



HANNU SAARIJÄRVI

Customer Value Co-Creation
through Reverse Use
of Customer Data



ACADEMIC DISSERTATION

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To Tiina and Nella

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At home in Pirkkala, after a long, long run, October 18th, 2011.

Hannu Saarijärvi

Abstract

Firms' customer data usage is becoming more diverse. Instead of firms using customer data unanimously to serve their own purposes, customer data is being refined and given back for the support of customers' value creation. This research addresses the emerging phenomenon by building a general framework for reverse use of customer data in the context of food retailing.

As a phenomenon, reverse use of customer data is still in its infancy. It is an underdeveloped area of research, which is why it is approached with caution and without any strict predefined schema. The focus is on exploring in detail the phenomenon and its context. A case study research is conducted on an Internet-based service application that provides customers with information about food healthfulness. The service combines point-of-sale data with nutritive substances of the groceries and gives the information back to customers for their own use. Data from multiple perspectives are generated and thematically analyzed. A set of basic principles that account for the research phenomenon are identified through four research questions. The research questions capture the fundamentals of reverse use of customer data and contribute to the building of the general framework.

Two well-established theoretical approaches compose the theoretical framework of the research: the customer relationship management (CRM) framework and the service perspective characterized by the recent advances in service theory. Value co-creation is used as a central concept of the research. Through dismantling it into its constituent parts a conceptual tool is developed: understanding what kind of value for whom ('value'), by what kind of resources ('co'), and through what kind of a mechanism ('creation') helps to both investigate the central characteristics of the research phenomenon and to synthesize the conceptual discussion beyond the boundaries of this research.

The general framework for reverse use of customer data is built as the result of a continuous interplay between empirical data and theory. It is based on three perspectives. First, the customer perspective describes how reverse use of customer

data supports the customer's value creation. A typology is constructed that captures the diverse ways ('Playing', 'Check-pointing', 'Learning', and 'Goal-orientation') in which the customer's value creation is supported by the information resulting from reverse use of customer data. Also elements that determine the information's value-creating ability are identified. Second, the firm perspective captures how reverse use of customer data contributes to the firm's own value creation. Four themes are identified: increasing customer loyalty, differentiation and repositioning, corporate values and firm strategy, and firm image. Third, the general perspective uncovers elements that fundamentally constitute reverse use of customer data as a phenomenon in the research context.

A paradigmatic change in customer data usage is unfolding. The research illuminates this evolution by extending the CRM framework and establishing a service perspective to customer data usage; it redirects attention from firms' internal use of customer data toward external use of customer data. The research introduces reverse use of customer data as a customer value co-creation mechanism through which firms can provide customers with additional resources, go beyond traditional exchange and reach out to customer context. Similarly, through mechanisms for firm value co-creation, such as co-production or co-design, additional customer resources can be engaged in the firm's value-creating processes. Understanding the opportunities of different value co-creation mechanisms opens up a whole new spectrum of opportunities for reconfiguring firms' value-creating logics, developing new service-based business models, and reinventing their roles as resource providers.

KEYWORDS: Reverse use of customer data, customer relationship management, service perspective, value co-creation

Tiivistelmä

Yritysten asiakastiedon käyttö on monipuolistumassa. Sen sijaan että yritykset soveltavat asiakastietoa yksipuolisesti omien prosessiensa suunnitteluun ja toteuttamiseen, asiakastiedosta jalostetaan asiakkaalle merkityksellistä informaatiota hänen omaan käyttöönsä, hänen omien arvoa luovien prosessiensa tueksi. Tämä tutkimus erittelee ja analysoi edellä kuvattua ilmiötä rakentamalla viitekehyksen asiakastiedon käänteiselle käytölle vähittäiskaupan kontekstissa.

Tutkimusilmionä asiakastiedon käänteinen käyttö on jäsentymätön ja varhaisessa kehitysvaiheessa, minkä vuoksi sitä lähestytään moninäkökulmaisesti. Case-tutkimuksen kohteena on Internet-palvelu, joka tarjoaa asiakkaille informaatiota heidän ostamansa ruoan terveellisyydestä. Palvelu jalostaa asiakastietoa yhdistämällä siihen tietoa ostettujen tuotteiden ravintoarvoista ja -suosituksista ja luovuttaa syntyneen informaation takaisin asiakkaiden omaan käyttöön. Triangulaation avulla luodaan monipuolinen tutkimusaineisto, jota analysoidaan temaattisesti. Tämän avulla vastataan neljään tutkimuskysymykseen, jotka edistävät ilmiön syvällistä ymmärtämistä ja mahdollistavat viitekehyksen rakentamisen.

Tutkimuksen teoreettinen viitekehys rakentuu kahdelle vakiintuneelle tutkimussuuntaukselle: asiakkuuksien johtamista asiakastiedolla korostava CRM (customer relationship management) sekä viimeaikaiset palveluteoreettiset kehitysaskleet yhdistävä palvelunäkökulma opastavat ilmiön ymmärtämisessä. Arvon yhteisluomisen käsite on tutkimuksessa keskeinen. Jakamalla käsite kolmeen osaan rakennetaan tutkimuksellinen työkalu, jolla kiinnitetään huomio siihen millaista arvoa luodaan kenelle, minkälaisin resurssein ja millä mekanismeilla. Sen avulla tutkimusilmiötä lähestytään arvon yhteisluomisen näkökulmasta sekä luodaan synteesi käsitteen ympärillä käytävästä teoreettisesta keskustelusta.

Asiakastiedon käänteisen käytön viitekehys rakentuu teorian ja tutkimusaineiston intensiivisen ja iteratiivisen vuoropuhelun seurauksena. Se perustuu kolmeen näkökulmaan. Asiakasnäkökulma osoittaa miten asiakastiedon käänteinen käyttö tukee asiakkaan omaa arvon luomista. Tutkimuksessa konstruoidaan typologia, joka

empiirisesti ilmentää niitä monimuotoisia tapoja ('Pelaaminen', 'Tarkistaminen', 'Oppiminen', 'Tavoitteellisuus') joilla asiakkaat käyttävät asiakastiedon käänteisestä käytöstä syntyvää informaatiota omissa prosesseissaan. Lisäksi tunnistetaan elementit jotka määrittävät informaation soveltuvuuden asiakkaan arvon luomisen prosesseihin. Yritysnäkökulma havainnollistaa miten asiakastiedon käänteinen käyttö hyödyttää yritystä: asiakasuskollisuus, erilaistuminen ja uudelleen asemointi, yrityksen arvot ja strategia sekä yrityksen imago ovat teemoja jotka tukevat yrityksen arvon luomisen prosesseja. Yleinen näkökulma kuvaa asiakastiedon käänteistä käyttöä ilmiönä. Tähän liittyen tunnistetaan ilmiötä rakentavia ja tukevia elementtejä.

Asiakastiedon hyödyntämisessä on kehittymässä paradigmaattinen muutos. Tutkimus ilmentää tätä kehitystä laajentamalla nykyistä CRM-viitekehystä ja luomalla palvelunäkökulman asiakastiedon käyttöön. Se siirtää huomion yrityksen sisäisestä asiakastiedon käytöstä ulkoiseen – asiakkaan arvon luomista tukevaan asiakastiedon käyttöön ja asiakastiedolla palvelemiseen. Vastaavanlaisten arvon yhteisluomisen mekanismien avulla sekä yritykset että asiakkaat voivat antaa lisäresursseja toistensa arvon luomisen prosesseihin ja haastaa perinteisiä tapoja toimia. Tämä luo yrityksille keinoja uusien palveluliiketoimintamallien kehittämiseksi ja mahdollistaa yrityksen roolin uudelleenmäärittelyn resurssien tarjoajana.

AVAINSANAT: Asiakastiedon käänteinen käyttö, asiakkuuksien hallinta, palvelunäkökulma, arvon yhteisluominen

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1. INTRODUCTION

Whenever one reacts with the feeling that's interesting, that reaction is a clue that current experience has been tested against past experience, and the past understanding has been found inadequate.

- Karl E. Weick (1985, 525)

Firms need data. They need data about competitors, the financial markets, the marketplace and the external environment in general. More importantly, to meet the demand of a continuously evolving customer base, they need data about customers: what they buy, how they buy, when they buy, why they buy. Customer data is used to segment customers, generate cross-selling sales, identify the most profitable customers, or to create tailored price promotions; all in all, to increase the firm's understanding of its customers. Consequently, the utilization of customer data in managing customer relationships, often referred to as customer relationship management, is of critical importance for firms to become and remain successful in the highly competitive markets. Yet from the customer's point of view, the benefits he or she gets from firms' customer data usage have remained limited in scope. Customer data usage and utilization has largely been a firm-centered activity. Customer data has been used first and foremost for the benefit of the firm; to support the firm's value-creating processes. The lack of clearly defined and tangible customer benefits has eventually resulted in customers becoming more suspicious of firms' customer data usage and more cautious about letting firms access their data.

Due to technological advancements firms are faced with a vast variety of opportunities to reshape their value creation logics and business models. Through trial and error firms seek and introduce new value-creating ecosystems where they reinvent their roles as resource providers and where customers configure new roles for themselves – the traditional roles of customers and firms are in constant flux. Changes in managerial mindsets facilitate firms in extending their focus from merely selling goods toward a more holistic perspective to customers' value creation. In parallel with the firms' increasing service orientation the traditional role

of customer data is being challenged. This is illuminated by recent initiatives in both public and private sectors. For example, the myData program by the British Government engages major industries in providing their customers with opportunities to reclaim their data for their own use. Safeway, a major US retailer, is setting up a service application called MySimpleNutrition that offers customers information based on their personal shopping data. A paradigmatic change in customer data usage is unfolding; customer data is being refined and given back to customers instead of being used only as a laboratory for customer behavior. A new meaning for customer data is constructed. This puts pressure on shaking and revitalizing the very foundations of customer data usage.

Hence, identifying the opportunities of *reverse use of customer data* opens up a whole new approach for firms to introduce a more service-oriented perspective to their businesses. Providing customers with highly personalized and meaningful information resulting from reverse use of customer data can be an effective mechanism in going beyond the traditional exchange process. It is a way to establish a service perspective to a goods-dominant business environment, i.e. shifting the focus from selling goods to supporting customers' value-creating processes. Reverse use of customer data – i.e. refining and giving customer data back to customers – can be a way to redefine the firm's role in the customer's value creation process, to differentiate itself from competition and develop sustainable competitive advantage in relation to competitors. As an emerging research phenomenon, though, it is still underdeveloped and in need of a thorough exploration of its basic elements and aspects.

This research challenges the limited and narrow perspective on the use of customer data. Reverse use of customer data opens up opportunities for firms to provide customers with additional resources that can be used as input to the customer's value creation; in addition to goods, the customer is provided with information that they regard as useful in their resource integration processes where customer value eventually actualizes. Altogether, compared with Weick (1985), what is found interesting, is the phenomenon of reverse use of customer data. Here, the past experience, i.e. the traditional perspective to customer data usage has been 'tested', and eventually, found inadequate.

1.1 Research context

The research focuses on the Finnish food retailing context through a single case study research. Finnish food retailing is one of the most concentrated retail markets in Europe. The two major food retailers, S-group and Kesko Food, account for about 80 percent of the market share (2010) leaving little room for other food retailers, such as Suomen Lähikauppa and Lidl – the only foreign food retailer operating in Finland at the moment. Both S-group and Kesko Food employ a multi-format strategy by focusing simultaneously on serving customer needs through convenience stores, supermarkets, and hypermarkets. On the contrary, the smaller-sized competitors target specific market niches; for instance, Suomen Lähikauppa recently decided to focus on the convenience store format.

Despite the relatively high level of concentration in the food retailing market, competition between the different players is harsh. The competition has been largely based on pricing issues and product category management, and more importantly, acquiring attractive locations for new food stores. In addition, CRM activities have been regarded as another critically important competitive tool. By analyzing customers' purchase data, i.e. point-of-sale data (pos-data), firms are, for example, able to identify the most profitable customers and discover emerging food trends. Furthermore, the role of customer loyalty schemes is generally considered as highly important. In the competition for both existing and new customers food retailers seek and explore new ways to increase customer loyalty and commitment. This is achieved largely through rewarding customer loyalty in monetary terms; the more you buy the more money you will get in return.

Besides applying different tools to get customers to buy more, retailers have started to harness the potential of the Internet as a way to extend the customer's retail experience, which also supports the firm's goal of increasing customer loyalty. At the international level, Internet-based service applications such as Tesco's Healthy Living or Publix's Event Planner are examples of using the capabilities of the Internet in order to provide customers with something additional than mere grocery items. Through these service applications food retailers can assist customers in their value-creating processes related to food consumption; for instance, customers are able to receive general information about specific dietary needs, find tools to achieve a more healthful lifestyle, or even get ideas for arranging parties and

nice dinners for friends and relatives. Thus, with the help of these applications firms can go beyond the traditional exchange in supporting customers' value creation and enter the consumption phase where the value potential of the resources is eventually actualized. Customers' value-creating processes are supported through benefits that originate neither from the location of the food store nor the groceries themselves. Despite the novelty value of these Internet-based service applications, what they basically offer is a generalized form of information, for example, about what constitutes a healthful lifestyle. In that respect, customers are provided with information that is available for everyone and could also be found from other information sources such as health-related magazines or TV programs. The information – although being something that is relevant for the customer – is not highly personalized but is more or less general in nature.

However, combining the capabilities of the Internet-based service applications with another critical element of today's competitive business environment, i.e. customer data, yields firms an interesting starting point to provide customers with something new that can result in unique value. Instead of being provided with generalized information, through reverse use of customer data customers can be offered personalized information that can be of support in their value-creating processes. This offers a fresh perspective not only to firms' customer data usage, but also to reconsidering their role as resource providers in general.

1.2 Research purpose and questions

The purpose of the research is to build a general framework for reverse use of customer data in the context of food retailing. Toward that end, four research questions will be addressed:

1. How do customers use the information resulting from reverse use of customer data in their value creation?
2. What determines the information's ability to be used as input to the customer's value creation?
3. How does reverse use of customer data support the firm's value creation?
4. What constitutes reverse use of customer data?

The research questions address different aspects of the research phenomenon of reverse use of customer data (Figure 1). As a whole they provide the answer to the purpose of the research, and include “potential for an empirical response and a novel insight that adds significantly to – or against – previous understandings” (Alvesson & Kärreman, 2007, 1268).

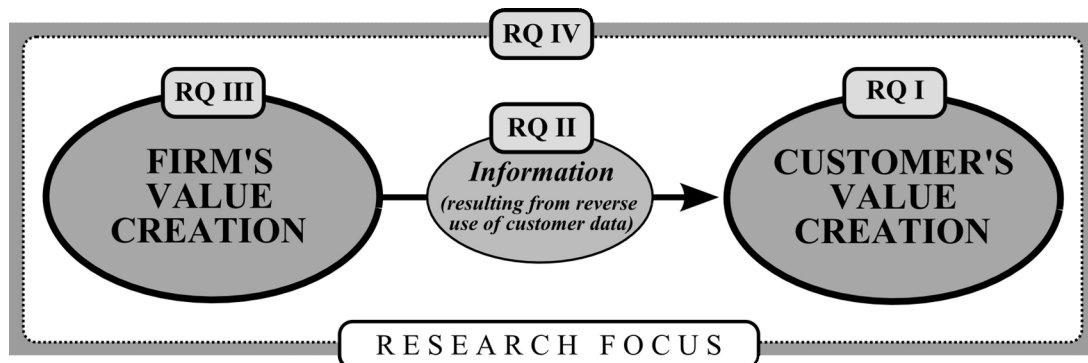


Figure 1. The research phenomenon and the research questions

The first and second research questions address the customer perspective to the research phenomenon. First, a typology is constructed that focuses on describing how customers eventually use the information resulting from reverse use of customer data as input to their value creation. Through the typology an in-depth understanding of the diverse ways in which the information is used in the customer’s value-creating processes is achieved; it captures how the information supports the customer’s value creation.

Second, not all data or information is usable in the customers’ value creation. In that respect, it is useful to examine what the customers value in the information resulting from reverse use of customer data; what eventually determines the information’s ability to be used as input to the customer’s value creation. Hereby, the fundamental characteristics of useful information in terms of the customer’s value creation are uncovered. Identifying themes that cause dissatisfaction toward the information help to reveal the elements that eventually determine the information’s ability. Altogether, through constructing the typology and identifying themes and elements a holistic understanding of the customer perspective to the research phenomenon can be gained.

The third research question addresses the firm perspective by focusing on how reverse use of customer data support the firm's value creation? In other words, why do firms provide customers with information resulting from reverse use of customer data? The question shifts attention to the themes that describe how reverse use of customer data converts into supporting the firm's value creation. It discusses the reasons why information based on reverse use of customer data is provided to customers and aims at understanding how it eventually supports the firm's value creation.

The fourth research question addresses the general perspective. Here, understanding what constitutes *the phenomenon* of reverse use of customer data is of highest importance. The focus is on the elements that characterize the research phenomenon; what constitutes the research phenomenon such as it is. It strives at understanding the circumstances where reverse use of customer data can be used to support the customer's value creation.

By addressing the above four research questions that employ the three perspectives (the customer, the firm, and the general perspectives), a holistic understanding of the research phenomenon can be achieved, which in turn provides a solid basis for answering the research purpose.

Given the novelty value of the research phenomenon, the focus of the research is neither on testing existing theories nor verifying predefined hypotheses, but on developing theory. In that respect, as argued by Alvesson and Kärreman (2007, 1266):

It is the unanticipated and the unexpected – the things that puzzle the researcher – that are of particular interest in the encounter.

The research questions have been developed in order to get as rich, versatile, and thick description of the phenomenon as possible, and as a result, be able to build a general framework for reverse use of customer data in the context of food retailing.

1.3 Central research streams

Although the research is theory-developing and explorative in nature, it still draws theoretically on the most recent advances within the marketing discipline. However, the role of theory is to give guidance, not to act as a straitjacket (Gummesson, 2002). Besides summarizing and presenting current research and understanding of the research phenomenon, the theoretical framework provides the means to approach the real-world phenomenon and to build a lens through which the research phenomenon is initially viewed.

The research addresses two marketing-related streams of literature: customer relationship management (hereafter CRM) and the ‘new’ and evolving service perspective¹ often referred to as Service-Dominant logic (S-D logic), service logic or Service Science (hereafter the service perspective). The former has become an established subdiscipline within the marketing field since its introduction in the mid-1990s and is theoretically largely based on the relationship marketing paradigm. Despite the fact that there are similar approaches where the roles of customer data and market information are being emphasized, CRM is preferred here due to its contextual relevance (food retailing), customer relationship orientation, and emphasis on customer data. The latter, in turn, has received a considerable amount of attention since the introduction of Service-Dominant logic (S-D logic) as an emerging paradigm for marketing (e.g. Vargo & Lusch, 2004; 2006; 2008a; Lusch & Vargo, 2006a; 2006c), although the discussion around service has been active already long before that (see e.g. Regan, 1963; Grönroos, 1979; Gummesson 1995). These two central literature streams – CRM and the service perspective – are discussed in more detail in chapters 2 and 3.

¹ In this research the recent service-related literature streams including the Service-dominant logic (e.g. Vargo & Lusch, 2004; 2008a), service logic (e.g. Grönroos, 2007a; 2008a; 2008b), and Service Science (e.g. Maglio & Spohrer, 2008; Vargo, Maglio, & Akaka, 2008) are together referred to as the service perspective. When building the theoretical framework for the research it was more appropriate to focus on the similarities between these ‘schools of thought’ instead of identifying areas of scholarly friction – although it is also important to be aware of the differing perspectives. Using the concept of ‘service perspective’ is also in line with the notion of service being understood increasingly as “a perspective on value creation rather than a category of market offerings” (Edvardsson, Gustafsson, & Roos, 2005, 118). The partly differing perspectives are discussed in more detail in the third chapter.

1.4 Justification for the research

The justification for this research can be built on identifying three main ‘gaps’ that are addressed in this research. First of all, previous research – especially in the context of S-D logic – although being abundant has remained at a rather abstract level of analysis. The contributions of recent theoretical discussion around both the service perspective as well as value co-creation have been mainly conceptual in nature, and there has been an established need for empirical ‘verification²’ (e.g. Brodie, 2007; Vargo, 2007a). Hence, the first gap is illustrated by Arndt (1985, 13) in his argument about the balance between knowledge (K), problems (P), and instruments (I):

A central notion in this view is that in any science, there should be some balance between the K, P, and I elements. If one of the three elements is allowed to dominate the other two, the discipline becomes unhealthy.

Referring to Arndt (1985, 13), given the latest developments within service research and marketing, the discipline is in danger of becoming too ‘knowledge-itis’ resulting in “empirically empty formal structures irrelevant to the problems”. There is an increasing need for real-world problems, exciting and evolving real world phenomena from which data can be generated for the purpose of theory development. This is also necessary for the sake of scientific balance and furthering service theory. Toward that end, reverse use of customer data is regarded here as an emerging real-world marketing phenomenon that needs to be explored and investigated further. This research helps firms to understand how they can take advantage of the emerging paradigm shift that is taking place in the context of customer data utilization. It sheds light on understanding how customers’ value creation could be supported by providing them with personalized information resulting from reverse use of customer data; i.e. it puts a current real-world marketing phenomenon at the center of attention. It gives guidance for firms that want to establish a service orientation by introducing reverse use of customer data as a way to shift the focus from selling goods to supporting the customer’s value

² Verification is used here to illustrate the general need for empirical illustration of the service perspective, not as referring solely to hypothesis-deductive verification.

creation. Furthermore, addressing the role of the Internet in achieving superior customer value is considered as an increasingly important topic for marketing research (Grewal & Levy, 2009). Thus, as a phenomenon it offers an excellent opportunity for not only for theory development, but also for providing managerial implications. In that sense, the research contributes to the interplay between empirical problems (P) and furthering existing knowledge (K) (compare with Arndt (1985)).

Second, firms are increasingly being equipped with tools and means to analyze and refine their customer data to achieve competitive advantage. Recent initiatives in both public and private sectors, such as the myData initiative by the British Government and Safeway's MySimpleNutrition application, illuminate the changing role of customer data. This research addresses this underutilized aspect of customer data by focusing on how customers can be provided with information that supports their value creation. It challenges the traditional perspective embedded within the CRM framework by shifting the focus from the firm's internal use of customer data to the external use of customer data; giving customer data back to customers. In the future the role of customer data in supporting customers' value creation becomes increasingly important; customer data can assume a fundamental role in both marketing management, service marketing and in building new service-based business models. Consequently, it is important to identify the full potential of customer data, generate new knowledge about its usage, and develop the CRM framework further.

Third, it can be argued that the research is in line with the research priorities (2010–2012) published by Marketing Science Institute (MSI). Among other important topics, MSI emphasizes the importance of identifying opportunities enabled by technology; gaining understanding and practical knowledge on how new and evolving technologies affect consumption and customers' value creation. Furthermore, focus should be placed on identifying and realizing innovation opportunities in order to discover new ways for value creation (Marketing Science Institute, Research priorities 2010–2012). In that respect, focusing on reverse use of customer data can be seen as a way to address issues presented by the MSI.

Altogether, by fulfilling the above described research gaps this research serves the marketing discipline in various ways. These include exploring new and current phenomena (reverse use of customer data) with contextual relevance (food retailing

and the Internet), theory development (both CRM and the service perspective), and living up to the research expectations set by the academy, i.e. Marketing Science Institute (research priorities). These established gaps provide the justification and motivation for the research process.

1.5 Central concepts

There are six central concepts that need clarification and more precise definition in terms of how they are understood in the context of this research. The research phenomenon is approached through concepts such as reverse use of customer data, customer data and information, additional information, value co-creation, customer's value creation, and firm's value creation. They contribute to the pre-understanding of the research phenomenon and were chosen on the basis of their ability to serve the purpose of the research.

1.5.1 Reverse use of customer data

Traditionally, customer data is used to meet the informational needs of the firm, for example, through identifying the most profitable customers or being able to cross-sell additional goods and services to customers. Firms convert customer data into information that can be used as input to the firm's own value-creating processes. Here, however, reverse³ use of customer data refers to the process of firms converting customer data into information that supports customers' value creation. The focus is thus on using customer data to meet customers' informational needs; to

³ Several other alternatives for the term referring to firms refining and giving customer data back to customers were considered. *Reciprocal* and *two-way* use of customer data were also carefully assessed and evaluated. However, both of them were discarded. The former was perceived as the firm and the customer mutually using the same type of customer data for their own purposes, and the latter shifted the focus toward using customer data interactively from the customer to the firm and vice versa, and as a whole constituting two-way use of customer data. Furthermore, at an earlier stage of the research process, also *innovative* use of customer data was contemplated. It was excluded due to the conceptually complex nature of innovativeness, and the danger of it as a concept referring to introduction of a new set of data mining techniques. Eventually *reverse* use of customer data was chosen as it manages to capture the process of using customer data not only to benefit firms, but also to support the customer's value creation. Reversing, as a verb, also characterizes the basic logic of challenging existing and conventional managerial mindsets in terms of customer data usage.

provide customers with information that they can use as an additional resource to their value-creating processes (Figure 2).

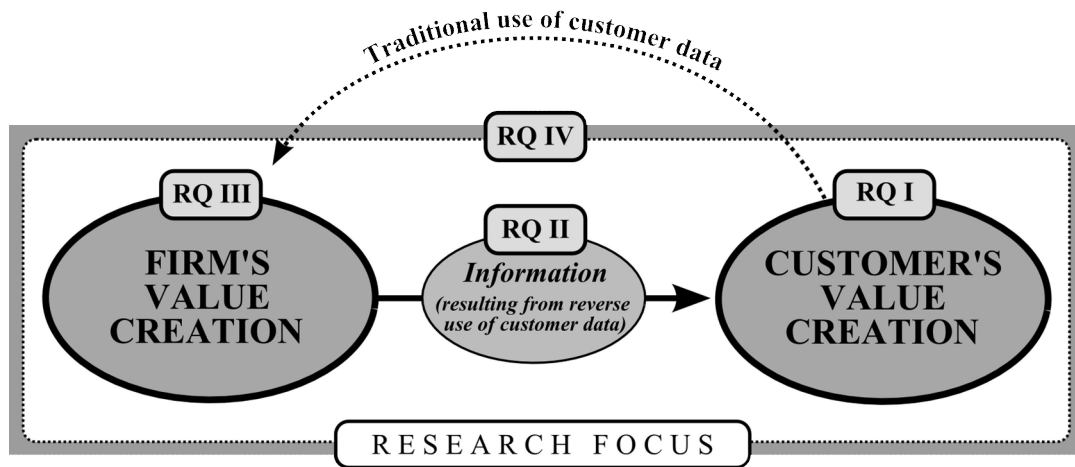


Figure 2. Positioning reverse use of customer data in the context of the research

Even providing customers with a receipt after a transaction could be regarded to some extent as a reverse use of customer data. However, here it is important to distinguish between what customers consider as information; i.e. data that endows relevance and purpose. Toward that end, when referring to reverse use of customer data, it is assumed that the information has relevance for the customer and can be used as input to the customer's value creation.

1.5.2 Customer data and information

In marketing literature, there are several concepts that refer to customers as a source of some type of information. Customer information, customer insight, market information, or market intelligence carry somewhat different meanings and are used in diverse ways in varying circumstances and within different literature streams. In this research, the focus is neither on customer intelligence nor customer understanding in general, but more specifically on customer data. Customer data is understood as being precise, concrete, and detailed in nature and resulting from the customer's direct actions. Thus, in relation to, for example, market orientation or market intelligence, customer data is not interpreted. In more detail, similarly with the definition of Blosch (2000), customer data is defined as *a set of discrete,*

objective facts about an event (Davenport & Prusak, 1998, 2). Given the nature of the food retailing context, customer data is understood as pos-data that is generated automatically at the moment of transaction and carries objective information for the firm about that specific transaction: what was bought, when was bought, where was bought, how much did it cost, and – if customer loyalty card was used – by whom was bought.

Customer data converts into information if it becomes meaningful to customers (or firms). As argued by Drucker (1988, 4): “Information is data endowed with relevance and purpose”. Information is a message with a sender and a receiver, and it has an effect on the receiver, as described by Davenport and Prusak (1998, 3):

Information is meant to change the way the receiver perceives something, to have an impact on his judgment and behavior. It must inform.

Hence, in relation to the research phenomenon, data cannot be used as input to the customer’s value creation if it lacks relevance and purpose. Information, in turn, can be of use in the customer’s value creation because it is ultimately defined by the customer. In other words, information is subjective and customer-dependent in nature. Therefore, it is always the customer who defines whether reverse use of customer data results in such information that can be used as input to his or her value creation.

1.5.3 Additional resources

The idea of providing customers with additional resources is central for this research. In the current service-related marketing literature, and especially within the service logic literature, customers’ value creation is understood as consisting of goods and/or services as well as additional resources, such as knowledge, information, skills held by the customer and other resources that are used together in the customer’s value creation when value-in-use emerges (see e.g. Grönroos, 2008a; compare with Vargo & Lusch, 2004; for resource-advantage theory). Therefore, additional resources can be regarded as important resources in order for the value potential of the resources to be actualized. Toward that end, this research focuses on exploring reverse use of customer data as a mechanism through which such

additional resources (information resulting from reverse use of customer data) can be provided to the customers' value creation.

