijn grossier heeft altijd een correcte facturatie van geleverde service of producten
- n) Mijn grossier heeft de kennis en ervaring om onze vragen te beantwoorden

- o) Mijn grossier heeft medewerkers die te vertrouwen zijn

3. Kunt u aangeven in hoeverre u het eens bent met de onderstaande stellingen? Antwoorden kunnen gegeven worden op een schaal van 1-7, waarbij geldt dat 1 is zeer mee eens en 7 zeer mee oneens.

- p) Over het algemeen zijn wij tevreden over onze grossier
 q) We zijn tevreden over de prijsstelling van onze grossier
 r) We zijn tevreden over het productaanbod van onze grossier
 s) Wij zijn tevreden over de prijs/kwaliteit verhouding van onze grossier
 t) Wij zijn tevreden over de service kwaliteit van onze grossier

4. Kunt u aangeven welk antwoord voor u geldt?

We bevelen onze grossier aan bij andere garages / collega's.

1. Altijd
2. Vaak
3. Soms
4. Nooit

We zullen in de toekomst ... producten kopen bij onze grossier

1. Geen
2. Enkele
3. Veel
4. Zo veel als mogelijk

Onze intentie is om in de toekomst gebruik te maken van de grossiers service.

1. Zeker
2. Waarschijnlijk wel
3. Waarschijnlijk niet
4. Zeker niet

We spreken ... positief over onze grossier.

1. Altijd
2. Vaak
3. Soms
4. Nooit

5. Vragen over een voor u nog onbekende grossier. Beantwoord ze op een 1-7 schaal waarbij geldt dat 1 is zeer mee oneens en 7 is zeer mee eens.

- u) Wij verwachten dat een grossier medewerkers heeft die een verzorgd uiterlijk hebben en verschijnen met gepaste (bedrijfs-) kleding
 v) Wij verwachten dat een grossier een overzichtelijke en verzorgde website / webshop heeft
 w) Wij verwachten dat een grossier gebruik maakt van schone en verzorgde transportmiddelen
 x) Wij verwachten dat een grossier geïnteresseerd is in eventuele (technische) problemen die wij hebben

- y) Wij verwachten dat een grossier individuele aandacht schenkt aan onze garage
- z) Wij verwachten dat een grossier medewerkers heeft die op een begrijpelijke manier met ons communiceren
- aa) Wij verwachten dat een grossier een breed productaanbod in automaterialen en accessoires heeft
- bb) Wij verwachten dat we bij een grossier snel en eenvoudig een order kunnen plaatsen
- cc) Wij verwachten dat een grossier een hoog aantal leveringen per dag heeft
- dd) Wij verwachten dat een grossier altijd snel op ontstane problemen reageert
- ee) Wij verwachten dat een grossier de producten of service op de afgesproken tijdstippen levert
- ff) Wij verwachten dat een grossier een snelle levertijd heeft
- gg) Wij verwachten dat een grossier altijd een correcte facturatie van geleverde producten of service heeft
- hh) Wij verwachten dat een grossier de kennis en ervaring heeft om onze vragen te beantwoorden
- ii) Wij verwachten dat een grossier medewerkers heeft die te vertrouwen zijn

6. Deze stellingen gaan over de service welke een grossier verleent. Geef u aan op een 1-7 schaal in hoeverre u het met de stelling eens bent, waarbij geldt dat 1 is zeer mee oneens en 7 is zeer mee eens.

- jj) Een duidelijke en verzorgde website / webshop achten wij belangrijker dan de individuele aandacht die we ontvangen
- kk) Schone en verzorgde transportmiddelen achten het leveren van goederen op de afgesproken tijdstippen
- ll) Een duidelijke en verzorgde website / webshop achten wij belangrijker dan het snel reageren op allerlei problemen
- mm) Schone en verzorgde transportmiddelen achten wij belangrijker dan een correcte facturatie van de geleverde diensten
- nn) Het oprecht geïnteresseerd zijn in het oplossen van onze problemen achten wij belangrijker dan een breed productaanbod
- oo) Het oprecht geïnteresseerd zijn in het oplossen van onze problemen achten wij belangrijker een snel en eenvoudig een order kunnen plaatsen
- pp) Medewerkers die begrijpelijk communiceren is belangrijker dan altijd een correcte facturatie hebben
- qq) Een breed productaanbod is belangrijker dan een snelle en eenvoudige methode om orders te plaatsen
- rr) Veel bezorgingmogelijkheden per dag (hoge bezorgfrequentie) is belangrijker dan de betrouwbaarheid van medewerkers van een grossier
- ss) Een snelle levertijd achten wij belangrijker dan een correcte facturatie
- tt) Betrouwbaarheid van medewerkers achten wij belangrijker dan het leveren van producten op afgesproken tijdstippen
- uu) Betrouwbaarheid van medewerkers achten wij belangrijker dan een snelle levertijd

7. Heeft u nog opmerkingen of andere zaken die u belangrijk vindt bij de service kwaliteit van een grossier?

.....

