

# CUSTOMER SATISFACTION SURVEY, RESULT ANALYSIS AND UTILIZATION IN A GLOBAL FORESTRY COMPANY

Pauliina Leppänen

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#### **ABSTRACT**

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## PAULIINA LEPPÄNEN:

Customer satisfaction survey, result analysis and utilization in a global forestry company

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Customer satisfaction effects companies' longevity, profitability and brand by the repeat buying behavior and good word of mouth due to loyalty. Therefore, measuring the customer satisfaction is important to companies and it enables effective development of customer satisfaction.

The aim of this study was to measure the company's customer satisfaction in customer service, quality of products and delivery, communications and customer experience to give the management a clear view of the company's customer satisfaction level. Specifically company's satisfaction level in customer service, products and reliability in order to help the management with decision making and allocation of development funds.

The data was collected by a web-based questionnaire survey which was sent to 337 customers from 31 countries. There was also an option of paper survey countries with specific needs. The survey was translated into seven languages; English, Finnish, French, German, Italian, Chinese and Japanese. The quantitative data of the research was analyzed by correlation, cross tabulation and comparative analysis. In addition, quadrant analysis and net promoter score were used to analyze the data even further.

The results indicated that the overall level of customer satisfaction of the company is very high. More than 91 percent of the respondents stated that they were very satisfied or satisfied with the company's products and delivery and more than 97 percent with the service. Almost 94 percent of the respondents stated that they would rate their company's relationship with the company to be very good or good. Compared to the last customer satisfaction survey there have not been big changes expect in the country level.

The findings suggest that the company has been successful in building trust and long lasting customer relationships. The main development area should be the consistency of quality grading which will increase the customer satisfaction and through that also increase the value of products compared to the price. In the future the company should continue to measure and monitor customer satisfaction annually in order to develop their operations and to succeed in their vision, strategy and long term goals.

Key words: Customer satisfaction, customer satisfaction survey, global forestry company, web-based survey, international business

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## **GLOSSARY** (In the field of forestry)

Chain of

Custody

The path taken by raw materials, processed materials and finished products from the forest to the consumer including each stage of transformation, manufacturing, storage and transport where progress to the next stage involves change of ownership of the materials or products

**Forest** 

A procedure for proving to the buyer of wood products that the raw material certification used for the product comes from a forest which is managed in a certain manner. The forest certification standard is a public directive on the management of certified forests. The aim of FSC and PEFC systems is that forest management complies with sustainable development.

**FSC** 

The abbreviation of the Forest Stewardship Council, which is a forest certification system.

Grading

Sawn timber is divided on the basis of the quality characteristics to different wood quality classes in the sawmills through visual sorting.

**Mechanical** Mechanical forest industry includes sawmill, plywood, chip board, fibre

forest

board, wood construction products and construction industries. Mechanical

industry

forest industry is also called wood products industry.

**PEFC** 

The abbreviation of the Programme for Endorsement of Certification Schemes, which is a forest certification system.

Softwood

Comes from gymnosperm trees which usually have needles and cones. Medullary rays and tracheids transport water and produce sap. Examples of softwood trees are juniper, pine and spruce.

#### 1 INTRODUCTION

Loyal customers and long lasting customer relationships are one of cornerstones of UPM Timber's strategy. They want to ensure long-term commitment and continuity and their vision is to be customer's number one choice. Therefore, high level of customer satisfaction is essential to their strategy and long term goals. Customer satisfaction, quality, customer relationship management and loyalty are the main concepts of this thesis. The concepts are described in detail in the chapters later on and they are working as a direction of the thesis.

This thesis is marketing research about the customer satisfaction of UPM Timber. The company commissioned a customer satisfaction survey in order to give the company's management a clear view of the company's customer satisfaction level and help them with decision making and allocation of development funds. The objective of this thesis is to gather information about UPM Timber's customer satisfaction in order to get a clear picture of the quality of the company's performance in different aspects and how they could improve their customer service level.

The main objectives of this research are the data collection from company's customers, the analysis of the data and to identify improvement areas and suggest development ideas how the company can improve their customer service level based on the analysis. UPM Timber has done this type of research earlier and therefore this research also analyses the development in customer satisfaction between this and the previous satisfaction survey.

The research is conducted as a quantitative research. The data for the research is collected by a web-based questionnaire survey using the Qualtrics, the online survey software tool. Statistical data is processed with Tixel and Qualtrics. In addition to comparative, correlation and cross tabulation analysis, this research is using quadrant analysis and net promoter score to analyse the quantitative data. The research also includes qualitative analysis of open-ended questions.

The next chapters explains in detail the research plan of the thesis. The research plan includes the objective and the purpose of the research, the research methods and the main concepts related the topic.

#### 2 RESEARCH PLAN

## 2.1 Customer satisfaction in UPM Timber and its importance

UPM Timber is a significant producer of Nordic sawn timber which produces red and white wood sawn timber to joinery, packaging, distribution and construction industries (UPM Timber 2015). They use certified Nordic raw material and latest sawmilling techniques to produce high quality sawn timber that fulfils their customers' requirements. UPM Timber has four sawmills in Finland with the total annual capacity of 1.5 million cubic meters. They are operating globally and have their own sales network in Europe and Asia. (UPM Timber 2016.)