1.5.4 Value co-creation

The concept of value co-creation can be regarded as one of the recent buzz words within marketing. In general, it can be argued that the concept strives to incorporate the shift from passive to active customers, from value being perceived as a result of the firm's manufacturing process to value being defined and created by the customer; from the notion of value-in-exchange to value-in-use. Despite the wide variety of contributions to the domain where customers and firms jointly create value, the concept itself has remained at a rather abstract level of analysis. Consequently, its fuzzy nature, resulting from the differing approaches which endeavor to capture the essence of the concept, has impeded the development of a more clear-cut definition. Nevertheless, despite the partly conflicting approaches, in the context of this research, the differing approaches to value co-creation are seen as rather more complementary than contradictory. The approaches employed by, for example, S-D logic and service logic are understood as enriching the conceptual insight and are collectively used to establish a more synthesized perspective to value co-creation.

What is fundamental in the constructed approach to the concept is its effort to discover and capture relevant dimensions and aspects of a current marketing phenomenon. In that respect, contrary to the general perspective, value co-creation is not regarded as something that is unconditionally, always, co-created (compare with Vargo & Lusch, 2008a). It is not considered as a general lens through which every marketing phenomenon can be viewed. This research approaches the concept conditionally; the concept is seen as introducing something new to marketing (compare with Grönroos 2008a), it sheds more light on understanding specific empirical phenomena. Consequently, the concept becomes more tightly linked to real-world marketing problems, and can therefore also be used in the normative sense. Ontologically, these two differing approaches to value co-creation represent alternative viewpoints; they contain a fundamentally differing constitution of the concept.

1.5.5 The customer's value creation

In this research, the customer's value creation is used to refer to the process of value actualization; it refers to the customer's creation of value-in-use. Value is understood as "always uniquely and phenomenologically determined by the beneficiary" (Vargo & Lusch, 2008a, 7). Customer value actualizes in customers' everyday practices when the resources provided by the firm together with other resources and applied skills are used (Grönroos, 2008a). Value-in-use can also emerge from possession of resources or from mental states (Grönroos, 2011). Despite the rather cumbersome definition of customer value, it serves the research purpose as the focus is not so much on value as an outcome but on value creation as a process (Grönroos & Helle, 2010). Customers' value actualization is considered as being constituted of resource bundles, such as goods that are provided by the firm, and additional resources, such as information, knowledge, skills and other resources that are critical in the customer's ability to eventually create value for him- or herself (see Payne, Storbacka, & Frow, 2008). In more detail, the customers' value creation is perceived as consisting of processes, resources and practices which customers use in order to manage their own activities (Payne, Storbacka, & Frow, 2008).

In the context of food retailing, the customer's value creation is often linked to a diverse set of processes, resources, and practices that customers have in relation to food consumption (compare with Payne, Storbacka, and Frow, 2008). These can include buying raw materials from the local food store or the customer's knowledge and expertise in how to prepare a decent meal. Information, knowledge, skills, customers' kitchen equipment as well as time are all good examples of the vital resources related to customers' value-creating processes within the food retailing context. Therefore, it is important to understand that also other resources than the goods alone have a major role in customers' value creation.

1.5.6 The firm's value creation

Value creation always employs two sides: the customer and the firm (Gupta & Lehman, 2005). Therefore, focusing only on the customer's value creation easily leads to a far too narrow perspective on value creation. Therefore, in the context of

this research, interest is also laid on the firm's value creation. The firm's value creation refers to the way how a firm creates value to itself. It does not describe how the firm creates value for the customer, because customer value is understood as something that emerges in customers' value creation and in customers' context; not something that is produced during a manufacturing process. The firm's value creation is characterized by its' value-creating processes that are fundamentally driven by the firm's focus on increasing shareholder value. When discussing how reverse use of customer data supports the firm's value creation, the focus is thus on understanding the process through which it eventually converts into the firm's value.

1.6 The structure of the research

The research is structured as follows. After the introductory chapter, the central literature streams that form the theoretical framework of the research are reviewed in two separate chapters. The CRM literature in the light of this research is reviewed in the second chapter, and the literature contributing to the building of the service perspective is discussed in the third chapter. A synthesis of the theoretical framework is presented at the end of the latter theory chapter. In the fourth chapter, the research strategy including basic methodological choices is discussed followed by a description of the used methods for data generation and analysis. The case description is also provided in the fourth chapter. The results of the data analysis are provided in two stages: the customer perspective to the research phenomenon is discussed in the fifth chapter, and the firm and general perspectives are addressed in the sixth chapter. The general framework of the research is built in the seventh chapter. Discussion, conclusions and ideas for future research are provided at the end of the research report.

2. UNDERSTANDING CUSTOMER DATA USAGE

The research phenomenon of reverse use of customer data is theoretically approached from the CRM perspective; CRM aids in understanding the research phenomenon and provides an important part of the theoretical basis on which the empirical part of the research can be built. This is due to two main reasons. First, the CRM framework is an established and widely acknowledged field of research that has become relevant especially in the context of food retailing. Second, the CRM framework, although it is basically about the management of customer relationships, is characterized by the critically important role of customer data – a central aspect of the research phenomenon.

2.1 Evolution of CRM

CRM started to gain attention among scholars and practitioners during the mid-1990s. As a result of customer data explosion in the 1980s firms were faced with enormous challenges to organize this data for analytic purposes (Boulding et al., 2005). Consequently, two closely linked concepts were developed: Peppers and Rogers (1993) introduced the famous concept of one-to-one marketing, and Pine (1993) proposed mass customization. As a result, vendors started to capitalize on these new ideas by introducing hardware and software solutions to better manage the overwhelming amounts of customer data firms were confronted with. Eventually, it was the vendors who started to use the term CRM to refer to the collection of customer data and other activities related to the management of the customer-firm interface (Boulding et al., 2005). CRM was soon extended to account for a more holistic approach to the management of customer relationships, and researchers started to stress the difference between the more tactically and operationally oriented CRM and the holistic and more strategically oriented

approach. There was willingness to clarify the misconception of CRM as offering merely technological and software solutions to the arising challenges related to customer data (Verhoef & Langerak, 2002).

From these roots, CRM evolved as an ambiguous concept. After exploring a wide variety of different definitions of CRM, Payne and Frow (2005, 168) identify three perspectives to CRM. First, CRM as a narrowly defined and tactically oriented approach that includes the implementation of a specific technology solution project. Second, CRM as “the implementation of an integrated series of customer-oriented technology solutions”, and third, CRM as defined in more broad and strategic terms including a holistic approach to the management of customer relationships to create shareholder value (for the list of CRM definitions, see Payne & Frow, 2005). Similarly, Zablah, Bellenger and Johnston (2004) introduce five divergent perspectives to CRM. They argue that CRM can be conceptualized as a process, strategy, philosophy, capability or technological tool. Despite the diversity in definitions, there are signs of a more coherent general definition for CRM. Boulding et al. (2005, 6) argue:

Specifically, CRM relates to strategy, managing the dual-creation of value, the intelligent use of data and technology, the acquisition of customer knowledge and the diffusion of this knowledge to the appropriate stakeholders, the development of appropriate (long-term) relationships with specific customers and/or customer groups, and the integration of processes across the many areas of the firm and across the network of firms that collaborate to generate customer value.

Despite the fact that CRM was originally considered as a rather managerially oriented concept, it started to gain theoretical ground quite soon after its introduction. CRM became theoretically linked to relationship marketing and to the widely accepted notion that the building and maintenance of customer relationships delivers the core of the marketing concept (Reinartz, Krafft, & Hoyer, 2004; for the marketing concept, see Morgan & Hunt, 1994; Webster, 1992; 1988). The pursuit of long-term relationships instead of the transaction-oriented approach was considered as more profitable for firms, which in turn was recognized as the basis for relationship marketing. Hence, the interconnectedness between relationship marketing and CRM was strong and it was difficult to make a clear distinction between these interrelated concepts. CRM was even regarded as “a philosophically-

related offspring to relationship marketing which is for the most part neglected in the literature” (Zablah, Bellenger, & Johnston, 2003, 116; see also Payne & Frow, 2004).

Despite the similarities between CRM and relationship marketing, it can be argued that the role of customer data has been emphasized more within the CRM framework, although its importance is highly acknowledged in the traditional relationship marketing literature as well. Verhoef and Langerak (2002) argue that CRM is based on three aspects of marketing management of which relationship marketing is one, but also customer orientation and database marketing play critically important roles. Customer orientation shifts the attention towards gaining customer understanding and database marketing introduces tools to identify interesting customer behavior patterns of which the firm can benefit.

In this research, similarly with the third definition by Payne and Frow (2005), CRM is perceived as a holistic approach to the management of customer relationships, but in which the utilization of customer data plays a significant role. CRM is understood as a management approach (Payne & Frow, 2004). This is in line with understanding CRM more as philosophy, as suggested by Zablah, Bellenger and Johnston (2004, 478):

Moreover, this perspective (CRM as philosophy) effectively builds a bridge between the marketing concept and relationship marketing paradigm and focuses on the importance of creating customer value, something that is only implied in the other perspectives.

Consequently, CRM should also address the customer’s value creation perspective, and not focus solely on the ways in which customer data usage supports the firm’s value creation.

2.2 Related literature streams

In addition to the strong link between CRM and relationship marketing, other closely related literature streams can be identified where the importance of customer data or some other type of market information is acknowledged. Here, four literature streams are briefly reviewed. These include market orientation, information sharing,

data mining, and information management. In all of them data or information is used to advance the firm's competitiveness.

Market orientation refers to the holistic generation of market intelligence, its dissemination across the organization, and the firm's responsiveness to it (Kohli & Jaworski, 1990; see also Narver & Slater, 1990). Market intelligence, in turn, is defined in broader terms than customers' needs and preferences, as it also includes exogenous factors that affect customer needs (Kohli & Jaworski, 1990). Altogether, market orientation emphasizes the organization-wide capability of understanding what customers eventually want and in that respect highlights the importance of gaining adequate customer understanding of the evolving market demand and reacting accordingly.

Information sharing has gained attention especially in the context of supply chain management (SCM). Together with concepts such as vendor managed inventory and collaborative forecasting planning and replenishment, information sharing is often linked to supply chain collaboration. It is widely acknowledged that the building of a synchronized supply chain contributes to increased responsiveness and lower inventory costs. Through information sharing, different actors in the same supply chain can decrease the bullwhip effect through sharing information between each other (e.g. Ryu, Tsukishima, & Onari, 2009). There are several types of information that can be shared within the supply chain including, for example, information about inventory levels, sales data or demand information (Lee, So, & Tang, 2000). For example, the world's biggest retailer Wal-Mart is sharing pos-data and real-time inventory information with Procter & Gamble (Ganesh, Srinivasan, & Chandrasekharan, 2008). Thus, information resulting from pos-data is not used only for the benefit of the retailer, but shared with other actors in order to streamline the supply chain. On the basis of this information, actors can react accordingly, for example, by decreasing the inventory levels and saving costs. Altogether, through information sharing the supply chain as a whole can better adapt to fluctuating demand. Moreover, research has also focused on supply chain components such as information transparency and collaboration, both of which are closely related to information sharing (Bailey & Francic, 2008).

Data mining, in turn, is about providing firms with tools to analyze large quantities of data and identify relevant patterns and relationships (Peacock, 1998). It is argued that there is a natural fit between data mining and customer relationship

management (Shankar & Winer, 2006; see also Homburg, Steiner, & Totzek, 2009). This holds true especially in contexts where the amount of data from a single customer is substantial and provides possibilities for building customer profiles and identifying emerging customer trends. Food retailing can be regarded as a good example of a business context where firms can increase their customer understanding through applying different data mining techniques and discovering interesting and nonobvious patterns related to consumption (Peacock, 1998).

Information management, on the other hand, is about the “collection, collation, and use of customer data and information from all customer contact points to generate customer insight and appropriate marketing responses” (Payne & Frow, 2005, 173). In relation to other literature streams discussed above, information management differs in terms of emphasizing the role of all customer contact points in achieving customer insight in a systematic way. A common emphasis in information management is that the firm should react to the increased level of customer understanding that is achieved through customer data or information. Altogether, customer data is not important per se – it has no intrinsic value, but the increased customer understanding that it brings is important and valuable. This increased understanding is then used to forge more suitable value propositions to customers.

Altogether, there are many literature streams that are closely related to CRM. In general, all of them include some type of generation and utilization of customer data or information. Some are more focused on the efficient management of the intra-organizational activities of the firm or the supply chain, whereas others emphasize learning new things about customers and their preferences. Many of these approaches are partly parallel and highly interrelated, which is why it is difficult to make clear distinctions between each concept. Altogether, the role of customer data in today’s business management is increasingly important and topical.

Yet in the context of this research, it is sufficient enough to realize the variety of management approaches to the utilization of customer data and how CRM is positioned in relation to them. Table 1 summarizes the customer data -related literature streams that are closely linked to the research phenomenon.

Table 1. Customer data -related literature streams

Approach	Description
CRM	CRM is understood as a holistic approach to the management of customer relationships, but in which the utilization of customer data plays a significant role. It is thus a strategic approach that combines aspects from relationship marketing strategies and IT in order to create profitable, long-term customer relationships. (Payne & Frow, 2004; 2005).
Market orientation	Market orientation refers to “the organization-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organizationwide responsiveness to it” (Kohli & Jaworski, 1990, 6).
Information sharing	Through information sharing different actors within the same supply chain can cut costs as they are able to react to fluctuating demand better (see e.g. Lee, So, & Tang, 2000).
Data mining	Data mining is the identification of interesting and nonobvious consumption-related patterns hidden in a database that have high financial potential (Peacock, 1998).
Information management	Information management focuses on collecting, collating and using customer data and information that is collected from all customer contact points and that increases the level of customer insight and generates marketing responses (Payne & Frow, 2005).

The CRM framework provides the lens through which customer data usage is viewed in this research. It helps to approach the research phenomenon at hand and offers the basis on which the empirical part of the research can be built.

2.3 Dual creation of value

At the core of CRM is the concept of dual creation of value (Boulding et al., 2005): firms who strive to excel at CRM should focus both on firm performance and customer value. The dual creation of value has some similarities with the recent theoretical discussion around the co-creation of value (e.g. Vargo & Lusch, 2004; 2008a; Grönroos, 2008a; 2008b; Payne, Storbacka, & Frow, 2008) and it stresses the importance of the benefits that the customer receives as a result of the usage of customer data. In other words, firms should not merely focus on using customer data for the benefit of the firm, but also concentrate on how the customer eventually benefits from the customer data usage. In practice, customers are perceived as benefiting because they are, for example, offered more customized offerings on the

basis of analyzing their customer data. In ideal circumstances, the pie can be enlarged so that both the customer and the firm are better off. More specifically, this can take place, for example, through cross-selling or offering price discounts on certain products (for a practical illustration, see Humby, Hunt, & Phillips, 2003)

From customers' value creation perspective it can be though questioned whether firms' customer data usage eventually converts into better customer value or some type of a support to the customer's value creation. As is argued by Boulding et al. (2005), if CRM-related metrics do not directly assess both sides of the dual value creation there is a risk that the value proposition becomes degraded. Customers may not feel that they are receiving any benefits from 'giving' data to the firm. Hence, "the dark side of CRM" (see Boulding et al., 2005, 159; Frow et al., 2011) can be realized if firms do not meet the criteria of dual creation of value and utilize customer data only unilaterally. There is a risk that customers lose trust in the firm if they perceive that data is used only to create value for the firm (Deighton, 2005). In the context of food retailing, this risk is especially relevant as privacy issues are becoming more topical; customers are concerned and worried about the way retailers use their loyalty card data. This general concern can be regarded as a sign that customer data is not being used in a way that genuinely benefits customers. Customers perceive the risks related to customer data, but do not see the benefits. In that respect, it can be argued that the notion of dual creation of value – at least to some extent – has been ignored, which can endanger the use of customer data in general.

2.4 Converting customer data into firm and customer value

An important aspect of the notion of dual creation of value is to consider how customer data usage eventually results in supporting both the firm's and customer's value creation. From the firm perspective, with the help of customer data the firm is better able to respond to the fundamental challenge of marketing: connecting market demand with supply. Toward that end, processes related to reciprocity, capture, integration, access and most importantly, the use of information (Jayachandran et al., 2005) are regarded as critically important aspects of CRM. Through these

processes and with the help of supportive technology firms focus on acquiring new customers, retaining their current customers, and enhancing existing customer relationships. Hence, customer data is converted into the firm's value, for example, through customized communications (more effective marketing communications), cross-selling (more effective selling), and segmentation (more effective customer profiles) (Payne & Frow, 2005). Furthermore, customer data is used to identify profitable customers from the unprofitable ones, to provide tailored and customized service and to gain a greater level of customer retention (Peppers, Rogers, & Dorf, 1999).

Altogether, the use of customer data results in an increase in customer understanding (knowledge-enhancing use) that can be used in the above-mentioned processes and in the development of more customer-specific products and services (action-oriented use) (Jayachandran et al., 2005). These, in turn, facilitate the firm's sales and result in supporting the firm's value creation. Richards and Jones (2008) complement the above mentioned benefits with CRM value drivers such as improved customer service efficiency and effectiveness and improved pricing.

It is important to recognize the different levels that these firm's value-creating processes employ. For example, customer data can be used to increase the level of understanding of customer preferences, which can then be used either to identify certain customer groups for the purpose of targeting a direct marketing campaign or launching a new product that meets the needs of those customers better. Whether the firm's value creation can be supported through customer data utilization or not is eventually dependent on whether customer behavior changes favourably due to customer data usage. In that respect, the success of CRM is dependent on whether customer data utilization – be it knowledge-enhancing use or action oriented use – simply results in customers spending more money on the firm's products and services. The central characteristics of the different information processes are summarized in Table 2.

Table 2. Central characteristics of information processes within a firm

Information process	Central characteristics	Supporting the firm's value creation
Customized marketing communications	The firm is able to send more customized messages to customers; more effective marketing communications.	Action-oriented use
Cross-selling	The firm is able to sell complementary products to customers.	Action-oriented use
New products and services	The firm is able to develop and create new products and services.	Action-oriented use
Identifying profitable customers	The firm is able to identify both the most profitable and unprofitable customers and react accordingly.	Knowledge-enhancing use
Segmentation	The firm is able to build segments and profile customers.	Knowledge-enhancing use

Yet from the customer's value creation point of view, it can be questioned whether the CRM framework succeeds in addressing the requirement of dual creation of value. The above discussion illustrates how the firms' CRM-activities are centered first and foremost on supporting the firm's value creation; customer data is used as an input resource to the firm's value creation processes. The ways in which customer data is eventually converted into customer value have remained unclear and obscure. CRM as a theoretical construct is firm-oriented and fails to address the customer perspective adequately.

2.5 Synthesizing the CRM framework of the research

CRM is widely recognized as an important research area, especially in the context of retailing. In order to remain competitive, retailers must succeed in leveraging their customer data asset. This is traditionally achieved through different information processes that have been discussed above, which result in supporting the firm's value creation, for example, through being able to identify the most profitable customers. Through customer data usage firms develop resources to be incorporated into their own value creation, to their resource integration processes. It can be argued that these processes, such as mass customization, sales force automation or database marketing, are more or less firm centric, focusing on

enhancing first and foremost the firm's value creation. This means increasing customer understanding and developing more suitable offerings to meet customer preferences and thus, increasing sales volume. Customer data is used to make customers buy more goods or services. Therefore, it is argued that the CRM framework is largely based on goods-dominant or product-centric thinking characterized by value-in-exchange rather than value-in-use.

Driven by real-world examples where the role of customer data is adjusted to better serve customers, there is increasing pressure to revitalize the CRM framework. Service applications are established that have a fundamentally different agenda in terms of customer data usage than described within the contemporary CRM framework. These examples – such as the public MyData initiative by the UK government in which major businesses are engaged in providing their customers with an opportunity to reclaim their data for their own use – are characterized by customer data being refined and given back to customers. Customers themselves are increasingly put in charge of their own data, which naturally holds major implications for the CRM framework as well.

This fundamental shift from firms' internal use of customer data toward external use of customer data is a natural consequence of the changing role of customer data; CRM has evolved through data dispersion (empowering technology), data organization (empowering data) and data ownership (empowering firms), and is now entering the phase of data sharing (empowering customers) (Table 3). Refining and giving customer data back to customers for their support is well in tune with firms moving their locus of exchange from goods to service and from selling to supporting. The evolution of CRM, as discussed in this chapter, was briefly reviewed in order to reflect and capture this paradigmatic change taking place in customer data usage. Research has been abundant and versatile in terms of the first three phases (i.e. data dispersion, data organization, data ownership). However, the recent shift toward empowering customers has yet remained as an unexplored area of research, which is why it offers a good opportunity for theory development within the CRM framework.

Table 3. Evolution of CRM; from empowering technology toward empowering customers

	I) DATA DISPERSION	II) DATA ORGANIZATION	III) DATA OWNERSHIP	IV) DATA SHARING
Characteristics	Firms were faced with overwhelming amounts of data; focus on developing technological solutions to manage the firm-customer interface better.	Customer data is organized to better serve firm purposes; concepts such as mass customization and one-to-one marketing are established.	Customer data as a firm asset; customer loyalty programmes are used to manage customer relationships better.	<i>Customer data is refined and given back to customers for the support of the customer's value creation.</i>
Focus	CRM as a technology solution; empowering technology	CRM as tactical and operational; Empowering data	CRM as strategy and philosophy; empowering firms	<i>CRM as serving customers; empowering customers</i>

This research is focused on the fourth phase of CRM evolution; it extends the CRM framework by shifting attention to reverse use of customer data; using customer data for the support of the customer's value creation. Today, the CRM framework is an overly firm-oriented construct and fails to identify ways in which customer data can be used for the support of the customer's value creation. It does not recognize the potential of converting customer data into information that can support the customer's value creation.

The CRM framework provides the basic understanding of data usage within the firm, including the information processes that support first and foremost the firm's value creation. This type of one-way use of customer data results in supporting the firm's value creation, but the degree to which it eventually results in supporting the customer's value creation is questionable. Customer data usage is driven first and foremost by the firm's value creation (see Figure 3).

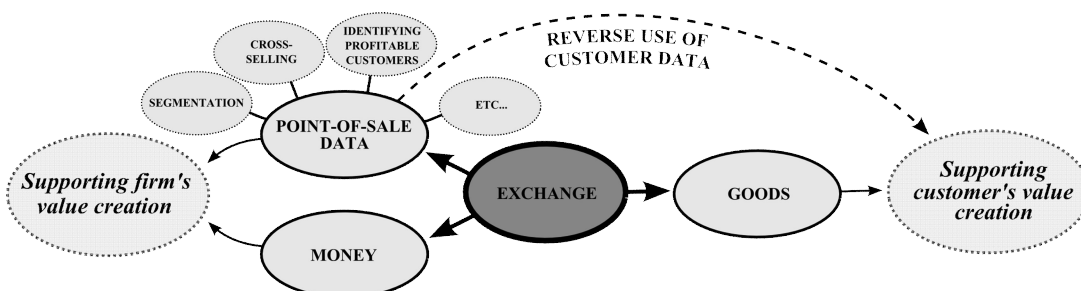


Figure 3. Simplified illustration of customer data usage within a firm

The current CRM literature does not offer adequate tools to understand or address the possibilities of reverse use of customer data; it does not discuss the opportunities of refining and giving customer data back to customers. In that respect, this research agrees with Alvesson and Kärreman (2007, 1265), who emphasize the role of empirical data (or empirical material) in developing theoretical ideas and challenging existing frameworks; it is used as a dialogue partner to question, doubt and develop:

In particular, we point to the ways empirical material can be used to facilitate and encourage critical reflection: to enhance our ability to challenge, rethink, and illustrate theory.

The CRM framework is characterized by the “market to” -philosophy (Lusch, 2007) and it fails to recognize the possibilities for value creation from the customer perspective. Perceiving the data usage from the point of view of the customer’s value creation introduces a new perspective not only to CRM, but more specifically to the central construct of dual creation of value. However, in order to understand the possibilities of reverse use of customer data – to understand it as a possible provider of additional input resources to the customer’s value creation – more theoretical insight must be generated. Consequently, exploring developments of the recent service literature and service-related concepts offers complementary support for building a theoretical framework for the research. This is done in the third chapter.

3. UNDERSTANDING VALUE CREATION

In marketing, the last few years have provided an interesting and thought-provoking setup of articles aiming at reshaping the very nature of the discipline. In general, there has been a widely established effort to revitalize the concept of service and emphasize its central role within marketing science. Today ‘service’ is not conceptualized or perceived similarly as during the time when services marketing as a subdiscipline started to evolve⁴. On the contrary, in the contemporary discussion around service the focus is on concepts and constructs such as value-in-use, customers’ own value creation, value co-creation and supporting customers’ value-creating processes. These contemporary service-related concepts have been largely emphasized, developed further and as a result, they increasingly lie at the core of contemporary marketing theory.

This chapter addresses the latest service-related advances within the marketing discipline. In the context of this research, current service theory provides the means to better understand the research phenomenon; it provides the mindset and the lens through which the contemporary marketing phenomenon at hand is viewed. It provides tools to understand customers’ value creation, and more specifically, how reverse use of customer data can contribute to supporting customers’ value-creating processes. In that respect, understanding the nature and logic of recent service-related approaches is of highest importance. Toward that end, Service-Dominant logic, service logic and Service Science are investigated in more detail including a more in-depth conceptual analysis of value co-creation – a central concept within the current service theory. The three service-related perspectives play a central role in today’s service research. Along with the CRM framework discussed in the previous chapter they create the theoretical foundation on which the empirical part of the research is built.

⁴ For a description of how services marketing as a new academic field of research evolved, see Fisk, Brown and Bitner (1993) and Berry and Parasuraman (1993).

3.1 Service-Dominant logic

The discussion around Service-Dominant logic (S-D logic) was launched by Stephen Vargo and Robert Lusch (2004), who succeeded in incorporating many loose ends, a result of the fragmentation of the marketing field (Gummesson, 2008b, 323). On the basis of a thorough historical analysis of marketing thought they argued that service – instead of goods – should be the fundamental unit of exchange. Goods are only transmitters of service and act as means for the customer to benefit of firm competences (e.g. Vargo & Lusch, 2004; Vargo, Maglio, & Akaka, 2008). Marketing as a discipline inherited the goods-dominant way of looking upon exchange from economics, which affected the way value – one of the most central concepts in marketing – was perceived. Eventually, marketing absorbed a logic based on goods-centric thinking including how value and value creation were perceived. Thus, in their seminal article and in the numerous publications that have followed, Vargo and Lusch have criticized marketing theory for being built on false assumptions and they have offered synthesized insight into the way marketing theory and value creation in general should be viewed.

Although presented under the new label, a majority of the ideas is not new per se, nor have Vargo and Lusch claimed to have the ownership of the ideas presented under the S-D logic. On the contrary, they have invited the academia to join them in a collective and open source effort to develop marketing theory.

3.1.1 Giving guidance to the marketing discipline

Since the first article on S-D logic in 2004 (Vargo & Lusch, 2004), the theoretical discussion around the new and evolving ‘paradigm’ has been fueled by a great number of contributions from researchers all around the world. S-D logic and its basic constructs have been discussed and debated in various forums. Special issues⁵ on S-D logic have been published in the leading edge marketing journals, not to

⁵ See e.g. Marketing Theory Vol. 6 (3), Australasian Marketing Journal Vol. 15 (1) and Vol. 18 (4), Journal of Academy of Marketing Science Vol. 36 (2), European Journal of Marketing Vol. 45 (1/2), Industrial Marketing Management Vol. 40 (2), International Journal of Physical Distribution and Logistics (forthcoming), and Review of Marketing Research (forthcoming).

mention the tens of conferences and books (e.g. Lusch & Vargo, 2006c) where these issues have been forwarded.

On the basis of the wide and intensive interest toward the subject field, it can be argued that to a large extent, S-D logic has been the contribution that a discipline consisting of a fragmented setup of varying marketing models and theories has longed for. S-D logic is about building a unified basis for the marketing discipline. Toward that end, it has fueled the need of sense-making for the discipline looking for a direction and as a whole wrapped up more or less the history of marketing in a synthesized way. As Vargo (2011, 218) concludes:

In all of our efforts, our purpose has been to identify, find, converge, and point toward a logical extension of conceptual and perceptual shifts taking place in apparently diverse research streams, especially, though not exclusively, in marketing. This evolution seems to point to a somewhat different foundational understanding of the role of exchange in human systems than the more dominant foundation that has emanated from early economic philosophy and science.

The roots and explanation power of S-D logic lie in the historical analysis of marketing conducted by Vargo and Lusch (2004; see also Lusch, 2007; Vargo, Lusch, & Morgan, 2006). S-D logic's basic ideology was created as a result of a thorough exploration of how marketing as a discipline evolved through different phases (see Lusch, 2007). It can be argued that S-D logic originally emerged as a result of identifying the rather fragmented setup of sub areas within marketing. In that respect, this fragmentation and the wide variety of different sub areas within marketing should be understood as a signal of a paradox and a cry for a more synthesized and unified approach to the phenomena (Vargo, 2007a).

3.1.2 S-D logic – a theory, a paradigm, or a mindset?

Before investigating the central concepts of S-D logic and what it eventually is all about, one should first understand what S-D logic should in general terms be considered as. Since the first article in 2004 (Vargo & Lusch, 2004) a need for empirical verification has been established. However, despite the fact that this 'empirical verification' implies that S-D logic is a theory-like construction, it is not

one. Although the ten foundational premises of S-D logic (Vargo & Lusch, 2008a) would provide an interesting starting point for hypothesis development, S-D logic should not be considered as a theory that ought to be tested through deductive reasoning. As stated by Vargo (2007a), S-D logic is not a theory. At this stage of the evolution it does not meet the criteria for a theory; instead, it could be understood as a pre-theory (see Winklhofer, Palmer, & Brodie, 2007; Vargo, 2011).

