Lappeenranta University of Technology

School of Business and Management

Industrial Engineering and Management

Master's thesis

Measuring customer experience in online grocery industry

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Helsinki, October 24, 2017

ABSTRACT

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Title: Measuring customer experience in online grocery industry

Year: 2017   **Location:** Helsinki

Master's Thesis. Lappeenranta University of Technology, Industrial Engineering and Management

70 pages, 8 figures, 2 tables and 1 appendix

Examiners: Associate Professor Kalle Elfvengren

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Keywords: Customer experience, customer experience measurement, grocery e-commerce

The aim of this thesis is to conduct qualitative research on measurement of customer experience in online grocery industry. The theoretical part of the thesis explains characteristics of grocery industry, customer experience and commonly used metrics around the topic. Recommendations on the measurement of customer experience are then given based on literature.

Customer experience is a holistic entirety consisting of all interactions between a consumer and a brand. It builds through touchpoints, where the customer encounters anything related to products or services offered by a company. These encounters form an image of the brand into the mind of the customer, which is seen to correlate with formation of customer loyalty. The measurement of customer experience is considered difficult due to the vague definition of the term, and the inability of companies to affect all encounters outside its services.

Based on the literature, it was suggested that the focus of measurement should be on current levels of loyalty and its formation along whole customer journey. While loyalty levels can be measured with common top-level metrics, metrics of customer journey should be chosen through research on business processes and the values of current and potential customers.

TIIVISTELMÄ

Tekijä: Janne Hilpi

Työn nimi: Measuring customer experience in online grocery industry

Vuosi: 2017   **Paikka:** Helsinki

Diplomityö. Lappeenrannan teknillinen yliopisto, tuotantotalouden tiedekunta

70 sivua, 8 kuvaa, 2 taulukkoa ja 1 liite

Tarkastajat: Tutkijaopettaja Kalle Elfvengren, tutkijaopettaja Lea Hannola

Hakusanat: Asiakaskokemus, asiakaskokemuksen mittaaminen, päivittäistavaran verkkokauppa

Tämän diplomityön tarkoitus on tehdä kvalitatiivinen tutkimus asiakaskokemuksen mittaamisesta päivittäistavaran verkkokaupan näkökulmasta. Työn teoriaosuudessa selvitetään kirjallisuuden pohjalta päivittäistavaran verkkokaupan, asiakaskokemuksen ja yleisten aihepiiriin käytettyjen mittareiden piirteitä sekä käsitteitä. Kirjallisuuden pohjalta johdettiin teoriatason suositukset asiakaskokemuksen mittaamiseen.

Asiakaskokemuksella tarkoitetaan holistista kokonaisuutta, mikä kattaa koko asiakkaan ja brändin välisen suhteen. Asiakaskokemus muodostuu kohtaamispisteiden kautta, missä asiakas kohtaa yritykseen tai sen tuoteisiin ja palveluihin liittyvää informaatiota. Kokemuksista muodostuu asiakkaan mielessä kuva yrityksestä, millä nähdään olevan merkitystä brändiasiakasuskollisuutta kohtaan. Asiakaskokemuksen mittaus on hankalaa käsitteen laajuuden vuoksi, minkä lisäksi yritykset eivät voi täydellisesti vaikuttaa kaikkiin kohtaamisiin omien palveluidensa ulkopuolella.

Kirjallisuuteen pohjautuen mittauksessa tulisi keskittyä asiakasuskollisuuden nykyiseen tilaan ja sen muodostumiseen asiakaspolun varrelta. Nykytilaa voidaan mitata yleisillä ylätason mittareilla, mutta kohtaamispisteisiin keskittyvien mittareiden osalta yritysten kuuluu suorittaa tutkimusta omien ja potentiaalisten asiakkaidensa arvoista mitattavaan palveluun nähden.

FOREWORD

I cannot remember who said that studying in university is the best phase of your life. It was said during a lecture I attended in my first day in LUT, and back then I could not believe that to be true at all. I later got closer and closer to starting a new major from the beginning, just to extend my student life for a few years. Now that I'm about to leave LUT for real, I can only say that I miss nothing more than the "spirit of Skinnarila". Never change, Lpr.

I would like to show my gratitude to the case company who helped in kickstarting this thesis, offered valuable insights on CX and cheered me through the last of my studies. I would also like to give special thanks to Kalle Elfvengren for instructing me through this thesis. Finally, thank you Alisa for not pointing out that I ended a sentence daily with "...when I graduate" for as long as I can remember. I will stop that now. For real. I even promise to stop saying "...now that I have graduated" after the first week.

Janne Hilpi
Helsinki, October 24, 2017

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LIST OF SYMBOLS AND ABBREVIATIONS

CES   Customer Effort Score

CSAT   Customer Satisfaction

CX   Customer Experience

KPI   Key performance indicator

NPS   Net Promoter Score

SoW   Share of Wallet

1 INTRODUCTION

1.1 Background

Consumers are making purchases through online channels increasingly more across industries, but grocery industry's online presence has grown slowly. In 2015, online sales of food and household goods had a combined market share of less than one percent in Finland (Nielsen 2016). Consumers have stated the willingness of buying groceries online, but businesses have encountered barriers in high costs of delivery (Galante et al. 2013). Consumers, too, have stated that the increased total price of groceries through home delivery is not worth it, as the high number of items in highly frequent orders makes online shopping laborious (Galante et al. 2013). To solve the deadlock of both parties being unwilling to pay for the order delivery, design of better-perceived experiences in online grocery stores has been recommended as a competitive strategy (Baker et al. 2002; Nielsen 2016).

To better aid the design of experiences, a need for clear and self-explanatory metrics showing how customer loyalty forms through experiences has risen. Measurement has often been carried out via lengthy and complex surveys, or by simple surveys with one question directly after transaction (Gartner 2015). While complex studies have provided accurate analysis on customers' thoughts, and simple single-question surveys have accelerated data collection, two main challenges have risen with these solutions. Large questionnaires present problems in costs when constant, fast input of data is required, and the simple metrics with aim of replacement of slower counterparts have made it difficult to pinpoint where the exact problem in products or services is.

Measuring customer experience (CX) in online services gains unique advantages over traditional brick and mortar stores, as devices connected online allow the gathering of large amounts of data on customer behavior on top of already existing loyalty card data. Pairing up this data with simple metrics during different phases of purchase, opens possibilities for detailed inspection of services in need of further

development without the need of conducting long and tedious customer surveys. This data-driven approach combines the detail of complex questionnaires and the agility of shorter counterparts.

The company which is conducting this research is a Finnish retailer, that has recently launched a new online grocery store. The company is aiming to improve its customer experience in all sales channels, and is using NPS survey program to predict its fulfillment. However, it is not clear whether NPS is enough to measure customer experience or not. This research has been conducted to provide insight through a literature study on how overall customer experience could be measured better.

1.2 Goals and limitations

The aim of this thesis is to provide insight on ways of measuring customer experience in online grocery industry. Answers will be searched from literature for the definition of customer experience, motivations behind measuring customer experience and how the common metrics correspond to the definition and measurement objective of the subject.

The main research question is
How should customer experience be measured in online grocery industry?

and the above will be split into subquestions
What is customer experience?
What metrics have been used to measure customer experience?
How do common metrics fit to the definition of customer experience?

Major challenge for this study is the amount of discussion that concentrates on how customer experience should be perfected and designed rather than how it should be measured, mainly because of the vague definition of customer experience as a term.

This is partly caused by customer experience being tied to contents of consumers' thoughts, which makes reliable measurement challenging. Furthermore, performance management as a field has a wide scope. This study will focus strictly on defining customer experience and the metrics around it to create an overview of what should be taken into account when improving the measurement of customer experience.
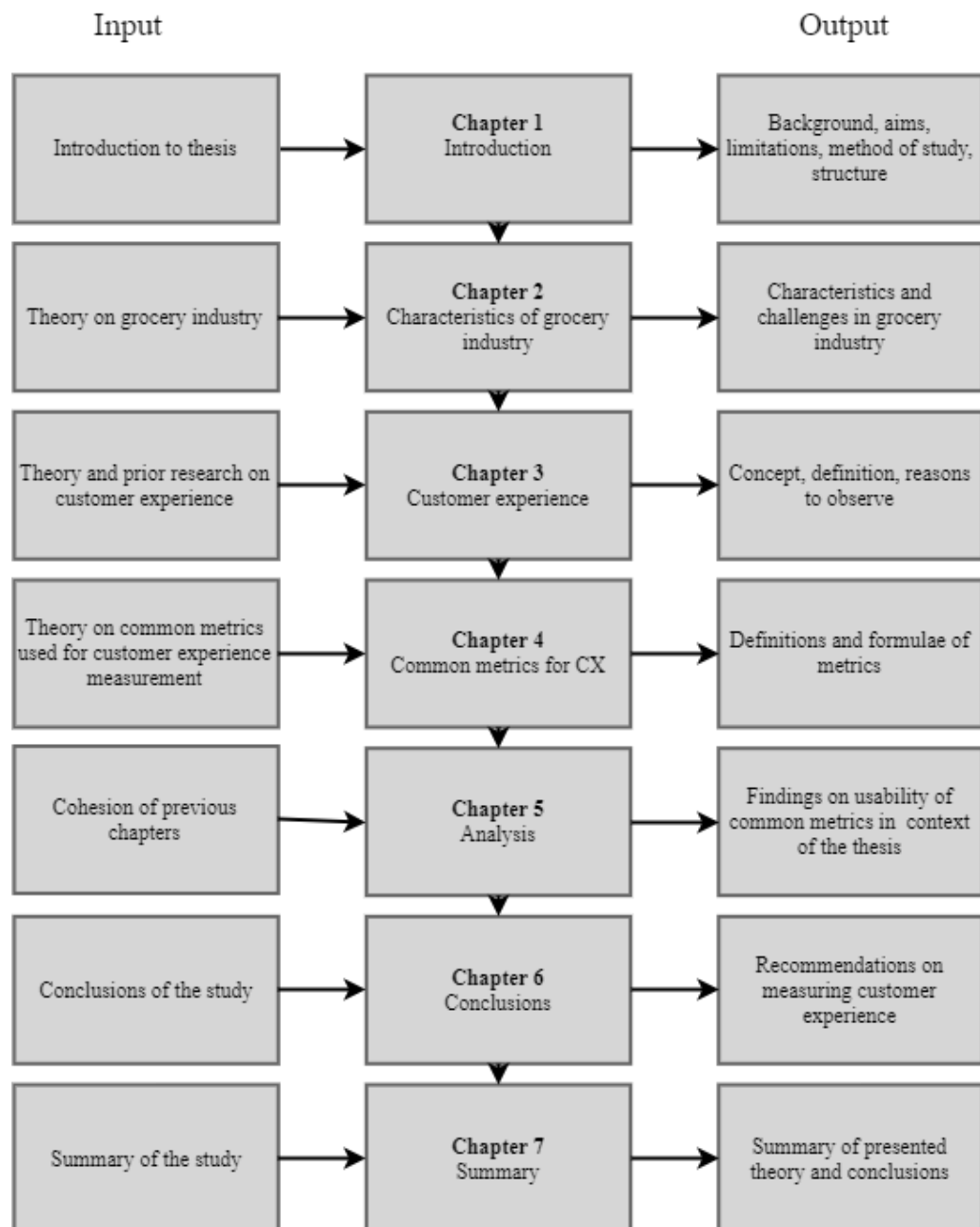
1.3 Structure of the thesis

Input   Output

Input	Chapter	Output
Introduction to thesis	**Chapter 1** Introduction	Background, aims, limitations, method of study, structure
Theory on grocery industry	**Chapter 2** Characteristics of grocery industry	Characteristics and challenges in grocery industry
Theory and prior research on customer experience	**Chapter 3** Customer experience	Concept, definition, reasons to observe
Theory on common metrics used for customer experience measurement	**Chapter 4** Common metrics for CX	Definitions and formulae of metrics
Cohesion of previous chapters	**Chapter 5** Analysis	Findings on usability of common metrics in context of the thesis
Conclusions of the study	**Chapter 6** Conclusions	Recommendations on measuring customer experience
Summary of the study	**Chapter 7** Summary	Summary of presented theory and conclusions

Figure 1. Input/output chart

2 CHARACTERISTICS OF GROCERY INDUSTRY

This chapter presents characteristics of both traditional and online grocery industries, and most common challenges perceived by online grocery industry. Due to goals of this thesis, the chapter will only act as a summary of grocery industry rather than going into detail how business models should be designed.