Appendix B: Reliability statistics

Service quality

There are 15 items indicators of service quality which show the following reliability statistics:

Cronbach's Alpha	Cronbach's Alpha based on Standardized Items	Number of items
.950	.950	15

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Corr.	Squared Multiple Corr.	Cronbach's Alpha if Item Deleted
Appearance of employees	55,41	283,939	,687	,678	,947
Appearance website /web shop	54,87	280,135	,730	,772	,946
Appearance of transport	55,39	284,335	,674	,740	,948
Interest in solving problems	55,85	277,025	,706	,730	,947
Understandable communication	54,94	280,702	,721	,816	,947
Individual attention	55,65	284,001	,709	,745	,947
Accuracy of deliver on time	54,93	282,119	,763	,796	,946
Range of products	55,02	276,076	,808	,808	,944
Frequency of deliveries	55,00	276,171	,820	,810	,944
Speed and ease of process to place an order	55,06	290,149	,628	,568	,949
Speed response to complaints	55,11	278,558	,713	,643	,947
Speed of deliveries	55,13	278,668	,800	,843	,945
Competence	55,37	287,949	,651	,538	,948
Correct billing	54,48	285,757	,741	,795	,946
Confidentiality employees	54,58	282,169	,772	,823	,945

The column 'Chronbach's Alpha if Item Deleted' indicates that there is no need to remove any item in order to increase the Chronbach's Alpha.

Customer satisfaction

There are 5 items indicators of customer satisfaction which show the following reliability statistics:

Cronbach's Alpha	Cronbach's Alpha based on Standardized Items	Number of items
.830	.803	5

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Corr.	Squared Multiple Corr.	Cronbach's Alpha if Item Deleted
Overall Satisfaction	17,91	25,420	,738	,572	,765
Price Sastisfation	17,99	25,838	,705	,579	,775
Range Sastisfation	18,06	22,225	,699	,571	,778
Price / Quality Sastisfation	15,98	37,200	,148	,057	,883
Support Quality Sastisfation	17,69	20,388	,850	,743	,721

The column 'Chronbach's Alpha if Item Deleted' indicates that there is no need to remove any item in order to increase the Chronbach's Alpha.

Customer loyalty

There are 4 items indicators of customer loyalty, which show the following reliability statistics:

Cronbach's Alpha	Cronbach's Alpha based on Standardized Items	Number of items
.914	.915	4

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Corr.	Squared Multiple Corr.	Cronbach's Alpha if Item Deleted
Intention	6,93	6,329	,878	,862	6,93
PositiveCom	7,08	6,775	,771	,901	7,08
Recommandation	7,16	6,860	,774	,900	7,16
Repurchase	6,99	7,171	,802	,891	6,99

The column 'Chronbach's Alpha if Item Deleted' indicates that there is no need to remove any item in order to increase the Chronbach's Alpha.

Appendix C: I-Rel Program

De oorspronkelijke opdracht voor Koskamp was het ontwikkelen van een klant analyse systeem. Er is ten doel gesteld om een praktisch toepasbaar model te maken welke op ieder autobedrijf toepasbaar is en waarmee de rayonmanagers van Koskamp richting de klant een tool hebben om een omzetverhoging te begeleiden.