Neither should S-D logic be treated as a paradigm, although many have referred to it as ‘a new paradigm’ (Vargo, 2007a; see also Vargo & Lusch, 2006; Vargo, 2008; Vargo, 2011). Paradigm, as a theoretical concept, refers to “accepted examples of actual scientific practice – examples which include law, theory, application, and instrumentation together” (Kuhn, 1962, 10). In other words, they configure ways of seeing and are sets of prior assumptions (Lowe, Carr, & Thomas, 2004). Paradigms can be regarded as powerful yet paradoxical. As argued by Vargo (2008, 212):

They simultaneously provide foundational models and concepts for understanding the world and restrict our ability to see it, at least from a counter paradigmatic perspective. Paradigms determine the research questions to be asked and the general rules to follow in the phase of interpretation (Bagozzi, 1976).

As argued by Arndt (1985, 11), paradigms “form the foundation for theories, but often remain implicit, are taken for granted, and, hence, are usually unquestioned”. Moreover, they reflect the interest and values of the dominant researchers (ibid). Hence, according to Vargo and Lusch (2006; see also Vargo, 2008), the goods-centered approach of marketing, or more precisely, ‘the Goods-Dominant logic’ (G-D logic) (Vargo & Lusch, 2004) has represented a paradigm of marketing and to some extent still does. This argument is based on the notion that the basic marketing language is substantially goods-oriented. Terms such as product, form, place, distribution, targeting, the marketing mix and the producer all imply the centrality of the good (Vargo & Lusch, 2006). In that respect, S-D logic may eventually evolve into a paradigm; a worldview that is shared among marketing academia. Importantly, worldviews are not determined on the basis of a single article nor created within few years: “worldviews are determined bottom up rather than top down and, thus, it is the discipline that will make this determination, over time”

(Vargo, 2007a, 106). However, as S-D logic is not a paradigm in itself, it can be regarded as operating at a paradigmatic level of analysis (ibid).

If S-D logic is not a theory – but is regarded more as a pre-theory, and not a paradigm – but can be perceived as operating at a paradigmatic level of analysis, what should it actually be considered as? S-D logic can be regarded as a lens, a mindset, through which phenomena can be viewed (Vargo & Lusch, 2008a), or more like a philosophy (Lusch, Vargo, & Malter, 2006). Basically, S-D logic can be understood simply as just what the name implies – a logic (Vargo, 2007b). Similarly in this research, S-D logic is perceived first and foremost as a mindset or a logic⁶. A mindset implies more managerial relevance, whereas a logic has a more objective connotation implying S-D logic's ability to describe what marketing as a discipline is all about. For firms, S-D logic does not offer direct means to better customer value or financial success. Hence, it is not normative in that sense⁷. However, it does provide new insight that can adjust managerial mindsets in order to achieve a better fit in contemporary markets.

3.1.3 Central characteristics

One of the central notions of S-D logic is the distinction between the traditional way of perceiving value creation and exchange, i.e. the G-D logic, and the new and emerging perspective, where service is underlined as the fundamental construct in marketing. In G-D logic, the focus was on tangible output and value was perceived to be created during the manufacturing process. Firms embedded goods with value and consumers destroyed the value. Marketing absorbed a considerably goods-centered view on value creation; marketing evolved a tangibility fixation (Lusch, Vargo, & Malter, 2006). Lusch, Vargo and Malter (2006) have argued that this development was also due to the fact that marketing thought was based on the foundations of economics, which in turn, was highly affected by Adam Smith's focus on the creation of national wealth through the export of surplus tangible goods. Secondly, the general model of science favored the 'Newtonian' mechanical

⁶ This is in line with Edvardsson, Gustaffson and Roos (2005), who asked several leading international scholars within service research to describe how they perceived and defined service. The basic finding was that it was regarded more as a perspective than activity.

⁷ For a discussion of the positive/normative nature of the S-D logic, see Vargo (2007b).

model of tangible things that were embedded with different properties. Perceiving goods as embedded with value served the marketing discipline's need for justification. Lastly, they emphasize that marketing practice originally developed as a business function in the context of industry and agriculture and focused on the distribution of tangible products. Later, G-D logic as a perspective has proven to be inadequate, especially in contemporary markets. According to Lusch, Vargo and Malter (2006), marketing models such as market orientation, customer orientation, CRM, service quality, to name but a few, are all as such evidence of the G-D logic's inadequateness to explain marketing phenomena. They have been created to adjust or reframe the old G-D logic without changing its very foundation. However, as time passes, anomalies⁸ may arise for which normal science fails to provide adequate answers. When such anomalies build up and scientists are losing faith, the field enters a crisis stage. This culminates in a scientific revolution, and a new paradigm emerges (compare with Arndt, 1985) that eventually will go through the same cycle.

Altogether, what is important in the context of this research is to understand the 'new' perspective to goods and services. Whether the customer buys goods or services as such is irrelevant. What the customer buys are resources or processes that support the customer's own value creation (see also Humphreys & Grayson, 2008). As is argued by Gummesson (1995, 250–251):

Customers do not buy goods or services: they buy offerings which render services which create value... The traditional division between goods and services is long outdated. It is not a matter of redefining services and seeing them from a customer perspective; activities render services, things render services. The shift in focus to services is a shift from the means and the producer perspective to the utilization and the customer perspective.

Instead of focusing on a single good or service, the focus should be shifted toward the customer context, to customers' own value-creating processes and to the way the customer uses the resources provided by the firm in his or her own value creation. S-D logic does not make a distinction between goods and services (Lusch, Vargo, & Malter, 2006). According to the S-D logic, since goods as such are not embedded

⁸ For a similar discussion concerning *breakdowns* resulting from misfit between an empirical finding and current theory, see Alvesson and Kärreman (2007, 1270–1271).

with value firms can only offer value propositions⁹. To elaborate on the basic idea of the S-D logic and capture its basic tenets, Vargo and Lusch introduced what they called foundational premises, which were published already in the seminal article on S-D logic (2004). Since 2004, they have modified the existing premises (Lusch & Vargo, 2006a; Vargo & Lusch, 2006) and added two more (Vargo & Lusch, 2006; Vargo & Lusch, 2008a) resulting in altogether ten foundational premises (see also Grönroos, 2011). These premises form the basic structure of the S-D logic. The foundational premises are presented in Table 4.

Table 4. The foundational premises of S-D logic (Vargo, S. L., & Lusch, R. F. (2008a). Service-dominant logic: Continuing the evolution. Journal of the Academy of Marketing Science, 36 (2), 1–10)

No.	Foundational premise	Explanation
FP1	Service is the fundamental basis of exchange	The application of operant resources (knowledge and skills), 'service' as defined in S-D logic, is the basis for all exchange. Service is exchanged for service.
FP2	Indirect exchange masks the fundamental basis of exchange.	Because service is provided through complex combinations of goods, money, and institutions, the service basis of exchange is not always apparent.
FP3	Goods are a distribution mechanism for service provision.	Goods (both durable and non-durable) derive their value through use – the service they provide.
FP4	Operant resources are the fundamental source of competitive advantage.	The comparative ability to cause desired change drives competition.
FP5	All economies are service economies	Service (singular) is only now becoming more apparent with increased specialization and outsourcing.
FP6	The customer is always a co-creator of value.	Implies value creation is interactional.
FP7	The enterprise cannot deliver value, but only offer value propositions.	Enterprises can offer their applied resources for value creation and collaboratively (interactively) create value following acceptance of value propositions, but can not create and/or deliver value independently.
FP8	A service-centered view is inherently customer oriented and relational.	Because service is defined in terms of customer-determined benefit and co-created it is inherently customer oriented and relational.
FP9	All social and economic actors are resource integrators.	Implies the context of value creation is networks of networks (resource integrators).
FP10	Value is always uniquely and phenomenologically determined by the beneficiary.	Value is idiosyncratic, experiential, contextual, and meaning laden.

⁹ For the discussion about nature of value propositions, see e.g. Anderson, Narus, and van Rossum (2006). For a more recent exploration, see Kowalkowski (2011) and Frow and Payne (2011).

In the end, when discussing what S-D logic is all about, one can refer to Lusch, Vargo, and Malter (2006, 267):

It provides a mental model of exchange with different implications for practitioners and public policy makers than the prevailing dominant logic in much the same way as an understanding of justice can refocus the notion of democracy, and understanding of love can refocus the notion of sex, and an understanding of strategy can refocus the practice of management.

What S-D logic offers, is a new perspective to value creation – one of the most central issues in marketing.

3.1.4 Criticism

The majority of the contributions around S-D logic have been in favor of the central tenets of the emerging logic. There are some exceptions as well. To a large extent the criticism has been targeted at the basic constructs of S-D logic, the co-creation framework embedded within the S-D logic or the ‘newness’ of S-D logic (see e.g. Wooliscroft, 2008). Schembri (2006, 386), for example, argues that “services are dynamic experiences, co-constructed with customers in accordance with their views that may or may not include active participation of the customer”. Moreover, contrasted with the sixth foundational premise of S-D logic (“The customer is always a co-creator of value”), Schembri (2006, 387) emphasizes that “customers are not always anything in particular”; some choose not to participate and some choose to become co-producers of the service and contributes actively to the service delivery process (Bettencourt, 1997).

Stauss (2005) also provides provocative thoughts that contradict the established perspective on value creation. From the firm’s point of view, the new paradigm advocating customer integration fails to identify some significant real differences between when the customer acts as a co-creator and when he or she does not. When using a physical good, the customer does not cause the firm any problem in terms of interaction, integration, or capacity. Moreover, based on his argument, Stauss (2005, 224) proposes: “Broadening the understanding of co-production to include the use

of physical goods leads to an abstract equating of matters that are manifestly different, and to an abandonment of important service-specific insights”.

One of the most provocative critiques of co-creation and S-D logic in general has been provided by Brown (2007). He argues that the recent chase for a new paradigm and “the next big scholarly thing” is being fueled by marketing’s never-ending quest towards “Sciencepolis”. Brown argues (2007, 296):

It’s a learned fairy story, an uplifting tale of once upon a time and happily ever after. It reminds us that, for all our talk of goods-dominant and service-dominant logics, the real driver of marketing endeavour is its story-dominant logic. We’re storytellers, storysellors, storyyellers.

In addition to the above-mentioned critics, Grönroos (e.g. 2008a; 2008b; 2011) has criticized some of the basic constructs of S-D logic, especially value co-creation. The differences between S-D logic and what Grönroos calls service logic are discussed later in this chapter. More recently, O’Shaughnessy and O’Shaughnessy (2009; 2011) have criticized that the S-D logic is neither logically sound nor a perspective that could displace others within the marketing discipline (see also Vargo and Lusch’s rejoinders 2011a; 2011b). Despite the criticism, great number of researchers, especially in Europe, have embraced the ideas presented within the S-D logic. S-D logic has raised the theoretical discussion of the role of marketing and creation of general theory for marketing up to a whole new level¹⁰. In addition, Vargo and Lusch have succeeded at least to some extent in responding to the questions raised by the critics (e.g. Vargo & Lusch, 2006; 2008a; 2011a; 2011b) and in the end, always emphasized that S-D logic is not something they have invented – it is a collective effort to further marketing theory.

3.2 Service logic

Based on the Nordic School research tradition, but with a separate identity, service logic (e.g. Grönroos 2008a; 2008b; 2007b, 181–189; 2006a; 2006b) has provided the marketing field with a slightly different perspective on service and value

¹⁰ For a critique concerning S-D logic’s strive toward being a general theory, see Möller (2007).

creation compared to the S-D logic. The aspects emphasized by the S-D logic are to a large extent similar with – and even based on – the contributions from the Nordic School research tradition. Thus, for the most part, the differences between S-D logic and service logic are semantic in nature. However, some differences do occur: for example, the way value co-creation is approached is notably different. This specific difference is discussed in more detail later in this chapter.

Most importantly, service logic makes a clear distinction between customer service logic and provider service logic (Grönroos, 2008a; Grönroos, 2011). The former relates to customers combining the resources provided by the firm with other resources in their everyday practices. The latter, in turn, takes a firm perspective by arguing that through interactions with customers firms can develop opportunities for value co-creation. During these interactions both the customer and the firm have an effect upon each other and are subjects (Grönroos & Ravald, 2011); i.e. active participants in the customer's value creation. As Grönroos (2011, 289) argues, in interactions the customer and the firm are in some contact: "Interactions are situations where the interacting parties are involved in each other's practices, and have opportunities to influence each other." Through engaging in the process of customers using goods or services, the firm can co-create value with them and for them (Grönroos, 2008a). The firm's strategy is not solely based on goods provision. Thus, what is essential in service logic is how the actual creation of value is viewed and understood. It is the customers who create value for themselves as a result of their resource integration process (Grönroos, 2008a, 303):

As firms provide customers with resources for their use, they can be viewed as creators of a value foundation through a value facilitation process. When customers use these resources (goods or services) and add other resources (goods, services, and information) and skills held by them, the value potential of the resources is developed into value-in-use. Hence, the customers also bring a value foundation to the table.

In terms of value creation, service logic makes a clear distinction between goods and services. Goods are perceived as value-supporting resources, whereas services are value-supporting processes. Service logic is about the firm facilitating processes that support customers' value creation. Goods logic, in turn, is about the firm

proving customers with goods as resources available for their own value creation (Grönroos, 2006a).

Another important aspect of service logic is the argument against S-D logic's seventh foundational premise: the enterprise cannot deliver value, but only offer value propositions (Vargo & Lusch, 2008a). Grönroos (e.g. 2008a; 2008b) argues that by engaging itself with the customer's own value creation process the firm is able to co-create value with the customer and thus, is not restricted to making value propositions only. Hence, the concept of interaction – activities that occur between the firm and its customer during the customer's consumption process – becomes critically important. Interaction is the key through which firms can influence the value actualization process. Therefore, according to service logic, the focal construct in marketing should be interaction, rather than exchange, or service (Grönroos, 2007b, 200)¹¹. For example, the customer can interact with a physical good, ATM, a vending machine or a complaints handling process and with people, technologies, systems or information involved in such interactions (Grönroos, 2006b). These interactions are there to make sure that customers get the value that was originally expected from goods and services. Normatively, firms need to find new and innovative ways to enter the consumption process and create interactions during that process (Grönroos, 2007b, 198). Firms should strive to add more resources to the goods themselves in order to support and facilitate the use of goods. Alternatively, they could provide customers with a variety of different resources – goods, information, other service activities and access to advice – in a value-supporting process (ibid, 197–198)¹².

The differences between S-D logic and service logic are summarized in Table 5¹³.

¹¹ For exchange as a central construct in marketing, see e.g. Hunt (1976), and for service as a central construct in marketing, see e.g. Vargo & Lusch (2004).

¹² More recently, Heinonen et al. (2010) have introduced a customer-dominant logic, which can be seen as sharing similarities with S-D logic and service logic. Customer-dominant logic emphasizes the importance of placing focus on what customers are eventually doing with services and service in order to accomplish their goals. Hence, what is central is not the offering, but the customer's life and the tasks it is related to (see Strandvik, Holmlund, & Edvardsson, 2008).

¹³ Service Science was not included in the Table 5 due to the fact that it is to a large extent in line with the S-D logic. Thus, only differences between S-D logic and service logic are explored in more detail.

Table 5. Differences between the S-D logic and the service logic

	S-D logic	Service logic	Difference
Goods	Goods are transmitters of service and intermediate “products” that are used in the value creation process. Goods act as a vehicle for operant resources enabling access to benefit of firm competences (Vargo & Lusch, 2004; Vargo, Maglio, & Akaka, 2008).	Goods are resources, but they cannot transmit services alone, other resources are needed as well (Grönroos, 2006a; 2006c, 354–355).	Service logic disagrees with the S-D logic perspective that goods are transmitters of service and emphasizes that other resources than merely goods are needed as well.
Service	Service is the application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself (Vargo & Lusch, 2004).	Service is a process that consists of a set of activities which take place in interactions between a customer and people, goods and other physical resources, systems and/or infrastructures representing the service provider and possibly involving other customers, which aims at assisting the customers’ everyday practices (Grönroos, 2008a).	S-D logic emphasizes the role of specialized competences, especially operant resources, in service provision. Service logic views service as a set of activities which take place in interactions. In addition, it highlights service’s role as facilitating customers’ everyday practices.
Value	Value is always uniquely and phenomenologically determined by the beneficiary (Vargo & Lusch, 2008a, 9). Value is always intangible, heterogeneously experienced, co-created, and potentially perishable (Vargo & Lusch, 2008b).	Value for customers means that after they have been assisted by a self-service process or a full-service process they are or feel better off than before (Grönroos, 2008a).	Both approaches acknowledge the subjective nature of value. Service logic emphasizes customer’s own value-generating activities as a starting point for understanding value for customers.
Value proposition	Firm can only offer value propositions that can be understood as a promise that value-in-exchange will be linked to value-in-use (Lusch, Vargo, & O’Brien, 2007).	Firms can influence both the development of value propositions and the process of value fulfillment (Grönroos, 2008a).	On the basis of different implications drawn from the concept of value-in-use, S-D logic and service logic differ in terms of whether the firm can do more than just offer value propositions.
Value-in-use	Value is co-created with the customer and determined by the customer’s assessment of value-in-use (Lusch, Vargo, & Malter, 2006).	Value is created in customers’ everyday activities and value-creating processes (Grönroos, 2007b, 196).	Both approaches carry similar perceptions of value-in-use.

Inter-action	Views interaction as being implicitly part of S-D logic. For example, interaction is central when viewing marketing as social and economic processes from the S-D logic's perspective (Lusch & Vargo, 2006a).	Through interactions firms create opportunities to make sure customers get the value that was originally wanted from goods and services (Grönroos, 2008a). Interaction is about the actors having an effect upon each other (Grönroos & Ravald, 2011; Grönroos, 2011).	S-D logic considers interaction as a vehicle to better manage networks. Service logic views interaction as more fundamental construct, allowing firms to influence the value actualization, i.e. value-in-use.
Value co-creation	Value is always co-created with the customer (Vargo & Lusch, 2008a).	Value is created solely by the customer and in some cases, through interactions, co-created with the firm (Grönroos, 2008a).	S-D logic argues that value is co-created, but according to service logic, value is created by the customer and only through interactions, a firm can act as a co-creator of value.
Firm	Firms exist in order to integrate and transform different kinds of micro-specialized competences into services (Vargo & Lusch, 2006). Firms should propose and co-create value, provide service and think in terms of service flows, rather than in terms of purchasing goods (Lusch, Vargo, & Malter, 2006).	Firms provide customers with a value foundation and they should focus on understanding customers' everyday practices and value-generating processes and facilitate these processes (Grönroos, 2008a).	S-D logic focuses on the firm's role as integrator and transformer of resources and emphasizes the importance of extending the firm's perspective from products to service. Service logic emphasizes the importance of firms understanding of customers' everyday practices and their role as facilitating these processes.
Customer	Customer is a co-creator of value, operant resource and collaborative partner (Vargo & Lusch, 2004; Lusch, Vargo, & O'Brien, 2007).	Customer's value foundation, i.e. customer's own resources, and other resources such as information, together, create the value potential for customer value (Grönroos, 2008a).	Service logic views the customer in terms of value foundation and acknowledges the importance of additional resources that are needed in order for value to realize. Similarly, what comes to customer as an additional resource in value actualization, S-D logic sees customers as co-creators and as an operant resource.
Marketing focus	Service exchange is the fundamental construct in marketing (Vargo & Lusch, 2008b, 32). Marketing should identify and develop the core competences and position them as value propositions that offer potential competitive advantage (Vargo & Lusch, 2004). Marketing ought to focus on providing service to all stakeholders (Vargo & Lusch, 2008b).	Interaction is the fundamental construct in marketing. Marketing should focus on developing and communicating value propositions to customers and facilitate customers' own value creation through resources and interactions (Grönroos, 2008a; Grönroos, 2007b, 210).	S-D logic and service logic provide contradictory viewpoints to the question of the focus of marketing. S-D logic argues for service exchange whereas Service logic views interaction as a foundational construct in marketing.

3.3 Service Science

Service Science is originally an IBM-led discipline within the evolving service framework. It shares to a large extent similar characteristics with S-D logic and has received an increased amount of attention during the last few years. Service Science can be defined as the interdisciplinary study of service systems (Maglio et al., 2009) and value co-creation is one of its fundamental constructs. Service systems, in turn, are value co-creation configurations composed of people, technology and value propositions. Both global economies as well as individuals can be regarded as service systems (Maglio & Spohrer, 2008). Different service systems are connected to each other through value propositions and they aim at taking advantage of their own as well as other's resources in order to improve their and others' circumstances (Vargo, Maglio, & Akaka, 2008).

Service Science as an approach yields more insight into the way different service systems interact to co-create value. It employs a somewhat different perspective, but does not necessarily introduce theoretically new insight into service. Its fundamentals are discussed by Vargo, Maglio and Akaka (2008, 149):

Moving the locus of value creation from exchange to use, or context, means transforming our understanding of value from one based on units of firm output to one based on processes that integrate resources. We think this move is fundamental for the development of Service Science, which aims to focus scientific attention on problems associated with innovating service and enhancing service provision (Chesbrough & Spohrer, 2006; Spohrer et al., 2006).

Service Science shares characteristics with the other service-related perspectives. It has even been argued that it is theoretically based on S-D logic (Maglio & Spohrer, 2008, 18), which, however, can be regarded as a slightly misleading argument due to the fact that S-D logic is not considered as a theory (Vargo, 2007a). Altogether, during the past years Service Science has gained scholarly attention and contributed increasingly to service research, which is why it is briefly discussed also in the context of this research.

3.4 Value co-creation

The concepts of value and value creation have increasingly moved to the core of the marketing discipline. The centrality of value has been fueled even more by the recent theoretical developments in service and the intensive, but highly conceptual, discussion around value co-creation. Value co-creation has become one of the most popular concepts within marketing – and especially within service research – as scholars around the world have provided versatile contributions to the domain where customers and firms work together to create beneficial output. The current discussion around value co-creation was intensified with the emergence of the S-D logic. However, as a concept it is anything but new and the discussion does not by any means take place exclusively within the S-D logic. The importance of value co-creation has been acknowledged also in other streams of literature, including service logic (e.g. Grönroos, 2008a; 2008b) and Service Science (e.g. Chesbrough & Spohrer, 2006; Maglio & Spohrer, 2008). Value co-creation has also been referred to, for example, in the context of new service development (e.g. O’Hern & Rindfleisch, 2009; Kristensson, Matthing, & Johansson, 2008; Matthing, Sanden, & Edvardsson, 2004) and customer communities (e.g. Rowley, Kupiec-Teahan, & Leeming, 2007; Gustaffson, Roos, & Edvardsson, 2004). Also more critical viewpoints have been provided (Schembri, 2006; Stauss, 2005; Brown, 2007; see also Zwick, Bonsu, & Darmody, 2008).

As a concept, the importance of co-creation was highlighted already by Normann and Ramirez (1993). Normann and Ramirez stated that our thinking of value is affected by the models inherited from the industrial economy. Therefore, we should focus on reinventing value in terms of the value-creating system itself, through which different economic actors – suppliers, business partners, allies, and customers – work together to co-produce value (Normann & Ramirez, 1993). This perspective is in line with Lusch’s (2007) notion that marketing is entering the phase of *marketing with* customers instead of *marketing to* customers. The shift from customers as objects of action to customers as subjects in a joint creation of value is evident. The question is no longer “What we can do for you?”, it is rather “What can you do with us?” (Wind & Rangaswamy, 2001, 21). Furthermore, the role of customers has changed “from isolated to connected, from unaware to informed, from passive to active” (Prahalad & Ramaswamy, 2004b, 4). Customers can no

longer be regarded as passive targets of marketing actions; they are viewed more as co-creators or co-producers than an objective audience (Lusch, Vargo, & O'Brien, 2007).

Thus, what characterizes the discussion around value co-creation is the acknowledgment of the role of active customers in value creation; a rather drastic contradiction to the traditional G-D logic (e.g. Lusch, 2007; Vargo & Lusch, 2008b). Value creation is no longer viewed as taking place during the manufacturing process by the firm only, but as something that the customer is in charge of in his or her own context (e.g. Vargo & Lusch, 2004; 2008a). Thus, common to value co-creation is the universal shift from G-D logic (Vargo & Lusch, 2004; Lusch & Vargo, 2006a; 2006b) (also known as the manufacturing logic or the old enterprise, or more specifically in the marketing context as product orientation or marketing myopia (see Vargo & Lusch, 2008b, 25)) toward a more holistic perspective on value creation.

To summarize, the value co-creation concept lies at the core of the recent advances within the service and marketing fields. In the context of this research, the concept provides a means to understand contemporary marketing phenomena where it is critically important to view value creation beyond traditional exchange and goods provision. The concept plays a fundamental role in addressing the new forms of resource integration processes that are increasingly emerging between firms and customers in today's business environment. However, the current literature provides multiple approaches to value co-creation that – despite having some similarities regarding the general aspects of the concept – carry and imply different characteristics and emphasis on what eventually constitutes the very nature of the concept. The wide variety of contributions – both in terms of scale and level of abstraction – has resulted in a complex setup of definitions and interpretations of how customers create value jointly with firms and other actors. This conceptual complexity and the large number of real-world examples characterized by industry-specific characteristics have resulted in a concept with a nuanced and multifaceted structure, both conceptually and empirically. Consequently, its ability to serve either theoretical or practical purposes can be questioned. Although the recent developments have provided additional insight into value co-creation, the concept itself and its applicability for practitioners have remained at a rather vague and abstract level. A more thorough discussion about the concept's theoretical and

business relevance is evidently needed: “To be able to understand and manage the creation of customer value, it is important to use the expressions ‘value creation’ and ‘co-creation of value’ in a well-defined way that cannot be interpreted in a multitude of ways” (Grönroos & Ravald, 2011, 16). Toward that end, to gain an in-depth understanding of the concept and in order to serve the purpose of this research, a more detailed analysis of the different approaches is needed both in terms of this research and service research in general.

3.4.1 The S-D logic approach to value co-creation

S-D logic has been in the forefront of value co-creation in terms of the most widely cited contributions to the subject field. S-D logic makes a clear distinction between co-production and co-creation. The former relates to the production of the core offering itself (Lusch & Vargo, 2006a; see also Lusch, 2007; Lusch, Vargo, & O’Brien, 2007) and the latter relates to value being created with and determined by the user in the ‘consumption’ process and through use or what is referred to as value-in-use or value-in-context¹⁴ (see Vargo, 2008) (or even more recently; value-in-social-context, see Edvardsson, Tronvoll, & Gruber, 2011). S-D logic’s approach to value co-creation is illustrated also in two of the ten foundational premises (Vargo & Lusch, 2008a). According to the sixth foundational premise, value is always co-produced (Vargo & Lusch, 2004), or more precisely after reformulation, co-created (Vargo & Lusch, 2008a). The customer is perceived as endogenous to the value creation process and hence, similarly for example with Prahalad and Ramaswamy (2000; 2004a; 2004b; Ramaswamy, 2009; for the more recent emphasis on human experience, see Ramaswamy, 2011), value is a joint function consisting of the actions of the provider(s) and the consumer(s).

Hence, the S-D logic approach to value co-creation is characterized by a resource orientation as it emphasizes the integration of customer and firm resources in value creation (see e.g. Vargo & Lusch, 2004; 2008a). The tenth foundational premise, in turn, argues that “value is always uniquely and phenomenologically determined by the beneficiary” (Vargo & Lusch, 2008a, 7). Because customer resources are

¹⁴ For a critique concerning the use of the concept of value-in-context, see Grönroos and Ravald (2011).

heterogenic and individual, value is always dependent not only on the customer preferences, but also on the resources that the customer contributes to the exchange and consumption process. As Vargo and Lusch (2004, 11) note:

However, for these services to be delivered, the consumer still must learn to use, maintain, repair, and adapt the appliance to his or her unique needs, usage situation, and behaviors. In summary, in using a product, the customer is continuing the marketing, consumption and value-creation and delivery processes.

Thus, according to the S-D logic, value is always co-created as customers “must still undertake a series of activities before the market offering can provide its intended value” (Humphreys & Grayson, 2008, 5). Despite the wide array of contributions around value co-creation, the S-D logic perspective to the concept operates at a rather abstract level of analysis and fails to adequately address what foundationally characterizes value co-creation. Moreover, no clear definition is provided, which impedes its practical and managerial relevance.

3.4.2 The service logic approach to value co-creation

The service logic approach to value co-creation can be regarded as perhaps the most controversial in relation to the mainstream literature. Besides providing a different approach to value co-creation, service logic explores the process of value co-creation in a more concrete and detailed way. Similarly with the S-D logic, service logic perceives value as something that is defined by the customer or the beneficiary. More specifically, value is something that emerges in the customers’ sphere, in customers’ own everyday practices and value-generating processes. Value can be defined as something that emerges when customers have been assisted by a self-service process or a full-service process and as a result feel better off than before (Grönroos, 2008a). However, in terms of co-creation, Grönroos (2008a, 305; see also Grönroos, 2006a; 2006b) has argued – contrary with the mainstream literature – that value is not co-created:

If value is created in customers’ value generating processes and should be understood as value-in-use, and if value-in-exchange for the suppliers is dependent on whether value-in-use is emerging or not, the customers have to be the value creators.

Therefore, value is created by the customer and only in some cases, if interactions between the supplier and the customer are established; value is co-created (Grönroos, 2008a). These interactions take place when the firm is an active participant in the customer's value-generating process instead of acting only as a passive facilitator. Contradictory to the S-D logic, "it is not the customer who becomes a value co-creator with a supplier, rather, it is the supplier which, provided that it adopts a service logic and develops firm-customer interactions as part of its market offerings, can become a co-creator of value with its customers" (Grönroos, 2008a, 307). In summary, the customer is the main creator of value and value is co-created during the customer's own value-creating activities only if the firm is able to affect the customer's value actualization process. Hence, the service logic approach employs a dyadic (firm-customer) orientation to value co-creation with a specific emphasis on customer value. Through interactions firms aim at making sure that value-in-use equals the value proposition. Therefore, according to Grönroos (2007b, 197–198), firms should find innovative ways to establish interactions and enter the customer's consumption process, and as a result, co-create customer value.