2.1 Traditional grocery retailing

Traditional brick and mortar business model for grocery stores typically means physical stores in which store owners manage stock of food and household products, and ensure that fresh products are available on shelves by demand. Steeneken and Ackley (2012) describe grocery stores as a service or final function as a part of more complex supply chain structure (figure 2). Grocery stores are often not producing any physical products themselves and instead act as convenient and centralized distribution points of grocery products from remote suppliers to local customers. Grocery stores offer customers value in eliminating necessity of visiting wide array of separate product suppliers when shopping for food. Furthermore, PTY (2016) characterized that grocery stores are also responsible of offering safety as a service through management of perishable products. A generalization (Steeneken & Ackley 2012) of traditional and competitive grocery store business model consists of the following:

- set array of repeat customers grouped in local area
- chain organization of retail stores under a brand
- various transportation systems between suppliers, warehouses and stores
- centralized warehouses that distribute products to stores
- set array of product suppliers working under contracts

In this model, suppliers produce masses of products in selections varying in size from single product to hundreds of products. Suppliers can be multinational

megacorporations or local farmhouses and breweries. Suppliers are commonly made contracts with to ensure that retailer chains have capabilities of maintaining required levels of stock with products of verified quality.
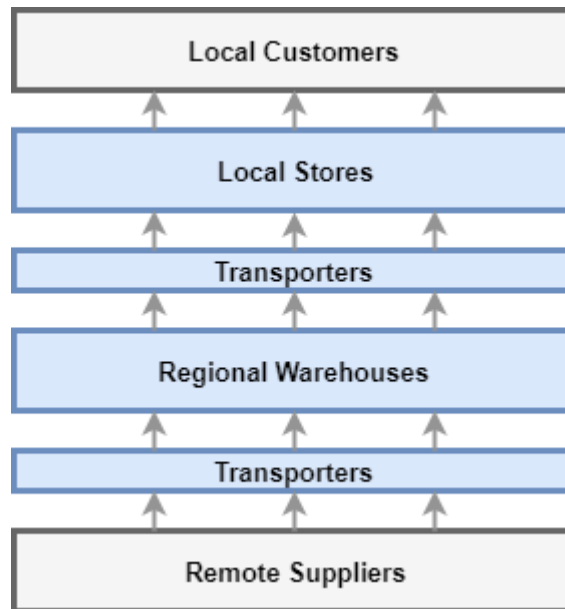

Figure 2. Simplified process model of grocery supply chain (Modified from Steeneken & Ackley 2012)

Due to the short lifecycle that food has, effective supply chain management between remote suppliers and local stores is critical to avoid excessive amounts of waste. In worst case products cannot be stored for longer than a few days before expiring, after which the products count as a loss immediately. Even after decades of loss optimization, FAO (2015) reports that shares as high as 40-50 % of root crops, fruits and vegetable and 20 % of meat and dairy and 35 % of fish ends up as wastage. To lower both wastage and transportation costs while answering to volatile demand quickly, typical organization in grocery industry upkeeps centralized regional warehouses that handle storing and transportation of products from suppliers to multiple local stores as effectively as possible (Steeneken & Ackley, 2012). Although transportation infrastructure is in most cases the backbone of all effective operations it is often not visible or known to consumers until empty shelves are met (Steeneken & Ackley 2012).

Retail stores are physical stores that are tied to a geographical point and mostly serve the consumers living around it. In traditional grocery industry, stores are the main sales channel. Stores have slightly varying business models in the sense of whether there is a backing chain organization or not. In both cases, one party has employees responsible of answering to demand in stores by handling replenishment, while stores are solely responsible of on-shelf availability of products and of act as the point of service that offer selection to local consumers. Stores are the point of customer service that most often directly interacts with customers the most.

In Finland, competitive strategies of retail stores follow mainly three core strategies to fill consumers' needs. Larger stores, hypermarkets and supermarkets, are often placed in or next to densely habited areas serving larger pool of customers. For consumers, these stores serve as "main stores" from which groceries are bought in larger baskets to "fill refrigerators" once or twice per week or even less frequently. Hypermarkets offer convenience with wider product selection, fresh food, lower price levels, additional services and parking space but suffer from limited customer service due to highly optimized operations. Supermarkets offer essentially the same but in smaller scale: wider selection is traded for special food products and lesser space is traded for more personal customer service and the possibility of locating stores inside habitation centers. Another strategy of smaller stores and kiosks, is to serve as supplementary stores serving areas in walking-distance. Purchases from smaller stores are made in smaller batches, more-frequently and in ad-hoc sense. Selection is heavily limited and consists of products of highest demand. Third strategy, hard discounting, is based on lowering price of products with heavy standardization and cost-cutting as much as possible without losing margins. Hard discounters offer the lowest price of food but may possibly suffer from involvement of products with lower price-quality ratio, less customer service, skeletal selection and narrow layout. (Koistinen & Järvinen 2009)

2.2 Online grocery trade

As daily life of consumers is heavily affected by both mobile and desktop Internet devices, other business models such as "click & collect" and home delivery have started to attract business owners, shifting sales from physical stores to digital interfaces. Many businesses have adopted new sales channels online to either support or to replace traditional sales channels. In online grocery trade, consumers browse and buy products through digital interfaces instead of physical stores, and are no longer responsible of picking the orders themselves or delivering the products to point of consumption. This forms the key decisions behind all variants of online sales: how fulfillment of orders is handled and how orders are delivered to customers (Yousept & Li 2004).

For fulfillment of orders or order picking, three models are available: in-store picking, dedicated picking center and a hybrid model combining first two models (Yousept & Li 2004). In-store picking refers to online sales where orders are fulfilled through an existing grocery store (Yousept & Li 2004) by handpicking orders from store's stock. It requires the least of changes to the existing supermarket infrastructure but suffers from high picking costs. Dedicated picking center acts like a regional warehouse in traditional model and serves wider area of customers with a reduced cost of picking and increased availability but at a higher initial investment (Yousept & Li 2004). The hybrid model is based on stores that are redesigned so that they can more effectively pick orders (Yrjölä 2003) while serving customers in traditional grocery business model. It aims to allow slow development of centralized picking centers with reduced risks and investment costs (Yrjölä 2003).

For order delivery, three models have been defined: attended, unattended and self-pick-up (Yousept & Li 2004). In attended delivery, a time window in varying lengths for delivery is agreed upon with customer for delivery. In unattended delivery orders are shipped to agreed reception boxes such as refrigerated boxes or doorsteps (Yousept & Li 2004). Self-pick-up model is more commonly known

today as click & collect model, in which customers make order through digital interfaces and pick them up from physical stores or distribution centers themselves. Click & collect may not require any new transportation infrastructure on top of traditional business models.

2.3   Challenges in online grocery retailing

Both traditional and online grocery industry face variety of challenges. Transportation costs (Wrigley 1992; Aalto-Setälä et al. 2004), volatile demand per product (Steeneken & Ackley 2012) and short lifetime of perishables (Steeneken & Ackley 2012) all lead to low margins and ultimately towards economies of scale (Wrigley 1992; Aalto-Setälä 2000). Fast trends amongst consumers, such as currently growing demand for fresh food over frozen products (Nielsen 2015), and short lifetime of perishables are directly causing challenges in inventory management (Steeneken & Ackley 2012).

While there is an increasing demand for online grocery stores (Galante et al. 2013; Nielsen 2015), the increased expenses for either the customer or the company itself often discourages from utilizing the platform (Galante et al. 2013). Contrary to brick and mortar grocery stores, on top of managing the store, online grocery retailers need to cover for the "steps" conventionally carried out by the customer: picking and transporting the item within the store and to the customer. These extra "steps" could, in theory, be covered for with increased pricing, which, in turn, can make online grocery shopping a less attractive option for the customer as opposed to brick and mortar grocery stores. This situation where both customer and retailer are unwilling to cover for the added transportation costs is referred to as the "last mile" problem (Fernie & Sparks 2009). So far, the last mile problem has become the greatest barrier blocking online sales from overtaking traditional grocery sales. In Finland, long distances between the retailer and the customers creates yet additional hurdles for the online grocery business, and forces it to focus on big cities

where the population is densest. While this minimizes the delivery costs for retailers, it also reduces the potential size of the customer pool.

Fernie and Sparks (2009) concluded from multiple observed bankrupts of "pure players", new competitors with sole focus on online groceries, that the failure in profitability was caused by the initial investment required. While pure players can optimize logistics towards online sales, they still suffer from the beforementioned transportation issues in less-densely habited areas, selection-variety tradeoffs and strong existing competition. Hybrids, as described by Yrjölä (2003), built on strong existing grocery chains, have suffered from out-of-stock and forced substitution of products when online shoppers compete from same physical products with in-store counterparts (Fernie & Sparks 2009).

3   CUSTOMER EXPERIENCE

To successfully measure customer experience, one must undestand what customer experience or customer journey means and why it should be focused on. This chapter explains the background and concept of customer experience, its generally accepted definition and why it should be measured.

3.1   Experiences as a source for loyalty

Customer experience has been in focus of research for decades after Holbrook and Hisrchmann (1982) theorized that consumption has experiential aspects. They suggested that to better understand customer's purchasing process, aesthetics, variety seeking and emotions of customer should be considered in research. Although value creation and solving the needs of a customer have already been "the standards" in marketing practices for years (Kotler & Keller 2016, p. 150), constant post-purchase relationship management and focus on "loyalty loop" have started to gain attention over traditional sales funnel thinking (Addis & Holbrook 2001; Court et al. 2009). Companies are no longer seen as providers for utilitarian consumption alone, but also providers of experiences (Pine & Gilmore 1998; Addis & Holbrook 2001). In their review "Welcome to the Experience Economy", Pine and Gilmore pointed out that without experiences as source of economic value, movie companies such as Walt Disney or majority of whole restaurant industry would have never succeeded as well as they did. Pine and Gilmore did not limit the value of experiences to those industries alone: retailers providing food recipe recommendations or letting customers feel and try products without charge are already providing experiences and services to customers along the products.