PICTURE 1. UPM Timber's International Sales network (UPM Timber presentation 2016)

Customer satisfaction is person's feeling of pleasure or disappointment which resulted from comparing a product's perceived performance or outcome against his/ her expectations (Kotler & Keller 2006, 144). According to Kenett and Silini (2011, 37) every competitive firm should be interested in assessing the satisfaction level of its customers. Some of the reasons are that customer loyalty guarantees the continuity of the firm, loyal customers are promoters of the firm, and satisfied customers are more tolerant of the firm's

mistakes and of choices such as changes in service levels or price increases. Loyal customer and long lasting customer relationships are one of cornerstones in UPM Timber's strategy. They want to ensure long-term commitment and continuity and their vision is to be customer's no 1. choice (Timber SBU Strategy 2016-2020). Therefore, high level of customer satisfaction is essential to their strategy and in order to achieve their long term goals.

Quality has become an increasingly important means of competition on the world market. A strategy based on management commitment to continuous quality improvement has therefore to be applied more generally and systematically in any organization to enable it to keep its position on the market. (Bergman & Klefsjö 1994, 15.) In a competitive market such as sawn timber industry it is important for UPM Timber to continuously measure and develop the quality of products and services in order to keep their good position in the market.

Annual customer satisfaction surveys (ACSS) are conducted in order to: identify key drivers of satisfaction and prioritize actions; compare data over time to identify patterns in customers' experiences; disseminate the results throughout the appropriate audiences within the company to drive change within the organization (Kenett & Salini 2011, 6). In 2013 company went through big changes when they withdrew from further processing business and focused only on sawn timber production. UPM Timber conducted customer satisfaction survey in 2014 to measure their success in customer satisfaction with the current operating model and to prioritize their actions. After two years from the last survey, measurement of customer satisfaction was needed from the business strategy perspective and from the operative standpoint.

In addition, the importance of satisfied customers is emphasized by the European Business Excellence Model, developed by the European Foundation for Quality Management (EFQM). The criterion customer satisfaction is the weightiest criterion and accounts for 20 percent of the total points in the scoring system when companies assess and measure their own excellence. This means, that understanding the customers, and measuring customers' satisfaction is an important element in companies' continuous quality improvement, which leads to improved business performance, including economic performance. (Neely 2002, 280.)

By conducting a customer satisfaction research UPM Timber gets relevant information about their current level of customer satisfaction. The research's focus areas are customer service, quality of products, delivery reliability, communications and customer experience. From these company can identify areas were they need to improve and get areaspecific information about how customers experience their services. UPM Timber can utilize analysed results in their customer satisfaction and quality development. When operating worldwide customers satisfaction development can be challenging and the service level can vary between countries. A global customers satisfaction survey for 27 countries will give regional information and help with customer satisfaction development challenges in a global business.

## 2.2 Research objective, purpose and research questions

## 2.2.1 Objective

The objective of this research is to gather information about UPM Timber's customer satisfaction to get a clear understanding of the quality of company's different aspects of services and based on that information identify development areas to increase their customer service level. To get a clear understanding of the customers satisfaction the objective is to execute customer satisfaction survey and analyse the results of survey by using different methods. Afterwards to compare the results with 2014 results and analyse the change and development in customer satisfaction and in customer service and other operations.

#### 2.2.2 Purpose

The purpose of the research is to collect information on customer satisfaction to give the management a clear view of the company's customer satisfaction level and more specifically satisfaction of each attribute that the company provides to its customers in order to help the management with decision making and allocation of development funds. The goal is to increase the customer satisfaction of the forestry company. The attempt to measure and improve customer satisfaction is aimed at increasing the population of those we satisfy and to satisfy at a higher level those who are loyal to us (Goldstein 2009, 119).

## 2.2.3 Research questions

Customers worldwide within various industries trust in UPM Timber's professional service and stable quality (Timber 2015). This research will give current information about how customers evaluate the company's performance based on their experiences.

To achieve the objective of research and gain a clear picture about the quality of company's customer service level, product satisfaction and reliability and how they could improve their customer satisfaction level the main research questions have to be answered: What is the company's level of customer satisfaction? How the company can develop their customer experience and improve their customer service level?

To be able to answer the question above the research need to gather information the research needed to answer what aspects of business operations needs to be improved in order to improve the customer experience and how can the company utilize these findings in customer satisfaction development. Comparison between these results and the previous customer satisfaction survey was essential to know is the level of satisfaction increased or decreased and what areas have changed during the past two years.

## 2.3 Concepts and theories of customer satisfaction

#### 2.3.1 Customer satisfaction

According to Richard Gerson and Machosky Brenda (1993, 5) customer satisfaction is the customer's perception that his or her expectations have been met or surpassed.

There are different dimensions in customer satisfaction. According to Hüseyin Güngör (2007, 18) cognitive satisfaction dimension is how customers rationally calculate the product or services they are receiving which are mostly related with the objective product attributes like product quality and price. Emotional satisfaction is the hedonic or experiential benefits that customers cannot calculate rationally or objectively. It is about trust and relationship (cf. Robinette et al., 2001). Both cognitive and emotional satisfaction are important for UPM Timber because they want their customers to be satisfied with the

quality and price but also to have emotional satisfaction to build long lasting relationships and great trust in what they do.

Transactional satisfaction is event specific and can be defined as the post consumption evaluative judgment of a particular transaction. General satisfaction is about all previous transaction experiences over time. General satisfaction is thus the outcome of a learning process where the customer learns from (or remembers) all previous transaction experiences over time. (Güngör 2007, 19-20.) This research is focusing on general satisfaction dimension by studying the current level of overall customer satisfaction of UPM Timber.