More recently, closely linked to value co-creation, Grönroos and Helle (2010) have introduced the concept of mutual value creation that focuses on matching supplier and customer processes. Mutual value creation is an interactive process of creating and sharing joint productivity gains between the supplier and the customer. Consequently, the monetary worth of those gains is shared through the price to the parties involved in the business engagement.

3.4.3 The Service Science approach to value co-creation

Service Science shifts the focus to the way participants, processes, and resources interact to co-create value in service systems (Vargo, Maglio, & Akaka, 2008). In the context of service systems, value is defined simply in terms of an improvement in system well-being (ibid; compare with Grönroos, 2008a, 305). Conceptually the approach is to a large extent in line with the S-D logic. Spohrer et al. (2008) have argued that these two areas of research overlap in many cases.

Service Science explores value co-creation as occurring through “the integration of existing resources with those available from a variety of service systems that can contribute to system well-being as determined by the system’s environmental context” (Vargo, Maglio & Akaka, 2008). Due to specialization and exchange, every service system is dependent on other service system entities. Each service system can be regarded both as a customer and a provider and together they can interact to co-create value (Spohrer et al., 2008). Hence, Service Science has a system orientation to value co-creation. The Service Science approach to value co-creation can be regarded as relatively wide, concentrating on exploring collective value co-creative service systems that function together in order to enhance the overall well-being respectively.

3.4.4 Other approaches

In addition to S-D logic, service logic, and Service Science, some other approaches have been introduced to bring additional insight and perspectives into the subject field of value co-creation. These include, for example, many-to-many marketing, new service development, and postmodern marketing that are here briefly reviewed to illustrate the variety and the diverse nature of the discussion around value co-creation.

Many-to-many marketing employs a network orientation by emphasizing the role of customer networks and identifying the importance of the multitude of actors such as intermediaries, employees, neighbors, and society in general in the co-creation of value. According to Gummesson (2007; see also 2008a; 2008c; for a more recent elaboration, see Gummesson, 2011), it is not enough to focus only on the dyadic relationship, for the variety of different actors involved in the value creation should be recognized as well. Thus, the nodes, links, relationships and interactions between these actors form the basis for the co-creation of value.

During the last couple of years, the co-creation framework has received a great amount of contributions from the new service development stream of literature – a research field that has to a large extent evolved independently and aside from the evolution of S-D logic or other service-related approaches to value co-creation. Following the widely acknowledged shift toward more active customers, firms are

increasingly engaging customers in their new product/service development processes. When developing new products and services, firms have traditionally engaged in various forms of marketing research (O'Hern & Rindfleish, 2009). However, to uncover the latent and hidden needs of customers, traditional survey methods may prove to be inadequate in obtaining a deep understanding of the customer preferences. The risk of a mismatch between the product and the customers may be realized as the information about customer needs and wants does not transmit correctly. Thus, firms are more motivated to engage customers in new service development processes to uncover the true needs and wants of the customers and to provide better service for them. Partly due to the recent technological advancements and the rise of the Internet the active utilization of customer resources has gained added momentum, which has been of interest to the researchers as well (see e.g. Magnusson, Matthing, & Kristensson, 2003; Matthing et al., 2006; Kristensson, Matthing, & Johansson, 2008; Kristensson, Gustafsson, & Archer, 2004).

A postmodern approach to value co-creation is depicted, for example, in the writings of Bendapudi and Leone (2003) who have identified that the interpretive marketing literature provides a broader perspective on the co-creation framework (see also Humphreys & Grayson, 2008). Other researchers such as Firat, Dholakia and Venkatesh (1995, 42; see also Firat & Venkatesh, 1995; 1993) have suggested that one of the characteristics of the postmodern era is the reversal of production and consumption:

The reversal in production and consumption arise from production losing its privileged status in culture and consumption becoming the means through which individuals define their self-images for themselves as well as to others; marketing, of course, being the primary institution which reinforces this trend.

The postmodern approach also acknowledges the shift toward more tailored goods and services offered to the consumer, “who takes elements of market offerings and crafts a customized consumption experience out of these” (Firat, Dholakia, & Venkatesh, 1995, 50). Customers demand a more active role in production; to fulfill this emerging need and allow consumers' active participation marketers are forced to open up more of their processes (Firat & Venkatesh, 1995; see also Bendapudi &

Leone, 2003). The consumer has gained the privileged status that was previously accorded to the producer (Bendapudi & Leone, 2003). However, as consumption is increasingly viewed as a production process “it can no longer be performed instinctively, naturally, without development of special skills” (Firat, Dholakia, & Venkatesh, 1995, 52). The postmodern perspective to value co-creation acknowledges that the product can not be regarded as a “finished” object. On the contrary, it should be considered as a process “into which the ‘customer’ can immerse oneself and provide inputs” (Firat, Dholakia, & Venkatesh, 1995, 51; see also Auh et al., 2007).

More recently, Edvardsson, Tronvoll and Gruber (2011) have proposed a social constructionist approach to value co-creation. On the basis of combining principles of S-D logic and social construction theories they offer propositions for expanding the understanding of service exchange and value co-creation. They emphasize value as a social construction, as value-in-social-context; i.e. value co-creation is considered as firmly placed in a social context.

The collective effort among scholars to develop S-D logic and the value co-creation concept has to a large extent been consistent. There are, however, few exceptions that challenge the superiority of the contemporary approaches. Zwick, Bonsu and Darmody (2008) have focused on exploring the ideological aspects of value co-creation. They target their critique at how customers are being used as an autonomous, unpaid, and creative workforce. By critically reviewing the role of marketing as facilitating recent developments they argue that marketing focuses on drawing consumers completely not only into the production process, but into the innovation process as well. By engaging customers into these processes, companies not only exploit consumers as workforce but also reduce the risk of consumer behavior evolving in ways other than prescribed by the firm (De Certeau, 1984; Lury, 2004). By using examples such as Youtube, Second Life and Build-a-Bear Workshop, Zwick, Bonsu and Darmody (2008, 184) argue the following:

Co-creation represents more than merely a further push towards customization, the mantra of traditional marketing. Co-creation, as a set of organization strategies and discursive procedures aimed at reconfiguring social relations of production, works through the freedom of the consumer subject with the objective of encouraging and capturing the know-how of this creative common.

To a large extent, there is thus a disconnection between academic discourse on co-creation and the reality of highly rationalized and dehumanized service production and distribution (Ritzer, 2004).

To conclude, reviewing these distinct approaches to value co-creation illustrates the diverse nature of the concept and the fact that the discussion is not limited within the service research framework.

3.4.5 The practically-oriented approach to value co-creation

When approaching value co-creation at a more general level it is critically important to distinguish two separate streams of discussion: the more theoretically-oriented discussion characterized by the varying approaches that have been addressed above, and the more practically-oriented approach illustrated by a multitude of widely cited examples, such as Threadless, Lego, Starbucks, and Dell. Despite the common concept, it can nevertheless be argued that these two streams can hardly fit under the same umbrella term; there is friction between what the theoretically-oriented stream attempts to capture and what the practically-oriented real world case examples empirically illuminate. One could assume that the former creates the theoretical basis that is then illustrated by the latter, i.e. by the various value co-creation examples, such as Dell's Ideastorm. However, given the obscure and fuzzy conceptual basis of the concept resulting from the multitude of perspectives, this hardly holds true.

In the practically-oriented discussion value co-creation is to a large extent characterized by such examples where the core phenomenon is eventually about harnessing customer resources to the firm's value creation. They basically describe practical examples of doing such firm-related activities together that were previously done exclusively by the other party only. This type of customer engagement is often facilitated by developments in technology and the rise of the Internet as enabling customers and firms to jointly create value. In that respect, when looking into widely cited examples such as Threadless or My Starbucks Idea one gets the impression that value co-creation is something that is characteristic only of contemporary marketing phenomena. On the contrary, some of the theoretically-oriented approaches (e.g. Service Science and many-to-many

marketing) imply that value co-creation should be understood more as a perspective; a lens through which phenomena are viewed. Hence, the question of whether value co-creation is closely linked to contemporary marketing phenomena in the sense of normative suggestions or a way to perceive customer/firm value creation is critically important when addressing the complexity around the concept and in trying to outline a more in-depth understanding.

3.4.6 Clarifying the conceptual fuzziness

A detailed exploration of the value co-creation approaches that were discussed above uncovers different types of distinctions, emphases and even frictions between them. These differences eventually result in a fuzzy setup of interpretations that as a whole impedes the development of more coherent theory around the concept.

Despite the differences, this research builds on the idea that these approaches should be seen rather as enriching and complementary than as exclusionary. S-D logic, service logic, Service Science as well as the other perspectives discussed above represent different approaches to the multifaceted concept, but are not necessarily all that contradictory. In that respect, to further the development of the concept, focusing in detail on the sources of friction between them provides a fertile starting point. Conclusively, on the basis of the existing literature on value co-creation, it can be argued that the differences between the approaches originate from slightly different viewpoints taken to what constitutes the ‘value’, the ‘co’, and the ‘creation’ in the concept of ‘value co-creation’. Thus, to clarify the fuzziness around the concept, value co-creation should be investigated through these sub elements¹⁵. Using this logic, Table 6 compares the S-D logic, service logic, and Service Science approaches to value co-creation. The purpose of the table is not to contradict the approaches, but to uncover the sources of the differing approaches, and as a result, provide a more synthesized perspective to the concept. Furthermore, it helps to position the concept within the context of this research – it introduces a conceptual tool to approach the research phenomenon at hand.

¹⁵ This conceptual outcome and synthesis of the current value co-creation discussion is analogous to Grönroos and Ravald (2011), who argue that the current understanding on value co-creation is scarce in understanding how value is created, by whom and for whom.

Table 6. Dismantling value co-creation – understanding different perspectives

	‘Value’	‘Co’	‘Creation’
S-D logic	Value is always phenomenologically and uniquely determined by the beneficiary (Vargo & Lusch, 2008a). Value emerges as a result of “the beneficial application of operant resources sometimes transmitted through operand resources” (Vargo & Lusch, 2004, 7). Compared with the famous IHIP service construct, Vargo and Lusch (2008b, 28) have noted that value is always “intangible, heterogeneously experienced, co-created, and potentially perishable”.	“Value becomes a joint function of the actions of the provider(s)” (Vargo & Lusch, 2008b, 44). As stated in the sixth foundational premise, the customer is always a co-creator of value implying the interactional nature of value creation. Thus, in S-D logic, the ‘co’ in the co-creation of value derives from the notion that both the service provider and the customer are involved in the creation of value, not only the firm through embedding value into the goods during the manufacturing process.	Vargo and Lusch (2008a, 7) have stated that “S-D logic is primarily about value creation, rather than ‘production’”. In more detail, value creation is perceived as a process of “integrating and transforming resources” requiring interaction and implying networks (Lusch & Vargo, 2006a, 285). Co-creation of value represents the notion of value being created with and determined by the customer in the consumption process “and through use or what is referred to as value-in-use.”
Service logic	Value for customers means that after they have been assisted by a self-service process or a full-service process they are or feel better off than before (Grönroos, 2008a). Customer value is something that emerges in people’s everyday activities through support to customer processes and through co-creation in interactions with customers. The customer’s own resources together with other resources such as information form the value foundation for customer value (Grönroos, 2008a; 2008b).	According to Grönroos (2008a; see also Grönroos and Raval, 2011), value is co-created only if interactions between the supplier and the customer are established. Through interaction firms are able to affect the value actualization process. Thus, the ‘co’ in the co-creation of value stands for firm and customer together creating customer value. In other words, the ‘co’ is not about creating value for both the firm and the customer; it is about the firm and the customer co-creating customer value through interactions.	In Service logic a clear distinction between value creation and value production is made. Grönroos (2008b, 273; see also 2008a) argues that “in production processes the distribution mechanisms (goods and service processes) for service that render value for customers are produced”. Value creation, in turn, takes place in the customer’s context as the customer uses the goods and adds other sources, such as knowledge or information resulting in value-in-use.
Service Science	Value is defined simply as an improvement in system well-being and it can be measured in terms of a system’s ability to adapt or its ability to fit in its environment (Vargo, Maglio, & Akaka, 2008). Similarly with the S-D logic, value among service systems is “determined through use or integration and application of operant (and sometimes operand) resources” (ibid, 150; Lusch & Vargo, 2006b).	Service system, the most central unit in Service Science, is a value co-creation configuration consisting of people, technology, and value propositions connecting internal and external service systems, and shared information (Maglio & Spohrer, 2008). Every service system entity is both a customer and provider and together these service system entities interact to co-create value (Spohrer et al., 2008).	The creation of value is critical in understanding the dynamics of service systems and in furthering service science (Vargo, Maglio, & Akaka, 2008). “It is through integration and application of resources made available through exchange that value is created. The process of co-creating value is driven by value-in-use, but mediated and monitored by value-in-exchange” (ibid, 152).

As a result of dismantling value co-creation into its constituent parts (Table 6), three issues are presented to clarify and outline the very nature of the concept in the context of this research.

Issue 1: Clarifying what kind of value for whom

Current approaches to value co-creation offer relatively vague definitions of what fundamentally constitutes ‘value’ in a given context. In order to enhance our understanding of value co-creation, focus should be laid on clarifying *for whom* is the value co-created, and more importantly, *what kind of* value is co-created. In the current literature, it often remains unclear whether the value is understood as customer value, firm value, or both. For example, it can be argued that one of the main sources of friction between the S-D logic and the service logic partly emerges from this misconception. While the former discusses value co-creation in general terms the latter is focused on co-creation of *customer* value from the firm point of view and how the firm can affect (the customer’s) value actualization process through interactions. Consequently, it should be clarified whether the emphasis is on the co-creation of customer value, or the co-creation of both firm and customer value.

In addition, the discussion around value co-creation is to a large extent limited in the sense that it does not discuss *what kind of* value is co-created. Understanding whether the value is utilitarian or more hedonic in nature would provide more depth to the discussion around the concept; what is the concrete output of the interaction between the firm and the customers; what kind of value do the additional resources delivered through that interaction eventually result in? Here it is critically important to distinguish what actually is considered as customer value (resulting from value co-creation) and what as firm value (resulting from value co-creation). Customers’ value creation can be understood as more diverse in nature than the firm’s value creation due to the fact that the latter eventually aims at succeeding in monetary terms. Hence, instead of only stating that value is being co-created, the focus should be on crystallizing *what kind of value for whom is co-created*. This is relevant also in the context of the more practically-oriented discussion around value co-creation; what kind of value for whom different types of value co-creation examples eventually result in?

Issue 2: Clarifying by what kind of resources

The 'co' in the value co-creation is another source of fuzziness in the discussion around the concept. It denotes to the actors that are involved in the value co-creation process and more specifically, the resources that are integrated in order for value to be actualized. In the current theoretical discussion, varying approaches are employed to describe and capture the actors that are involved in the resource integration process. For example, service logic focuses on the dyadic relationship between the customer and the firm, whereas many-to-many marketing takes a more interactive approach and considers value as co-created in the extensive networks of networks and emerging in various interactions taking place between different actors, including C-to-C interaction (see e.g. Gummesson, 2008a). Service Science, in turn, conceptualizes the 'co' by service systems consisting of people, technology, and value propositions. Therefore, understanding the resources and the different actors involved in the resource exchange is of critical importance in clarifying the fuzziness related to the use of 'co'.

Most importantly, it needs to be clarified whether value co-creation is understood as a change in the resource integration process of the firm and the customer, or is it just a lens through which a phenomenon is viewed. In that respect, the 'co' may represent both aspects. On the one hand, it can be understood as something that occurs if the firm takes more responsibility for the customer's resource integration process by providing him or her additional resources to be incorporated in the value creation process. Hence, from the *firm's perspective*, only through establishing interactions with the customer can the firm co-create value, as suggested in the service logic (provider service logic) (e.g. Grönroos, 2008a). Grönroos (2011, 290) argues: "If there are no direct interactions, no value co-creation is possible". However, the widely-cited case examples often argue the contrary: value is co-created through engaging additional customer resources (i.e. other than money) to the firm's processes; customers are given more responsibility in the firm's resource integration process, for example through co-production or co-design. Therefore, attention should be on clarifying how the customer/firm roles are eventually readjusted in establishing interactions that basically reshape the resource integration process. On the other hand, S-D logic takes a different approach to the concept as a whole. Value is something that is always co-created and hence, in terms of value co-creation, the concept represents another way to see value creation. In more detail, in

S-D logic the 'co' refers to integrating resources from different sources in the customer's context. It takes an all-encompassing view to value co-creation as it focuses on value emerging from the integration of multiple resources; thus, value is co-created. When comparing service logic and S-D logic's approaches to the 'co' in value co-creation, it can be argued that the former sees value co-creation more as a firm-dependent element, closely linked to firm strategy, whereas the latter views the concept at a more general level resulting from the process of integrating various resources.

Determining who are eventually understood as involved in the co-creation of value is of highest importance when clarifying the conceptual fuzziness. Instead of only stating that value is co-created, attention should be laid on clarifying who is eventually involved in the joint creation of value, and more importantly: *by what kind of resources is value co-created.*

Issue 3: Clarifying through what kind of a mechanism

The 'creation' in value co-creation is another fundamental source of conceptual fuzziness. To a large extent, this obscurity emerges from the interrelationships between how creation is understood in relation to the closely related concepts such as co-production, crowdsourcing, co-design, or co-development that are often used synonymously referring to the same phenomenon. However, these processes are first and foremost linked to the firm's value creation. They can be understood more as mechanisms through which additional customer resources are integrated to the firm's own value creation. On the contrary, call-centre services, for example, can be regarded as mechanisms through which additional firm resources are integrated to the customer's value creation. All these mechanisms are ways through which the traditional roles of customers and firms are adjusted in order to utilize customer/firm resources in an unorthodox manner. In other words, they are used to connect customers', firms', and other actors' resources for the benefit of both (or all) actors. Either additional firm resources are provided to the customer's value creation or vice versa. Technology is often seen as facilitating the emergence of different types of mechanisms. For example, without the Internet most of the commonly cited value co-creation examples (e.g. Threadless, Lego, Dell) would not have been established in the first place.

Whatever the mechanism, 'creation' can be understood as the process of integrating different types of resources, either provided by the firm or the customer or both. It is also important to make a distinction between what is considered as creation for the customer and what is creation for the firm. Customers' value creation is naturally determined and driven by the customers and it is about the process of value actualization, i.e. when value-in-use emerges as a result of integrating different kinds of resources. Firm's value creation, in turn, is characterized by various processes including manufacturing, new product and service development, sales, risk management etc. These two different sides of value creation must be kept apart (Gupta & Lehman, 2005). Moreover, although customer engagement might be co-production from the firm perspective (in the sense of joint production of the core offering), the process of customers taking actively part in the development and production process of the firm can in itself be of value to the customer. Engaging in such an activity can be found as entertaining, motivating, and socially rewarding by the customer, which challenges the traditional co-production perspective; co-production of the core offering can actually contribute also to the customer's creation of value.

In conclusion, when trying to capture the phenomenon in which customers and firms jointly create beneficial output through the concept of value co-creation, the focus should be on clarifying what is considered as creation in the given context. Instead of only stating that value is co-created, focus should be placed on identifying and understanding the different 'co-processes' that are used to engage resources in one another's value-creating processes. In other words, emphasis should be on understanding *through what kind of a mechanism is customers' and firms' value creation supported.*

3.4.7 Synthesizing value co-creation

Dismantling value co-creation into its constituent parts helps to clarify the general fuzziness around the concept and understand the different levels of analysis. The three issues discussed above help to reconcile the differing approaches and contribute to a more synthesized effort to identify the possibilities of value co-creation both for marketing scholars and practitioners.

Table 7¹⁶ strives at reconciling and synthesizing the different theoretical approaches to value co-creation by considering both the sub elements of the concept and firm and customer perspectives separately. Instead of only stating that value is co-created, the table takes a more systematic approach by asking *what kind of value for whom, by what kind of resources, and through what kind of a mechanism* does value co-creation take place?

Table 7. Clarifying the conceptual fuzziness around value co-creation

	‘Value’ <i>What kind of value for whom?</i>	‘Co’ <i>By what kind of resources?</i>	‘Creation’ <i>Through what kind of a mechanism?</i>
Customer	What does the customer benefit; how is the customer’s value creation supported? -----	What kinds of firm resources are integrated in the customer’s value-creating processes?	What is the mechanism through which firm resources are integrated in the customer’s processes?
Firm	What does the firm benefit; how is the firm’s value creation supported?	What kinds of customer resources are integrated in the firm’s value-creating processes?	What is the mechanism through which customer resources are integrated in the firm’s processes?

First, both the customer and the firm perspectives must always be addressed to consider whether the process of value co-creation is beneficial for both actors. In other words, are the benefits gained from the change in the resource integration process worth the sacrifices. As Gupta and Lehman (2005) note, value creation always has two sides. This, however, does not mean that value is always co-created.

Second, focus should be laid on understanding the change that takes place through the additional resources provided by the customer/firm to the firm’s/customer’s value creation. Through these resources the traditional roles of the customer (as provider of money) and the firm (provider of goods/services) are adjusted. Instead of only focusing on the additional resources, more emphasis should be on uncovering what these additional resources eventually are; i.e. what kind of additional resources are engaged in the customer’s/firm’s value-creating processes. Is it customer creativity or customer insight about the firm’s goods that are engaged in the firm’s value-creating processes? Or what kind of additional resources, such as information about the goods, does the firm provide to its

¹⁶ In Table 7, in the ‘value’ column the line between the customer and the firm perspectives is dashed because both perspectives need to be addressed when considering the possibilities of value co-creation.

customers that are able to challenge the traditional roles in the resource integration process?

And third, what is the mechanism through which these resources are eventually integrated to the customer's or the firm's value creation? Is it co-production or co-design or alternatively a mechanism through which additional firm resources are engaged in the customer's value creation?

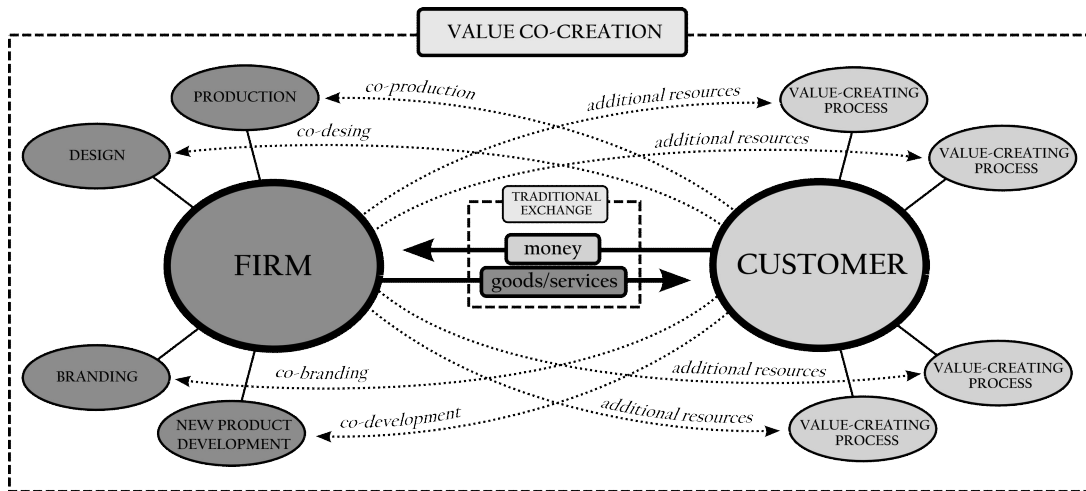


Figure 4. Illustrating the mechanisms through which additional customer/firm resources are provided to the firm's/customer's value creation.

Figure 4 illustrates the idea of providing additional customer/firm resources to the firm's/customer's value creation. In the context of this research, providing additional resources through different kinds of mechanisms constitutes the very foundation of value co-creation.

3.5 Understanding value

Despite the fact that the contemporary service-related logics consider value as one of the most foundational concepts within respective literature streams, they offer rather vague definitions on what is understood by value. Concepts such as value-in-use, value proposition and value co-creation are fundamental in terms of shaping the very nature of the discussion around service, but it can be argued that the concepts spend little time in exploring the characteristics of value in a more profound way.

The highly complex and multifaceted nature of value is widely acknowledged within the marketing discipline. At a general level, value as a concept can be approached through the categorization by Khalifa (2004). He groups value definitions into value components models, benefits/costs ratio models, and means-end models. Value components models are characterized by emphasis on product/service attributes, yet they pay little attention to the interactive dimension of value and the sacrifices customers are faced with when acquiring the benefits (Khalifa, 2004). In that respect, the benefits/costs ratio models also take the sacrifice side of customer value into account. Means-end models, in turn, are more focused on customers acquiring and using products and services in order to accomplish favorable and pre-defined ends (Khalifa, 2004; see also e.g. Huber, Herrmann, & Morgan, 2001). Altogether, these models are not exclusive, but offer complementary perspectives to value as a concept.

In the context of this research, value is understood as multi-dimensional acknowledging both the cognitive and the affective dimensions of customer value (see Sánchez-Fernández & Iniesta-Bonillo, 2007). A general perspective to value recognizes both utilitarian and hedonic outcomes of human action. The former often results from conscious pursuit of planned behavior and the latter is related to more spontaneous hedonic responses (Babin, Darden, & Griffin, 1994). Despite the fact that also other value dimensions¹⁷ have been put forward in various studies these two basic dimensions, i.e. utilitarian and hedonic, have been widely acknowledged and used in marketing research. They offer additional insight into understanding the phenomenon of reverse use of customer data also in the scope of this research.

3.5.1 Utilitarian value

The utilitarian perspective to customer value views customers as rational problem-solvers (Bettman, 1979) and consumption is understood as a way to accomplish some predefined end (Rintamäki et al., 2006). Utilitarian value is regarded as instrumental, task-related, rational, functional, cognitive, and a means to an end (Babin, Darden, & Griffin, 1994). In the retailing context, utilitarian shopping is

¹⁷ Other value dimensions include, for example, functional, social, emotional, epistemic and conditional value (e.g. Sheth, Newman, & Gross, 1991) or efficiency, excellence, status, esteem, play aesthetics, ethics, and spirituality (Holbrook, 1999).

characterized by such benefits as monetary savings and convenience and such sacrifices as money, time and effort (Rintamäki et al., 2006).

3.5.2 Hedonic value

Hedonic value emphasizes consumption as an end in itself; it is self-purposeful and is appreciated in its own right (Rintamäki, Kuusela, & Mitronen, 2007). It reflects the entertainment and emotional worth of shopping, is non-instrumental, experiential, and affective (Babin, Darden, & Griffin, 1994). In the context of department store shopping, Rintamäki et al. (2006) argue that hedonic value is about benefits such as entertainment and exploration in relation to sacrifices such as stress and negative emotions. In comparison to utilitarian value, hedonic value is regarded as more subjective and personal resulting rather from fun and playfulness than task completion (Holbrook & Hirschman, 1982).

3.6 Synthesizing the service perspective

The three perspectives (S-D logic, service logic, and Service Science) addressed in this chapter form a major part of the current academic discussion within service research. The discussion around them has been extensive and to some degree exhaustive. The aim is not to offer an all-around review of their theoretical and conceptual developments, but to underline the central aspects and characteristics that are relevant to this research and to the building of the service perspective to the research phenomenon. Exploring these perspectives gives guidance to the research process and to understanding the research phenomenon.

To a large extent, these perspectives are closely linked together. Differences are minor and often semantic in nature, and for the most part result from different ways of approaching some central issues within service. For developing service theory further, it is more beneficial to view the different perspectives as complementary rather than contradictory. Toward that end, within the scope of this research, the service-related perspectives are referred to as the service perspective. Hence, referring to the service perspective does not focus on demonstrating the differences between the perspectives, but is more interested in the collective effort to underline

the importance of the new role of service within marketing. The aim is not to empirically ‘verify’ the superiority of one perspective against another. On the contrary, given the nature of the research as theory-developing, the role of theory is to give guidance, not to act as a normative straitjacket (Gummesson, 2002). Empirical data, then, creates a strong impetus for rethinking conventional wisdom and challenging existing frameworks.

Table 8 synthesizes the above discussion to clarify and highlight the aspects of the service-related literature streams that are of special importance in constructing the service perspective in the context of this research.

Table 8. Summarizing the service perspective

	Description
The subjective nature of customer value	Value is not something that goods are embedded with during the manufacturing process and then transferred to customers through exchange. Quite the contrary, value is always defined by the customer and it can be regarded as an interactive relativistic preference experience (Holbrook, 1999, 5); value for the customer means that the customer feels better off than before (Grönroos, 2008a) and it is “uniquely and phenomenologically determined by the beneficiary” (Vargo & Lusch, 2008a, 9). In this research, defining the value concept explicitly is not that important; the interest lies in how it is created and how the creation process can be supported. This is in line with Grönroos and Helle (2010, 566) who argue that when shifting the focus toward service as a perspective or logic the interest of the research and practitioner alike is shifted “from value as an outcome in the direction of value as value creation”.
Value emerges in the customer’s value creation process	Since value is always defined by the beneficiary, the focus of value creation moves toward the customer’s processes, resources and practices which are used in their own value creation (Payne, Storbacka, & Frow, 2008). Value emerges in customers’ own value-creating processes ¹⁸ that take place during customers’ consumption or usage of goods or services. These value-creating processes can be defined as series of activities that are performed by the customer in order to achieve a particular goal and that are “dynamic, interactive, non-linear, and often unconscious” (ibid, 85–86); value is thus created as a result of combining resources provided by the firm with other additional resources (Grönroos, 2008a).
The nature of value co-creation	Value co-creation is a multifaceted concept that is often approached with differing emphasis. To clarify the general complexity around the concept, focus is here on dismantling value co-creation into its constituent parts and as a result presenting three central issues that determine the nature of value co-creation in the context of this research: What kind of value for whom (‘value’), by what kind of resources (‘co’), and through what kind of a mechanism (‘creation’) does value co-creation eventually take place. Importantly, value co-creation is not considered as something that always takes place. On the contrary, it is approached as means to better understand a contemporary marketing phenomenon.