Court, Elzinga, Mulder and Vetvik (2009) researched customer buying process, or decision journey, by examining nearly 20 000 consumers across five industries and three continents. Their research suggested that instead of systemically narrowing down brands until a purchase has been made (figure 3), consumers are more likely

to make purchase decisions in an iterative process of four stages called 'initial consideration', 'active evaluation', 'moment of purchase' and 'post-purchase experience' (figure 4). During initial consideration, customer evaluates initial brands based on brand perception and exposure to recent touchpoints (Court et al. 2009). Active evaluation adds and removes brands through information gathering and shopping when the final need is developing until customer finally decides on a brand which to purchase from (Court et al. 2009). Considerable difference to traditional systematical purchasing process is that the possibility of new brands intercepting the decision journey is present, making the process iterative. During and after consumption, experience gained from the overall journey is added to inform the next decision journey (Court et al. 2009). Best perceived experiences generate better brand perception and can ultimately create loyalty towards a brand, leading to possibility of 'loyalty loop' where the customer heads straight to another purchase from the same brand.
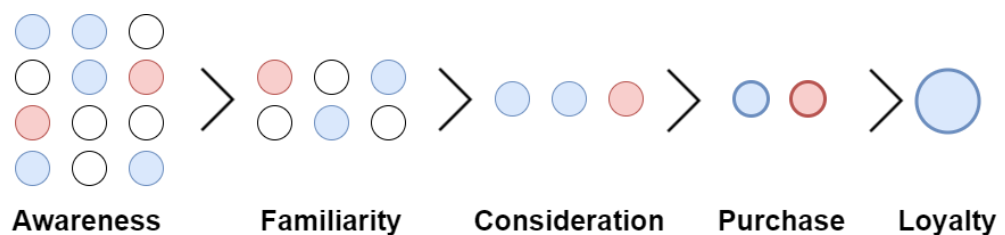

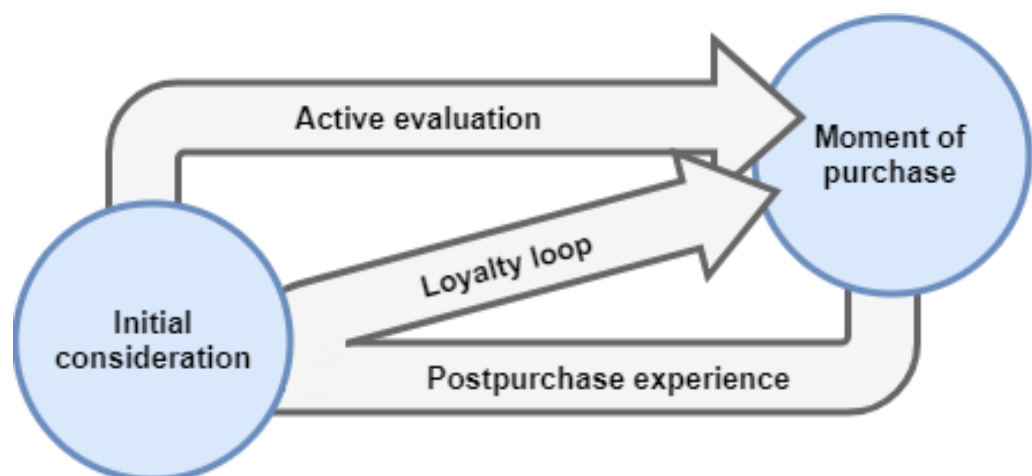Figure 3. Systematical purchasing process (Modified from Court et al. 2009)

Figure 4. Iterative purchase process (Modified from Court et al. 2009)

Court et al. (2009) further suggested that loyalty towards a brand is not simply built through an instance in traditional funnel process. It is, instead, further generated post-purchase after initial journey instance in subsequent decision journeys that are affected by previous journeys. Each journey not only builds loyalty between the brand and the customer that made the purchase, but can also affect other consumers through communication between customers. Loyalty gained from the journey can exist in two categories: active and passive loyalty (Court et al. 2009). Active loyalists are those who would recommend a brand to another after a great experience, while passive loyalists can be described as those who are simply loyal to a brand by other reasons such as habit or confusion caused by multiple options available. Passive loyalists are open to marketing by both active loyalists and the company itself (Court et al. 2009).

Generation of loyalty through experiences becomes more important as the consumers are constantly becoming increasingly informed and knowledgeable of their power in choice processes (Webster 1997). With increasing knowledge, consumers are less dependant on suppliers and can understand market options better, to improve evaluation of alternatives available for their own needs (Webster 1997). Interactions between customers through touchpoints such as reviews and social networks cannot fully be controlled by the company alone (Court et al. 2009). 'Word of mouth' has long been a marketing strategy to take into consideration (Kotler & Keller 2016, p. 646), but modern Internet and social media have however enabled customers' view on a brand to be greatly influenced by social networks even without said customers' own constant evaluation between alternatives (Court et al. 2009; Hajli, 2014).

The core idea behind managing customer experience is to offer the best experiences to both create and target active loyalists (Court et al. 2009). Offering better experiences is today considered as a strong strategy to compete with, as experience design both strengthens loyalty of older customers and attracts new customers to stay (Baker et al. 2002). Regardless of consumers aiming for cheap groceries, best

experiences may override their requirement of low monetary prices (Baker et al. 2002).

3.2   Definition of customer experience

Multiple definitions for customer experience have been given in literature. Literature in late 90s and early 2000s focused more on explaining the reasoning and experiential aspects of consumption as inspired by Holbrook and Hisrchmann, after which the focus shifted more on whole holistic relationship between customers and companies. By today, the definition has gained many categorizations and expanded to include almost everything that happens between a customer and a company, shaping its interpreting results vague.

Common ground for articles around customer experience is often the definition of experience by Pine and Gilmore published in 1998 and the definition of customer-company-relationship by Addis and Holbrook published in 2001. Experiences were defined as unique and "*inherently personal, existing only in the mind of an individual. This excludes the possibility of two people having the same experience as each experience is a derivative of interaction between staged events by companies and the individual's state of mind*" (Pine & Gilmore 1998). The relationship between a customer and a company was soon after defined to include not only the product, but also the services that surround it and the information that is transferred through interactions between both parties (Addis & Holbrook, 2001). Addis and Holbrook further added that the use of product is also encompassed by "...the inclusion of other offerings that together create the consumption experience".

Complete interpretations with direct mention of customer experience started to appear around mid-2000s. Petre, Minocha and Roberts (2006) defined customer experience as all interactions between companies and customers that influence customers' perceptions of value, service quality and thus, loyalty towards a brand. They included the effects of cultural context as variable that greatly affects customers' expectations and judgement. Nature of word of mouth and other

information not in the control of the company was heavily emphasized by Meyer and Schwager (2007), who, in short, defined customer experience as internal and subjective response to any contact between companies and customers. Contact was categorized into direct and indirect contact: direct contact involves interactions during purchase, use and service situations, while indirect contact involves unplanned encounters with products, services or brands in forms such as word of mouth, advertisements, news reports and reviews (Meyer & Schwager 2007).

Arguably the final form of the definition for customer experience was soon after compiled by Gentile et al. in their literature study. They compiled the definitions of multiple authors into the definition as follows:

"The Customer Experience originates from a set of interactions between a customer and a product, a company, or part of its organization, which provoke a reaction. This experience is strictly personal and implies the customer's involvement at different levels (rational, emotional, sensorial physical and spiritual). Its evaluation depends on the comparison between a customer's expectations and the stimuli coming from the interaction with the company and its offering in correspondence of the different moments of contact or touch-points." (Gentile et al. 2007)

Further explanations in literature have mostly reworded the above with no truly new additions to the definition. Drawing from above, customer experience is often defined as a holistic and lengthy relationship between a company and each unique customer with multiple components both in and out of company's control. Major emphasis on how customer experience is shaped is without a doubt in customers' minds and discussions between customers only, possibly unreachable by companies. With the definition, Gentile mentions the possibility of customer never recognizing such structures. Therefore, it may be beneficial to assume that each customer perceives each separate experience as a complex but unitary feeling (Gentile et al. 2007), meaning that the connection between separate experiences should be noted to exist, but not focused on too greatly.

3.3   Touchpoints and Customer journey

Discussion around customer experience often contains terms such as touchpoint and customer journey as seen above (Gentile et al. 2007). Previously mentioned interactions, or service encounters, between a customer and a product or a service provider are more commonly called touchpoints (Howard 2007), while "whole customer experience" combined from all touchpoints is called customer journey (Meyer & Schwager 2007; Stein & Ramaseshan 2016).

Touchpoints are often defined as instances of direct contact either with the product or service itself or representations of it (Meyer & Schwager 2007; Stein & Ramaseshan 2016). Meyer and Schwager also defined touchpoints as data sources for experience that can have different values between individual customers. Touchpoints, which can advance customers towards more valuable interactions, or which could provide alternative interactions preferred by customers' own values, would inherently matter more overall (Meyer & Schwager 2007). Touchpoints exist both pre- and post-purchase (Meyer & Schwager 2007), and may occur in multiple different retail channels (Stein & Ramaseshan 2016). Touchpoints represent what happens from the customer's perspective, and thus, are recommended as points of inspection to understand customer perspective better (Stein & Ramaseshan 2016).

Individual touchpoints as a set form larger path that is customer journey. Customer journey is defined as a sequence of touchpoints and actions involved for a customer to achieve a specific goal (Meyer & Schwager 2007; Stein & Ramaseshan 2016). For this thesis, the distinction between customer journey and customer experience is as follows: customer experience consists of whole customer lifecycle, while customer journey only involves one instance of purchasing process. During customer journey, consumers move through multiple touchpoints to come up with a need, that is later satisfied with a purchase.

3.4   Online customer experience and flow theory

Web services are often seen as one touchpoint alone by companies in all industries (Straker et al. 2015), though the amount of data available suggests that breaking websites down to multiple pieces for inspection is more valuable for business development. Borowski (2015), for example, defined online customer experience to include all experiences that happen through a digital interface. By this definition, online customer experience consists of many individual touchpoints, all of which may drive potential customers away from the online service in a few seconds. Breaking down websites along whole purchasing process flow is also supported by Rose et al. (2012) who concluded that one weak area in an online store may strongly affect the long-term relationships with customers.

What differentiates online shopping most from traditional brick and mortar shopping, is how customers are mostly communicating with web interfaces only. Customer support, as in brick and mortar stores, can be available in forms such as chat, phone or email but is not often sought by customers experiencing problems (Borowski 2015). Product information is only passively received by customers as presented on the web page (Bilginhan et al. 2013). These constraints around web interfaces lead to situations where customers entering the store are less emotionally engaged and need to achieve a certain state of mind, "flow", before fully engaging in shopping (Bilginhan et al. 2013).

Discussion around flow has been overlapping with the discussion around customer experience. Experiences through web services have been noted to greatly correlate with loyalty and repeat purchases (Novak et al. 2000; Rose et al. 2012; Martin et al. 2015; Bilginhan & Zhang 2016; Liu et al. 2016) long before the presence of modern high-speed Internet. The discussion has raised a theory of flow as an ultimate objective of web service design. Flow can be viewed as the psychological part of an online customer experience, which was already defined above as an important factor of overall customer experience.