UPM Timber's one goal is to establish long-term relationships with satisfied customers. According to Richard Gerson and Brenda Machosky (1993, 30) this is established by understanding and identifying customers' needs, meeting and exceeding their expectations, closing or removing any perceptual gaps that may exist between what the business believes was delivered and the customers believe was received, and trying continuously to improve the service quality efforts a little bit at a time. This research will help UPM Timber with service quality improvements and in closing these gaps between the business and the customers and thereby to build long-term relationships.

According to Derek Allen (2004, 2) improvements in product and service quality will increase customer satisfaction which leads to desirable business outcomes (see Figure 1). This assumption is also foundation to this research. By measuring customer satisfaction level we can identify aspects in need of development and through them to increase the satisfaction level and improve the company's operations.

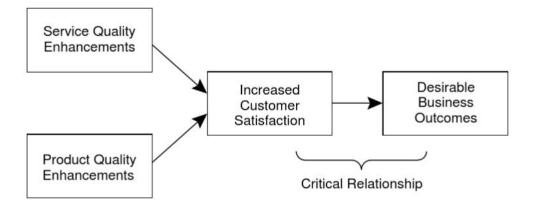


FIGURE 1. Fundamental assumption driving customer satisfaction measurement (Allen 2004, 2)

Figure 2 shows the relationship between customer satisfaction and business outcomes. According to Derek Allen (2004, 116) customer satisfaction effects on business outcomes and profitability directly by buying behavior and indirectly by customer retention. Understanding this relationship is essential for the research and its helps to understand reasons for the development of customer satisfaction.

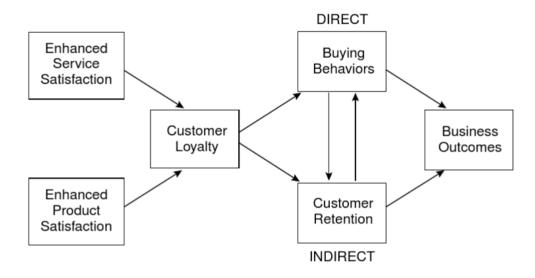


FIGURE 2. Customer satisfaction effect on business outcomes (Allen 2004, 116)

Anderson and Mittal examined the relationship between profitability, customer loyalty and satisfaction and developed the satisfaction-profit chain (see Figure 3, 13). According to the satisfaction profit chain customer satisfaction is link to the business performance through customer loyalty. Satisfaction increases because customer insight allows companies to understand their customers better, and create improved customer value propositions and better customer experiences. As customer satisfaction rises, so does customer intention to repurchase. (Anderson & Mittal 2000, 107–120.) The satisfaction-profit chain shows how with high customer satisfaction level company's business performance will be higher. Therefore measuring and developing customer satisfaction is important for UPM Timber also from the perspective of profitability.



FIGURE 3: The Satisfaction-Profit Chain (Anderson & Mittal, 2000)

## 2.3.2 Quality

The quality of the product is its ability to satisfy the needs and expectations of the customer (Bergman & Klefsjö 1994, 16). The definition presented by Montgomery (1996): Quality is the extent to which products meet the requirements of people who use them (Hayes 2008, 1). According to Gerson and Machosky (1993, 12) there a distinct relationship among quality, customer service and customer satisfaction because quality and service are whatever the customer says they are and if you provide the these according to your customer's definitions, customer satisfaction will follow.

According to Morris Wilburn (2006, 3) brand image influences current customer and an image of overall quality will make an owner more satisfied with a product. Company image adds something intangible to purchasing, owning and using a product. UPM is a big brand globally in the forestry industry and it gives overall high quality image to some customers in Asia and Europe and especially in Finland. This also creates value for some customers who are selling their products to end users who are aware of the brand.

It is conclusive that organizations that consistently deliver superior customer service generally enjoy more repeat business, less price elasticity, higher price points, more cross-selling opportunities, greater marketing efficiency, and a host of other factors that usually lead to earnings growth (DiJulius 2011, 8). Excellent customer service is one part of the UPM Timber customer promise and they strive to be customer orientated throughout the supply chain. With the current market prices of sawn timber, loyal customers who are not

so price sensitive and are willing to pay more for quality have been key factor in UPM Timber's profitability.

## 2.3.3 Customer relationship management

Customer relationship management is the combination of strategies and technologies that empower relationship programs, reorienting the entire organization to a concentrated focus on satisfying customers (Boone & Kurtz 2015, 358). According to Ballantyne, Christopher and Payne (2002,16) CMR is a strategic approach to improving shareholder value through the development of appropriate relationships with key customers and customer segments. Whereas according to Francis Buttle (2008, 15) CRM is the core business strategy that integrates internal processes and functions, and external networks, to create and deliver value to targeted customers at a profit.

An important rationale for CRM is that it improves business performance by enhancing customer satisfaction and driving up customer loyalty. There is a compelling logic to the model, which has been dubbed the 'satisfaction–profit chain'. (Buttle 2008, 43.) For UPM Timber great customer relationship management is important to the fundamental basis to achieve their vision to be the customer's number one choice and their strategic goals with customers. Deeper strategic customer collaboration and higher share of volume to top category customers are two main strategic goals of the company for the next four years (Timber SBU Strategy 2016-2020). These can be only achieved by a great customer relationship management.

The leaky bucket theory is the model that seeks to describe the process of customer gain and loss, otherwise known as customer churn (Blythe 2009, 21). It shows how keeping customers by filling the leaks in the bucket is more useful than continually acquiring new customers to keep the bucket full. UPM Timber is currently focusing on retaining their customers because they are selling all their capacity to their current customers. According to Jim Blythe (2009, 21) customer retention is one of the key concepts in relationship marketing but still most companies concentrate on recruiting new customers to replace customers who move on, rather than seeking to retain customers.