¹⁸ In addition to the customer’s value-creating processes, the act of the customer doing something that actualizes the value potential of the resources has also been referred to as value-creating activities and value-creating practices (e.g. Korkman, 2006, 47–54). In this research, no difference between these concepts is made.

From selling to supporting customer's value creation	The fact that value is created in the customers' sphere and in the customers' own value-creating processes provides implications for firms as well. In a normative sense, instead of concentrating merely on the exchange, firms should view customer-firm relationships as possibilities to learn to support customers' value-creating processes. Consequently, this is more or less a strategic question where firms should make a decision whether to offer customers value-supporting resources (goods logic), or to apply 'provider service logic' (e.g. Grönroos, 2008a), and focus on supporting customers' value creation by, for example, providing them with additional resources, such as information, to their value-creating processes. Therefore, firms should not be distracted by the distinction between goods and services, but focus on achieving a thorough understanding of the customers' everyday practices and value-creating processes (Grönroos, 2008a).
The role of interaction	The concept of interaction – activities that occur between the firm and its customer during the customers' consumption process – is critically important in the research context. Interaction is understood as “a mutual or reciprocal action where two or more parties have an effect upon one another” (Grönroos & Ravald, 2011, 11). Interaction is the key with which firms can influence the value actualization process; during that process both the firm and the customer are active participants; they act as dual subjects (ibid). Thus, normatively, firms need to find new and innovative ways to enter the consumption process and create interactions with the customers. Altogether, firms should strive to add more resources to the goods themselves to support and facilitate their use. Alternatively, they could provide customers with a variety of different resources – goods, information, other service activities and access to advice – in the value-supporting process (Grönroos, 2007b, 198).

3.7 Combining the CRM framework and the service perspective

In this research, theoretical triangulation is used to explain, understand, and interpret the research phenomenon (see Eriksson & Kovalainen, 2008, 292–293). Toward that end, the research is built on two distinct streams of literature: the CRM framework and the constructed service perspective. The former creates a basis for understanding customer data usage in the context of food retailing and the latter provides understanding about both the customer's and the firm's value creation process. These two theoretical approaches¹⁹ are not perceived as able to provide an adequate understanding of the research phenomenon if used separately. In other words, trying to capture the characteristics of reverse use of customer data only through the CRM framework would not contribute toward a thorough understanding

19 Neither CRM nor the service perspective can be considered as 'pure' theories as understood, for example, by Arndt (1985). On the contrary, they can rather be regarded as theoretical approaches, or perspectives. Despite their lack of hard-core theoretical characteristics, they are established and widely acknowledged literature streams. Given that the nature of the research as theory-developing rather than theory testing, these approaches provide a good theoretical basis for the empirical part of the research.

of the phenomenon. The service perspective alone would not suffice to achieve an in-depth understanding of the phenomenon where customer data usage plays a significant role either. In that respect, theoretical triangulation was employed to approach the research phenomenon holistically.

In conclusion, both of these approaches are needed, and when combined, they provide a solid basis on which the empirical part of the research can be built. As a whole they create a good starting point to empirically explore and investigate the phenomenon of reverse use of customer data (Figure 5). Since the research is theory-developing in nature and situated more within the context of discovery than the context of justification, combining previously unconnected bodies of knowledge and leveraging on an established theory to explore a new phenomenon is considered a good strategy for achieving the general purpose of the research (see Yadav, 2010).

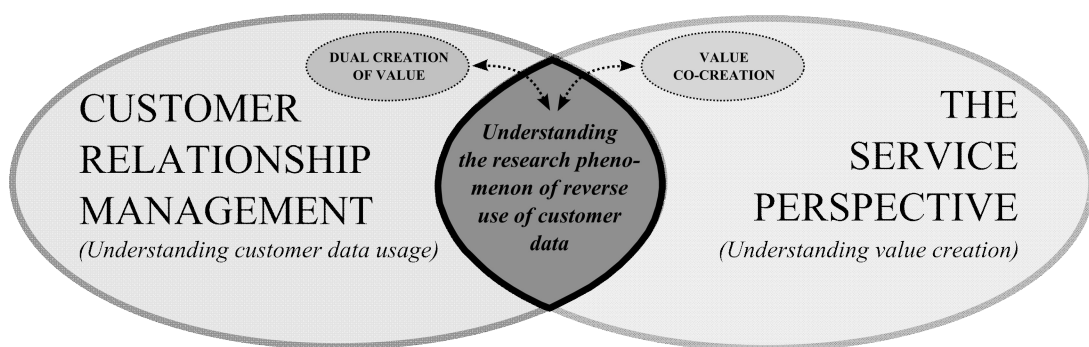


Figure 5. Combining CRM and the service perspective

When exploring the nature of the research phenomenon from the point of view of these two distinct literature streams it can be argued that what eventually constitutes the phenomenon in theoretical terms are the two central, and surprisingly closely related theoretical concepts that have been discussed extensively in the theory chapters: the dual creation of value and value co-creation. The former can be regarded as one of the most important concepts within the CRM framework, whereas the latter is a central concept within the service perspective. These concepts help to approach the phenomenon at hand from their respective points of view and as a whole, provide the basis for the empirical part of the research.

4. RESEARCH STRATEGY

The systematic utilization of customer data has been at the forefront of firms' actions for years, especially in the context of retailing. Using customer data for firm purposes is not something new in theoretical terms either. However, viewing customer data from the customer's value creation perspective, as reverse use of customer data, can be regarded as a new approach. Consequently, given the novelty value of the research phenomenon, the research questions should be approached with caution without any theoretical straitjacket or predetermined assumptions about the empirical data, as described by Gummesson (2002, 347):

We need theory for guidance, but not for obedience, we should go back to the "classics" to get a perspective, but for application today most of the "classics" are in need of upgrading or replacement. Also we must propose more valid and general theory, discarding extant theory whenever we find it called for, irrespective of its standing in the academic community.

The aim of this research is not to verify ideas presented within the literature streams of CRM or the service perspective. The contemporary 'classics' of marketing theory are explored to give guidance – not to point out where the research process should end; they usher the researcher to a certain point from where empirical data and interpretation are used to take the next steps. Prior theory is used to "define the problem and how to tackle it" (Carson et al., 2001, 11). Furthermore, this research is characterized by "discovery, description and meaning rather than prediction, control and measurement" (Lavery, 2003, 21). When comparing the contexts of discovery and justification, the research is focused on the former: "Conception of new ideas (e.g., new constructs) or to the creative synthesis of existing ideas (e.g. new relationships between well-accepted constructs)" (Yadav, 2010, 2). This general perspective to the research process guides both the formulation and implementation of the research strategy.

Four basic elements of research strategy emphasized by Crotty (1998, 2–4) are discussed in this chapter. These include research ontology and epistemology, theoretical perspective, methodology and methods. Ontology addresses the nature of reality, and epistemology refers to the theory of knowledge that is embedded within the theoretical perspective shedding light on the relationship between the knower and what can be known (Lavery, 2003). The theoretical perspective, in turn, is informed by the philosophical stance and creates the basis for the methodology employed in the research. Methodology is the strategy and general idea behind the use of appropriate methods that describe the techniques used to generate and analyze data related to the research purpose and questions (Crotty, 1998, 3). These research strategic issues are discussed and elaborated next in more detail.

4.1 Ontological and epistemological issues of the research

Ontological and epistemological questions determine the most fundamental aspects of the research process. They address issues regarding ‘truth’ and the creation of new knowledge and form the researcher’s philosophical orientation: “a worldview that underlies and informs methodology and methods” (Corbin & Strauss, 2008, 1). In more detail, ontology refers to the study of being: “It is concerned with ‘what is’, with the nature of existence, with the structure of reality as such” (Crotty, 1998, 10). Ontology is about the form and nature of reality and more importantly, what can be known about it (Lavery, 2003). Epistemology, in turn, is interested in the nature of knowledge and its sources and limits (Eriksson & Kovalainen, 2008, 14–15); it informs and explains how we know what we know (Crotty, 1998, 8). Ontological and epistemological questions need to be addressed in order to inform the research process and reflect the decisions that have been made during that process. Consequently, in line with Crotty’s (1998, 4) notion of interdependence of epistemology, theoretical perspective, methodology and methods, research strategic choices arise on the one hand from the research phenomenon and the nature of the research questions, and on the other hand from the researcher’s beliefs and attitudes about the world (see e.g. Corbin & Strauss, 2008, 5).

The set of scientific beliefs and attitudes employed in this research are heavily affected by the complexity that is present in the research phenomenon at hand. The aim is to capture as much of this complexity as possible, yet realizing that it is impossible to capture the phenomenon holistically in every single detail. In the context of this research, ‘truth’ is perceived as subjectively experienced and constructed. This is in line with Crotty’s (1998, 9) argument: “In this understanding of knowledge, it is clear that different people may construct meaning in different ways, even in relation to the same phenomenon”. Hence, given the novelty value of the research phenomenon and the theory-developing nature of the research, it is important to facilitate the understanding of the research phenomenon in all its richness and diversity; i.e. letting the data speak freely and letting all realities emerge as they are described. Choosing another epistemological foundation, such as objectivism, could possibly restrict the researcher’s possibilities to deal with the complexity present within the research phenomenon and result in excluding some important dimensions of the phenomenon.

Furthermore, the research is about reverse use of customer data resulting in information that can be used as input to the customer’s value creation. Here, the meaning of the information to customers is not discovered, but rather constructed (see Crotty, 1998, 9) in customers’ contexts, in customers’ everyday lives, in customers’ value-creating processes. Understanding this value creation is at the core of this research, which is why constructionism is preferred as the epistemological basis for the research²⁰ instead of, for example, a positivistic basis (see e.g. Denzin & Lincoln, 2005, 24).

²⁰ In the context of this research empirical data is generated from both customers and firm representatives. The latter contributes first and foremost to the construction of the firm perspective to the research phenomenon – the aim was not to investigate firm representatives’ personal experiences. The firm perspective was thus constructed through exploring how the events were related by the firm representatives that were closely involved in the research phenomenon of reverse use of customer data (and in the development of the service that is used as a case study to empirically illustrate that phenomenon).

4.2 Hermeneutical understanding – theoretical perspective of the research

The theoretical perspective of the research discusses the basic assumptions that are reflected in the chosen methodology. It builds justification for the applied methodology by relating the reasons behind these assumptions. In the context of this research, *interpretation* is considered as a central element of the theoretical perspective. Interpretation is about trying to understand instead of explaining (Crotty, 1998, 67–69); it strives to understand events as related by participants (Corbin & Strauss, 2008, 48). As emphasized by Denzin (1998, 332):

Interpretation is a productive process that sets forth the multiple meanings of an event, object, experience, or text. Interpretation is transformation. It illuminates, throws light on experience. It brings out, and refines, as when butter is clarified, the meanings that can be sifted from a text, an object, or slice of experience.

Interpretation is related to the scientific tradition of hermeneutics, although it is argued that interpretation is always present irrespective of the research being quantitative or qualitative in nature (see Gummesson, 2003; 2006). Hermeneutic philosophy is interested in the interpretation of understanding: “It emphasizes that all understanding is linguistic” (Arnold & Fischer, 1994, 55). According to Eriksson & Kovalainen (2008, 20), hermeneutics refers to interpretation and understanding as necessary parts of the research process: “inescapable action of interpretation (*verstehen*) taking place in *all research*” (emphasis added, compare with Gummesson, 2003). It is about reading between lines (Odman, 1985, 2162). In the interpretation process, researchers can be considered as the “go-betweens for the participants and the audience that they want to reach” (Corbin & Strauss, 2008, 49). Hence, the role of the interpreter is important in bridging the subject-object dichotomy.

There is no general hermeneutics, only separate and contrasting theories of hermeneutics (Thompson, 1981, 46). Here, the theoretical perspective to the research is built on what is regarded as phenomenological hermeneutics. What characterizes phenomenological hermeneutics is its mediating role to recapture the sense of the text and its meaning into understanding (Arnold & Fischer, 1994). In this process of interpretation the researcher’s pre-understanding is seen inevitably as

an important part of the interpretation process; “the biases and assumptions of the researcher are not bracketed or set aside²¹, but rather are embedded and essential to interpretive process” (Laverly, 2003, 28). In the context of this research, following phenomenological hermeneutics emphasis is on understanding reverse use of customer data through analyzing data from multiple sources. In that respect, the chosen theoretical perspective allows the researcher to have an active role as the interpreter of the empirical data. In the process of interpretation, the researcher and his pre-understanding are in a critically important role. In more detail, in the context of the research, the researcher’s pre-understanding was influenced by the current theoretical discussion around value co-creation and the related service logics. The theoretical concepts and approaches emphasized within the service perspective offered inspiring new insight for the researcher to consider and understand the role of marketing in the evolving business environment. From the case study point of view, the researcher, however, did not have any previous personal experience with the service application that was explored.

Viewing the role of the researcher more as a research instrument²² than a detached observer is in balance with the chosen epistemological basis (see Carson et al., 2001, 13). However, the researcher must be aware of his or her existing beliefs and assumptions about the research phenomenon. In that respect, hermeneutic understanding is about self-understanding, self-reflection, and self-development (Arnold & Fischer, 1994) where keeping a reflective journal can be helpful in the process of interpretation and reflection (Laverly, 2003). Scientific discoveries may sometimes appear as simple and easy observations, but usually the discovery itself has no intrinsic significance without the researcher relating it to other knowledge and using it in the creation of new knowledge (Beveridge, 1963); this also makes the role of the researcher’s pre-understanding relevant and critically important. Furthermore, the interpretation process is never quite finished, for researchers often extend and reinterpret interpretations; a natural part of the qualitative research process (Corbin & Strauss, 2008, 49–50).

²¹ In phenomenology, the researcher engages in the process of self-reflection in order to protect oneself from his own existing assumptions.

²² Although acknowledging the researcher’s role as the interpreter of the empirical data passive voice was preferred instead of using first person in writing the research report. This was not to diminish the researcher’s role as the ‘go-between’ of the research phenomenon and the audience, but to emphasize the action of interpretation, not the interpreting subject.

There is no pre-defined methodology for hermeneutics or phenomenological hermeneutics. Nevertheless, it is through language that experience is interpreted and there are features that support this process of interpretation (Arnold & Fischer, 1994). A *hermeneutic circle or spiral* emphasizes the need for consistency and coherence between parts and the whole and recognizes that research is a never-ending process toward improved understanding. According to this ethos, the researcher should demonstrate the ability to handle texts in a broad sense, including both words and numbers, and to do so through a systematic and conscious effort (Gummesson, 2003).

In this iterative spiral of understanding, the focus is on achieving a coherent interpretation. In the context of this research, the iterative nature of the interpretation process is in balance with the general purpose of the research – i.e. the building of a general framework for reverse use of customer data. To achieve that purpose, the interpretation process involves moving back and forth between parts and the whole. This is similar to another concept that is used within the hermeneutical tradition, i.e. *fusion of horizons* which refers to transcending the subject-object dichotomy through gradually combining (interpreting) the interpreter's and the text's (representative of the other) horizons; pre-understanding evolves into understanding that then creates the basis for the new pre-understanding.

Phenomenological hermeneutics can be seen as a natural consequence of the employed epistemological stance, i.e. constructionism. Furthermore, an interpretive approach is a suitable research strategy as the focus is on gaining an in-depth understanding of an emerging research phenomenon. It also allows the use of different types of data sources, such as customer feedback (in textual form) and transcribed customer interviews. Using both multiple sources of empirical data and perspectives contributes to the generation of diverse and versatile empirical insight about the research phenomenon. In the context of this research, viewing the research phenomenon from manifold perspectives with the help of different data sources was considered as a critically important research strategic choice given the purpose of the research. Toward that end, the dynamic hermeneutical circle is a natural tool for achieving increased understanding. Furthermore, the research process where the aim is to build a general framework is genuinely iterative in nature. It forces the researcher to systematically change perspectives and move between the detailed, contextually-dependent parts of the case study and the broader perspective to the

research phenomenon of reverse use of customer data. This is evident during the whole research process making it both more dynamic and interesting in nature.

4.3 Case study research setting

Through case study research, the dynamics presented within a single setting can be explored in depth. Case study research is particularly suitable for new research areas or such research areas where existing theory seems inadequate (Eisenhardt, 1989). In the context of this research, case study research is a natural consequence of the purpose of the research and the nature of the research phenomenon as a whole.

In general, case study research is used to gain a deep and versatile understanding of the research phenomenon. Importantly, it should be regarded more as a research approach or strategy²³ than a mere research method (Eriksson & Kovalainen, 2008, 115–117; Eisenhardt, 1989). Similarly, in the context of this research, case study research is understood as a research methodology; a strategy or a plan of action to achieve the purpose of the research (compare with Crotty, 1998, 3). It is understood as a holistic approach, where the case is used as a tool to empirically illustrate the research phenomenon. As argued by Stake (2005, 445):

The case is of secondary interest, it plays a supportive role, and it facilitates our understanding of something else. The case still is looked at in depth, its contexts scrutinized and its ordinary activities detailed, but all because it helps us pursue the external interest.

Similarly, Tellis (1997) argues that common to case study research is striving for the production of detailed and holistic knowledge based on rich empirical data. According to Ghauri and Gronhaug (2005, 171), case studies differ “from the experimental, quantitative, and deductive research tradition in business research that aim to produce statistical generalization” (Eriksson & Kovalainen, 2008, 117). Also within the scope of this research, empirical reasoning is conducted rather through abduction than deduction. From the methodological point of view, case study research is connected to the research tradition of interpretive, ethnographic and field

²³ Contrary to the classification by Crotty (1998), here case study is perceived more as a methodological approach than a single research method.

research (Dyer & Wilkins, 1991). It is also considered to be in line with the scientific tradition of hermeneutics (Gummesson, 2003). Thus, in that respect, case study research can be regarded as a suitable research methodology also in the context of this research.

Case study research has been criticized as producing only anecdotal evidence without the possibility for scientific generalizability, but it has nevertheless been widely applied, for example, in psychology, sociology, anthropology, history, economics, public policy and management (Yin, 1994). In addition, what has been argued as a weakness of case study research is nowadays recognized more as an opportunity (Dubois & Gadde, 2002, 554):

Learning from a particular case (conditioned by the environmental context) should be considered a strength rather than weakness. The interaction between a phenomenon and its context is best understood through in-depth case studies.

What is a case study, though? Or more precisely, *what is it a case of* (Ragin & Becker, 1992, 6). Defining and determining a case is found a difficult task and there are different ways it is understood and conceptualized in research. Yin (2009, 18) defines a case study as “an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context especially when the boundaries between phenomenon and context are not clearly evident.” Consequently, case studies are often preferred when research questions such as “how” and “why” are posed and the researcher has little control over the events. These characteristics distinguish case study research from other forms of social science research (Yin, 2009). More specifically, case studies are used especially as means to develop theory through the utilization of in-depth insights on an empirical phenomenon and its context (Dubois & Gadde, 2002). Similarly, Stake (2005, 455–457) emphasizes the role of case study research in refining theory. This aspect of case study research is of special importance in the context of this research. Through case study research, interesting insight about the emerging research phenomenon can be empirically leveraged. The case study under investigation is understood as an object for empirical inquiry.

There are many ways to classify case studies into different types. Harré (1979, 132–135) has divided case studies to intensive and extensive case studies; a

classification that has been widely used. The intensive case study is more about focusing on one or a few cases and finding out as much as possible from those specific cases. Extensive case study, on the contrary, is about comparing different cases against each other in order to uncover differences and similarities in them. Yin (1994; 2009, 16–20), in turn, has identified three types of uses of case study research: descriptive, explanatory, and exploratory. Descriptive case study research is focused on getting a detailed description about events; whereas explanatory case study research is more interested in explaining presumed causal links that are present in the case study context (see also Yin, 2009, 19). Exploratory case study, in turn, is about getting an in-depth understanding of a research phenomenon by focusing on the case at hand. Stake (2005, 445) has identified two types of case study: intrinsic case study, where the focus is on the case itself, and instrumental case study that is examined mainly to gain insight about a certain phenomenon. These different alternatives for case study research are summarized in Table 9.

Table 9. Classifying case study research

Harré (1979)	Yin (1994; 2009)	Stake (2005)
Extensive case study	Descriptive case study	Instrumental case study
Intensive case study	Explanatory case study	Intrinsic case study
	Exploratory case study	

In this research, the focus is on gaining an in-depth understanding of reverse use of customer data. Hence, referring to the classifications by Harré (1979), Yin (1994; 2009), and Stake (2005), this case study research is *intensive*, *exploratory* and *instrumental*. The aim is to present the case study at hand in a way that it can be read with interest toward the case itself, but that it eventually has another agenda (Stake, 2005, 447); the case itself can be regarded as a tool; an empirical illustration through which a certain research phenomenon is approached.

4.4 Methods for data generation

The use of research methods refers to the techniques or procedures for data generation and analysis related to the specific research purpose and question(s) (Crotty, 1998, 3). In this research, data triangulation was used in order to explore the research phenomenon in depth and discover new dimensions and perspectives to the research problems (Dubois & Gadde, 2002). Data triangulation refers to using multiple data sources in order to clarify meaning and verify the validity of an observation or interpretation. In this research, three main sources of data were used: unstructured customer interviews, customer feedback data, and semi-structured interviews with firm representatives. In addition, a customer online survey was conducted to screen out suitable informants with different backgrounds for the unstructured interviews; i.e. to increase the diversity of the empirical data.

4.4.1 Unstructured customer interviews

Interviews can be regarded as the main method for generating empirical data in qualitative research (Carson et al., 2001, 73). In the context of this research, interviewees for the unstructured customer interviews were chosen firstly on the basis of their willingness to participate in additional interviews and secondly on the basis of the background information generated from the online survey. Interviewees' willingness to participate in unstructured interviews was asked at the end of the survey targeted at the users of the service, after which their contact information was collected. Following the guidelines of theoretical sampling²⁴, the interviewees were selected in a way that would contribute to getting a rich and diverse set of informants with different levels of, for example, user experience. In addition, gender, age, and household size were considered when forming an appropriate set of interviewees (see Table 10). Altogether, 17 unstructured interviews with varying users of the service were conducted. One of the interviews was excluded from the final empirical data set due to the likelihood of bias; the interviewee had worked as

²⁴ The purpose of theoretical sampling is to generate data from particular people that will “maximize opportunities to develop concepts in terms of their properties and dimensions, uncover variations, and identify relationships between concepts” (Corbin & Strauss, 2008, 143; see also Alvesson & Skoldberg, 2000, 27–28). Theoretical sampling is seen as improving the quality of results of interpretive research (Carson et al., 2001, 67).

a customer service employee for the case firm. After each interview the saturation point of the interview data was considered (see e.g. Corbin & Strauss, 2008, 143).

Table 10. Summary of the conducted customer interviews

Pseudo-nym	Gender & age	Occupation	Date of the interview	User experience	Household size	Length
Maria	F55	Practical nurse	31.8.2009	>3 months	2	44 min
Emilia	F61	Acquisition engineer	2.9.2009	>3 months	1	55 min
Sofia	F21	Student	7.9.2009	>3 months	1	52 min
Juhani	M37	IT-engineer	28.9.2009	>3 months	4	56 min
Olivia	F34	Cosmetician	1.10.2009	>3 months	3	44 min
Johannes	M48	Librarian	1.10.2009	First timer	4	58 min
Aino	F42	Career planner	1.10.2009	> 3 months	2	52 min
Matilda	F53	Instrument caretaker	1.10.2009	> 3 months	2	48 min
Amanda	F48	Spokesman	2.10.2009	1–3 months	4	65 min
Helmi	F30	Clerical employee	2.10.2009	> 3 months	2	40 min
Aurora	F55	Practical nurse	2.10.2009	First timer	2	37 min
Ilona	F40	Sales manager	4.11.2009	1–3 months	2	41 min
Mikael	M19	Sales assistant	4.11.2009	1–3 months	2	43 min
Katariina	F64	Secretary	4.11.2009	> 3 months	2	46 min
Johanna	F30	Teacher	5.11.2009	1–3 months	2	45 min
Julia	F47	Designer	5.11.2009	First timer	2	42 min

In the interviews, the researcher had only a general topic for discussion, i.e. the case study service. No particular predetermined list of questions that absolutely needed to be addressed was used; only a few guiding perspectives to the research phenomenon were written down prior to the interview (see Appendix A). Interviews were conducted in several different places including an interviewee's home, universities and shopping malls (see Table 11).

Table 11. Interview locations

Place of interview	Number of interviews
Hanken School of Economics (Helsinki)	5
Turku School of Economics (Turku)	3
Interviewee's workplace (Tampere, Turku, Turku)	3
University of Tampere (Tampere)	2
ABC Service Station (Salo)	1
Interviewee's home (Tampere)	1
Shopping Mall Plaza (Salo)	1

In all cases, the researcher focused on creating a relaxed, open and trustworthy atmosphere in order to gain better access to data. In practice, this was achieved, for example, by buying the interviewee a cup of coffee and talking with him or her for a while before the actual interview took place. The interviews were recorded, but notes were also taken during the interviews to be able to return to some particularly interesting aspect the interviewee had mentioned later in the interview. In general, the interviewees were interested in contributing to the subject field and were motivated to talk about themselves and their relation to the service. During the interviews, the researcher focused on encouraging the informants to elaborate and talk freely about the topics related to the research phenomenon²⁵. Altogether, the unstructured interview method yielded intensive, rich and well-grounded descriptions of the research phenomenon, which is in line with Corbin and Morse's (2003) preference to unstructured interviews where no predetermined set of questions dictates the interview. All the interviewees were rewarded by giving them alternatively either two movie tickets or a small bag of grocery items.

Unstructured customer interviews were tape-recorded and transcribed resulting in altogether 12 hours and 48 minutes of recorded interview material and 171 pages of transcribed text (Arial, font size 12, single line spacing). Some parts of the transcriptions were included in the research report as citations. They were translated into English by using a qualified translator.

²⁵ For the list of applicable techniques to manage the interview, see Carson et al. (2001, 76).

4.4.2 Customer feedback data

Customer feedback data was generated in two stages. The first set of customer feedback data was generated through the web site of the service application that was used as the case study of the research. By clicking the feedback link located on the main page of the service customers were able to give feedback about the service by reporting what they considered was good in the service and what they thought should be developed. A time period of three months in the beginning of the year 2009 (January 22nd–April 27th) yielded 249 pieces of customer feedback data. The second set of feedback data was generated as part of the customer online survey. In this case, the respondents were encouraged to share their opinions about what they considered was especially good or bad in the service or what they thought should be developed further. Respondents were allowed to give general feedback about the service as well. The second set of customer feedback data was generated during three months in the autumn 2009 (August 5th–November 2nd) and yielded a total amount of 207 pieces of feedback. These two sets contain altogether 456 pieces of customer feedback data.

4.4.3 Semi-structured interviews with firm representatives

Three semi-structured interviews were conducted with firm representatives including both the service provider (Tuulia International Ltd) and the food retailer (Kesko Food). Two of the interviews were conducted in a group setting and one as an individual interview (see Table 12). Semi-structured interviews were used both in order to gain a detailed description of the process of the firm providing customers with information resulting from reverse use of customer data and understanding the firm perspective to the research phenomenon. The primary focus was first of all on getting a detailed description of both the process of providing customers with such a service as well as understanding the reasons behind it.

In the interview with Tuulia International's representatives the interest was first of all in the process of converting the original idea into a real-world service application. The interview was conducted for case descriptive purposes only. The aim was to get a detailed description of the case study at hand, to understand the

case itself, which would also aid in gaining an in-depth understanding of the research phenomenon.

In terms of the two interviews with Kesko’s representatives, the overarching goal was to understand the research phenomenon of reverse use of customer data from the firm perspective; to address the reasons why a firm chooses to refine and give customer data back to customers. Consequently, this also included strategic dimensions and aspects related to the firm’s value proposition and its implementation. The interviewees had personal hand-on experience of the service and the necessary knowledge and experience to answer the questions and contribute to the data generation process.

Table 12. A summary of the interviews with firm representatives

Data source	Date	Length
Group interview with representatives of Kesko Corporations	17.3.2009	100 min
Interview with representative of Kesko Corporation	19.5.2009	79 min
Group Interview with representatives of Tuulia International ²⁶	19.5.2009	91 min

Interviews with firm representatives were semi-structured because the focus was on achieving a detailed description of the ‘facts’ behind the service. However, the aim was to create an open and relaxed atmosphere and by no means to strictly follow the predetermined set of questions. The interview was semi-structured only in order to receive insight to the particular questions that needed to be addressed. In practice, the interviews opened new insights to the research phenomenon beyond the predetermined questions. Figure 6 illustrates how the data generation process progressed.

²⁶ The interview with the representatives of Tuulia International was conducted for case descriptive purposes (see chapter 4.8).