Flow has been defined as a state of mind, in which online shopping is experienced with total involvement. In flow state, consumers are absorbed into a mode where focus is narrowed and irrelevant perceptions and thoughts are filtered out to allow achievement of clear goals. It constitutes of high levels of skill and control, challenge, focused attention and enhanced interactivity and finally, telepresence. Self-consciousness is lost and feeling of control of the environment is present. Consumer is fully involved in a stimulus field that is limited and scripted by another, the business providing the service. In short, flow can be easiest described as the sense of control that leads an individual towards a goal, and which can be interrupted when a problem is perceived with the web service. (Liu et al. 2016)

Most notable variables towards flow have been researched to be shopping features that can be categorized as "smooth" features, such as easy ordering, easily reachable support, easy order cancellation, easy payment options, easy order returning and quick delivery (Novak et al. 2000; Rose et al. 2012; Bilginhan et al. 2013; Liu et al. 2016). Atmospherics also affect reaching flow, most notably among in-frequent shoppers and those who are already loyal (Martin et al. 2012). Perceived easiness leads towards speed and control of web interfaces (Liu et al. 2016), while communication of variety and quality information of products or services in a way that fits customer's search process affect focus and telepresence greatly (Novak et al. 2000; Rose et al. 2012).

Novak et al. (2000) mentioned flow to be considered as an important factor in measuring competitiveness in online experiences, which has been later supported by multiple other authors (Rose et al. 2012; Martin et al. 2015; Liu et al. 2016). While how the customer perceives the experience in his or her mind cannot directly be controlled by the company, companies can try to design and orchestrate perquisites that enable customers to have desired experiences (Stein & Ramaseshan 2016). Facing challenges in service consumption leads towards disruption of concentration and flow, and ultimately to experiences valued as low by computer users (Liu et al. 2016). Observing how individuals reach ease-of-use and usefulness

and by providing an environment where flow is not disrupted, businesses can fully exploit web services as a source of better customer experience (Liu et al. 2016).

3.5 Stages of journey in online customer experience

Previously defined four stages of customer experience (Court et al. 2009) describe the overall concept of customer experience amply, but do not represent online customer experience specifically. Figure 5 presents a seven-phase model of online customer experience by Petre, Minocha and Roberts (2006). It is based on literature on service encounter model, a commonly used model for evaluating services. Their model represents a customer loyalty as a loop, created by seven distinct phases. It offers an easy-to-explain model on how the customer experience is shaped in the context of online services. It involves phases prior entering the website, actual usage of the website and post-consumption of products or services.
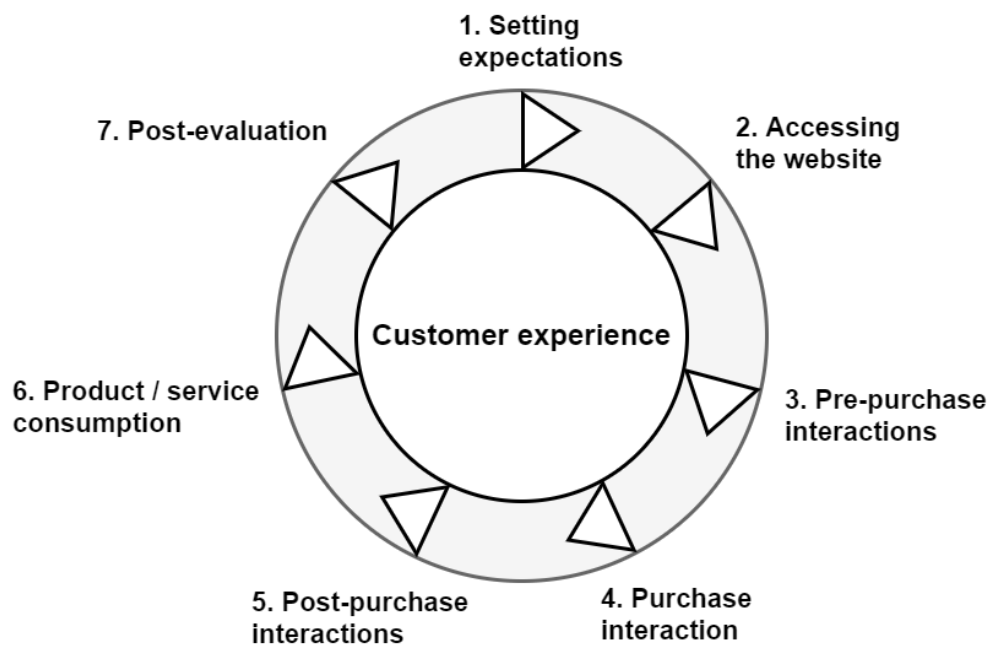

Figure 5. Online customer experience shaped through seven phases (Modified from Petre et al. 2006)

The first phase is expectations-setting, in which the customer forms expectations of products and services. Expectations are based on previous experiences and multiple

other factors such as marketing, reviews, word of mouth and other business channels. Expectations shape the perceived outcome of following other phases. Second phase is direct accessing of the website by either typing the web address or entering through search engines or other portals. (Petre et al. 2006)

During pre-purchase interactions customer uses the website by searching for products and information on the website to decide whether to purchase or not. If a positive decision is made, the purchase will be carried out during phase four. Post-purchase interactions focus on interactions prior the delivery and waiting for the delivery. Phase five occurs during consumption of service or product ordered. (Petre et al. 2006)

Final phase is more complicated than the phases before. During post-purchase evaluation, customer assesses experiences met during the customer journey against expectations and shapes what was learned as knowledge for the next round of the loop in online shopping. It may only happen in the mind of a customer, but also end up as word of mouth marketing for other instances. Evaluation may end up as written experience to review websites, blogs and social media. It may shape the expectations of others heavily instead of just the one who experienced the service. (Petre et al. 2006)

3.6   Reasonability of measuring customer experience

Impact of customer experience on business has been found to be more than meaningful. In transaction-based business, the customers with the best past experiences spend as much as 140 % more than those who perceived the poorest experience (Kriss 2014). On top of additional revenue great experiences potentially lower the costs of customer service as unhappy customers are more likely to require more support and return bought products (Kriss 2014). Aside from loyalty, positive impact has also been found on customer satisfaction, shopping frequency, share of wallet, and brand image (Verhoef et al. 2009; Wong & Sohal 2006; Wijaithammarit

& Taechamaneestit 2012; Rose et al. 2012). As better customer experience drives customers towards loyalty (Kriss 2014), understanding what exactly generates or lowers customers' loyalty towards a company becomes an important aspect to monitor in business development. Baker et al. (2002) concluded that reaching loyalty by creation of better customer experience can create a competitive advantage against other retailers.

In grocery industry, from customers' point of view shopping is an essential and recurring process with high frequency. High frequency shopping leads to customers seeking local stores, in which each retailer in the same geographical area of competition share wallets of the same pool of customers. Retailers are heavily limited by current locations of warehouses or stores, as when deliverables consist of food products that expire fast, centralizing one large warehouse that delivers bags of grocery everywhere may not be a viable option due to both geographical length and cost of delivery. Even with the essential aspects tied to shopping, if possible, customers are ready to switch stores they regularly visit with certain criteria and motives such as product quality, selection, convenience, cleanliness, staff, scope of offers and price level (Morschett et al. 2005; Nielsen, 2015). Combining willingness of switching stores through experiences with natural slow rate of change of demography in a geographical pool of customers, a conclusion can be made why customer experience can create competitive edge in grocery retailing.

In an online store customer experience becomes even more critical than in brick and mortar store for the business. In a traditional physical store, customers can stand multiple criteria of bad experience, such as behavior of other customers, that may not be in control of the business owner. However, websites begin losing traffic to competitors when websites load 250 milliseconds longer, and after ten seconds of waiting 50 % of consumers have given up (Borowski 2015). Regardless of potential problems with customers' own home network, causes such as connection failures may be the fault of the company immediately. Furthermore, customers are not as likely to contact customer support online in comparison to brick and mortar, leaving inconsistencies in online services as information only available among consumers.

Companies that strive towards an omnichannel experience with multiple sales channels may encounter setbacks to the whole business when only one channel is not providing enough value to the customers. Perceived inconsistencies in the omnichannel experience may lead the customers to abandon the brand completely, and to choose a competing provider with better online services and less fragmented overall experience (Borowski 2015).

Main driver shifting consumers towards online shopping has been identified to be efficiency: shopping online allows fast, easy and repeatable purchases with less effort than required by brick and mortar stores (Boyer 2006; Lian & Yen 2014). This leads online stores to mainly derive revenue from long-term relationships with customers due to easiness of repeating orders from a known provider versus trying a new alternative (Bonacchi et al. 2008; Rose et al. 2012). Furthermore, Rose et al. (2012) concluded in their research that the volatile nature of online shopping and easiness of switching stores directly causes loyalty to online stores to be generated from repeatedly perceived great experience on constant basis. Single transactions with lowly perceived experiences are enough to greatly lower overall loyalty to a brand (Rose et al. 2012).

Online stores specifically have an advantage in measuring customer experience in comparison to physical stores. For a web service, information of customer behavior can be easily collected from all activities and webpages on user level with reliable accuracy of seconds without the need of advanced in-store sensor infrastructure. Data tied to specific customer can be tracked with either webservice specific user accounts or by tracking cookie systems offered by multiple vendors on market or even with both solutions at the same time. Google, for example, provides complete web analytics libraries that can be implemented to existing webpages relatively fast (Google 2017). Regardless of the metric in use, if any question is asked directly from the customer, combination of that answer with online activity data can provide valuable insights on what specific part of a service on customer journey worked or failed, and what may have lead towards that success or failure.

4   COMMON METRICS FOR CX

Multiple standardized metrics have been adapted for measuring customer experience. This chapter's focus is on creating an overview of common metrics that are in use regardless of industry. Characteristics of effective metrics are also compiled for evaluation of presented metrics.

4.1   Characteristics of effective metrics

Bourne et al. (2002) found in their case study compilation that one main reason for performance management projects to fail was poorly defined metrics, or key performance indicators (KPI). Schneiderman (1999) summarized metrics into two effective categories, process and result metrics. Process metrics are useful for improvement teams responsible of where metrics focus, while result metrics are more useful as a strategy management tool. Fitting a set of metrics to fit into both categories helps to provide the detailed knowledge of the process executors and the big picture perspective of the executive (Schneiderman 1999).