Enkele algemene voordelen van I-Rel zijn:

- Alles is digitaal en overal (onder inlogcodes) zichtbaar
- Omzetslijsten pagina's hoeven niet meer geprint te worden
- Kortere en actuelere werkvoorbereiding
- Beter inzicht in klant / gerichte klantenbenadering
- Opvolging van lopende acties
- Meer actuele informatie bij de hand (vorig bezoek, opvolging afspraken etc.)
- Gemakkelijker opvolgen van bonusafspraken
- Professionelere presentatie t.o.v. de klant

I-Rel bestaat uit 6 basisfuncties: Omzetsleutel, potentiemodel, Algemene klantgegevens, Bonusmodule, Actiemodule en de notitiemodule

Omzetsleutel

De basis voor het programma is de gemiddelde interne omzetverdeling binnen een autobedrijf (geldt voor zowel universeel als dealer). Deze interne omzetverdeling wordt in dit rapport omzetsleutel genoemd. Deze sleutel is tot stand gekomen op basis van intern onderzoek onder 120 loyale klanten die in elke productgroep afdruk hebben. Deze gegevens zijn vervolgens gebenchmarkt bij de organisaties Heuts (collega groothandel) en Van Heck (importeur onderdelen). Tot slot is de sleutel door het management van Koskamp bijgesteld en vereenvoudigd.

De oorspronkelijke productgroepindeling (zie bijlage B) is vereenvoudigd van 51 productgroepen tot 33 groepen. Een aantal 'incidentele' groepen waarbinnen niet elke garage een vast aankooppatroon kent zijn buiten beschouwing gelaten. De uiteindelijke sleutel is gepresenteerd in tabel 1 op de volgende pagina. De percentages die genoemd worden bij de sleutel houden een gemiddeld % van de totaalomzet van de desbetreffende productgroep in.

De sleutel wordt gebruikt om de totale omzetpotentie van een garage te specificeren per productgroep. Deze omzetpotentie per productgroep kan vervolgens weer gebruikt worden om verschillen met omzet in het afgelopen jaar of de omzet in de afgelopen 12 maanden te berekenen. Met behulp van sorteerfuncties binnen I-Rel kan een rayonmanager eenvoudig zien in welke productgroep de meeste potentie van een klant ligt en dit biedt natuurlijk input voor het regelmatig klantbezoek van een rayonmanager.

Groepindeling	Omschrijving	Sleutel
A01	Aandrijving	0,82%
A03 + A07	Accessoires	1,20%
A04	Airco Delen	0,74%
A05 + A06	Accu's	4,20%
A09 + A02	Bevestigingsmaterialen	1,00%
A11	Chemische Producten	1,00%
A13	Filters	5,50%
A14	Frictiedelen	2,50%
A17	Lagers	1,71%

A18	Lampen	0,65%
A19	Motor delen	0,95%
A22 + A20	Ontstekingsdelen + Motor Elektronica	4,00%
A23 + A08	Originele onderdelen + Automaterialen Algemeen	0,67%
A24	Pakkingen	0,32%
A26	Plaatwerk & Verlichting	1,38%
A27 + A16	Radiatoren	0,83%
A28 + A30 + A15	Remblokken & Schoenen+ Remmen Droog + Kabels	4,73%
A31 + A34	Remmen Nat + Remslangen	1,47%
A32	Remschijven	3,67%
A35	Riemen & Spanrollen	5,00%
A37	Schokdempers	1,20%
A39	Starters Dynamo's	1,15%
A40	Stuurdelen	3,07%
A41	Trekhaken	2,01%
A42	Uitlaten	5,55%
A43	Veren	1,90%
A46 + A21	Vloeistoffen + Olie	6,48%
A47	Waterpompen	1,05%
A49	Wisserbladen	2,06%
B50 + B51	Banden	30,38%
B52	Banden reparatie materialen	0,33%
B53	Wielen	1,98%
K85	Kentekenplaten	0,50%

Potentiemodel

Een omzetmodel is een model die de totale potentiële omzet van een garage specificeert. Er is onderzoek gedaan naar de totale potentie van een klant en hoe deze te berekenen. Allereerst is er onderzoek gedaan naar het gemiddeld aantal monteurs dat een garage heeft. Hiervoor hebben de rayonmanagers van Koskamp de gegevens van ongeveer 400 klanten ingevuld. De resultaten zijn weergegeven in tabel 2.

Type garage	Aantal bedrijven	percentage	Aantal monteurs	Gemiddeld aantal monteurs
dealer	128	31,6%	575	4,4921875
concept	118	29,1%	356,5	3,021186441
universeel	159	39,3%	370	2,327044025

Na overleg met het management van Koskamp, Van Heck en Bovag is het duidelijk geworden dat een universele garage en een conceptdeelnemer een omzet potentie van minimaal €50.000 per monteur heeft. Indien een van deze twee typen garages over slecht 1 enkele monteur beschikt is de totale omzetspotentie van deze monteur €60.000,-. Voor een dealer garage wordt de potentie voor Koskamp op €25.000,- per monteur geschat.