		2009											
		J	F	M	A	M	J	J	A	S	O	N	D
UNSTRUCTURED CUSTOMER INTERVIEWS									①	② ③ ④	⑤⑥ ⑦⑧ ⑨⑩ ⑪	⑫⑬ ⑭⑮ ⑯	
CUSTOMER FEEDBACK DATA			①							②			
INTERVIEWS WITH KESKO REPRESENTATIVES				①		②							
INTERVIEWS WITH TUULIA REPRESENTATIVES						①							

Figure 6. The data generation process

The use of multiple data sources contributed to gaining a well-grounded description of the research phenomenon. As a whole they provided a good basis for the data analysis process.

4.5 Abductive reasoning

In this research, the role of theory is to give guidance for the research process and empirical data is used to take the next steps in understanding the research phenomenon at hand, and in developing theory. In that respect, both theory and empirical data play critically important roles in the research process. The research is not deductive since no pre-determined hypotheses are developed from existing theory and statistically tested. Nor is the research purely inductive in nature, as the role of existing knowledge in terms of CRM and the service perspective are emphasized in *approaching* the phenomenon of reverse use of customer data. Although these two basic aspects of inquiry seldom exist as clear-cut alternatives (Eriksson & Kovalainen, 2008), here *abductive logic*²⁷ is preferred to characterize the roles of existing theory and empirical data generated from the case study. The

²⁷ Also referred to as systematic combining (Dubois & Gadde, 2002), interactive research (Gummesson, 2001), or reflexive methodology (Alvesson & Skoldberg, 2000, 4–9) (see Lamberg, 2008, 77–80).

focus is on the interplay between the empirical world and existing theory in order to refine and develop theory further, which is considered as a fruitful approach when the objective is to discover new things (Dubois & Gadde, 2002). This is achieved through what Dubois and Gadde (2002) refer to as matching and direction and redirection.

In general, case studies offer tools to generate in-depth insight about empirical phenomena, but are often described as linear processes (Dubois & Gadde, 2002). Here, to utilize the potential of the case study at hand, the research is seen more as a cyclical process than a linear one. The research process consists of intertwined research activities and is characterized by constant movement between theory and empirical reality. It is a natural consequence of the research purpose; building a general framework. Hence, this research agrees with Dubois and Gadde (2002, 555) as they argue:

Instead, we have found that the researcher, by constantly going ‘back and forth’ from one type of research activity to another and between empirical observations and theory, is able to expand his understanding of both theory and empirical phenomenon.

In practice, abductive reasoning is to a large extent similar with the general objective of hermeneutical understanding and the hermeneutical spiral (see Eriksson & Kovalainen, 2008, 23), where there is continuous interaction between the parts and the whole. What is important, though, is to understand the separate roles of existing theory and empirical data in achieving the purpose of the research, and to communicate this research setting in a transparent way.

4.6 The process of data analysis and interpretation

Analysis is about giving data significance; it is a process of investigating something to find out what it is about and how it works (Corbin & Strauss, 2008, 46). The process of qualitative analysis requires the researcher’s intuition about what is going on; trust in the research process and ability to be creative, flexible and honest with the research data all at the same time (Corbin & Strauss, 2008, 16). It is about investigating a substance and its components to determine their respective

properties. In the context of case study research, the researcher should be intensively focused on digging into meanings and relating them to contexts and experience: “Place your best intellect into *the thick of what is going on*” (Stake, 2005, 449–450, emphasis added). And most importantly, during this process of giving data significance, the researcher has to be ever reflective, understanding his own role as an interpreter of the empirical data about a phenomenon.

However, in the context of case study research, studies too often focus only on describing data generation, but spend little time on elaborating data analysis, despite the fact that it can be regarded as the heart of building theory from case studies. Consequently, a huge chasm often separates the empirical data from the conclusions (Eisenhardt, 1989). In that respect, the basic choices made in the data analysis process and in the interpretation are described in more detail.

4.6.1 Analysing unstructured customer interviews and customer feedback data

The data analysis process was started with the customer interviews. First, the interviews were listened to and the transcriptions of the interviews were read through twice in order to gain a general feeling about the interviews. Becoming acquainted with the data helped to understand the interviews as a whole and create an initial understanding of the customer’s relation to the research phenomenon. Using coding²⁸, categorizing and thematizing the data was investigated for similarities and interesting aspects related to the research phenomenon. No predetermined coding scheme was used; the focus was on letting the data speak in broad terms. Throughout the coding phase the data was asked guiding questions such as how do customers describe the information affecting their value creation?; what is the role of the information in the customer’s everyday life?; what causes dissatisfaction toward the information and why?; etc. Altogether, the overarching goal was to achieve a broad and holistic understanding of the customer perspective to the research phenomenon at hand.

The coding scheme in itself was developed from the empirical data. The initial coding phase yielded altogether 42 distinct and initial categories, including

²⁸ Coding can be understood as a method of connecting data and issues involving interpretations, data sources and report writing (Miles & Huberman, 1994).

categories such as 'Not for me' (information was not regarded beneficial), 'Guiding' (helping customers to achieve a more healthful life), and 'Education' (information as educator), 'Easiness & Convenience' (service as convenient to use), to name but a few. At this point, these categories were not organized into any hierarchical structure or under broader themes or entities. As the understanding of the empirical data increased, the categories were developed further including hierarchical elements. This was achieved using NVivo's tree nodes as a way to organize data. In addition to the hierarchical structure of the data, some categories that were developed during the first round of coding were readjusted, merged into broader entities or divided into sub categories. Altogether, the reorganization of data was the result of perceiving the data more as a whole, identifying emerging patterns and similarities and understanding the interrelations of the empirically-grounded categories.

Customer feedback data was different from the interview data for it was already initially in textual form and was not characterized by the interactivity of the interviews. The majority of the feedbacks were rather narrow and limited in nature and thus far from the richness of the interview data in terms of the ability to describe the research phenomenon in depth. However, customer feedback data provided good insight into what customers regarded as good or bad in the information resulting from reverse use of customer data and what should be developed further in the service. Customer feedback succeeded in uncovering aspects that were considered important in the customer's value creation. Although being one-sided and limited in size, they offered condensed and outlined perspectives to the research phenomenon. In addition, the total amount of customer feedbacks (456 pieces) can be regarded as rather large, which also contributed to the wide variety of different and diverse customer perspectives to the research phenomenon.

The analysis of customer feedback data started with reading all the feedbacks through twice. After that, the feedback data was coded and categorized using the hierarchical structure developed when coding the customer interviews. The existing categorization was used due to two reasons. First, the majority of the aspects found in the customer feedback data had already emerged from the customer interview data and hence, fitted well into the developed structure. Second, although data triangulation was used in generating data, it was utilized to generate data from the same phenomenon. It was not necessary to start with a new coding scheme for the

feedback data, but to let the additional data generation method enrich and shape the existing categorizations.

A critically important aspect in the data analysis process was to understand the nature of the data. In terms of data validity, it was vital to notice when the informant was talking about him- or herself, i.e. about actual experience, and when the focus was on general observations about the case context. Furthermore, it was important to distinguish whether informants were talking in conditional terms; i.e. not based on personal experiences, or through imaginary experiences of others. The focus was placed on teasing out what can be called experiential knowledge from what is only opinion and preference (Stake, 2004). This was in line with the chosen theoretical perspective, i.e. phenomenological hermeneutics, and the focus on interpreting customers' subjective experiences. Thus, the process of data analysis focused systematically on the subjective experience of the informants in order to gain a trustworthy, valid and well-grounded description of the research phenomenon.

After the analysis the transcriptions of both the customer interviews and the feedback data were read through once more. This was done to evaluate how well the output of the analysis eventually reflected the data. Only minor adjustments were made.

4.6.2 Analyzing interviews with firm representatives

Common to all interviews with the firm representatives was the aim to introduce a firm perspective to the research phenomenon and to understand how reverse use of customer data supports the firm's value creation. By addressing the firm perspective additional insight was gained about what eventually characterized the research phenomenon. Firm interviews were used as the main data source for building this perspective and addressing the third and fourth research questions. In addition, these interviews had a critically important role in gaining additional insight about the case study as such; to get a detailed and rich description of the case at hand.

The analysis of the interviews started with listening to the interviews for a few times and writing down their detailed summaries and highlights. In addition, a few important parts of the interviews were transcribed to get illustrative examples of the aspects that were emphasized during the interviews. The interviews were not

transcribed in their entirety because the focus was not on understanding individual experience, but to build a firm perspective to the research phenomenon. Hence, it was important to focus on aspects and ‘facts’ that were linked to the firm. Therefore, transcribing parts of the interviews for illustrative purposes was considered as adequate. This, however, did not affect the meticulousness of the data analysis process.

During the interviews with firm representatives the informants also talked about the customer perspective; what they thought customers value or what is of benefit to them. These perspectives were ignored because they were not based on actual customer experience. The focus was simply on aspects, elements and perspectives that increased the understanding of why information based on customer data was provided to customers.

After the analysis firm interviews were listened through once more to make sure that important insight was not excluded from the data analysis.

4.6.3 A thematic analysis and construction of the typology

During the analysis of the customer interviews and customer feedback as well as the firm interviews, distinct *themes* and *elements* started to emerge from the data. What constituted a theme was its ability to incorporate a specific set of relevant characteristics introduced by the customers and/or the firm representatives. These themes became more evident as the coding phase progressed and they became empirically enriched. In more detail, the themes succeeded in describing central characteristics of the research phenomenon in relation to the research questions. Elements, on the other hand, were more concrete in nature and succeeded in capturing different aspects of the research phenomenon that were more static and tangible.

Despite the diverse nature of the themes and elements that emerged from the empirical data they did not, however, succeed in capturing the nature of the research phenomenon as a whole. Both the identified themes and elements represented somewhat limited perspectives to the research phenomenon and were not able to address it holistically from the customer’s value creation perspective. As the understanding of the empirical data increased it was noticed that there were distinct

ways in which customers used the information resulting from reverse use of customer data as input to their value creation. To capture these dynamic and versatile ways a *typology* was constructed to illuminate ways in which customers were using the information in their value creation.

A typology can be understood as having “the goal of illuminating the distinctions between varying elements in a set that together comprise a construct” (Belk, 2006, 25). Miller (1996), in turn, argues that “well-conceived and articulated typologies cluster together commonly co-occurring constellations of dimensions and/or properties and can accomplish many analytical tasks” (Belk, 2006, 25). Similarly, in this research a typology is constructed to empirically illustrate co-occurring constellations of customers using the information resulting from reverse use of customer data as input to their value creation. In other words, the variety of ways in which the information is used in customers’ value creation and the multifaceted set of characteristics related to them comprise different constructs, different *types of the typology*.

Importantly, during the data analysis, the interpretation of empirical data was influenced by the researcher’s pre-understanding and the continuous strive to understand reverse use of customer data. Regardless of the source (customer interviews, customer feedback data, and firm interviews), empirical data was given significance as it illustrated the research phenomenon at hand. This process of improved understanding resulted in the themes, elements, and the constructed typology that can be regarded as outputs of the data analysis process. They are summarized in Table 13.

Table 13. The research questions and the outputs of the data analysis process

Research question	Output of the data analysis process	Description of the type of output
1) How do customers use the information resulting from reverse use of customer data in their value creation?	Construction of a typology	Co-occurring constellation of dynamic (customer) action related to the research question 1.
2) What determines the information's ability to be used as input to the customer's value creation?	Identification of themes and elements	Incorporation of aspects (themes) that were used to identify more concrete and tangible factors (elements) related to the research question 2.
3) How does reverse use of customer data support the firm's value creation?	Identification of themes	Incorporation of aspects (themes) related to the research question 3.
4) What constitutes reverse use of customer data?	Identification of elements	Concrete and tangible factors (elements) related to the research question 4.

Through these 'outputs' the research questions are addressed, providing possibilities to make inferences about the whole, and eventually, address the purpose of the research.

4.7 A summary of the research strategy

This chapter brought forth the issues and aspects of the research process related to the research strategy. This involves making the assumptions embedded in the data analysis process transparent as well as justifying the decisions concerning the four elements (ontology and epistemology, theoretical perspective, methodology, and methods) of the research strategy. Furthermore, the aim was to describe the interpretation process transparently. Table 14 summarizes the basic decisions made in this research related to the research strategy.

Table 14. Summarizing the research strategy

Element	Chosen approach	Description and justification in the context of the research
Ontology and epistemology	Constructionism	Constructionism allows multiple realities to emerge when striving at understanding the research phenomenon in all its diversity. Given the theory-developing nature of the research, it is important to let data speak freely in all its richness and versatility; the role of information in customers' value creation is subjectively experienced and constructed.
Theoretical perspective	Phenomenological hermeneutics	Phenomenological hermeneutics focuses on recapturing the sense of the empirical data and converting its meaning into understanding. It is characterized by the researcher's pre-understanding that is an important element in the interpretation process. Given the purpose of the research of building a general framework, the iterative nature of hermeneutics and the hermeneutic circle offers a natural foundation for the interpretation process.
Methodology	Case study research	The case study research setting is found suitable for new research areas. The focus is on gaining an in-depth understanding of the case study at hand. However, the case itself is of secondary interest as it is used as intensive, exploratory, and instrumental in facilitating understanding of the research phenomenon.
Methods	Unstructured & semi-structured interviews, customer feedback data; thematic analysis, construction of a typology	Different data generation methods are used in order to achieve adequate access to data that is about the research phenomenon and has the potential to answer the research questions. Data triangulation is used to discover new dimensions and perspectives to the research problems as well as clarify interpretation. Thematic analysis and the construction of a typology are found as appropriate data analysis methods in uncovering the critical aspects of the research phenomenon and answering the research questions.

To conclude, two central issues determine and characterize the chosen research strategy. First, the nature of the research phenomenon necessitates certain assumptions in terms of research ontology and epistemology, theoretical perspective, methodology, and methods. Reverse use of customer data as a new phenomenon facilitated by advances in technology needs to be approached without a pre-defined schema; the researcher must facilitate understanding through letting data speak freely and allowing the phenomenon to emerge in all its richness and diversity. Second, the theory-developing nature of the research has also guided the research strategic choices. This is evident in how the interplay between empirical data and existing theory is approached through abductive reasoning. Altogether, the

aim has been to build a suitable research strategy for qualitative research aiming at building a general framework for reverse use of customer data in the context of food retailing.

4.8 Case description – understanding the Nutrition Code

The Nutrition Code²⁹ is an Internet-based service application launched in cooperation by the Tuulia International Ltd. and the Kesko Food, a subsidiary of Kesko Corporation, a major Finnish retailer focusing on trading sector services. With annual sales of 8.8 billion Euros (2010), Kesko Corporation is one of Europe's largest retailers. The majority of the net sales comes from Kesko Food, consisting of more than 1 000 K-food stores around Finland. Kesko Food meets customer needs through four store concepts: K-citymarket, K-supermarket, K-market, and K-extra. These concepts vary mainly in terms of product variety, location and service. Kesko Food's net sales were 3.9 billion Euros in 2010 accounting for about 44 percent of the overall sales of the corporation (Kesko Corporation's web pages).

The Nutrition Code is targeted at the loyalty cardholders of Kesko Food, i.e. K-Plussa cardholders. It uses customers' pos-data from K-food stores combined with the nutritive substances of the groceries in order to provide customers with nutritional information about the groceries they have bought. After registering to the service, customers are able to access this information via the Internet-based application, i.e. the Nutrition Code, where customers are able to monitor the healthfulness of their groceries and receive advice on how to enhance the quality of their diet.

In the service application, customers are able to explore their own nutritional profiles in great detail. For example, customers can see how their nutritional profiles become consisted of the actual grocery items they have purchased. With the help of the service they are able to track down which nutritive substances come from which grocery items. The service provides a monthly summary of the grocery items and maintains a rolling three month's summary of the nutritive substance resulting from

²⁹ Throughout the research the service is referred to as Nutrition Code. In Finnish, the service is called Ravintokoodi.

the bought groceries. In addition, a monthly summary of the food groups, such as potatoes, fruits, and fish, is provided. Yet another important aspect of the service is that it provides recommendations for the customers. The customer-specific nutritional profile results from comparing the nutritional information with the recommendations provided by the National Nutrition Council³⁰. Nutritional values of the grocery items are based on the food content database called Fineli. The database is maintained by the National Institute for Health and Welfare. These recommendations create the basis on which customers' groceries are compared with. Values for each nutritive substance are calculated as relative shares of the overall groceries. In other words, the size of the household does not affect the estimate of the quality of the customer's nutritional profile as energy-standardized values are used as a basis for the recommendations. The so called food circle is used as a basis for the recommendations in terms of different food groups.



Figure 7. An illustration of the Nutrition Code's user interface

³⁰ The National Nutrition Council is a group of experts working under the Ministry of Agriculture and Forestries. This group, consisting of nutrition authorities, health promotion representatives and representatives from agriculture, food industry, and retailing is set up for a three year period (the Ministry of Agriculture and Forestries' web pages).

The nutritional components that meet the recommendations are illustrated with green dots and the aspects of the customer's diet that need the most attention are illustrated with red dots. Furthermore, based on the customer's nutritional profile, the service recommends certain products in order to enhance the quality of the customer's diet. In summary, via the service application customers are able to browse through a rather wide selection of different alternatives concerning their nutritional profile.

4.8.1 The development process of the Nutrition Code

The service is originally developed by a Finnish firm called Tuulia International Ltd. The firm is also responsible for maintaining the service. The firm recognized the emerging phenomenon of consumers' concern over health-related food issues and the increasing need for information about food healthfulness. However, there were no metrics to capture the multifaceted and complex nutritional playground, as described by a representative of the firm.

And well, at the same time we've had this megatrend, megatrend, this healthfulness, and this sort of connects with those questions that people would like to eat healthfully. When they go to the store they pile up tens or even hundreds of products in their shopping cart. And then, well, how can they know whether they eat healthfully and buy healthful products. And this is the problem that this Nutrition Code service automatically solves as it connects to the loyalty program system and calculates the contents of your shopping cart and displays it to you online.

- Representative of Tuulia International Ltd

Thus, despite the vast amount of general and detailed information about issues related to the healthfulness of food there were no means to bring the phenomenon to a genuinely concrete or personal level. There was always the possibility to calculate the nutritional values of the groceries by hand or to keep a food-related diary, but in both cases, these kinds of ways to monitor the healthfulness of the groceries could be regarded as rather inconvenient and exhausting. Hence, the aim was to come up with an automated service that could provide customers with information about the healthfulness of their own groceries. Attention was directed at the nearest automated

function to consumers' food consumption, i.e. the transaction taking place when the groceries are actually bought.

And then we got that mostly eating-related automatic way to assess it (the eating), we sort of came up with that. This is like automated, and mostly related to eating.

- Representative of Tuulia International Ltd

As a result of the transaction, pos-data emerged. The role of pos-data can be regarded critically important since it was an automated function and in that respect decreased customers' sacrifices. Every time food was purchased, pos-data emerged automatically including information about what was bought for what price, when was bought, where was bought, and in the case of K-Plussa cardholders, who had bought. Pos-data was then combined with nutritional information about the specific groceries; i.e. customer data was refined by adding an external informational element.

The development process of the Nutrition Code necessitated a diverse set of resources and competences. In the case of a service that is related to the healthfulness of food, the role of nutrition experts and health authorities was critically important. Their knowledge and resources guaranteed valid and up-to-date measurement of the healthfulness of groceries. In addition, the role of information systems, i.e. how to handle the information in practice, became important. Furthermore, legal expertise was needed to make sure that the customer's data privacy was protected according to the Finnish legislation.

The service was publicly launched in February 2009. Before the official launch the service was pilot tested for several months by the employees of Kesko Corporation.

4.8.2 The data protection law

An important aspect of the development process of the Nutrition Code was the fact that the databases including information about customer loyalty schemes and information about the healthfulness of customers' groceries had to be kept strictly apart. Finnish legislation prohibits the firm from using the new information that emerged as a result of the Nutrition Code in its CRM activities. The employees that

had access to customer loyalty data were not able to see customers' nutritional profiles and vice versa. The firm was neither allowed nor able to segment or profile customers on the basis of the healthfulness of their groceries. In practice, this made the development process more time consuming as well as difficult as the informational infrastructure needed to be built in a way that took this fact into account.

From the customers' perspective, however, this was not clearly understood when the service was first launched. There were customers who thought that the firm is now supervising how healthfully each and every one is eating. Some even thought that this new information was used as a ploy to make them buy certain goods. This, naturally, was not the case as the firm was neither allowed nor able to use any of the new information for internal purposes.

4.8.3 Case selection criteria

Selecting the case is often a result of pragmatic considerations including access to data and feasibility (Eriksson & Kovalainen, 2008, 124). In multiple case studies cases are selected, for example, on the basis of the cases' ability to represent the most 'critical' or relevant cases for transferring findings to other case contexts or selecting cases that reflect maximum variation (Patton, 1990, 169). Yin (1994), in turn, suggests that the case should be critical, extreme or unusual. Altogether, when selecting an appropriate case study, relevance rather than representativeness should be the guiding criterion (Stake, 1994).

In this research, the case was selected for various reasons. However, two main criteria guided the selection process: relevance and access. Most importantly, the Nutrition Code offered a relevant and empirically interesting representation of the emerging research phenomenon. The focus was on intensively investigating the single case study, not to strive for maximum representativeness through multiple cases. Moreover, through a research project funded by Finnish Funding Agency for Technology and Innovation a good access to data on the Nutrition Code could be achieved. Table 15 summarizes the criteria used for selecting the Nutrition Code as the case study for the research.

Table 15. Criteria for selecting the Nutrition Code as the case study of the research

Criteria	Description
Relevance	As an Internet-based service application the Nutrition Code reflected well the phenomenon of reverse use of customer data. It offered a real-world example of the research phenomenon and provided an excellent fit between the purpose of the research and the empirical case representing that phenomenon.
Access	The researcher was involved in the AAPO research project funded by Finnish Funding Agency for Technology and Innovation where K-Plus (Kesko Corporation's subsidiary that is responsible for the customer loyalty programme) also took part among other firms. This provided initially a good access to data and an opportunity to start investigating the Nutrition Code in more detail.
Exclusiveness	There were not so many clear-cut real-world examples available of the emerging research phenomenon of reverse use of customer data. Consequently, the Nutrition Code was a natural consequence when considering appropriate cases for the research. Moreover, it was an innovative service, not only in Finnish scale, but also internationally ³¹ . This provided additional research interest toward the service. Combining pos-data with the nutritional substances was genuinely something new that was considered worth investigating.
Wide influence	Choosing a case that utilized pos-data meant that the research included such an example that was somehow relevant for a broad scope of customers. Customers generally know that retailers use their customer data for different CRM-related activities. In that respect, selecting a case study where the same pos-data is used in a new way for the benefit of the customers is able to illustrate well the research phenomenon of reverse use of customer data.
Topicality of food healthfulness	Food healthfulness is an increasingly important phenomenon both within the food retailing and society in general. Therefore, it was also considered as criteria for selecting the Nutrition Code as the case study for the research. The topicality of food healthfulness justified the case in its own right.

Altogether, selecting the Nutrition Code as the case study for the research was due to the combination of the above criteria. What was essential was the case's ability to illuminate the research phenomenon. In that respect, the Nutrition Code offered a good possibility for investigating a new phenomenon and further, developing central marketing-related concepts and constructs further.

³¹ Safeway, a major US food retailer has launched a similar kind of a service called MySimpleNutrition (formerly known as FoodFlex). It is based on the same idea than the Nutrition Code and provides customers with nutritional snapshots of their groceries.

5. INFORMATION AS INPUT TO THE CUSTOMER'S VALUE CREATION

Quite soon during the data analysis it became obvious that the information provided by the Nutrition Code meant different things to different customers. For some the information was something that was “nice to know” but it did not affect his or her consumption or future purchase decisions in any way. Others, on the contrary, described how the information had an important instrumental role in achieving a specific goal in life. Altogether, the ways in which information was used in customers' everyday lives varied among the customers. The information was used in different ways as *input to the customer's value creation*; as support to the customer's value creation consisting of processes, resources and practices which customers use in order to manage their own activities (Payne, Storbacka, & Frow, 2008). To understand how the information resulting from reverse use of customer data was eventually used in customers' value creation, an in-depth exploration of the diverse set of ways was needed.

In this chapter, the first and second research questions are addressed. The focus is first on how customers use the information resulting from reverse use of customer data in their value creation. Here the aim is to gain an in-depth understanding of the ways in which the information converts into customer value; to identify the diverse ways of customers using the information as an additional resource in their value creation. This is approached through constructing *a typology*. When customers talked about the information provided by the Nutrition Code, they often referred to their personal value-creating processes that are somehow related to food consumption, such as losing weight or being able to know how healthfully their children are eating. In other words, when talking about the case study context, they brought up issues that were relevant in their everyday lives and how the information provided by the Nutrition Code was used as input in those processes. In a way, they

talked about ‘information-in-use’; how the information provided by the Nutrition Code was embedded within their lives and in their daily value-creating processes. In that respect, the construction of a typology was perceived as a valid method to capture the dynamics of customers using the information in their value creation.

The second research question, in turn, focuses on understanding what determines the information’s ability to be used as input to the customer’s value creation in the context of the Nutrition Code. Instead of focusing on *how* the information was used, the aim was to understand *what* characterizes such information that can be used as input to customers’ value creation. During the interviews and in the customer feedbacks, besides talking about the ways in which the information was used in their various value-creating processes, customers also offered insight about the basic characteristics and determinants of the information that contributed to its ability to be used as input to their value creation. In that respect, the typology constructed for the first research question already carried some initial empirical insight about what fundamentally constituted such information that could be used as input to customer’s value creation.

However, the typology alone did not provide adequate empirical basis to systematically analyze what eventually determined the information’s ability to provide customers with such additional resources that could be used in their value creation. The typology did capture the dynamic ways how customers used the information in their value creation, and thus, what fundamentally determined the information’s value-creating ability as such was ‘hidden’ and ‘embedded’ in the various value-creating processes brought up by the informants. Thus, a more detailed analysis of what characterized the value-creating potential of the information was needed to answer the second research question. Additional empirical insight was gained through focusing on the *themes* and *elements* that cause dissatisfaction toward the information, i.e. what decreased the information’s ability to be used as input to customers’ value creation. Here, customer feedback data had a major role. Hence, instead of focusing only on aspects of the information that caused satisfaction toward the information, it was also important to identify aspects that caused dissatisfaction; in addition to understanding what is perceived as good, it was considered as important to analyze what is considered as bad.

The analysis of the empirical data resulted in the construction of a typology consisting of four types (research question 1) and six themes that were used to

uncover the basic elements that determine the information's ability to be used as input to the customer's value creation (research question 2).

5.1 A typology for using information as input to the customer's value creation

Altogether four types were constructed, describing the diverse ways in which customers use the information provided by the Nutrition Code as input to their value creation. These include 'Playing', 'Check-pointing', 'Learning', and 'Goal-orientation' and importantly, they were not perceived as mutually exclusive. Through this typology the dynamic nature of how customers use the information in their value creation was captured. The typology and the types it is consisted of are discussed next in more detail.

5.1.1 Playing

'Playing' refers to such creation of customer value where the information resulting from reverse use of customer data is valued as an end in itself without considering its instrumental value in helping the customer to achieve a more healthful diet or to loose weight. The information was valued *per se* regardless of its usefulness as an additional resource in the customer's value-creating processes related to food. The information was simply something that was "nice to know"; nutritional monitoring as a way to achieve a healthful diet was not regarded as the main benefit of the service. Instead, customers played with the information; it was regarded as fun and exciting. The information was not necessarily used in the instrumental sense nor did customers talk about using the information to achieve a specific goal in life or to being able to check whether their diet was in line with the official recommendations. The phenomenon of food healthfulness was not regarded as important; for some customers the information about the healthfulness of the groceries was not considered as that useful in their value-creating processes at that specific time in their lives.

I can eat more freely, I mean compared to people with a lifestyle disease, like diabetes or obesity or weight problems, for them it might be more useful, or kind of more useful information, but for me it's more like nice-to-know type of information...

- Mikael, 19

As is demonstrated by Mikael, the information was perceived mainly as “nice to know”. Using the service was not necessarily driven by the customer’s high level of cholesterol, for example. On the contrary, the information succeeded in supporting the customer’s value creation in more hedonic terms; it was considered simply interesting and entertaining:

[...] on the other hand, there was trivia there that was sort of fun, like that I've bought 84 kilograms of stuff, food, and I wondered where it's all gone... Now I have to wait a while again until enough information has gathered to see whether anything has changed, so it's one of these exciting new things that you enjoy following.

- Amanda, 48

I don't know, I guess I've always been a sort of a statistics buff and sort of kept track, or I always keep track of what I buy and that sort of thing. It just works for me I think it's nice to have them there. So that you can see what you've bought. I don't know, it's quite interesting.

- Aino, 42

As both Amanda and Aino describe, it was simply fun and interesting to be able to see what they had bought. It can be argued that ‘Playing’ as a way of using information as input to the customer’s value creation was facilitated by the novelty value of the service. The Nutrition Code was something new and exciting and customers were therefore willing to give it a try regardless of whether it was found useful in the utilitarian sense.

And then I just got curious and wanted to find out what it is really... It was a bit strange though like what is this about. Like when you hadn't seen it in action yet, like how does it really work. Like where you have those things you've bought and you can check like, okay, these things are listed and okay, what do all of these contain, like the nutrition levels they contain. So it's interesting. It's like you get eager even, like to see that, well, this and this and this ingredient contains that. So I thought it was quite fun to look at them really.