Several authors (Schneiderman 1999; Maskell 1989; Globerson 1985; Parmenter 2010, p.88) have compiled or argued over a definition of effective metrics. By combining their results, an effective and informative performance measurement metric fulfills the following criteria:

1. Non-financial, preferably ratio-based
2. Directly related to objectives or strategy, clear purpose
3. Has significant impact on critical success factors
4. Measured frequently (24/7, daily, weekly)
5. Simple and easy to understand
6. Root cause for result can be identified, clear indication of required action
7. Stimulates continuous improvement rather than pressure of monitoring
8. Accessible or reported to those who can best use them, clear owner of responsibility

Schneiderman, Parmenter, Globerson and Maskell also add supporting principles of the best practice regarding criteria above, which can be compiled as follows:

1. Designing an effective metric should always involve a representative of each stakeholder
2. Previously defined working metric is not always suitable for all organizations, departments or sites
3. No more than 10 metrics should ever be reported to single stakeholder
4. Available for continuous review and refinement
5. Allows comparison to other organizations of same industry (if possible)
6. Focus on outcomes, not steps taken

4.2 Customer satisfaction score

Customer satisfaction score (CSAT) can mean a variety of different metrics. In simple adaptations, it means how a customer rates satisfaction over a product or service on a set scale during consumption or post-consumption. In these cases, customer is often asked only one or two questions on satisfaction. On the other hand, customer satisfaction score may mean an aggregated value from multiple metrics as in case of SERVQUAL or Multicriteria Satisfaction Analysis. Multicriteria Satisfaction Analysis, MUSA, calculates aggregations of customers over multiple criteria of satisfaction. SERVQUAL measures customers' perceived pre-consumption expectations and actual perceptions post-consumption over five sets of questions. (Grigoroudis & Siskos 2010)

Previously mentioned simple adaptation could ask a customer "How would you rate your experience with us?" directly after transaction, to which answers could be collected in ways such as verbal categories "good or bad" or numeric scale from 1 to 10 (Grigoroudis & Siskos 2010). Final score in this case would then be calculated as follows:

$$CSAT = \frac{answers\ with\ minimum\ accepted\ score}{total\ number\ of\ answers}$$

Companies using CSAT commonly collect data from multiple points of service. Data collection from multiple sources allows comparison of different divisions and points of business process to find weak links in service from customer's point of view. In more advanced surveys, the data may be collected over longer periods of time with large participant counts. The advanced surveys like MUSA may ask satisfaction in multiple categories such as the quality of service performance, features offered or reliability from each point of service (Grigoroudis & Siskos 2010). Final score of MUSA would then be calculated in multiple steps that give customers values for global satisfaction, average satisfaction per category, average demand per category, value given to each category and weight of category (Grigoroudis & Siskos 2010).

The core idea behind customer satisfaction is how satisfied customers are directly linked to successful business (Motorola 1995; Dutka 1995). Customer satisfaction is also measured by multiple national barometers such as American Customer Satisfaction Index in USA and TNS Gallup's customer satisfaction index in Finland, which provide companies performance benchmarks against competitors. Grigoroudis and Siskos (2010) compiled vast amounts research from two decades supporting the importance of customer satisfaction and its measurement. They, however, found that majority of frameworks measure satisfaction only after consumption although it would be more effective to measure overall satisfaction from multiple points during and after consumption.

While customer satisfaction has been proved to be important, main argument in literature against ineffectiveness of measuring customer satisfaction is that a satisfied customer does not equal a loyal customer (Skogland & Siguaw 2004; Dixon et al. 2010; Pleshko & Heiens 2014; Jacoutot 2015). Pleshko and Heiens (2014) found out three factors supporting this claim: loyalty to one company does not indicate dissatisfaction on another company, some customers are brand switchers by their nature and finally, dissatisfaction does not rule out loyalty through wider set of attributes. Argument against more scientific customer satisfaction models such as SERVQUAL and MUSA lie in the slow data collection

process (Reichheld 2003). Hill (1996) argued that heavy scientific models such as SERVQUAL can be rendered useless with "low amount of 22 questions", which indicates that each answering customer should prepare to take time for questionnaires and justifying asking them to answer these questionnaires again in the future could be hard.

4.3   Net Promoter Score

Net Promoter Score (NPS) is a metric introduced by Frederick F. Reichheld in his article in 2003. Background of NPS is in the need to counter complexity of customer satisfaction surveys with just two questions: one about quality of service and one about willingness to use the service again. Reichheld (2004; 2006a; 2006b) concluded later over multiple case studies that the willingness to recommend a service correlated strongly between repeat purchases and referrals.

Studies by Reichheld shaped NPS into one single question "How likely is it that you would recommend the service to another?", for which an answer is given as a score in scale from 0 to 10. Answers are grouped into three segments shown in figure 6. Answers given between 0 and 6 come from detractors, 7 and 8 from passive customers and 9 and 10 from promoters.
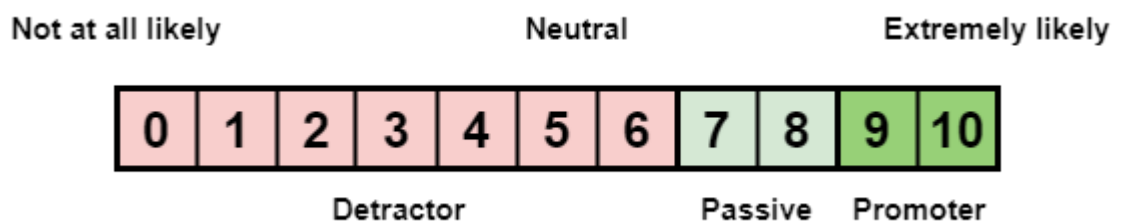

Figure 6. Answer groups in NPS

Final value for NPS is then calculated as follows:

$$NPS = \frac{number\ of\ promoters - number\ of\ detractors}{total\ number\ of\ answers}$$

Formula above leads to a score which can range from -100 to 100. Aim of tracking share of promoters lies in the idea of promoters being the most loyal customers who drive growth of the company with both purchases and word of mouth marketing. Focusing on business' strengths valued by promoters and weaknesses pointed out by detractors would possibly provide key insights on reaching higher customer loyalty (Reichheld 2003).

After Reichheld's multiple articles about effectiveness of NPS (2004; 2006a; 2006b) critique has also risen about its robustness and reliability over low signal to noise ratio on common scores ranges (Kristensen & Eskildsen 2011). Baxter (2012) suggests that users of NPS often stop gaining value from the metric after first investment and steps taken by original score, but notes that this most likely comes from organizational problems. Original hopes of using NPS alone for customer experience measurement have been discussed to be ineffective due to the small amount of information it gives, confusing score range and the missing link to actual customer behavior (Meyer & Schwager 2007; Mandal 2014; Lemon & Verhoef 2016). Critique against NPS indicates that it is not sufficient for decision making alone, but could still present a strong indicator on loyalty and word of mouth as a part of wider set of metrics (Haan et al. 2015).

4.4   Customer Effort Score

Customer Effort Score (CES) was coined originally by CEB managers in their HBR article (Dixon et al. 2010). Their research had shown that instead of satisfying customers, reducing effort required from customer for purchasing or service usage was more critical in building up loyalty towards a company. A metric, CES, was introduced for estimating effort required from customer by asking "How much effort did you personally have to put forth to handle your request?" on a scale from 1 to 5, where 5 equals to very high effort. CES's power lies in claims that 96 % of customers reporting high-effort experience are very likely to become disloyal in the future (Dixon et al. 2010; CEB 2014).

CEB later observed inconsistency in CES ratings due to customers misleadingly perceiving low scores as low performance (Ponomareff 2013). A new version of CES was published with the question flipped into "How easy the company made it to handle my issue", to which answers are given on a scale from 1 to 7, where 7 equals to 'Strongly Agree'. Ratings from 5 to 7 can be grouped as share of customers who agree that services provided offer easy solutions to customers. The 2.0 version of CES in full form is as follows:

To what extent do you agree or disagree with the following statement:
The company made it easy for me to handle my issue.

☐ *1 Strongly Disagree*

☐ *2 Disagree*

☐ *3 Somewhat Disagree*

☐ *4 Neither Agree nor Disagree*

☐ *5 Somewhat Agree*

☐ *6 Agree*

☐ *7 Strongly Agree*

...after which the final ratio will be calculated as follows:

$$CES = \frac{number\ of\ answers\ with\ score\ from\ 5\ to\ 7}{total\ number\ of\ answers}$$

Low usage rate of CES in customer experience reports among multiple industries (Gartner 2015) has been partly explained with its low predictive power in predicting customer retention when compared to other popular metrics such as NPS and CSAT (Haan et al. 2015; Lemon & Verhoef 2016). However, for online shopping industry, CES has been found out to be the strongest predictor of competitive edge (Haan et al. 2015). CES's strength in online industry was further promoted indirectly by Bernier (2015) and Borowski (2015), who state that most customers expect fast results in today's high-speed mobile world. This leads to the assumption that CES could be a strong indicator of high level of customer experience performance in the

context of online shopping. Downside of CES was mentioned to be its way of predicting ease-of-use scores only from answers given by the customers who used the service until a purchase was made (Haan et al. 2015).

4.5   Churn rate

Churn rate focuses on customer retention directly by measuring the share of leaving customers to total number of customer base over a period (Gallo 2014). It notes whether the same customers return to purchase from the same company or "bleed" to alternative options as lost customers. Churn is more popular in subscription-based business models (Gartner 2015), but is still a possible metric in industries with high-frequency customer visits for indicating customer repurchase intention. Although origins of churn rate are in measuring customer lifetime value, Bonacchi et al. (2008) listed maintaining customer retention as one of the three most important parts of online business strategies, and recommended monitoring churn rate almost regardless of chosen strategy to develop a better overall customer experience. For it to provide valuable insights in transaction-based business, repeat orders, rate of another purchase after previous purchase over a period could be measured. Those, who have not repurchased in a set period, are equal to lost customers.

Multiple ways for calculating churn have been introduced. A popular method (Noble 2011; Gallo 2014) for churn rate is as follows:

$$Churn\ rate = \frac{Customers\ lost\ during\ a\ period}{total\ number\ of\ customers\ at\ the\ beginning\ of\ the\ period}$$

While above is certainly easy to understand, Noble (2011) warns of potentially misleading reports created by it. It may produce a situation where churn rate lowers over time while customer behavior remains unchanged. In this case, new customers are acquired in a steady rate while the same percentage of the new and base customers churn. Alternative solution presented by Noble assumes that each

customer can leave the company any day, and thus, average churn rate per day is calculated from all periods of inspection, which allows better comparison between different periods of time. His version of churn rate formula is as follows:

$$Churn\ rate\ = \frac{c}{\sum_{i=1}^{d} c_i \div d}$$

where

- c = customers lost during the period
- c_i = number of customers at the beginning of the subperiod
- d = number of subperiods

Churn rate inspection receives additional benefit from rich customer databases that can further improve analysis on causes behind the metric. Old, new and lost customers can all be profiled to find out if, for example, marketing or product performance does not correspond to target segments defined in business strategy (Gallo 2014). Gallo suggests that churn should be viewed as an indicator of behavior: what are customers doing and why, and what can be done to change it?

4.6 Share of Wallet

Share of Wallet (SoW) measures the share of expenses from consumers wallet spent on a category as a ratio between 0 and 1, where 1 equals to customer allocating all purchases to certain category, such as a brand. Its aim is to predict brand performance rankings, customer loyalty and customer lifetime value among consumers (Keiningham et al. 2011; Buoye et al. 2015). Keiningham promotes SoW as a strong indicator of impact made by strategic decisions, balancing the overview of customer experience by revealing how strong a brand exactly is when comparing to competition.

For calculating the Share of Wallet, multiple variations have been presented in literature, some of which may require different types of data collection. Keiningham et al. (2011) presented a simple way to calculate SoW via wallet allocation rule,

that ranks all competing brands against each other. A modified representation of their formula, that allows ranks to be shared by multiple brands, is as follows:

$$SoW\ (Wallet\ Allocation\ Rule)\ = \left(1 - \frac{\sum_{i=1}^{r} R_i \div r}{bp + 1}\right) \times \left(\frac{2}{bp}\right)$$

where

- R = current rank of a brand in brand pool
- r = number of brands sharing rank R
- bp = brand pool or number of brands used by the customer

The results of the above formula lead to a distribution of values between 0 and 1, where each brand is allocated a share of the market from each individual consumer's point of view. In case of ties, the combined share held by tying ranks is split evenly for each brand sharing the rank. If two brands hold rank two for example, a half of combined share of rank two and three is available for these brands. The company placing third would then get the next available rank, which in this case would be rank four. This is due to impossibility of brands with a shared rank to "duplicate" the available market share of rank two in a case of a tie (Keiningham et al. 2011).