Naast dit onderzoek zijn er een aantal omzetgegevens van de meest loyale klanten (Categorie A) uit Silicomp onderzocht en is bepaald dat een loyale dealervestiging garage bij Koskamp gemiddeld €21.580,- aan omzet doet. Een concept garage zit op gemiddeld €42.540,- en een universele garage zit op een omzet van €38.374. Deze gegevens zijn uiteraard niet relevant om de totale potentie van

een klant mee in te schatten maar geven wel goed weer op welk niveau de loyaalste klanten van Koskamp acteren. Er blijkt maar weer dat een deel van de *meest) loyale klanten 'slechts' 80% van hun omzet bij Koskamp onderbrengen. Hier is dus werk aan de winkel. De verdeling tussen A-klanten die meer of minder dan deze 80 % omzet bij Koskamp onderbrengen is 38 % - 62 %.

Uiteraard moet de omzetspotentie berekend worden aan de hand van huidige gegevens die bekend zijn bij Koskamp. Onderzoek binnen Silicomp heeft uitgewezen dat het aantal monteurs hiervoor niet toereikend is. Slechts bij 43% van alle klanten is het aantal monteurs ingevuld. Als advies geldt dan ook deze gegevens beter bij te houden om ze beter zicht te krijgen in de potentie van het huidige klantenbestand(zie kopje advies).

Gekozen is om het programma in eerste instantie te laten draaien op de ingesproken potentie van een rayonmanager. De ingesproken potentie van rayonmanagers is voor zo'n 84% van de klanten ingevuld binnen Silicomp. Het gevaar dat hierin schuilt, is dat een rayonmanager een inschatting maakt van de potentie voor Koskamp, en niet de totale potentie van een klant. Zoals onderzocht brengen de meest loyale klanten circa 80% van hun omzet bij Koskamp onder. Rayonmanagers kunnen deze 80% gaan zien als de maximaal haalbare omzet van loyale klanten, echter blijkt dit niet de totale potentie van een loyale klant te zijn. Om dit probleem te tackelen zijn er twee maatregelen genomen:

1. Potentie op basis van enkele productgroepen
2. Ingesproken potentie controleren aan de hand van de omzettafel.

De potentie op basis van enkele productgroepen

Indien ingesproken potentie te dicht ligt bij de omzet in het vorige jaar geldt er een speciale formule die is ingebouwd bij I-Rel. De omzetspotentie wordt dan berekend op een aantal productgroepen waarbinnen een klant 'goed' scoort. Deze productgroepen zullen de totale omzetspotentie van een klant omhoog liften. De formule werkt als volgt: De ingesproken potentie wordt gedeeld door de omzet in het voorgaande jaar. Indien het antwoord groter is dan 0.80 (omzet vorige jaar ligt wel erg dicht bij de ingesproken potentie) dan geldt het onderstaande stappenplan. Indien de uitkomst lager ligt (zal voornamelijk bij C-F klanten zijn) dan geldt gewoon de ingesproken potentie.

- a) $\text{Omzet vorig jaar} / \text{omzetsleutel} = \text{potentie volgens de productgroep}$.
- b) Neem de som van alle productgroepen die (afhankelijk van het aantal monteurs) binnen de onderstaande afbakening vallen (zie tabel 3):

Universele en concept garages			Dealer garage		
<i>Aantal monteurs</i>	<i>Minimaal</i>	<i>Maximaal</i>	<i>Aantal monteurs</i>	<i>Minimaal</i>	<i>Maximaal</i>
1	60.000	100.000	1	25.000	50.000
2	100.000	200.000	2	50.000	100.000
3	150.000	300.000	3	75.000	150.000
4	200.000	400.000	4	100.000	200.000
5	250.000	500.000	5	125.000	250.000

- c) Deel de som door het aantal productgroepen dat binnen deze selectie valt onder de voorwaarde dat de som uit minimaal 5 productgroepen of meer bestaat.
- d) De nieuwe herberekende potentie is duidelijk en kan ingevuld worden in de kolom market mirror.

Ingesproken potentie controleren aan de hand van de omzettafel.

Om het systeem kloppend te houden moet de ingesproken potentie van rayonmanagers altijd worden gecontroleerd met bovenstaande tabel. Indien een potentie ver onder of ver boven deze

waarden uitkomt dat is er wat aan de hand met de ingesproken potentie. Het is ook nodig om het aantal monteurs adequaat in Silicomp te zetten en bij te houden.