- Olivia, 40

However, it can be questioned whether the information provided by the Nutrition Code can offer customers continual entertainment and excitement. Customers reported initial enthusiasm when starting to use the service; the information provided by the Nutrition Code was interesting and entertaining *at least at first*. In the long run, however, customers that simply are not into food healthfulness may lose their interest toward the service. The information's ability to deliver the characteristics such as fun and entertainment might gradually fade away.

To summarize, 'Playing' as a type captures the characteristics of the way in which customers use the information more as entertainment than as an instrument to follow the healthfulness of their groceries. The information provided by the Nutrition Code is considered as interesting and fun per se, and supports the customer's value creation in more hedonic than utilitarian terms. Hence, evaluating the information provided by the Nutrition Code only through its usefulness for customers to achieve a more healthful diet is inadequate. Although the information is not considered as useful here and it does not change the customer's food consumption toward a more healthful diet, it can still strengthen customers' commitment to the food retailer:

Well yeah, sure if I've got S-market and K-Supermarket side by side I'll go to the K-store, if not for any other reason then just because what I've bought will be registered in the Nutrition Code service...

- Mikael, 19

Hence, thinking in terms of promoting the Nutrition Code only for customers that are originally interested in food healthfulness as a phenomenon is a too narrow perspective. Providing customers with information resulting from reverse use of customer data can support customers' value creation also in other ways.

5.1.2 Check-pointing

'Check-pointing' is characterized by customers' demand for feedback about the healthfulness of their groceries *in relation* to the recommendations provided by the authorities. Being able to know how well one's groceries are in line with the official recommendations was regarded important in the customer's value creation.

Customers were interested in getting information about the ‘goodness’ or ‘badness’ of their groceries. They were willing to know whether they were in or out of balance according to the recommendations, as described by Juhani:

Well I guess I’ve been kind of vaguely concerned about whether there’s something missing in my diet. Of course I have a broad idea about my old diet. About what the food pyramid looks like and how you should eat. But still especially with the trace elements, I don’t know where I could get which of them. So it has increased that kind of consciousness...”

- Juhani, 37

There was a subjectively experienced concern over food healthfulness; a need for information about food healthfulness that could be used in the customers’ daily activities, in their value creation. The customers were vaguely worried about the healthfulness of their groceries. They wanted to identify the flaws in their diets; to find out what is bad and what is good, as illustrated in the following anonymous customer feedbacks:

The service reveals ‘errors’ on your shopping list in enough detail.

[anonymous customer feedback]

This service is very useful; you can see whether you’ve had a healthful or unhealthful diet for example...

[anonymous customer feedback]

You get to know the nutritional facts of the food you buy, what you should eat more of and what you should eat less of.

[anonymous customer feedback]

In the research context, i.e. food retailing, there was clearly an established need to recognize the ‘errors’ in one’s diet. In other words, in customers’ value-creating processes it was important to know the extent to which the groceries were healthful or unhealthful, or whether there was a lack or an excess of some specific nutritive substance. Thus, there was a need to know how ‘legitimate’ the customer’s diet eventually was. From the value creation point of view, for some customers this was an important piece of information, i.e. an additional resource, to be used in customers’ value creation. As an additional resource, the information provided by

the Nutrition Code supported the customer's value creation through providing a secured feeling that everything is in line with the recommendations, and that there is no need to be worried about one's food healthfulness:

For example the section where you can see what you've bought from the store it's kind of, it has confirmed to me that it, I mean when they always talk about these health or that you should eat a bit of everything, so that I've been on the right track so it confirmed that...

-Maria, 55

[...] I have to say that I like it and I keep track of it, but of course I decide for myself what I buy, but it's good to take a look at it and I always do, since we only go to the store once a week, so it's quite easy when you get your result, to check how you're doing.

- Katariina, 64

As described by Maria and Katariina, the information was used to provide confirmation about being on the right track and getting insight into where one stands in terms of food healthfulness. The information can thus be used to receive feedback about the overall healthfulness of the groceries. It can also be used to monitor some specific nutritive substance in particular. In that respect, the customer's own 'food religion'³² plays a central role. There are lots of customers who do not follow the official guidelines regarding nutrition and food consumption in general. For those customers, the information's (as being based on the official recommendations by the authorities) ability to be used as input to the customer's value creation is naturally decreased. Nevertheless, customers that follow other than the 'official' diet can still use some pieces of the information provided by the Nutrition Code in their value creation. For example, being provided with information about some specific nutritive substances, such as the level of protein, can support their value-creating processes. Vegetarians, for example, might be interested in knowing whether they are getting enough calcium, as reported by Sofia:

Well take this here for an example that well I've been a vegetarian for a long time now. But then I left out fish from my diet just six months ago. So now I sort of want to keep track that I get all the nutrients like I need. Because my doctor said to me too that I should be more careful about these things now. So in that way the service can be like helpful in this. And

³² The concept of 'food religion' is used here to refer to customers' varying dietary practices and to their often contradictory beliefs about what constitutes a well-balanced diet.

then for example well calcium is quite important for your bones and of course you just think that you don't want to be middle aged and realise that because you haven't had the right diet younger then you end up with osteoporosis or something. And then you can't do anything about it anymore.

- Sofia, 21

After leaving out fish from her diet Sofia needed to know whether she was getting enough calcium, which was considered as important in order to avoid illnesses, such as osteoporosis, in the future. Thus, despite the fact that the Nutrition Code was based on the official recommendations by the authorities and ignored the fact that Sofia was a vegetarian, the information provided could nevertheless to some extent serve Sofia's purposes and was considered helpful and supporting Sofia's value-creating processes as a vegetarian.

Altogether, central to 'Check-pointing' is the customer's need to know whether his or her diet is in line with the recommendations provided by the authorities or in line with the guidelines of alternative food diets. As a result of this 'check-pointing', new information emerges that is then used in customer's value creation accordingly; to provide a secured feeling or confirmation about one's choices regarding food. Naturally, the 'goodness' or 'badness' of a customer's diet is to a large extent evident in all types of the typology, as the Nutrition Code as a service is fundamentally based on providing customers with information about the healthfulness of their groceries. However, here the type is characterized by customers' willingness to know how they stand *in relation to* the recommendations, which can then result in getting a secured feeling that everything is in balance:

I noticed that I get enough nutrients and vitamins from my diet. That I don't need any supplements or additional vitamins. I use too much sugar but otherwise it's quite okay.

[anonymous customer feedback]

And then, maybe it adds up this kind of feeling of security when the trace nutrient lists don't show red a lot or anything. So you know it's okay and all. If I sometimes wondered whether I get enough of vitamin D from food now I know I do and that I don't need to worry about that. So it has brought with it this feeling of security and it's also nice to know that you have a tool you can use and how you can improve your diet if you suddenly need to do that.

- Juhani, 37

Being aware of such a tool to measure groceries' healthfulness also creates a feeling of security, as described by Juhani. Hence, although not using the service constantly, simply knowing that one is able to do so can support the customer's value creation.

5.1.3 Learning

'Learning' as the third type in the typology refers to customers using the information provided by the Nutrition Code to increase their level of understanding about issues related to food *and* changing their behavior on the basis of this new knowledge. In other words, the information provided by the Nutrition Code offers customers additional resources that enhance customers' understanding of their diets in general and of the nutritive substances of different grocery items in particular. This understanding is then used to make better decisions regarding food consumption; customers use the information in their own value-creating processes to enhance the quality of their diets and end up feeling better off.

First, 'Learning' is characterized by the information's ability to open customers' eyes to important issues regarding their food consumption and provide them with unexpected insight about food healthfulness. The information shook customers' basic beliefs about their food diet.

It's been totally shocking I mean to look at for example when you buy an innocent one-litre jar of yogurt and the figures and it shows and so and how they rise I mean the share of sugar and those. It's been in a way kind of, it's been really I mean really astonishing and enlightening.

- Aino, 42

It opens your eyes to what you tend to buy.

[anonymous customer feedback]

It's been really fascinating to keep track of my eating habits through the Nutrition Code service. Even though I've known that my diet is quite healthful, I've still been surprised by some of the things, for example the excess salt I get in the form of hidden salt. It's revealing to see which individual products may raise the figures. In addition, the tips for improving your buying habits are useful.

[anonymous customer feedback]

As demonstrated by the above citations, the information was described as being astonishing, enlightening, surprising, interesting, and all in all; awakening. In other words, the information challenged customers' current perception of their food consumption and resulted in new knowledge about food healthfulness. Reflecting upon the definition of information by Davenport and Prusak (1998), here the information provided by the Nutrition Code had an impact on customers' judgment. As a result of the information, customers were surprised by, for example, the amount of sugar in yogurt or the saltiness of bread. In that respect, customers' current understanding was found inadequate and the additional resources provided by the Nutrition Code as input to their value creation were used to fill this gap in knowledge.

Second, in addition to finding out interesting and thought-provoking things about their own diets, the information also helped customers learn new things about food-related health issues on a more general level:

If you look back a couple of years. And you more, like, follow that stuff. I mean especially the convenience foods and such, like what they contain and the carbohydrates, too. I didn't do that much before, well I did know what carbohydrates are. But I didn't have any clue about what is a big amount or a small amount in some specific food. And what should be there and what should not.

- Aino, 42

You can track your buying behaviour and learn from it.

[anonymous customer feedback]

You get information about what you eat. And at the same time you can learn about a healthful lifestyle for your own body! Thank you for this innovation!

[anonymous customer feedback]

Moreover, the information could even motivate customers to search for more information about a certain nutritive substance, as told by Sofia:

Well, just to get information about many different foods. And then it's a kind of a wake-up call if there's something major there you'll probably spot it. Well I don't know, I haven't kept track of the trace nutrients or such a lot. But then once it showed me that my selenium level or something was like 50 per cent below target or something. So that made me actually

look up this selenium like what that really is. What do I need that for and should I start paying attention to that and that sort of thing.

- Sofia, 21

Besides acting as a wake-up call and thus facilitating learning, the information provided by the Nutrition Code can also arouse interest to learn even more about food healthfulness. For example, as described by Sofia, she became interested in learning what selenium actually is and what it is used for. The information does not only provide customers with new knowledge within the boundaries of the Nutrition Code, but it can also encourage and motivate customers to learn new things about food healthfulness by themselves; to search for new resources that customers perceive as being relevant in their own value-creating processes respectively.

Third, a natural consequence of the two above discussed characteristics of 'Learning' is that customers use their increased understanding to make better choices regarding their food consumption in the future. After being provided with additional resources in the form of information about their groceries, customers are better equipped – i.e. they have more resources – to make decisions that better fit their own value creation. For example, customers can exclude certain grocery items that they have learned are unhealthy as well as concentrate more on products that have less salt or more fibers.

Well it has changed it, like with salt, even though I use very little salt, it has changed it so that I do think about how much I eat cheese because cheese is where I get a lot of salt.

- Johanna, 30

I've become more interested in getting more information about what kind of an effect my purchases have. Like what I get too much of and what I lack and from where I might get what I'm missing and what I could, what I should give up because I'm getting something too much.

- Emilia, 61

Altogether, the information guides customers toward a more healthful life. In practice, this is achieved as customers switch from using a certain product to choosing a more healthful product within the same product category, as illustrated in the following excerpts:

This is an excellent, interesting and motivating thing. My sons (12 and 17) haven't been too excited about healthful foods, but now that they're into the Nutrition Code they have even accepted vegetables and fish.

[anonymous customer feedback]

This way you come to pay attention to how healthful your purchases are. This type of service has made me feel that I try to avoid red "dots" when shopping for my groceries.

[anonymous customer feedback]

In conclusion, the role of the information provided by the Nutrition Code is not restricted to giving feedback about the customer's current diet. Moreover, the customers stressed the information's role in finding better and more suitable products to be included in their future value-creating processes. The increased understanding is converted into enhanced customer behavior. In other words, the additional resources generated through using the Nutrition Code are put into use when customers acquire resources (groceries) to be included in their value creation; customers are able to buy more appropriate grocery items to be used in their resource integration process driven by their subjectively-determined needs and wants. These resources are then regarded as serving customers' value creation better as they result in a more healthful diet than the resources used before the Nutrition Code.

5.1.4 Goal-orientation

'Goal-orientation' is the fourth type in the typology and refers to customers using the information provided by the Nutrition Code as a way to accomplish something greater than 'merely' a more healthful diet. While 'Learning' was about using information as an instrument to achieve a more healthful diet, here information is used to achieve something more that goes beyond food healthfulness. Here the healthier diet in itself is used instrumentally to serve greater purposes for the customer.

I'm glad that I found this right now. I just found out at the doctor's that my cholesterol levels are completely off. The Nutrition Code will help me in this new lifestyle I'm starting on.

[anonymous customer feedback]

So this means that a healthful lifestyle is a part of me now. That there's no dieting anymore but a whole new life. It's a whole new lifestyle and the Nutrition Code service assists me in it.

- Matilda, 53

As reported by Matilda, the Nutrition Code is more than just a guide toward a more healthful diet; it rather supports her striving toward a whole new lifestyle. The role of the information goes beyond the types of 'Playing', 'Check-pointing', and 'Learning'; customers perceive its role in more holistic terms, as a means to a better life. As a result, the way in which the information eventually supports customers' value creation has more diverse characteristics. In more detail, the information as an additional resource contributes to higher-level needs that can take various forms respectively; the way in which the information was used in customers' value creation was not limited to food retailing:

An excellent service. It makes you think about your eating habits. I'm a mother of two small children and well-being is very important to me. Now that I use the Nutrition Code I think more carefully about which products I add to my shopping cart. Thank you for a great service!

[anonymous customer feedback]

I feel like okay, I'm making the right choices or that it somehow. Sometimes I do come to think about like, oh how can one or the other of my friends have such an unhealthful diet. Or something like that. Maybe I feel like a better person when I know how it should go.

- Sofia, 21

If I think about my 17 and 18-year-old daughters who have got such a health education at school that I have to strain every nerve here, to be honest, because they keep checking every single label and tag and content and there's an immediate protest if I have bought the wrong types of products, if there's too much salt or it's not Finnish or some other content is not right or it was produced elsewhere, too many E numbers, so in that sense I do want to prove that this shopping cart is correct.

- Amanda, 48

For example, a mother recognizes the Nutrition Code's role in helping her to become familiarized with the nutritive substances of the food her children are eating

and as a result, helps her to be a better mother. Moreover, as a result of using the service, Sofia has compared her diet with her friends' diets and has felt gratification and pleasure for knowing that at least she is making the right decisions. Amanda, in turn, is able to convince her daughters of the nutritive quality of the food she buys. In none of these examples was food healthfulness a central characteristic as such, because the information was used as input to the customer's value creation at a higher-end level. The information was used to provide a feeling of being a better mother or considering oneself as a better man. Detailed information about the healthfulness of the groceries was not used to achieve a more healthful diet per se, but the role of the Nutrition Code as a whole was seen as supporting customers' value creation.

Altogether, 'Goal-orientation' is characterized by the information being used for higher purposes than achieving a more healthful diet alone. Instead of focusing on the information's ability to help customers to eat more healthfully, customers perceive greater goals that go beyond food healthfulness; the role of food retailing in customers' value creation is extended. These 'goals' are not about food healthfulness or food consumption per se, but providing customers with information about the healthfulness of their groceries help them achieve specific goals in their own value creation. These goals, since they are more abstract in nature than the 'mere' more healthful diet, interestingly uncover the wide variety of customers' value-creating processes. These processes take place at a higher level of analysis and can eventually be tracked down to food consumption – and more importantly – can be supported through providing information resulting from reverse use of customer data.

5.2 A summary of the typology

The four types in the typology described and discussed in this chapter characterize the ways in which information resulting from reverse use of customer data is used in customers' value creation in the context of food retailing. The empirical focus was laid on identifying characteristics that co-occur in the respective types; to identify bundles of characteristics that as a whole constitute distinct types, and collectively contribute to the construction of a typology. Thus, during the data analysis process

attention was paid to letting the data speak freely; no pre-determined coding scheme was used in order to let a wide spectrum of types to emerge and to avoid the risk of excluding central characteristics of the ways in which customers used the information in their value-creating processes. As a result of a careful process of coding, categorizing and thematizing an empirically well-grounded typology was constructed that managed to illustrate the *the thick of what is going on* (Stake, 2005). The types of the typology captured the ways in which information is used as input to the customer's value creation.

It is important to note that the different types were not necessarily exclusionary; the purpose was not to classify customers into different groups, but to identify different ways in which reverse use of customer data eventually contributed to supporting the customer's value creation. This often took place through multiple types of the typology; the information supported some customers' value creation in various ways, whereas for others it served more limited purposes. Some of the value-creating processes were characterized by customers' everyday practices and others were more longer term and characterized by more abstract goals. Consequently, for some customers these processes were parallel, but were here interpreted as representing different types of the typology. The central characteristics of each type are summarized in Table 16.

Table 16. The constructed typology and its central characteristics

Type	Central characteristics	Input to the customer's value creation	Citation example
'Playing'	Customers have no acknowledged need for information about food healthfulness and the information as such is not necessarily meaningful or relevant for the customer; the information carries no instrumental value.	The information is used for entertaining purposes, as something that is "nice to know", but does not contribute necessarily to enhanced value creation through more healthful consumption. Information is something that is simply interesting, fun or entertaining emphasizing the hedonic aspect of the service.	"Well maybe it's kind of nice-to-know information, I can't really say that it would have in any way, that it would affect my buying decisions very much..." - Ilona, 40
'Check-pointing'	Customers are interested in the healthfulness of their groceries in relation to the recommendations provided by the authorities or in relation to alternative food diets. Customers perceive it important for them to know where they stand in nutritional terms.	Meeting the customer's need to know whether his or her diet is in line with the recommendations; providing a secured feeling about the healthfulness of food and a peace of mind.	"And then I just kind of wanted to know. Like let's see what I've got there. Like are we on the red or green in each of the categories. I mean it was sort of quite interesting to check out like okay where are we at." - Olivia, 34
'Learning'	Information as interesting, astonishing, enlightening, surprising and as a whole awakening in a more instrumental sense; enhancing customers' level of understanding about issues regarding their own food consumption. The customers learn new things about food healthfulness and change their behavior accordingly.	Customers use the additional resources (in the form of new knowledge) in making better decisions regarding their future food consumption. Customers can enhance their value creation as they are better equipped to acquire resources that fit their value-creating processes better.	"I switched the brand of the cold cuts I buy because it showed me that one producer's cold cuts contained more of the unhealthy nutrients than a similar product by another producer, so I switched that and then I changed the bread spread we use in our family for a low-fat spread." - Helmi, 30
'Goal-orientation'	Achieving a more healthful diet is instrumental in relation to more abstract goals; customer goals are not necessarily related to food healthfulness as such.	The customer is being supported in achieving his or her higher-level goals; information is used as input to value-creating processes that take place on a higher level than the achievement of a 'mere' more healthful diet.	"So this somehow made me feel that I'm in better control of my life." - Juhani, 37

When comparing the different types in the typology it can be noticed that the role of the information in customers' value-creating processes varies considerably. As discussed in the third chapter, the utilitarian perspective to value perceives customers as rational problem-solvers and consumption is often characterized by some type of a task completion. Utilitarian value is instrumental, task-related, relational, functional, cognitive and a means to an end (Babin, Darden, & Griffin, 1994). On the contrary, hedonic value is often an end in itself and reflects entertainment and playfulness (Rintamäki et al., 2006; Babin, Darden, & Griffin, 1994).

Interestingly, these two dimensions, i.e. utilitarian versus hedonic and more instrumental versus less instrumental, also help in conceptualizing the constructed typology in more detail (see Figure 8). For example, 'Playing' is characterized by the way customers use the information provided by the Nutrition Code for entertaining purposes. The information has no instrumental value in the sense of achieving a more healthful diet and value creation is more hedonic in nature. On the contrary, 'Learning' is characterized by the way customers use the information as an instrument for achieving a more healthful diet. In that respect, it is also less hedonic in nature as customers learn and find out new things about their own food consumption and use their new knowledge for making rationalized and well-grounded decisions about their future food purchases.

The proposed typology shares some similarities with the four realms of an experience by Pine and Gilmore (1998). In their exploration of customer experience characteristics they classified experiences along two dimensions: customers' active versus passive participation and absorption versus immersion. As a result, they introduced four types of the typology including entertainment (compare with 'Playing'), esthetic ('Check-pointing'), educational ('Learning'), and escapist ('Goal-orientation').

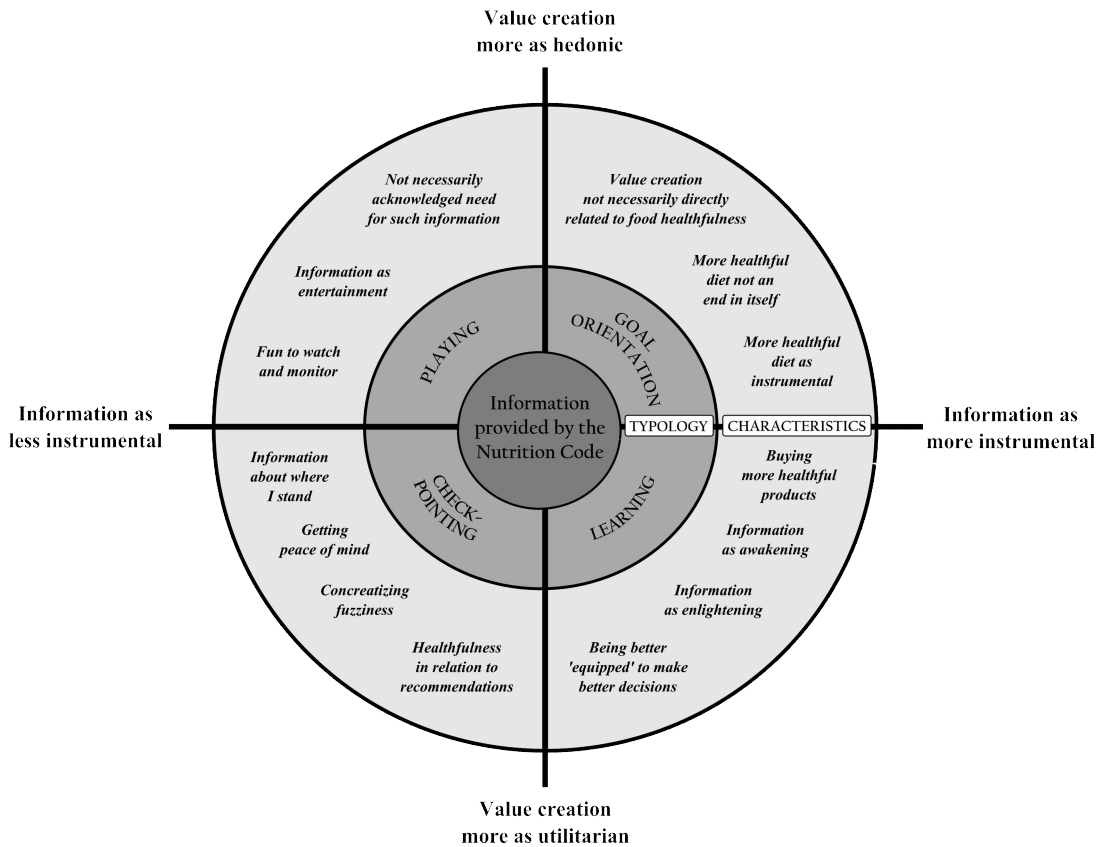


Figure 8. The constructed typology

With the help of the typology, a better understanding can be gained about the research phenomenon itself – i.e. reverse use of customer data. The types help to understand the potential of refining and giving customer data back to customers as they empirically illustrate the variety of ways in which the information eventually supports customers’ value creation. Consequently, identifying and understanding these diverse ways of value creation is critically important in order to meet the overall purpose of the research: building a general framework for reverse use of customer data.

5.3 Themes of dissatisfaction toward the information

While the first research question focuses on understanding how the information was used in customers’ value creation, the second research question aims at understanding what eventually characterized such information that can be used as input to the customer’s value creation; i.e. what determines the information’s ability

to be used as input to the customer's value creation. Although the constructed typology provided good empirical insight to address the second research question also, it did not, however, offer adequate understanding of the elements that constitute the information. Additional empirical insight was gained through focusing on themes that caused dissatisfaction toward the information³³. These themes were interpreted as signals of the information's decreased (or increased) ability to support customers' value creation. Six themes emerged from the empirical data that captured what causes dissatisfaction toward the information provided by the Nutrition Code. Methodologically, these themes of dissatisfaction were used instrumentally; they did not directly offer any answer to a research question, but were instead used as an empirical tool to identify the elements that fundamentally determine the information's value-creating ability – the objective of the second research question. The themes were labeled as 'Out-of-K-store shopping', 'Out-of-household shopping', 'Same household – different diet', 'Seldom bought items', 'Not for me', and 'The customer's food religion'. Next, these themes are discussed in more detail after which the second research question is addressed in more detail.

5.3.1 Out-of-K-food-store shopping

Of course it would be useful if all the other bigger chains (S-group, Tradeka, etc.) were in the service as well. Purchases to our household are made in all of these chains so the information in the Nutrition Code service is unreliable.

[anonymous customer feedback]

Food that was not bought from K-food stores is not registered to the service. Nutritive substances of the food items bought elsewhere were not thus taken into account in the information provided by the Nutrition Code. Moreover, not all food is bought in the first place; customers were picking berries or mushrooms, which also naturally affected their nutrition. These ingredients had not gone through the cash

³³ Focusing on themes that cause satisfaction (instead of dissatisfaction) toward the information was found relatively difficult. This was due to the fact that when the users of the Nutrition Code were satisfied with the information they tended to describe how the information was then used in practice. In that respect, focusing on the contrary on themes that cause *dissatisfaction* was considered as another way to capture what is regarded as important in the information in terms of its ability to deliver such resources that could be used in the customer's value creation. Hence, focusing on themes that cause dissatisfaction can be considered as a research strategic choice to better access data about the research phenomenon.

register in K-food stores and were not thus registered to the service. These two characteristics of the ‘Out-of-K-food-store shopping’ had an impact on the information’s ability to be used as input to customers’ value creation.

We buy the meat products for our household directly from the producers. In addition we have tons of products in our freezer which we have picked ourselves (berries, fruit, mushrooms, etc.). It would be great if the Nutrition Code service would allow you to leave out products like this and get your result without the categories you’ve selected to delete.

[anonymous customer feedback]

Similarly, customers can eat at restaurants or at work. Also in these cases, since the food is not bought from K-food stores, the information is not registered to the Nutrition Code and it also affects the way in which the information provided by the Nutrition Code can be used as input to customers’ value creation.

And then you could turn that around too, like if you’ve bought groceries from elsewhere or eaten out. Then you might want to add a product. I mean otherwise it won’t give you an accurate picture. Of course you’ll get a rough idea.

- Sofia, 21

To sum, ‘Out-of-K-food-store shopping’ was regarded as an important theme that caused dissatisfaction toward the information provided by the Nutrition Code. Dissatisfaction was due to the information’s decreased ability to reflect the customer’s nutritional profile; i.e. what the customer eventually ate. The information was not regarded as being about the customer because it did not include all the nutritive substances that the customer had eaten. This was because customers also consumed food and grocery items that were acquired elsewhere than at K-food stores.

5.3.2 Out-of-household consumption

‘Out-of-household consumption’ is another theme of dissatisfaction that emerged from the empirical data. It is closely related to the first theme discussed above because here the basic reason for dissatisfaction also results from the information’s decreased ability to provide accurate information specifically about the customer’s

diet. The difference results from the fact that here the dissatisfaction derives from others consuming the grocery items bought by the customer (from K-food stores). For example, customers may have bought food that is served for friends or relatives at a nice dinner.

And precisely if I have guests over then it mixes it up altogether because then it shows that you have eaten all wrong even though it's just that one or two nights that your grandchild is visiting. So that you would be able to divide it somehow, or maybe that you could type in how often you've had guests over or I mean that we don't eat all that food just the two of us because sometimes it looks really bad as we are just two people, I guess it's all calculated based on that, I mean I guess it asked you how many people you have in your household.

- Katariina, 64

I mean sometimes if you buy something like. Like if you throw a party, buy tons of food and have friends over. Then it kind of gets distorted. So then sometimes it would be nice if you could just remove a product. That I haven't eaten this myself at all. Of course like that. I don't know if it would work in practice and would I actually take the time to do it. But if you've just bought a lot of food for other people too it wouldn't be as interesting to follow because you'd know that it doesn't like give you a kind of an accurate picture.

- Sofia, 21

Moreover, customers hardly want to include such information in their nutritional profiles that is bought for pets or other animals:

How could I remove the peanuts from our list because we use them to feed birds. We don't eat them at all ourselves but instead the birds eat at least a kilogram a week...

[anonymous customer feedback]

Or then like we have two dogs and I always buy that discount meat for them and sometimes a little bit of goodies and make these weird mixed-up dishes like rice and barley and they eat lots of tomato purée without any spices...

- Amanda, 48

So that you could tick off some items, like when I buy oil and salt for my horse from the K-stores, so that mixes up the figures altogether.

[anonymous customer feedback]

Whether a guest or a dog, others eating the groceries the customer has bought affect the validity of the information provided by the Nutrition Code. In the first theme (Out-of-K-food-store shopping), customers would have liked to have the possibility to add such nutritive substances to the service that were acquired elsewhere. In the case of this theme, on the contrary, there was a need to exclude such grocery items from the Nutrition Code that were not eaten by the (human) members of the household. Such a feature would also allow removing from the nutritional profile the grocery items that were not in the end consumed at all or were not used as nutrition. As a result, the Nutrition Code could provide more accurate information about the healthfulness of the groceries that were eaten:

It would be great if you could tag a product as 'not used' like for example we buy table salt for dying clothes, not for eating.