Results of above formula are easy to calculate and to explain to business management, as well as offer rankings between separate brands. However, it requires surveying customers to identify brands used and rankings among brands used by customers, adding expenses and slowing down the usage of the metric. Furthermore, while it does provide accurate benchmarking in brand rankings, it does not predict actual value provided by customers to each brand.

Alternative way of calculating SoW is to divide value of transactions made by customers with total value of customers' wallet. This approach however suffers from a fact that companies have transactional data from own credit card and loyalty card transactions only, forcing the use of statistical models to replace missing data

from competitor sales. Multiple ways of estimating wallet size have been presented in literature (Fox et al. 2006; Du et al. 2007; Glady & Croux 2009; Chen & Steckel 2012), most of which rely on use of wide array of demographical data as predictor for each customer. Additionally, the most accurate models also require initial collection of shopping data from outside the company.

Latter approach is more difficult in the sense of initial effort and explanation required due to requirement of accurate statistical modeling, but offers more value in the sense that it can be directly linked to other customer data, such as loyalty data, without the need of conducting customer surveys after initial effort (Du et al. 2007). This allows more accurate inspection of each separate customer that have made purchases by measuring their value without surveys. On the other hand, this approach reduces the accuracy of brand rankings when compared to the wallet allocation rule, as the resulting wallet share given by modeled results only predicts the market share of a brand for which the model is built for (Du et al. 2007).

4.7   Other metrics

Visitor intent and task completion is a metric coined by Avinash Kaushik (2007). It is a metric designed to be paired up with hard web analytics such as behavior data on website by providing a link between customers' thoughts and actual web data. The questionnaire part of visitor intent and task completion asks why customer visited the website. Answers should be collected with a few preset answers to keep analytics simple enough. Second question asks if the customer completed what was originally desired. Answers to question two should be collected in a binary format, yes or no. In case of a negative answers to question two, a third question is asked in open format to find out why customer couldn't complete their tasks. Dividing completed tasks by answers to question one gives the final ratio of task completion. Question one enables drilling down into the metric in different preset categories without the need of additional questions and provides possible insights on which tasks on the website are not completed as easily as others. (Kaushik 2007)

For customer support alone, multiple metrics have been adapted for use. Most common metric in Gartner's research (2015) was first call resolution rate, which measures the rate of a customer receiving a solution to a problem in either a phone call or live chat before hanging up or closing the chat window (Rumburg 2011). Another common metric is return rate (Gartner 2015), although it may not offer enough value to grocery industry, as the grocery retailer companies are required to follow local quality control laws in Finland. Fernie and Sparks (2009) suggested that online stores following the previously mentioned hybrid business model could measure product substitution rate instead, although it fails to capture whether customers see product substitution as valuable service or failure of order fulfillment. Even if previous findings (Fernie & Sparks 2009; Borowski 2015) indicate that customer support should not be the main priority of online store experience development, completely denying measuring customer support should not be done either, as negatively perceived customer support experience can alone lower value of otherwise well-perceived set of experiences (Klaus & Meklan 2011; Borowski 2015).

4.8   Web analytics supporting CX metrics

Multiple metrics of customer behavior online can be categorized under web analytics without set frameworks behind them. Websites alone should be used for possibly multiple measures on customer experience performance as suggested by Borowski (2015). The power of web analytics lies in data collection: it does not require any questionnaires shown to the customer and can be implemented with low costs. As long as customers spend time on a website, data of various activities can be collected from the customer and combined with possible answers to questionnaires of metrics mentioned before. Possible examples gathered from customers' web cookies (Google 2017) is shown in a list below.

- Waypoint of arrival to website

- Has the customer seen marketing regarding the brand? (requires combination of cookie linking between multiple services)

- Bounce rate i.e. how many customers leave the site at any point of inspection

- Length of visit, length of visit per bought product

- Time spent on a certain page

- Rate of conversion by milestones: 30 seconds on website, product added to shopping cart, purchase made or other tasks included in online buying process

Web analytics can be considered as "cold" metrics that do not by themselves offer direct answer to quality of experiences without extensive measurement framework design (Kaushik 2007; Borowski 2015). Borowski suggests that web data best acts as a behavioral data, showing true customer behavior on website that can be linked with various other metrics used for customer experience. For example, if a customer gives low scores to any previously presented metrics, web data can be used to find the path or journey the customer went through before, possibly revealing any problematic part of the website.

4.9   Summary of metrics presented

A summary of metrics presented in this chapter is shown below in table 1.

Table 1. Common customer experience metrics

	Aim	Data collection	Presented question(s)	Formula
CSAT	Satisfaction to services provided	A: Survey with one question presented directly after transaction	"How would you rate your experience with us"	$\dfrac{\text{Satisfactory answers}}{\text{answers}}$
		B: Complex survey with multiple categorical questions	Multiple categorical questions	
NPS	Loyalty of customers by prediction of referral willingness	Survey with one question and optional free-form follow-up question	"How likely is it that you would recommend the service to another?"	$\dfrac{\text{Promoters} - \text{detractors}}{\text{Answers}}$
CES	Ease-of-use aspect of service	Survey with one question and optional free-form follow-up question	"How easy the company made it to handle my issue?"	$\dfrac{\text{Satisfactory answers}}{\text{Answers}}$
Churn	How well can the company hold on to current customers	Loyalty data	No customer input required	$\dfrac{\frac{\text{Customers lost}}{\text{set of periods}}}{\frac{\text{Average lost}}{\text{per period}}}$
SoW	Share of expenses spent on a brand	A: Questionnaire with two questions	1. Number of brands in use 2. Rank among brands	$\left(1 - \dfrac{\text{Rank}}{\text{Brands} + 1}\right) \times \left(\dfrac{2}{\text{Brands}}\right)$
		B: Statistical estimation on customer wallet size based on loyalty data	No customer input required	$\dfrac{\text{Expenses spent}}{\text{Wallet size}}$
Substitution rate	Share of forced product substitutions	Order fulfillment data	No customer input required	$\dfrac{\text{Orders with substitution}}{\text{Total orders}}$ $\dfrac{\text{Sum of replaced products}}{\text{Total number of products}}$

First call resolution	Share of customers receiving solution on first chat or call	Customer support data	Customer input required to be recorded in some form, direct question or follow-up survey	$\dfrac{\text{Solutions on first contact}}{\text{Total number of issues}}$
Visitor intent and task completion	Share of customers able to complete what they intended	Survey with two or three questions depending on input given to question two	"What is the purpose of your visit to our website today?", "Were you able to complete your task today?", "If you were not able to complete your task today, why not?"	$\dfrac{\text{Tasks completed}}{\text{Answers}}$

5 ANALYSIS

The following chapter's focus is on combining literature findings presented in previous chapters to present an overview of how and what should be done to successfully measure customer experience. First, evaluation of previously presented metrics is done based on the definition of online grocery industry and customer experience, after which recommendations are given on using them. The second part of recommendations is a suggestion of a process framework for further development of the measurement.

5.1 Evaluation of common metrics

A summary of strengths and weaknesses of each common metric presented in previous chapter is presented in appendix 1., noting the use of defined metrics in a hypothetical context of usage in online grocery industry. CSAT and SoW are split into two as the possible approaches presented for these metrics in previous chapter vary greatly in form of execution. Previously listed important features of KPIs are also considered when evaluating each metric.

All metrics are close to measuring customer experience or loyalty by their definition. However, CSAT receives heavy opposition in the literature due to possible disconnection between loyalty and satisfaction. Both the definition and the idea behind measuring customer experience lean more towards the factors that generate better customer retention and loyalty rather than pure satisfaction of a customer. Although CSAT is listed as the most common metric in Gartner's (2015) findings, it can be assumed that customer satisfaction is perhaps often mistaken as a synonym for customer experience and is not necessarily a relevant metric for customer experience.

Aside from SERVQUAL and MUSA, all metrics have focus on a simple presentation and fast data collection on frequent basis as was recommended for

KPIs in the previous chapter. Considering that customer experience is often formed from separate touchpoints, such as social media, ads or web pages, to which actions for further development can be done quickly when the source of problems is known, fast data collection gains value in terms of customer experience development. As faulty experiences can provide both negative word of mouth marketing and instantly lowered loyalty for the customer perceiving the faulty experience, capturing and learning from the negative experiences as quickly as possible with minimum effort required from customer reduces the chance of others perceiving and spreading negative word of mouth.

Conducting more thorough surveys that require deep engagement from customers should not be left out completely from quarterly or yearly inspection, but should not be done too frequently either. A frequency problem presented by complex questionnaires like SERVQUAL or MUSA is an assumption that the survey conduction with these frameworks is recommended to reach customers outside the company. Directly requiring same customers to answer to a complex, time-consuming questionnaire may become annoying from customers' point of view, lowering the overall brand image. Rotating target group is a possibility to avoid repeatedly surveying the same customers, but if the data collection must be fast, the effectiveness of rotation may suffer from the size of customer pool. Considering the size of current online grocery industry in Finland, the customer pool for each competing business can be assumed to be lower than the number of loyal customers in one medium sized brick and mortar supermarket.

Root cause identification by metric varies greatly. Metrics such as SoW and churn that require no customer input are direct outcomes from total experience, and thus, require in-depth analysis to find the cause of current values. Visitor task intent and completion, product substitution and first call resolution have direct focus on respective touchpoints, providing insights on performance of respective touchpoints alone. NPS and CES are different in the way, that both represent a touchpoint but do not exactly reveal the cause of score unless the customer leaves a proper free-form text answer. NPS represents a touchpoint for word of mouth

marketing to other consumers, but does not fully guarantee that the promoter would do so. CES represent the ease-of-use of the website of the store, but may not fully reveal valuable insights as splitting up the website to multiple points of inspection was recommended in previous chapters. Therefore, both NPS and CES are more predictors of overall loyalty rather than representatives of exact touchpoints.

A comparison of CES and NPS is justified in the sense that both require input from customers and both work as predictors of loyalty. While NPS is the strongest predictor in most industries, CES was found out to best represent competitive edge in online retailing (Haan et al. 2015). Validity of CES in online retailing can be further explained through discussed flow theory and fast results expected from customers. Still, the focus of measurement is different between the two, and this does not rule out the usage of both at the same time. The possibility of using both at the same time is ultimately tied to the pool size of customers, as presenting multiple surveys to the same, limited population of grocery industry consumers may not be ideal in terms of the ideology of simple surveys.

Churn and SoW as metrics of loyalty are different in sense that the metrics do not ask customers anything directly, nor are either of the metrics tied to a touchpoint directly. However, these metrics tell the reality of how customers either return to the service or abandon it after first trying it, and how big share of customer value is truly captured. To further explain use of churn and SoW, great experiences are not enough for competitiveness if customers are not returning to use the service. The metrics also provide results from past strategic decisions and overall success in customer experience development.

Visitor task intent and completion is a combination of multiple questions and simplicity. It collects data for multiple categories of tasks made by customers and collects direct feedback from them, allowing drilling down between dimensions to find which parts of a web service are not working. It fails to capture the easiness required from web services, meaning that it can possibly be replaced with CES, which requires less input from customer. Visitor intent and task completion suffers

from the requirement of having to present the right pre-selected categories in question one to customers. Focus on wrong categories or too many categories may provide misleading results and drive resources of experience design to wrong areas.