Advies: Het opvolgen van klantgegevens is cruciaal voor dit systeem. Het controleren van het aantal monteurs / de ingesproken potentie en aan de hand daarvan het systeem aanpassen. Indien dit adequaat en wekelijks gebeurd kunnen er veel fouten uit het systeem worden gehaald.

Algemene klantgegevens

Het I-Rel system bevat ook algemene klantgegevens die handig kunnen zijn voor de rayonmanager. In versie 1.0 zijn de volgende klantgegevens toegevoegd. Indien gewenst kan deze lijst worden aangevuld. Wel dient de informatie binnen Silicomp aanwezig te zijn.

Naam	Plaats
Telefoonnummer	E-mail
Klantnummer	Type garage
Specialisme	Aantal monteurs
Potentie	Percentage online order
Percentage telefonische verkoop	Percentage retour
Gemiddeld betalingstermijn	Inloggegevens web shop
Actuele omzet totalen / per productgroep	Actuele omzet per artikelgroep
Omzetspotentie totalen / per productgroep	



AUTOMATERIALEN • BANDEN • GEREEDSCHAPPEN • KENTEKENPLATEN • OLIËN

Naam	Bcs Autobedrijf Wessels Bv
Plaats	Dedemsvaart
Telefoonnummer	0523-612593
E-mail	
Klantnummer	0185658
Type garage	Universeel (Bcs (koskamp))
Specialisme	
Aantal monteurs	0.0 FTE
Ingesproken potentie	€ 400.000
Percentage online order	93.6 %
Percentage telefonische verkoop	6.4 %
Percentage retour 2011	14.3 %
Gemiddelde betalingstermijn	12 dagen

Ingelogd: Tim Heinen
Datum: 15-03-2012
Laatste bezoek: 14-03-2012 om 10:23

- Ga naar notitieblok
- Ga naar actieoverzicht
- Ga naar bonusoverzicht

Klantstatus A
 Er zijn geen gebruikergegevens bekend.

Omzet

Artikelgroep	Market Mirror	Omzet 2011	Prognose 2012	Laatste 12 maand	Vershil
AM Automaterialen	241.320	205.324	217.957	213.285	35.996
BA Banden	130.760	159.814	118.100	165.242	-29.054
KP Kentekenplaten	2.000	0	1.806	332	2.000
VL Vloeistoffen	25.920	0	23.411	780	25.920
Totalen	400.000	365.138	361.274	379.639	34.862

Omzetten per groep

Bonusmodule

Het nut van een bonusmodule is aan de klant aan te geven welke bonus hij kan verwachten van Koskamp. Niet iedere klantencategorie ontvangt een bonus, dus de bonusmodule moet niet bij iedere klantengroep zichtbaar zijn. Echter kan een bonusmodule wel handig zijn om de klant erop te wijzen dat bij een kleine omzetverhoging een hogere bonus te behalen valt. Het is dus een omzetstimulerende tool.

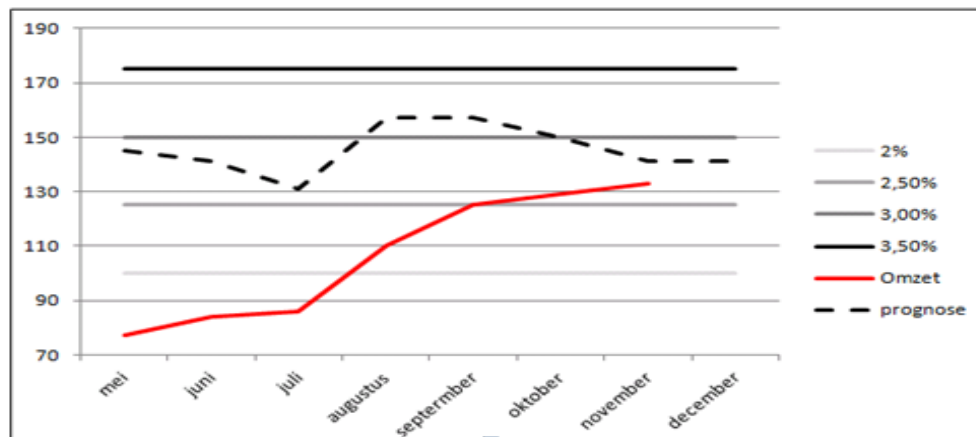


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Bonusoverzicht (0185658-Bcs Autobedrijf Wessels Bv)