Amy Gallo (2014) emphasizes the importance of keeping the right customers. Keeping the right customer is valuable. Depending on which study you believe, and what industry you're in, acquiring a new customer is anywhere from five to 25 times more expensive than retaining an existing one (Gallo 2014). Fred Reichheld also points out that biggest opportunity to keep costs down for business is to building loyal relationships with customers and other stakeholders and how small increase in customer retention can produce high increase in profit. UPM Timber is also taking advantage of the customer retention by building loyal and long-lasting relationships with customers and by categorising customer in order to concentrate more on the top category customers.

## 2.3.4 Customer satisfaction and loyalty

Loyalty and long-term relationships with customers are important part of UPM Timber's strategy because they concentrate heavily on their current customers and they want to have a stable position in their strategic markets. As widely agreed (e.g., Reichheld, 1993, 1996, 2001; Oliver, 1997; Heskett, Sasser, & Schlesinger, 1997) there are many positive effects of customer loyalty such as revenue growth due to repurchases as well as referrals, cost decline due to lower acquisition costs and serving experienced customers, and increase in employee retention due to job satisfaction and pride (Güngör 2007, 14).

The American Customer Satisfaction Index (ACSI) is the world's most comprehensive assessment of customer sentiment (Barwise & Meehan 2004, 9). One of the most compelling empirical linkages between customer satisfaction and profitability involves the American Customer Satisfaction Index (ACSI) shown in Figure 4 on page 16, which assumption is that for most companies repeat customers are a considerable profit source (Allen 2004, 12-13). The theoretical framework ACSI model of customer loyalty starts with customers expectation and perceived quality which affects the customer satisfaction and perceived value of the product or service. Customer satisfaction, as measured by the ACSI index, has two antecedents: customer complaints and, ultimately, customer loyalty (Allen 2004, 13). This shows how researching customers' expectations and perceived quality can give information about the customer satisfaction level and how customer satisfaction and loyalty are connected.

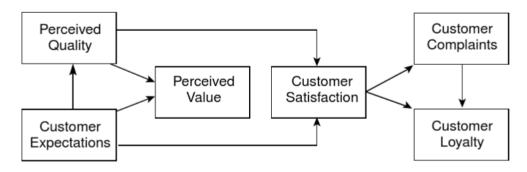


FIGURE 4. The ACSI model of customer loyalty (Allen 2004, 13)

Derek Allen and Tanniru Rao suggested a causal chain for the relationship between loyalty and satisfaction which shows how customer satisfaction affect both affective and cognitive loyalty (see Figure 5). The brand image perceptions directly affect the emotional component of loyalty whereas value perceptions and customer satisfaction a have an impact on the more rational aspects of loyalty. Finally, customer satisfaction and the two loyalty measures directly affect customer retention. (Allen & Rao 2000, 8-9.)

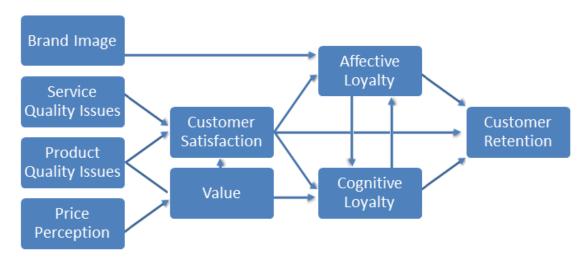


FIGURE 5. Relationship between loyalty and satisfaction (Allen & Rao 2000, 9)

According to Sheldon Goldstein (2009, 28) when conducting a satisfaction survey, one should always include questions at the end: "Would you be willing to recommend (Company) to your colleagues and industry acquaintances?" This gives an indication of customer loyalty, because customers willing to recommend your company are also indicating that they have confidence in your company to stand behind their reference. In UPM Timber survey the question "What is the likelihood of you recommending a co-operation with UPM Timber?" measures the level of loyalty. Goldstein also suggested that the customer loyalty is the intersection of customer satisfaction, willingness to recommend and to repurchase (see Figure 6, 17).

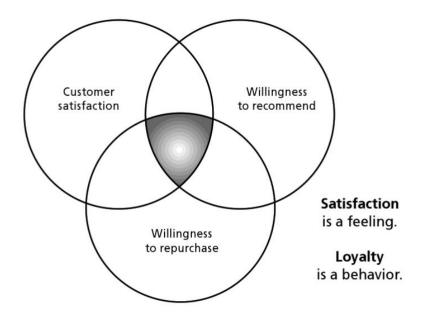


FIGURE 6. Customer loyalty (Goldstein 2009, 28)

#### 2.4 Research data

#### 2.4.1 Data collection

The research is conducted as a quantitative research. Quantitative data allows to establish baselines for performance and compare performance (Goldstein 2009, 8). To achieve the purpose of research UPM Timber is conducting customer satisfaction survey to its customers. The quantitative data from customer satisfaction surveys is usually a response by the customer to a question about an attribute that the company provides to its customers (Goldstein 2009, 13). The aim of this study is to measure customer satisfaction in customer service, quality of products, delivery reliability, communications and customer experience. The survey is planned on the basis of the focus areas and the topics of the survey are service in sales, products and deliveries, communications and relationship and value. UPM Timber has conducted a master's thesis about the most important attributes for the customers. The questions and the studied attributes are being chosen on the basis this master's thesis. With these topics and attributes the research gives the management a clear picture of customer satisfaction in different aspects.