Substitution rate surprisingly offers great value in hybrid business models, where customers compete over the same products through two different sales channels. It has not gained much attention in literature due to its low-level nature, but it's directly tied on a relevant touchpoint on order fulfillment, showing the rate of success in fulfilling order requests just as ordered. Importance of the metric for online grocery industry can be described in a simple example as follows. Considering that the value offering of a grocery store is to upkeep shelves full of products ready to pick up, a customer may assume that before entering a brick and mortar store, products are available. With presented options on the shelf, a customer picks up the product that best suits the current need. Not finding a product on the shelf may not be the worst experience, as the customer can spend time and select the next best available alternative before "ordering", i.e. placing the product in a shopping cart. Next, when the customer selects a product online, adds it to a shopping cart and orders it, customer has made an order for that exact product after evaluating it against other products. If the online store, following a hybrid model, then fails to pick up the product from the shelves after another customer has physically bought the product from the store, the store essentially takes the product away from another customer's online shopping cart, offering another product that was not selected. A failure of providing results expected by the customer online has occurred, and the customer may potentially perceive the experience as unsatisfactory. Substitution rate may picture that exact situation and how many times it occurs, or in other words, how much the catalog of the online store lies in product availability. A downside of this metric in the possibility of some customers seeing the product substitution as an alternative way of providing value. However, the value offered by product substitution is ultimately a question that requires opinion from each individual customer.

5.2   Levels of focus in measurement

The metrics presented can clearly be divided into two categories in terms of focus. Metrics that receive more support in literature, CES, NPS, churn, SoW and the simple adaptation of CSAT, are heavily focused on high-level measurement of customer experience by revealing the current level of loyalty among customers. Visitor intent, product substitution, first call resolution and the more complex version of CSAT (SERVQUAL or MUSA) on the other hand are focused on low-level of customer experience by measuring touchpoints and revealing the source of experiences directly. The holistic definition of customer experience formed through whole customer journey, and the level categorization of metrics indicates that measurement of customer experience should be split into two parts, current level of loyalty and the way loyalty builds as shown in figure 7, to better direct the focus given by the metrics.
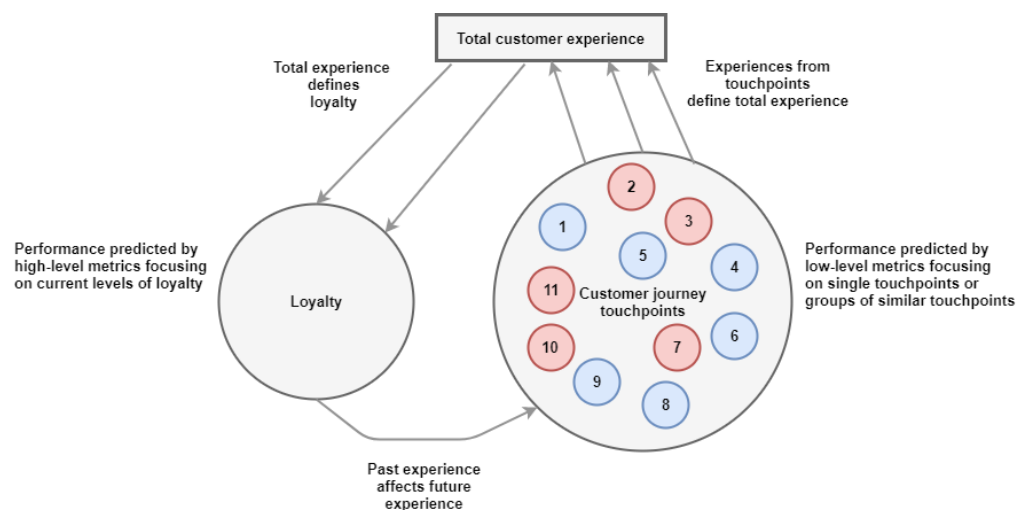

Figure 7. Two-level customer experience measurement

The first part of measurement focuses on current level of loyalty in multiple dimensions provided from the metrics: customer value (SoW), customer retention (churn), willingness to promote (NPS) and the overall convenience perceived from using the service (CES). These high-level metrics focus on revealing changes in the current degree of loyalty, or the overall customer experience quality, and whether the past strategic decisions have had a positive impact or not. Information acquired

can lead towards conclusions of current value of customers to company, providing insight on whether the other metrics are proving valuable information or not, and if a more in-depth analysis of current competition is required from the viewpoint of customers. If the low-level metrics are all showing improvement in customer experience, but the overall loyalty is not improving, then a conclusion can be made that the low-level metrics are perhaps not focusing on right aspects of business processes.

The low-level metrics measure the second part of customer experience, how loyalty builds up through multiple touchpoints along customer journey. Unlike high-level metrics, low-level metrics focus on presenting direct input on what must be done to better allow customers to have well-perceived experiences. As presented in figure 7, there can be multiple touchpoints in non-linear order during customer journey, and in varying customer-perceived criticality. The metrics focus directly on single touchpoints or groups of similar touchpoints, and offer total value of experiences that translates to loyalty.

A notable difference in the level of metrics can be made in sense that the metrics capable of predicting overall loyalty are not truly tied to certain business case. Low-level metrics, on the other hand, are strictly tied to the aim of company using them and the values of customers that are required for competitiveness. Therefore, low-level metrics should not be chosen by literature analysis only, but through evaluation of current strategical objectives of the company, characteristics of said company's business processes and the values between different touchpoints as perceived by the company's customers.

5.3   Process of researching suitable low-level metrics

Definition of customer experience and argumentation on the importance of researching the definition of customer experience from customer's point of view (Giraldi et al. 2016; Klaus & Meklan 2011) suggests that there is no one framework

or low-level metric that fits all business needs on any industry. Online grocery retailing specifically is not yet a well-established business in Finland, and research supporting customer experience on it is scarce. Taking notes from other geographical markets should be done very carefully as research on the influence of local culture in online customer experience has been found to be strong (Shobeiri et al. 2015).

Considering that customer experience is in customers' minds by its definition, a more in-depth research should be conducted on it for measurement on level of touchpoints. To effectively measure customer experience, a six-step process framework based on previous chapters was compiled for research (figure 8). Purpose of the framework is to find the true meaning of customer experience from customers' point of view in any context to measure it in a balanced and in-depth way. Core idea of this framework is to study how customers see the online store and which touchpoints during the journey most affect the outcomes of perceived experiences.
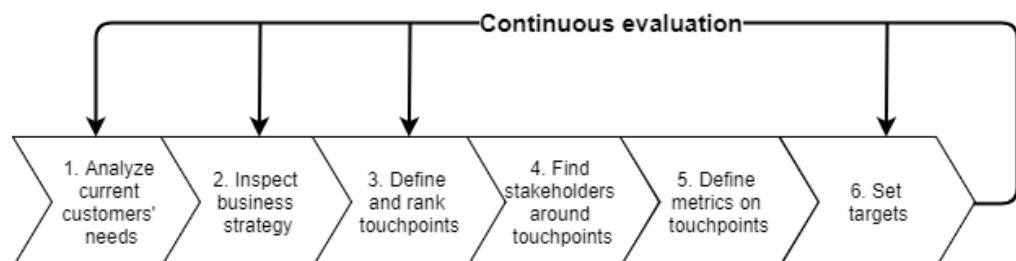

Figure 8. Process for measuring customer experience

First step of the framework focuses on customers. Research should be conducted on current customers' needs, drivers or barriers of online shopping, to find what enables them to have great experiences. Points of contact between brands and customers should also be defined for steps followed by this. The target group of this research should be the most valuable customers to the current business to find what makes them loyal. Developing their needs further develops the possibility of increasing overall customer experience in similar customers with potential to become loyal.

In second step, previous findings should be fit on to current strategy to define what experiences can be developed further within possible limits set by strategy. If the current strategy is causing limits to the development of better customer experience, it may have to be evaluated again for better competitiveness. As the experience valuations given in step one was collected from the currently most valued customers, evaluation of strategy conflicts against their needs could be necessary.

After possible points of development have been chosen, definition of touchpoints around the subject should be done, and each touchpoint should be ranked in terms of importance found in the first step. Findings in previous chapter explained that customer experience forms up of all interactions between customer and the company. This indicates that experience should preferably be measured during the whole process of relationship or purchase process as explained by Petre et al. (2006) or Kotler & Keller (2016, p. 195) instead of just evaluating post-purchase feelings of a customer, as is often done in case of metrics such as CSAT, CES and NPS. Examples of common touchpoints are presented in table 2., but the actual touchpoints may differ due to limits of business processes and how consumers truly access or consume the products or services.

Table 2. Examples of touchpoints along customer journey following model presented by Petre et al. (2006)

Step of customer journey	Touchpoint
Setting expectations	Social media
	Blogs
	Email/print/TV/radio/programmatic marketing
	Word of mouth
	Brick and mortar stores
	Competing online stores
	Review websites
Accessing the website	Search engines
	Web portals
Pre-purchase interactions	Frontpage
	Product pages providing information on products or services
	FAQ pages

	Customer support (Live chat, email/phone support)
	Shopping cart
Purchase interaction	Ordering page
Post-purchase interactions	Delivery
	Customer support prior delivery
	Physical store
	Email and text messages
	Social media
	Billing
Product / service consumption	Products and services directly
	Customer support (support in use or in reclamation)
Post-evaluation	Follow-up marketing
	Review websites
	Social media
	Word of mouth

Having too many top-level KPIs should be avoided, as metrics such as NPS or churn may provide difficulties for stakeholders in pinpointing the flaws in actual business processes that they are responsible of. It is also important to note that same stakeholders should not be presented with too many KPIs, as too many metrics can lead towards unnecessarily difficult analysis of current situation. Careful inspection of metrics should be done as metrics that are not directly linked to what is expected to improve, customer experience in this case, do not help in explaining root causes of outcomes.

Each metric should have target levels for increasing motivation towards the improvement of customer experience. Commonly used SMART framework for setting targets has been in use for a few decades (Doran 1981). Doran explained that each target should be specific, measurable, agreed upon, realistic and time-related. With reasonable targets, continuous strive towards improvement is easier to motivate.

Findings from literature state that setting up metrics for any system should not be a simple process from step one to step two. Rather, it should be continuous process of evaluation, where changes should be done as often as required. Therefore, framework in figure 8 recommends that there should be a frequently occurring evaluation of measurement system that considers how KPIs currently help in development of customer experience. Maldeveloped metrics, changing needs of customers, developing technology allowing new touchpoints and changes in business strategy may require redesigning or completely replacing measurement systems.

6 CONCLUSIONS

Customer experience has multiple definitions, of which the most common is a holistic relationship between a customer and a company offering products or services. Overall customer experience builds up from multiple touchpoints along customer journey in which the customer encounters the company or its products. By developing customer experience, customers are enabled to better perceive great experiences and a chance of loyalty towards a company is higher.