	Omzet	Korting (%)	Bonus	Nog te behalen omzet voor hogere bonus staffel
Prognose dit jaar	361.274	5,50	19.870	-
	400.000-450.000	6,00	24.000	38.726
	450.000-500.000	6,50	29.250	88.726
	500.000-1.000.000	7,00	35.000	138.726

In versie 1.0 wordt ook nog een grafische weergave van de bonus ingebouwd. Op moment van schrijven is een dergelijke grafiek nog niet weergegeven maar het concept dat is aangeleverd is als volgt:



Actiemodule

Het nut van een actiemodule is het adequaat opvolgen van een actie. Een actie wordt gekoppeld worden aan de omzet in een productgroep of een focusomzet. Een rayonmanager kan zien of een klant gebruik maakt van acties en hem al dan niet daar op aanspreken. Dit is een omzetstimulerende tool. Tevens is het ook goed voor de klantbinding, omdat wellicht enkele klanten niet op de hoogte zijn van de huidige acties. Wanneer ze attent worden gemaakt op scherp geprijsde producten zullen ze dit wellicht waarderen.



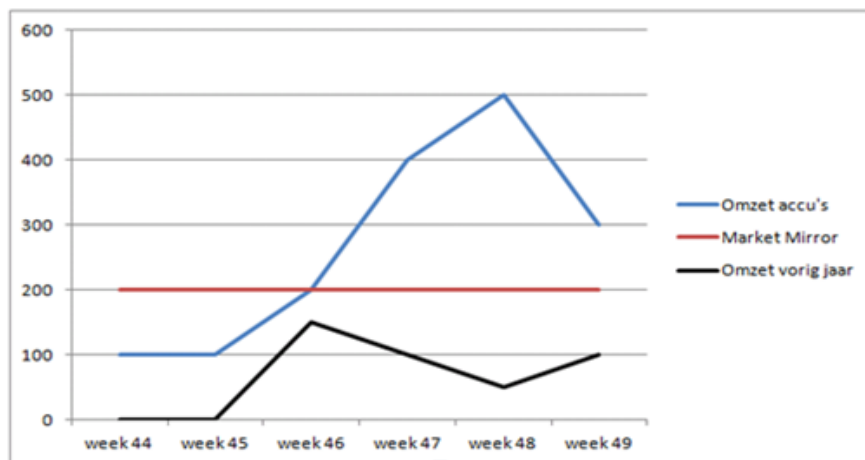
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Acties

Totalen

FOCUSGROEP	Market Mirror	Omzet 2010	Prognose 2011	Laatste 12 maand	Verschil
A05 + A06	Accu's	10.500	4.418	4.560	4.993

In versie 1.0 wordt ook nog een grafische weergave van de bonus ingebouwd. Op moment van schrijven is een dergelijke grafiek nog niet weergegeven maar het concept dat is aangeleverd is als volgt:



Notitiemodule

Voor een rayonmanager is het handig om te weten welke (bonus)afspraken er zijn gemaakt met een klant. Hiervoor is – naast de dagrapportage – een notitiemodule aan I-Rel toegevoegd. Het nut van een notitiemodule is het adequaat opvolgen van gemaakte afspraken met een klant. Indien nodig kan een rayonmanager een mail sturen naar zichzelf of het een en ander. terugkoppelen naar diverse afdelingen (directie, marketing). Hierdoor heeft is er een herinnering aan de gemaakte afspraken in de mailbox.

Het notitiesysteem kan ook gebruikt worden voor de opvolging van eventueel verhoogde condities bij een klant. Evaluatie is dan de volgende keer mogelijk, omdat de verhoogde condities genoteerd zijn tijdens een eerder bezoek.



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Notities - Bcs Autobedrijf Wessels Bv

Datum: 15-03-2012

Laatste bezoek: 14-03-2012 om 10:23

Notice: Undefined variable: notitiegegevens in /var/www/iirel/getNotities.php on line 127

Datum	Actiepunten	Opgevolgd?
Er zijn geen actiepunten bekend!		

Notitie toevoegen

Datum	Notitie	Opgevolgd
15-03-2012		<input type="radio"/> Ja <input checked="" type="radio"/> Nee

Opslaan Opslaan + CC Mail Opslaan + CC Gert

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