Web-based survey is a good way to conduct UPM Timber's customer satisfaction survey because it is an effective and fast way to gather responses from worldwide customer base.

If the sample size is fairly large and widely distributed geographically online administration is the best option. Access to the appropriate list makes an online survey a reasonable choice. (Ritter & Sue 2007, 5.) In addition, Valerie Sue's and Ritter Lois's arguments supported the decision of data collection method. The survey invitations are sent out based on a closed customer lists which are checked by the sales people. According to Ron Kenett and Silvia Salini (2011, 90) these surveys are particularly appropriate for research among clients for instance customer satisfaction.

According to Bob Hayes (2008, 76) benefits of collecting customer feedback using web-based surveys are that it is relatively inexpensive to conduct and response rates are typically higher than for other methods because they are easier to complete and respondents can respond at their own convenience. Convenience is significant factor when choosing the data collecting method because our target population is full of busy people. Web-based surveys also give immediate information how many people and how have they responded to the survey which is essential for this research. It enables the process of get-ting answers from each country and sending reminders to non-respondents and sales team to contact the right customers. In addition to tracking who replied, with survey software you also should be able to limit replies to one respondent (Ritter & Sue 2007, 17).

In this research the data is collected by a web-based questionnaire survey. The customer satisfaction survey is done online by using the Qualrtics, the online survey software tool. There is an option of paper survey for countries with specific needs. The survey has seven language option; English, Finnish, French, German, Italian, Chinese and Japanese. With web-based survey and seven language options it is possible to reach all customers world-wide and to maximize questionnaire responses. This helps the management to allocate development funds to the right area and dealt with country specific problems. This research is also exploiting the data collected in previous customer satisfaction surveys.

The survey is sent to 337 selected customers from 31 countries on 1st of April and the survey is open at least for three weeks, if needed four weeks. The target population of this survey is UPM Timber's key customers who buys their products frequently. This target group includes directors, purchaser and purchasing managers, managing directors, production managers and full-time sales assistants in these companies who work closely with UPM Timber.

Obtaining high response rates can be challenging when conducting online survey research (Sue & Ritter 2007, 93). The response rates for Web-based surveys are approximately 30%, but the studies are limited in number (Sue & Ritter 2007, 8). The goal of the research is to get 135 responses to reach 40% response rate. To reach the same response rate 30,9% as in year 2014 the survey needs to get 105 responses. In order to maximize the response rate the survey is designed to be short only with the essential questions. After one week follow-up reminders will be sent to non-respondents and later on the sales people remind the customers who haven't yet responded to the survey after the reminder message.

## 2.4.2 Data analysis

The quantitative data of the research is analysed by correlation and cross tabulation. Response differences between different countries and continents can be effectively analysed with cross tabulation. Comparative analysis is used to compare the differences in 2016 and 2014 survey results. Statistical data is processed with Tixel and Qualtrics. Statistical Programme Tixel is an extension of Excel, which is designed to analyse statistics. The online survey software Qualtrics offers cross tabulation tool for multivariate analysis. The research also includes qualitative analysis of open-ended questions.

In addition to comparative, correlation and cross tabulation analysis this research is using quadrant analysis and net promoter score to analyse the data. Integrating a basic analysis with more advanced tools, provides insights into non-obvious patterns and important relationships between the survey variables which can significantly affect findings and recommendations derived from a survey (Kenett & Salini 2011, 3-4).

A comprehensive satisfaction survey analysis will include a method for helping management establish priorities. One common approach is a Quadrant Analysis, which plots satisfaction levels (or gaps) against importance levels for satisfaction attributes. (Rockbridge Associates 2013.) The research includes quadrant analysis exploiting a previous customer satisfaction study about the most important attributes to the customers to identify problem and development areas. Quadrant analysis helps the management in the allocation decisions of resources and development funds. This analysis can be used to analyze the products, delivery and service scale questions (quantitative data). On the basis of this analysis

the author can identify development possibilities to increase the company's customer satisfaction level and see if some areas could be more cost efficient (see Table 2). To analyse even deeper the customer satisfaction with the current business model and progress of satisfaction, comparison with some of the results of 2010 survey will be done. The 2010 customer satisfaction surveys was done when UPM Timber still had further processing production and many production units.

TABLE 1. Quadrant Analysis (Multivariate Solutions 2016)

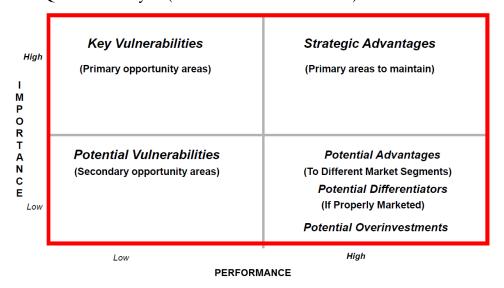
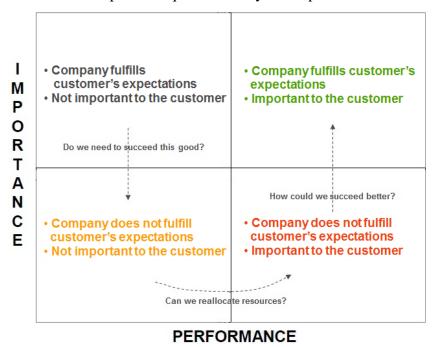


TABLE 2. Performance-importance quadrant analysis template



Bain's Net Promoter System is based on the fundamental perspective that every company's customers can be divided into three categories. "Promoters" with score from 10 to 9 are loyal enthusiasts who praise the company to friends and colleagues. "Passives" with score from 8 to 7 are satisfied but unenthusiastic customers who can be easily wooed by the competition. And "detractors" with score 6 or lower are unhappy customers. (Bain & Company) For UPM Timber loyalty is essential to gain the long lasting relationships and keep their current customers from strategist markets.