Impact of customer experience and its measurement has been recognized widely on literature, as well perceived experiences generate loyalty and satisfaction. Loyal customers generate better brand image, purchase more repeatedly and finally, generate more revenue. Customers in grocery retailing are repeat customers with mandatory high-frequency visits to any local store by default. Readiness to switch stores to shop in in local area is not limited to geographical distance alone, but to other features such as product quality, selection, convenience, cleanliness, staff, scope of offers and price level too. Pool of possible customers changes slow due to the limited nature of it, i.e. slow change in demography and the inability to target new customer segments far away geographically, forcing competitors to share wallets of customers with each other. Retailers competing in multiple channels may suffer setbacks to loyalty in whole business when customer's encounter bad experiences in any part of the omnichannel experience. Furthermore, revenue of online stores is dominantly generated by long-term relationships with customers. Customer acquisition due to customers easily abandoning websites costs more than customer retention. Thus, loyalty that is generated by great customer experience, is an important corner stone of competitive edge in grocery retailing.

Comparison of different grocery store business models indicate that the main drivers behind consumer shopping behavior can be categorized in convenience of time offered by stores geographically near, convenience of selection offered by hypermarkets and convenience of price offered by heavy discounters. Online stores are in unique position to traditional models in gaining competitive advantage with

capability of targeting customers demanding for fast results offered by small brick and mortar markets while offering the convenience and selection of larger hypermarkets at the same time. Experiences are, however, a direct factor of success in online industry.

Experiences can be described as psychological and personal. Experiences and value of experiences are outcomes of interactions, or the difference between expectations set by a customer and value offered by a company. The value of experience occurs on touchpoints between the customer and the company, and experiences on touchpoints move customers towards further touchpoints and form the whole customer experience through single instance of customer journey. If customer expects to find products in store fast, and fails to do so, the experience can be categorized as a bad experience and may suspend the whole customer journey from proceeding further. Ordered products may be just perfectly packaged and delivered right on time, which the customer can see as a definitively well-crafted experience that encourages to repeat the order again in the future. Another customer, on the other hand, may encounter reviews before trying, or even hearing of the service, and thus receive experience from that in future evaluation of brands. How a customer perceives the experience in his/her mind cannot directly be controlled by the company. However, companies can try to design and orchestrate perquisites that enable customers to have desired experiences.

Experiences happen fast online, and results expected by customers should come both fast and easy. Walking into in a brick and mortar store already ties customers to be more engaged with shopping than online because of the actual requirement of walking and entering the store, physical availability of products for comparison and presence of workers that can help and suggest products that work together. Entering the store already makes it less worthwhile to leave without purchase, as this required further physical effort and lost time by the customer. Engagement has already happened before entering, and thus mishaps in the experience, such as missing product alternatives and unruly behavior of other customers, are allowed. However, in online, the store can be exited in a fraction of a second when encountering

anything that was worse than expected. A page loading too slow, a bad search engine or inability to find required products or product information can offer enough reason to switch to a competitor without much effort. Furthermore, going through the purchasing process with positive outcomes in a store once is not enough, but should happen repeatedly in all possible situations where the customer would like to use the store. If a part of the store is not responding but the store worked well last time, if a need rises to order food, a customer could possibly have no choice that involves waiting for days to purchase groceries. Rather than waiting, it is easier or mandatory to either try another online store or walk to a competitor that has a physical store next door.

Flow theory in online stores supports customer experience theories well. According to flow theory, customers need some form of engagement mode, a state of mind, for online shopping. Achieving flow is mainly supported by encountered ease-to-use, aesthetics and access to quality information that together feed a sense of control of the environment and thus, knowledge of using the environment to make purchases. Not reaching flow causes frustration and possibly abandonment of the store that is working without technical problems. Previous knowledge of customers expecting fast results online, further indicates that service providers should focus on delivering a supportive environment for reaching flow. Flow further generates more loyalty and repeat-purchases of made by customers. The main feature of flow, easiness to use, can be easily measured by asking customers whether they reached their intentions easily or not. Considering that the website is the store itself, measuring the easiness of using the store should be of high priority.

To develop better experiences, measurement of customer experience can be done with touchpoints as data sources of experience. Touchpoints represent what truly happens from customers' perspective. In the context of online industry, touchpoints are points of interaction where the customer encounters a brand, or uses the webstore or any services around it. Discussions between customers, as in social media, review websites, and face-to-face, outside the webstore are also touchpoints. Touchpoints are the points of inspection that allow learning about customer

experience in context of a product or service. Therefore, metrics should focus on these touchpoints.

Multiple metrics have been adopted for use in measuring customer experience but knowledge of actual customer experience as a concept is still vague. Majority of literature focus on presenting single metrics for overall measurement, rather than providing accurate frameworks that could cover whole customer experience in-depth. Top-level metrics such as NPS or CES have strong support in the literature, but the use of these metrics alone was also found out to be insufficient.

The aim of this thesis was to find out how to measure customer experience in the online grocery industry, and to provide clear knowledge in both definition of customer experience and possible metrics around it. The main research question, "How should customer experience be measured in online grocery industry?", was answered in the following subquestions.

What is customer experience?

The most comprehensive and explanatory definition was found out from the study written by Gentile et al., who concluded the definition as follows:

"The Customer Experience originates from a set of interactions between a customer and a product, a company, or part of its organization, which provoke a reaction. This experience is strictly personal and implies the customer's involvement at different levels (rational, emotional, sensorial physical and spiritual). Its evaluation depends on the comparison between a customer's expectations and the stimuli coming from the interaction with the company and its offering in correspondence of the different moments of contact or touch-points." (Gentile et al., 2007)

What metrics have been used to measure customer experience?

Multiple metrics were found in literature. Metrics most commonly used by companies for measuring CX, NPS, CES, CSAT, churn, SoW all have wide amount

of literature. These top-level metrics are predictors of loyalty in some degree. Other metrics, such as substitution rate, first call resolution and visitor intent and task completion were mentioned briefly in some research papers and blogs, but did not have much research on them due to the low-level nature of the metrics.

How do common metrics fit to the definition of customer experience?
Literature around customer experience suggested that the focus of measurement should be on loyalty and how loyalty forms up through experiences. The top-level metrics all receive support in literature, but CSAT was found out to be unsuitable in terms of loyalty due to possible disconnection between satisfaction and loyalty. The low-level metrics fit measurement of loyalty buildup through touchpoints well, but the choice of using them should not be done based on literature alone, but through comprehensive research on customer values.

While top-level metrics, other than CES, were found out to be non-sensitive to industry, modifications such as replacing churn to repeat purchase may be necessary in context of retail industry. Low-level metrics are heavily affected by case of use. For example, substitution rate is directly related to certain business models in grocery industry, and should not be included in measurement if customers don't see it as a predictor of great experiences.

Although SoW and churn do not directly take input from customer surveys, the use of these metrics as predictors of loyalty can be justified. As using online grocery stores cannot be classified as a daily routine in Finland, churn predicts whether customers only try the service or actively return to it. SoW balances the measurement of loyalty by revealing the true value of customers through market share capture. SoW and churn present possibility in revealing if other metrics have wrong value focus: if other metrics are showing improvement but customers are either leaving or not spending enough, the development of customer experience has failed and new metrics should be chosen.

Measuring customer experience is challenging as the definition given to it in literature is often vague and holistic by nature. The most common definition, a

holistic relationship between a customer and a company offering products or services, defines a wide scope that is most likely not possible to accurately measure with a few KPIs alone. During this study, it was found that the focus on current levels of loyalty and how loyalty builds up best represent measurement of customer experience.

Rather than directly measuring customer experience from the perspective of online grocery industry alone, the findings work as a basis for multiple online industries instead. In measuring customer experience, the most popular top-level metrics are not tied to any certain online industry. The main difference between industries is in what sort of touchpoints there are available on low-level and what in the context of products or services matters most to consumers.

7   SUMMARY

Customer experience was found to be a holistic structure that consists of many touchpoints between a customer and a company. Reasonability for measurement of customer experience was found in the connection between great experiences and loyalty. Measurement of loyalty provides insight on what generates loyalty and how to design better customer experience to ensure repeat purchases.

Measuring of customer experience should be done in two levels, one with focus on level of loyalty, and one with focus on how loyalty builds up. Top-level metrics, such as NPS, CES, churn and SoW, predict loyalty and how valuable current customer are to the company. Low-level metrics with direct focus on touchpoints should be chosen through research, that defines the case company's processes and the values of customers. Low-level metrics should be chosen from the whole customer journey to present overall view of how and when loyalty builds up.

Literature presented strong metrics for top-level measurement of loyalty, but only a few low-level metrics with actual representation of touchpoints. It was suggested that low-level metrics should perhaps not be chosen through literature, but through other means of study. A framework was presented for this, created as a suggestion from findings of studies researched, which requires testing in a real context. Furthermore, the results of the study indicate that the recommended way of measuring customer experience is not for online grocery industry alone, but suitable for multiple other online industries instead.

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APPENDICES

Appendix 1. Common metrics' strengths and weaknesses in CX

CSAT (MUSA or SERVQUAL approaches)	Strengths	Lowers the need for other metrics as drill down to separate phases of business processes is allowed Aligns with customer needs if properly established National benchmarks are available
	Weaknesses	Supporting literature has strong opposition due to possible disconnection between satisfaction and loyalty Complexity slows data collection Tradeoffs between sample size and loyalty data linkage Requires heavy engagement from customers
Simple CSAT	Strengths	Fast data collection National benchmarks are available Repeating the survey to same customers does not require strict rules
	Weaknesses	Literature opposition renders the only focus of the metric weak Pinpointing reason for low scores is challenging
NPS	Strengths	Strong correlation between willingness to recommend and re-purchase rate Link to word of mouth marketing Fast data collection Repeating the survey to same customers does not require strict rules
	Weaknesses	Promoters are not guaranteed to promote the service Volatility in common score ranges Low scores may require semantic text analysis from free-form questions
CES	Strengths	Reduced effort correlates strongly with re-purchase rate in the online industry Repeating the survey to same customers does not require strict rules

		Fast data collection
	Weaknesses	Fails to capture ease-of-use opinions from those who are willing to make purchases but abandon the service early due to technical issues Low scores may require semantic text analysis from free-form questions
Churn	Strengths	Accurate results on customer retention Does not depend on customer surveys
	Weaknesses	Does not reveal the reason of abandonment
SoW (Wallet allocation rule)	Strengths	Provides brand ranking against each competitor separately Reveals impact of marketing
	Weaknesses	Ranks after the first rank are not clearly distinguished from each other Causes behind brand ranks require additional research
SoW (modeled from wallet size)	Strengths	Does not depend on customer surveys Reveals impact of marketing Provides accurate share of market captured on customer level, allowing customer lifetime value estimations
	Weaknesses	Modeled size of wallet requires initial effort based on competencies in company Is only as accurate as the model it was built with Causes behind brand rank requires additional research
Substitution rate	Strengths	Direct connection to a touchpoint of order delivery Reveals where actions are required for improvement of experience Does not depend on customer surveys
	Weaknesses	Presents potentially misleading results, some customers may receive value from product substitution as a service instead of perceiving substitution as failure in order fulfillment May only provide value in hybrid business models
	Strengths	Links to loyalty through lowered frustration caused by issues

First call resolution		Fast data collection Direct connection to a touchpoint with customer support Reveals where actions are required for improvement of experience
	Weaknesses	Relies heavily on existing business processes and business models. No other notable weaknesses
Visitor intent and task completion	Strengths	Combination of simplicity and input collection from multiple points of business process Aligns with customer needs if properly established Fast data collection
	Weaknesses	No direct supporting literature No clear point of execution in presenting the survey to customers Categories presented in questions require initial research to avoid results causing misleading or inefficient decisions