The Net Promoter Score of a company is the percentage of promoter minus the percentage of detractors (Bain & Company). Net Promoter Score is using scale from 10 to 0 so with the survey scale from poor to very good need to be converted to numbers. Therefore answers "very good" represents promoters and "good" answers are passives. And companies with "fair" or "poor" answers are detractors. We need to keep in mind and take into account in the calculations that because the scale four of the survey cannot be divided by to eleven so the amount of detractors is less and amount of promotors is more than with the actual results. NPS with a low-response-rate surveys process can lead to confusing and misleading results (Reichheld & Markey 2011, 110). Therefore, the response rate have to be taken into account also.

#### 2.4.3 Limitations of the research

It is important that researchers recognize internet surveys' opportunities and limitations so that they may make informed decisions when selecting a data collection method (Ritter & Sue 2007, 3). With online surveys there are some limitations to the research. In web-based surveys some customers might give quick answers and not think so much about the questions or even skip some of the questions. Cultural differences and customers' honesty also play a role in the limitations of the research.

High response rate eliminates the possibility of unit non-response error. Ron Kenett and Silvia Salini (2011, 43) define unit non-response as the choice not to participate in the survey by a population unit that has been selected for the survey. Because target population is selected the challenge is to get enough responses from these specific population units. With low response rate the research have too small sample from the target population which may lead to sampling error or even to the results of the survey being unusable

for generalization. Therefore, customers will get actively reminders about the survey from the sales team and by email. In addition, personalized invitations to the survey will motivate more customers to response.

Item non-response error occurs when the unit does not respond to specific items and there is missing answer to one or more questions in the questionnaire (Kenett & Salini 2011, 42-44). This error is very probable because some customers might skip one or two questions in the questionnaire. In small numbers this error will not be a limitation for the research. But in case for example if many customers leaves the questionnaire unfinished there might be a big item non-response error in the last questions which will affect the validity of the research.

In web-based surveys there is also the problem of abandonment. Respondents can easily quit in the middle of a questionnaire (Ritter & Sue 2007, 13). Therefore, the questionnaire is design to be short and to the point. Valerie Sue and Ritter Lois suggested that if the questionnaire is easy to navigate and fun to complete respondents are less likely to quit the questionnaire. To test the navigation of the survey and overall flow the survey will be sent to 35 UPM Timber's employees from different units for preliminary testing.

Cultural differences can be a limitation to the research. Morris Wilburn (2006, 95) states that comparing responses from different countries can be problematic because the cultural differences. The issue here is that a given point on a rating scale may not correspond to the same intensity of attitude in all the countries which can occur for many reasons; for example, one country may have cultural norms against making extreme statements. This should be taken into account when analyzing the results especially with respondent from Japan and China where the cultural norm is to be more over polite when giving feedback. Because of the anonymity that web-based survey gives, the cultural differences have only a small impact to the research. Online survey gives respondents better environment to be truthful compared to face-to-face or phone interviews. Survey also highlights the anonymity by stating that the name and the company boxes are optional. In addition, rather than giving a scale from 1 to 9 minimizing the scale option to four options helps with the correspondence problem.

## 2.5 Thesis process

Chapter 3 explains in detail how the survey was designed and executed and gives background information about the previous studies of customer satisfaction in the company. In chapter 3 there is also information about the company and the forestry industry in Finland.

Chapter 4 discusses the results of the survey and shows key findings in the comparison between 2014 and 2016 customer satisfaction surveys. It also includes the quadrant analysis and the net promoter score.

Chapter 5 concludes the research by identifying the key findings of the research and analyses how the company can utilise these findings in their customer satisfaction development.

Chapter 6 is a summary of the research process.

## 3 WEB-BASED SURVEY QUESTIONNAIRE AND UPM TIMBER

## 3.1 UPM Timber and the forest industry

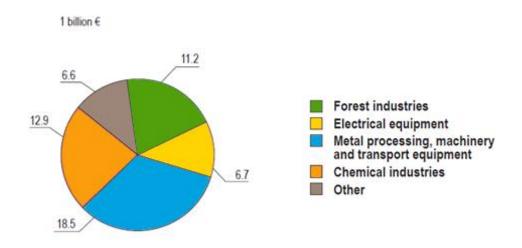
UPM Timber is part of the UPM-Kymmene Oyj company. UPM is a global bio and forest industry company with personnel in 45 countries and production in 13 countries. UPM's business structure consists of six business areas: UPM Biorefining, UPM Energy, UPM Raflatac, UPM Specialty Papers, UPM Paper ENA (Europe & North America), UPM Plywood, UPM Biocomposites and UPM Biochemicals. In the UPM Biorefining business area, UPM combines integrated production of pulp, renewable diesel and sawn timber with a supply chain of wood raw material (UPM-Kymmene Oyj 2016). UPM's products are based on renewable raw materials and are recyclable. UPM leads the integration of bio and forest industries into a new, sustainable and innovation-driven future and their products offer alternatives to replace non-renewable fossil-based materials (UPM-Kymmene Oyj 2016). UPM's sales in 2015 were 10,1 billion and 20 percentage of the sales were generated by Biorefining business area (UPM-Kymmene Oyj 2016, 4).

UPM Timber is one of the leading sawn timber producers in Finland and they sell sawn timber worldwide. UPM Timber employs around 410 people and is headquartered in Tampere, Finland (UPM Timber 2016). All sawn timber produced by UPM Timber can be sold either as PEFC<sup>TM</sup> or FSC® certified. They have four sawmills in Finland: Alholma in Pietarsaari, Kaukas in Lappeenranta, Korkeakoski in Juupajoki and Seikku in Pori. There are currently 77 industrial sawmills in Finland and the biggest sawmill is UPM Kaukas with annual production capacity of 510,000 million cubic meters of redwood and whitewood sawn timber. UPM Timber production volume of 1.5 million m<sup>3</sup> is 0,5% of the global softwood volumes and approximately 15% of the Finnish volumes (Timber SBU Strategy 2016-2020). Therefore, UPM Timber is a big part of the Finnish sawmilling industry and has an important role in the forest industry.

## 3.1.1 The forest industry in Finland

The forestry industry is one of the biggest industrial sectors in Finland and it has substantive effect in the Finnish economy. The forest industry is a major contributor to wellbeing in Finland and it is the main source of income for many regions. The sector accounts for approximately 20 per cent of Finland's export revenue and it directly employs about 42,000 people. (Metsäteollisuus ry 2015.) As shown in the Figure 10, in 2014 the value of exported goods of forest industries were 11.2 billion euros which was one-fifth of the total value of exported goods. According to Figure 11 on page 29, in 2015 the forestry industry was 19,2 percentages of the manufacturing sector's gross value of production and 14,8 percentages of the employment in manufacturing sector. This demonstrates how important the forestry industry is for Finland.

## Exports of goods from Finland by sector in 2014



- In 2014, the total value of goods exported from Finland was 55.9 billion €.
- . The share of the forest sector of the goods exported was 20.1%.
- · Source: Finnish Customs: Natural Resources Institute Finland (stat.luke.fi). Updated 04.08.2016.

FIGURE 10. Export goods from Finland by sector in 2014 (Finnish Forests Association 2016)

	2011	2012	2013	2014	2015	
Osuus tehdasteollisuuden työllisyydestä, %a						
Puutuoteteollisuus*	9,8	9,1	9,1	8,7	8,8	
Massa- ja paperiteollisuus	6,1	5,7	5,9	5,9	6,0	
Metsäteollisuus yhteensä*	15,8	14,8	15,0	14,6	14,8	
Osuus tehdasteollisuuden tuotannon bruttoarvosta, % <sup>b</sup>						
Puutuoteteollisuus*	5,9	6,0	5,9	6,5	6,3	
Massa- ja paperiteollisuus	12,1	11,6	12,1	12,4	12,8	
Metsäteollisuus yhteensä*	18,0	17,6	18,0	18,9	19,2	
Osuus viennistä, % <sup>c</sup>						
Puutuoteteollisuus*	4,0	4,0	4,4	4,6	4,8	
Massa- ja paperiteollisuus	15,8	15,5	15,8	15,6	16,9	
Metsäteollisuus yhteensä*	19,8	19,4	20,2	20,2	21,6	

a Tilastokeskus: työllisyys Kansantalouden tilinpidon mukaan, 2015 tiedot julkaistu heinäkuussa 2016

FIGURE 11. Figures of forest industry in the national economy of Finland (Salo 2016)

The sawmilling industry is the Finnish forest industry's oldest sector and one of Finland's first export industries (Metsäteollisuus ry 2016). In 2014 world softwood production volume is 312 million cubic meters and 13 percent of this is produced in Northern Europe (Timber SBU Strategy 2016-2020). Finland's softwood production is two percent from the whole world production.

Demand of Nordic sawn timber is expected to grow 2-3 percent annually in 2016-2018 (Timber SBU Strategy 2016-2020). One of the reasons is increasing wood construction but also increasing softwood consumption in Asia. According to Metsäteollisuus ry (2013) EU countries can considerably reduce carbon dioxide emissions and achieve the climate objectives by focusing on wood construction. France caught on to the climate benefits of wood construction and in 2010 approved a law that requires a particular amount of wood to be used in the structures of new buildings. These type of regulations and awareness of the climate benefits of wood have been and will increase wood construction in Europe and in other markets as well.

## 3.3 Survey design

Typically, a customer or employee satisfaction survey contains three parts: overall measures of satisfaction, rating of key performance attributes, and demographics ques-

b Tilastokeskus: Alueellinen yritystoimintatilasto: 2015 ennakkotiedot

c Tullihallitus: CN-luokittelulla

tions (Chisholm, 1999). UPM Timber's customer satisfaction survey starts with demographics questions. The questionnaire is structured in five parts which measures key performance attributes: Demographics, Products and deliveries, Service in sales, Communications and Relationship and value. The part of products and deliveries is focused on quality and its stability, consistency of grading and delivery reliability. In the service in sales the focus is on customer service, accuracy of sales documentation and on the daily work and professionalism of area managers and sales office personnel. And the last part of the survey focuses on the value of products and services and the relationship with UPM timber in addition to overall performance.

According to Ritter and Sue (2007, 90) the survey invitation should explain why the survey is important and inform the reader of the approximate time needed to complete the survey. Therefore, the cover letter clearly states the purpose of the survey and the time estimate to complete it (see Appendix 1). The cover letter which worked as invitation to the survey was signed by Director of Sales and Supply Management to motive customers to response to the survey and to create image of important message. For further details look at the Appendix 1. Cover Letter of the customer satisfaction survey.

The survey had matrix tables, open-ended and multiple choice questions. The questions about products and deliveries and service were design to matrix tables with scale of four from very dissatisfied to very satisfied. The three questions about relationship and value were also in matrix table with scale of four from poor to very good. Communications part had two simple multiple choice questions with yes or no options. Open-ended questions were used to investigate further why respondent was not satisfied and to get improvement suggestion to UPM Timber's sales and supply-chain services and to level of service in general.

The survey started with four demographics questions. The name of the company and respondent's name questions were highlighted to be optional. The matrix table about products and delivery had seven questions and one open-ended questions if the respondent answered very dissatisfied to at least one questions. The same question came with the same logic after service matrix table to get detailed information about respondents dissatisfaction. The service sections had eight questions in the matrix table. The second and third parts of the survey were ended with general open-ended question about improvements in sales and supply-chain services. In the communications part's first question, if

the respondent answered "No", there opened open-ended question how UPM Timber could improve marketing and communications. Over all there was 11 questions and 3 additional questions. If you count all the questions in the matrix tables there were 26 questions in the questionnaire. For further details look at the Appendix 2. UPM Timber Customer satisfaction survey 2016.

Quality dimensions availability, responsiveness, timeliness, completeness and pleasantness of support that Bob Hayes (2009, 13) listed are important to take into account in designing the survey (see Figure 12, 32). Therefore, the questionnaire survey have questions about all these areas. For example the question are sales assistants service-minded and professional deals with the pleasantness of the support (see Appendix 2, 2). These dimensions were also mentioned in the master's thesis about the most important attributes for customers.

- 1. Availability of support: the degree to which the customer can contact the provider
- 2. Responsiveness of support: the degree to which the provider reacts promptly to the customer
- 3. *Timeliness of support:* the degree to which the job is accomplished within the customer's stated time frame and/or within the negotiated time frame
- 4. Completeness of support: the degree to which the total job is finished
- 5. *Pleasantness of support:* the degree to which the provider uses suitable professional behavior and manners while working with the customer

FIGURE 12. Some quality dimensions for staff support areas and their definitions (Hayes 2009, 13)

At the end of the survey these was a thank you message explaining how respondents answers are important and why (see Appendix 2, 4). Short but pleasant ending message gives a good impression of the company and the respondents feel appreciated.

## 3.4 Survey execution

Link to the survey in the e-mail invitation makes the survey easily accessible and it is also an interactive approach, is personal, and can provide the respondents with anonymity (Ritter & Sue, 89). Therefore, the survey link was send by email from communication managers email. By this invitations going to a spam folder was avoided and invitations came from a familiar person. In addition, according to Ritter Lois and Valerie Sue (2007, 5) responses to online surveys are greatest when respondents are first contacted by e-mail.

The email invitations were sent in 1<sup>st</sup> of September. The email had link to the survey's with the same language as the invitation was depending on the customers country. Most of the invitations were in English (see Table 3, 33), but for example to Algeria and Morocco the invitations were in French and to three customers in Poland they were in German.

TABLE 3. Customers by the survey language

Survey language	%
English	40,06
French	25,52
Finnish	13,95
German	10,09
Chinese	3,86
Japanese	3,56
Italian	2,97

After one week the reminders were sent by email to all non-respondents. After this the sales people received list of non-respondents so they could remind their customers when you are contacting them. After three weeks to achieve higher response rate the survey was continued by week. Informing about longer opening of the survey work as a reminder to those who haven't yet responded to the survey. Couple of days before closing of the survey sales people got the current non-respondent lists to increase the response rate of their country or area. By continuing the opening days of the survey with a week, responses

increased by 34 and the response rate went up from 30,6% to 40,7%. Out of 337 customers 136 responded to the survey and the overall response rate was 40,7% which is higher than the 30% average of online surveys.

#### 6 SUMMARY

The purpose of thesis was fulfilled and this thesis gave the company's management a clear view of the company's customer satisfaction level and will help them with decision making and how to allocate the development funds. The objective of gathering information about UPM Timber's customer satisfaction to get a clear picture about the quality of the company's performance in different aspects and how they could improve their customer service level was achieved. The data collection by web-based surveys was really successful and the company should you use it also in the future because it is cost effective way to reach their global customer base. Overall the research was success and it provided all the wanted knowledge and answered all the research questions.

If the satisfaction survey was performed again the questionnaire could have questions about the easiness of doing business with the company, representative's availability and about product range and specifications which were the topic in many open comments. All of these are also important factors in customer satisfaction. UPM Timber should also consider other survey tools in the future which have options to show the percentage or length of the survey on each page so that the respondents see how far are they in finishing the survey. This will reduce the problem of abandonment in the middle of a questionnaire. The online survey tool could also have more visual options to make the survey more attractive.

According to Kenett and Silini (2011, 6) annual customer satisfaction surveys are conducted in order to identify key drivers of satisfaction and prioritize actions, to compare data over time to identify patterns in customers' experiences and also to disseminate the results throughout the appropriate audiences within the company to drive change within the organization. To ensure long-term commitment and loyalty of customers and UPM Timber's vision to be customer's number one choice their customer satisfaction need to be at high level. Also according to Nink Marco (2013) unless companies actively monitor the strength of their customer relationships, few know they have a problem until it's too late. Therefore, customer satisfaction development is essential to their strategy and long term goals. Their customer satisfaction should be continued to be monitored and measured in the future, preferably annually to get the most benefits from it.

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