[anonymous customer feedback]

The option to add/remove items. For example sometimes you don't eat all the eggs you've bought but some of them end up in the biowaste bin. The Nutrition Code doesn't take this into account in any way.

[anonymous customer feedback]

Despite the differences with the first theme of dissatisfaction, the fundamental reason for the information's decreased ability to be used as input to customers' value creation was nevertheless the same: the accuracy of the information about the customer was decreased. Customers perceived the information as something that was not directly about them, it did not reflect their consumption. Because there were grocery items that could not be added to or excluded from the nutritional profile the information's ability to be used as input to the customers' value-creating processes was also impeded. In other words, the information had deficiencies that affected the way it was used to support the customer's value creation.

5.3.3 Same household – different diets

The fact that customers may follow different kinds of diets within the same household was another source of dissatisfaction toward the information provided by the Nutrition Code. The service cannot recognize which grocery item is meant for

whom, nor do customers buy grocery items always for themselves only. Customers may buy groceries for the whole household including, for example, a husband and two children. In that respect, the information provided by the Nutrition Code is about the groceries bought for the household, not about the groceries bought for a single customer (unless he or she occupies a single household). Hence, in some cases, the diets that customers follow within the same household can be so different from one another that it affects the overall nutritional profile provided by the Nutrition Code:

[...] but my husband and I have relatively different diets, like he trains a lot and consumes lots of dairy products for example that are high in protein, so in that way it gets kind of skewed as it adds together all of our groceries, so that I need to consider that my husband has eaten most of the quark.

- Johanna, 30

[...] that when it gives you recommendations, it doesn't tell you who the recommendations are for. Like we, for example, we consume a lot of milk because we have two – we have a 3-year-old and a 1-year-old in our household. So it probably seems like I drink tons of milk. But in fact I don't. I only use milk with coffee. So that makes you wonder what the system behind calculating the recommendations is.

- Juhani, 37

As Johanna describes, different diets within the same household distort the information provided by the service; the information becomes somewhat compromised and commoditized. Juhani, in turn, ponders how the recommendations are eventually calculated as there are two children in their household who consume the majority of the milk he buys. These aspects of the information result again in decreasing the information's ability to be used as input to the customer's own value creation because more cognitive effort must be made to understand what the nutritional profiles of the members of the household are like. Here the question is not about including or excluding grocery items from the information, but being able to divide grocery items between different people within the same household. Adding such a feature to the service was suggested, for example, by Katariina:

And then the milk, well it's true that our family drinks milk, I drink non-fat and my husband drinks low-fat milk, so it would be nice if you could specify what each of us has eaten so

that you could calculate yourself, I don't know how that could be done but that would be the ideal solution really, but it's true that you can calculate your own figures by yourself if you just care to do it.

- Katariina, 64

This could enhance the information's ability to be used as input to the customer's value creation. Nevertheless, similarly with the first and second theme, also here the basic problem of the information is that the customer does not perceive it to be entirely about him- or herself.

5.3.4 Seldom bought items

The fourth theme of dissatisfaction toward the information is related to such grocery items that take a relatively long time to consume. For example, in comparison with bread and meat, groceries such as butter, salt or wheat flour are not consumed within a short period of time, but take weeks and even months to consume. However, the information provided by the Nutrition Code does not recognize the period of time during which the grocery item is consumed. The Nutrition Code includes the specific grocery item in the information in its entirety at the moment it is purchased.

That reminds me of one drawback. If in any given month I have bought a packet of salt then it bounces up that column sky-high even though it takes a long time to use the whole packet, so those kinds of long-lasting products can push the figure way over to the wrong side.

- Johanna, 30

The Nutrition Code service is quite useful, but I think the user should be able to take out products from the list. For example if you buy a packet of butter it mixes up all the figures even though you use the same packet for almost six months.

[anonymous customer feedback]

As described in the above quotations, dissatisfaction emerges because the Nutrition Code registers the nutritive substances of the groceries at the very moment of the transaction despite the fact that in reality the grocery item may be consumed during a time period of several weeks or even months. As a result, again, the customers do not perceive the information to be about them as the consumption of the items takes

a longer time period than is actually understood from the information. Here, the only way to avoid that kind of dissatisfaction would be to add such a feature to the service that takes into account the consumption time of a specific grocery item, as described in the following anonymous customer feedback.

I suppose the service isn't able to divide products over a longer period of time? For example the time that lapses between your two purchases of a packet of spread is the time that really equals your consumption. That would make an excellent tool for controlling your weight if you could divide the actual consumption over a longer period of time and then it would alert you like 'watch out girl now you're buying this product a bit too often'.

[anonymous customer feedback]

In that respect, the solution would not be to include (as in 'Out-of-K-food-store shopping'), exclude (as in 'Out-of-household consumption'), or divide (as in 'Same household – different diet') different grocery items accordingly, but to lengthen the consumption time of a specific grocery item. This, in turn, would contribute to the validity of the information for the customers and furthermore, increase its ability to be used as input to their value creation.

5.3.5 Not for me

The fifth theme of dissatisfaction toward the information was basically that customers did not perceive the information provided by the Nutrition Code as useful or meaningful. The information's ability to be used as input to the customer's value creation was decreased by the fact that the customers were simply not into food healthfulness, as described by Mikael:

What I mean by that is that I don't have any, I'm still so young that I don't have any of those lifestyle diseases, like diabetes or high cholesterol or anything like that, so I don't need to pay too much attention to those things and so I don't need to keep an eye on my diet like I can't eat this and not much of cholesterol, not much salt and all that, so I can eat a little bit more freely...

- Mikael, 19

As described by Mikael, the fact that he did not find the information personally that meaningful was due to his young age and the fact that he did not have any health-related problems. Being provided with information about food healthfulness was not regarded as an important additional resource that could be used to support his value creation. The information was regarded as something that was not for the customer, because the customer at this point in life was not into food healthfulness as a phenomenon. The theme is closely related to the type of 'Playing' because the information as such is not used as input to the customer's value creation in order to achieve a more healthful diet, but is merely something that is viewed for other reasons, often characterized by more hedonic aspects.

5.3.6 The customer's food religion

The sixth theme of dissatisfaction is related to the variety of 'food religions' consumers pursue today. As reported in the case description, the Nutrition Code provides customers with information about the healthfulness of their groceries *in relation to the recommendations by the authorities*; i.e. the healthfulness of customers' groceries is compared with the official nutritional recommendations provided by the National Nutrition Council. However, not all customers believe in such recommendations and therefore they follow different nutritional guidelines. There are also customers that do not eat according to the official recommendations due to, for example, ethical reasons. Thus, from the customer's point of view, the nutritional basis to which the customers' groceries are compared is not valid in many cases; what eventually is considered as healthful or the 'right' way to eat is to a large extent a matter of dispute.

Also the service only follows the official recommendations for a healthful diet, tens if not hundreds of studies show that this diet makes people ill with for example cardiovascular diseases, diabetes, cancer, etc. Why can't the users themselves choose which levels of macronutrients they want to have in their diet? Therefore the service as it is now is not useful for me at all because the officially healthful diet is not really healthful at all and I don't want to pursue it in any way.

[anonymous customer feedback]

The diet is wrong because the generally accepted diet in this country is wrong. Meaning that a high-carbohydrate diet is not the right way to go. Potato and grains are not something you should eat as much as you like. This doesn't take allergies into account either. I wonder why Finns gain more and more weight, well it's of course because the same wrong diet is imposed on them everywhere.

[anonymous customer feedback]

I'm on a low-carb diet where bread, potato, pasta and rice are cut to a minimum, but vegetables, eggs, fish and meat are used a lot. I use processed transfat (margarins, vegetable oil products, etc.) only minimally but I use a lot of natural fat, meaning butter. And because the Nutrition Code service wants to follow the so-called 'official dietary recommendations', my diet is unhealthful. In my opinion and according to the numerous other low-carbers I am on a healthful diet all the same. So who should I believe?

[anonymous customer feedback]

For customers that do not believe in the official nutritional recommendations the information provided by the service is not as beneficial as for others, as highlighted in the above quotations. However, the majority of the customer perceptions were not that radical in the sense of rejecting the whole idea of the service. For example, customers could use some parts of the information provided by the Nutrition Code, and disregard or filter the 'false' information resulting from the incompetent food doctrine the service was based on.

Well then one thing for me is that since I'm a vegetarian, it disturbs me a lot that they have those like recommendations for amounts of meat and fish you should eat and so my diet can't fully fall within the recommendations. So of course my grain and vegetable proportions will be bigger percentage-wise because I won't have any meat products in there.

- Sofia, 21

But then as me and my family are vegetarians, it's a bit like it doesn't serve us as well as it could because it assumes that meat is part of your diet.

[...]

When I said at the beginning that the service gives you a rough idea, I think this is what makes it rough, that it doesn't give you an exact picture, and maybe it's like, of course it's based on one general recommendation and you might easily get the idea at first that it's like the one and only truly healthful diet, but then when you start thinking about it more closely you realise that it's been made to fit a specific model and that you can build up a healthful

diet in many different ways. But as far as the vegetarian diet is concerned, these are the only drawbacks I've experienced.

-Johanna, 30

[...] but then there are some things that are matters of principle for me that I won't, like even if it shows me that the consumption is too low, I won't change it, like for example we don't eat meat so I won't buy it. So it can be on red or too low, it won't affect me of course.

- Julia, 47

Furthermore, some customers might be obligated to follow a specific diet. These include for instance customers that have inborn food-related health problems that oblige them to avoid certain nutritive substances. For those customers the information provided by the Nutrition Code may not be correct.

Our family is mainly on a strict diet due to gout. The service offers for example good sources for Vitamin B 12, such as liver steaks, liver casserole and Baltic herring. We can't eat any of those. So it would be great if you could create your personal profile to which you could add or remove foods that you eat or cannot eat. This way you might perhaps get more suitable suggestions on what to get from the store.

[anonymous customer feedback]

The service doesn't take into account special diets, for example if you have severe lactose intolerance you can't even drink lactose-free milk. Then it should give you other sources for calcium for example.

[anonymous customer feedback]

Altogether, the information is incorrect because customers follow different recommendations than the one used in the Nutrition Code. However, customers provided suggestions for finding a solution to this problem. As described in the quotations below, providing customers with possibilities in terms of the type of diet the customer is following could enhance the validity of the information and thus, could be better used as input to the customer's value creation.

[...] but I'd say that it would be great if the service had the most common diets, so that you could choose that I'm a vegetarian and I use milk and eggs, or I could imagine that if someone's allergic to citrus fruit or something that when it suggests something, like when there's a red dot telling you that one of the dietary minerals is missing and then you can

check out the suggestions that show you where you could get that, and well if I get suggestions for pork or beef it doesn't help me at all because I'd need to know what fits my diet or from which foodstuff I could get it.

- Johanna, 30

I would definitely like to make the service more customisable so that the users themselves could define the desirable proportions of nutrients. Or at least stop comparing the users' diets to the official dietary recommendations. I myself follow a low-carbohydrate diet which is quite far from the recommendations. It means that I only eat small amounts of foods containing carbohydrate but a lot of fat. Therefore I don't need any 'infidel' guidance for what I should eat. For the most part I would like the service to affirm numerically what I experience through my well-being and to do so in a discreet way without any lecturing.

[anonymous customer feedback]

In comparison with the themes of 'Out-of-K-food-store shopping', 'Out-of-household consumption', 'Same household – different diets', and 'Seldom bought items', the source of dissatisfaction was not that the information was not *about* the customer. Here, similarly with the theme of 'Not for me', customers were dissatisfied toward the information because it was not *for* the customer. In other words, nutritional information that follows the official recommendations by the National Nutrition Council is not relevant for all customers. Customers' alternative food religions determine the basis to which their groceries' healthfulness should be compared. Consequently, this basis determines the extent to which the information is valid and therefore useful in their value creation. Now, due to the diversity of customers' food religions, the information provided by the Nutrition Code can only be used partially, or in some cases, not at all.

5.3.7 A summary of the themes of dissatisfaction

The six themes of dissatisfaction describe the different sources from where customers' dissatisfaction toward the information provided by the Nutrition Code eventually derives. Similarly with the constructed typology, also here the focus was placed on exploring data in all its diversity. Both the unstructured customer interviews as well as the customer feedback data offered wide empirical insight into exploring and analyzing what characterized customers' dissatisfaction toward the information resulting from the reverse use of customer data. During the analysis it

was noted that the empirical data became saturated; no new themes or elements emerged from the data. All empirical data was incorporated in the analysis, which eventually resulted in identifying the six themes of dissatisfaction. These themes and their central characteristics are summarized in Table 17.

Table 17. The central characteristics of the themes causing dissatisfaction toward the information

Theme	Central characteristics	Implications for increasing the information's value-creating ability
Out-of-K-food-store shopping	Not all food and groceries are bought from K-food stores or bought at all. Thus, not all nutritive substances are registered in the service. In addition, food eaten at restaurants and workplaces is not registered to the service, which also decreases the information's ability to be used as input to the customer's value creation.	<ul style="list-style-type: none"> - Customers ought to concentrate as much of their grocery shopping to K-food stores as possible. - Adding a feature that would allow customers to <i>add</i> grocery items by themselves to the service.
Out-of-household consumption	Not all groceries bought by the customer are in fact consumed by the members within that household. For example, food is often bought to be served to guests, relatives or pets.	<ul style="list-style-type: none"> - Adding a feature that would allow customers to <i>remove</i> grocery items from the service that were not consumed by the household members.
Same household – different diets	Customers that buy groceries for the whole household but have varying diets within the same household can end up being provided with information that is somewhat compromised and commoditized. In other words, the information is provided at a household level, not targeted at one specific customer within the household.	<ul style="list-style-type: none"> - Adding a feature to the service that would allow customers to <i>divide</i> grocery items among different household members.
Seldom bought items	Grocery items that take relatively long time to consume distort the information provided by the Nutrition Code. The information is about the healthfulness of the bought groceries and the service does not take into account the time that it takes to consume a specific item.	<ul style="list-style-type: none"> - Adding a feature to the service that would allow customers to <i>lengthen</i> the consumption time of specific grocery items.
Not for me	The information's ability to be used as input to the customer's value creation is decreased due to the fact that the information is simply not regarded as meaningful for the customer. This can be, for example, due to the customer's young age or the fact that he or she does not have any food-related health problems.	<ul style="list-style-type: none"> - Adding features that increase the playfulness of the service. - Adding features to the service that make customers become interested in the phenomenon of food healthfulness and start perceiving the information as being useful also in their value-creating processes.
Customer's food religion	The information provided by the service compares the healthfulness of the customers' groceries with the official recommendations provided by the National Nutritional Council. However, some customers do not believe in these recommendations, but follow alternative nutritional guidelines or are forced to follow some specific diet due to health problems. Consequently, the information provided by the service is not as accurate for those customers.	<ul style="list-style-type: none"> - Adding a feature to the service that would take into account different food diets, which would contribute to more valid recommendations for instance for vegetarians or customers with low-carb diets.

The themes described above empirically illustrate what decreases (or increases) the information's ability to be used as input to customers' value creation. This, in turn, provides insight into what customers foundationally value in the information resulting from reverse use of customer data – the objective of the second research question that is discussed next.

5.4 Determining the information's value-creating ability

On the basis of the six themes discussed above, it can be argued that what fundamentally determines the information's (resulting from reverse use of customer data) ability to be used as input to customers' value creation is that the information is *about them* and *for them*. Accordingly, the information provided by the Nutrition Code can be divided into two central elements (see Figure 9). The first accounts for whether the actual purchase data (pos-data) describe what is consumed by the customer accurately enough; whether the customers perceives the information as being about them. The second, in turn, accounts for the food healthfulness phenomenon at a general level. It determines whether the information provided by the Nutrition Code is something that is for the customer; whether the information about food healthfulness is something that is relevant in the customer's value creation.

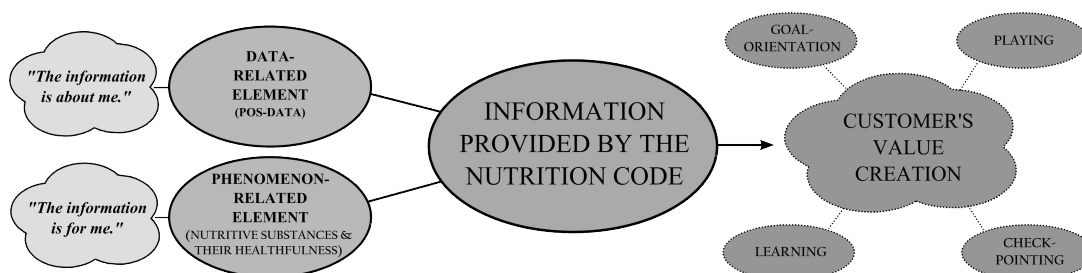


Figure 9. The data and phenomenon -related elements of the information

The two elements were empirically illustrated in the themes of dissatisfaction as they depicted the information's ability to be used as input to the customer's value-creating processes. These two elements, i.e. the data-related element and the phenomenon-related element are discussed next in more detail.

5.4.1 The data-related element

The importance of the data-related element was empirically illustrated in several themes of dissatisfaction. It was also discussed separately in the interviews.

Well maybe it's good that I can see in a concrete way what's there. What I've bought. And what those products contain.

- Olivia, 37

So obviously it's important that it's my diet and no one else's that it's about. So that it's me who should eat more fish, for example.

- Juhani, 37

Within the case study context, the data-related element referred to data that emerges at the moment of transaction, i.e. pos-data. Pos-data was regarded by the developers of the service as the best way to provide customers with information that they found to be about them. This was due to the fact that it was relatively easily available and something that already occurred whenever a customer bought something from food stores; it was the nearest automated function somehow related to actual food consumption.

However, it is important to notice that from the customer's value creation perspective, customers wanted information about the healthfulness of the food *they eat*, but were provided with information about the healthfulness of the groceries *they buy*. The data-related element measured what was bought – not what was eventually consumed. Consequently, the themes capturing dissatisfaction toward the information including 'Out-of-K-store shopping', 'Out-of-household consumption', 'Same household – different diets', and 'Seldom bought items' emerged as a result of this gap. In that respect, it is critically important to understand the nature of the data-related element. The gap between what it actually is about and what it aims at reflecting determines to a large extent the degree to which dissatisfaction toward the information emerges. Consequently, it plays a critically important role in determining the information's ability to be used as input to the customer's value creation.

5.4.2 The phenomenon-related element

In addition to the data-related element, the phenomenon that the information was all about – in this case food healthfulness – was identified as another foundational element constituting the information. Whereas the data-related element contributed to the information's ability to be *about the customer* the phenomenon-related element resulted in the information being *for the customer*. In other words, it constituted information that was considered as meaningful to the customer and thereby contributed to the information's ability to be used as input to the customer's value creation. In that respect, the phenomenon-related element was highly subjective in nature; whether the phenomenon that the information was about was found meaningful or not was eventually determined by the customer; by the customers' value-creating processes. Not all customers are interested in food healthfulness nor do they use such information as input to their value creation. However, it is important to notice that for those customers some other phenomenon-related element could in turn result in the kind of information that they would find meaningful and useful in their value creation.

Two themes of dissatisfaction, i.e. 'Not for me' and 'Customer's food religion', were recognized as decreasing the phenomenon-related element's ability to provide information that can be used as input to the customer's value creation. This was because customers perceived that the information about food healthfulness was not something that they found relevant in their value-creating processes or they believed in different nutritional recommendations than the ones provided by the Nutrition Code. In that respect, food consumption can be regarded as a rather complex and conflicting context as it implies several contradictory perspectives on what eventually constitutes 'legitimate and healthful' food consumption or what constitutes the 'right way' for customers to create value in the context of food retailing.

5.4.3 Adaptability

The themes causing dissatisfaction toward the information decreased either the data- or phenomenon-related element's ability to deliver such information that could be used as input to the customer's value creation. However, how much it eventually

decreased was highly customer dependent. During the unstructured interviews it was noticed that some customers were better able to adapt to situations where the information's ability was perceived as decreased due to some of the themes causing dissatisfaction. For some customers these themes were a bigger issue than for others. Some were simply better able to adapt to the situation where the information was not entirely about or for the customer due to, for example, the fact that the customer had bought grocery items from other than K-food stores or the fact that the customer was a vegetarian.

[...] but I buy major amounts of them from other stores besides the nearest one because the selection there is not that wide so that then they don't register in the service but of course as I know this I don't get worried or anything when I go to the Nutrition Code site...

[...]

The fact that it doesn't, I mean I trust my own judgement too and since it doesn't reflect the entire reality of my diet because I also eat other food besides the groceries I buy from my nearest K-store.

- Johanna, 30

[...] like it always shows that I'm low on fruit and vegetables because I get huge amounts of those from the marketplace. So that's how I know I don't need to worry about that at all.

- Aino, 42

I recall that for the fruit category we have bought a lot of berries and fruit from the marketplace which obviously won't register in the service. So I'm kind of able to figure out what the service will show me compared to the actual situation. I mean I won't follow it blindly and take every piece of information literally. Like a red dot somewhere when I know that I've carried a lot more fruit and vegetables home from the marketplace than I've checked out from the grocery store.

- Matilda, 53

Hence, customers' ability to adapt to the information gap resulting from the differences between what is bought and what is eventually eaten (information gap in the data-related element) and what is recommended by the service and the customer's food religion (information gap in the phenomenon-related element) is a critically important issue when discussing the information's overall ability to be

used as input to the customer's value creation. In that respect, it is the customer him- or herself who subjectively determines the extent to which the information gap eventually affects his or her value creation.

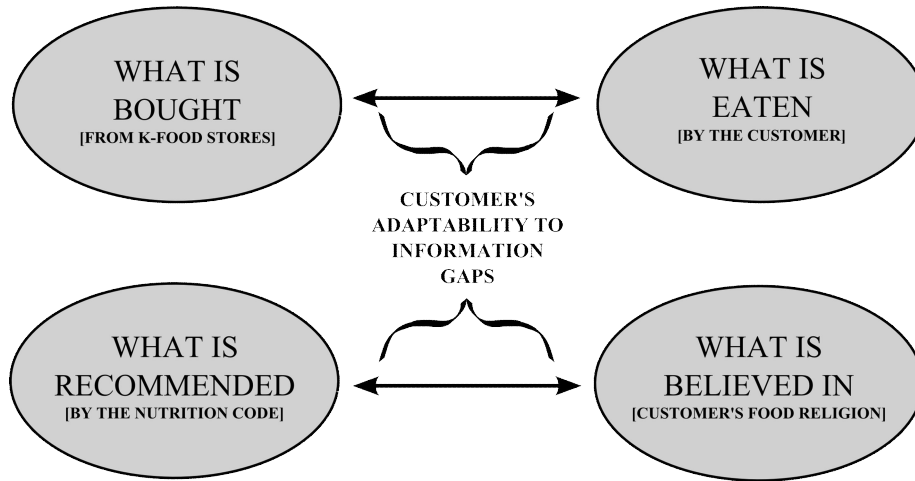


Figure 10. Illustrating the customer's adaptability to the information gaps

Thus, as illustrated in Figure 10, from the customer's value creation point of view, the customer's adaptability is another element contributing to the information's overall ability to be used as input to the customer's value creation.

5.4.4 Summarizing the data- and phenomenon-related elements

On the basis of the themes and elements discussed above, it can be summarized that dissatisfaction toward the information results from the decrease in the element's (i.e. data- or phenomenon-related) ability to provide information that is used as input to the customer's value creation. The four themes ('Out-of-K-food-store shopping', 'Out-of-household consumption', 'Same household – different diets', and 'Seldom bought items') were primarily about decreasing the data-related element's ability to provide information that can be used as input to the customer's value creation. Similarly, two themes ('Not for me' and 'Customer's food religion') were basically about decreasing the phenomenon-related element's ability to provide information that can be used as input to the customer's value creation. Both data- and phenomenon-related elements' ability to provide information that supports the

customer's value creation was mediated by the customer's individual adaptability to the information gap (see Figure 11).

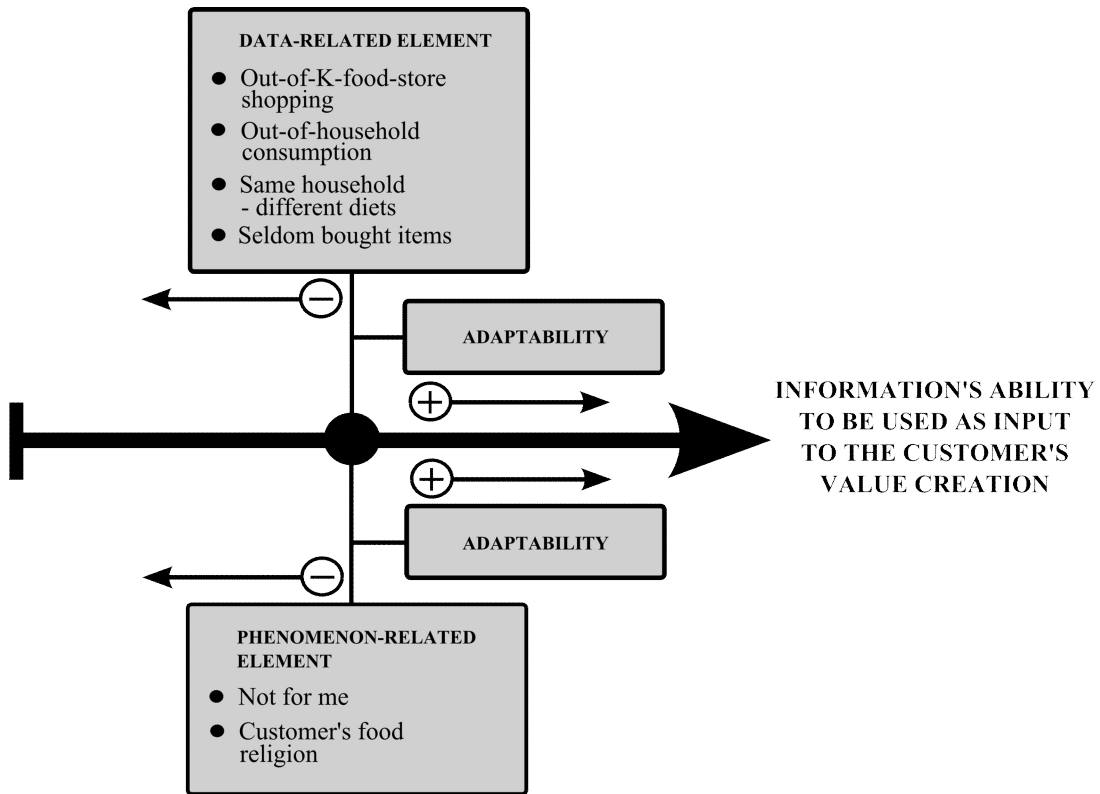


Figure 11. Themes and elements contributing to the information's ability to be used as input to the customer's value creation³⁴

In conclusion, in the case context, the data- and phenomenon-related elements create the foundational basis on which the information provided by the Nutrition Code and resulting from the reverse use of customer data is built; they constitute the information's ability to be used as input to the customer's value creation. However, it is also important to understand the differences regarding how these two foundational elements can be measured. The data-related element's (in)ability to provide desired information can be measured in quite objective terms: it results from the gap between what the customer has bought (from K-food stores) and what the customer has eaten. The phenomenon-related element, and the themes of 'Not for

³⁴ Figure 11 should not be understood as a way to model the research phenomenon but as an interpretive illustration of how the elements constitute the information's ability to be used as input to the customers' value creation.

me' and 'Customer's food religion', on the contrary, are highly subjective in nature and are thereby more difficult to measure. In that case, the information's ability to be used as input to the customer's value creation is decreased – not because the information is not about the customer – but because it is not for the customer. In the context of food retailing, the phenomenon-related element thus carries subjective and often contradictory assumptions of what is considered as a legitimate way to eat or what is the optimum level of certain nutritive substances customers should target at. Due to customers' varying food religions, it is disputable what eventually counts as food healthfulness. Therefore, given the nature of the phenomenon-related element, the information provided by the Nutrition Code always carries highly subjective dimensions; it is always the customer who defines the extent to which the information can be used as input to his or her value creation.

5.5 Synthesizing the customer perspective

This chapter has addressed the first and second research questions. As a whole they cover the customer perspective to the research phenomenon. To account for the first research question, a typology was constructed describing how customers use the information resulting from reverse use of customer data as input to their value creation. To answer the second research question, themes were identified that cause dissatisfaction toward the information. Further exploration of these themes uncovered that the dissatisfaction was the consequence of two central elements' (data- and phenomenon-related) decreased ability to deliver the informational benefits that characterizes them (information being about and for the customer).

The two elements can be regarded as a natural consequence of providing customers with information that is based on the one hand on utilizing transaction data, and on the other hand on combining it with nutritional information about the groceries bought on that specific transaction. However, it is not only the identification of these elements that is considered as important here, but through the elements it is possible to gain an in-depth understanding of how they eventually convert into the customer's value creation through different types in the typology; or how the lack of these elements causes dissatisfaction toward the information, which then results in the information's decreased ability to be used as input to the

customer's value creation. In other words, the interest is not in the elements per se, but in understanding how they eventually constitute the whole research phenomenon of reverse use of customer data.

To summarize, the two foundational elements (the data- and phenomenon - related) constituted such information that could be used as input to the customer's value creation. In that respect, the constructed typology uncovered different ways of using this information in the customer's value creation. Depending on the customer, the way in which the information was used in practice – in the customer's value creation – took various forms in the constructed typology. 'Playing', 'Check-pointing', 'Learning', and 'Goal-orientation' included bundles of characteristics that co-occurred when the information was used as input to the customer's value creation. Altogether, the issues discussed regarding the first and second research questions can be combined to represent the customer perspective as a whole. This unified approach is illustrated in Figure 12.

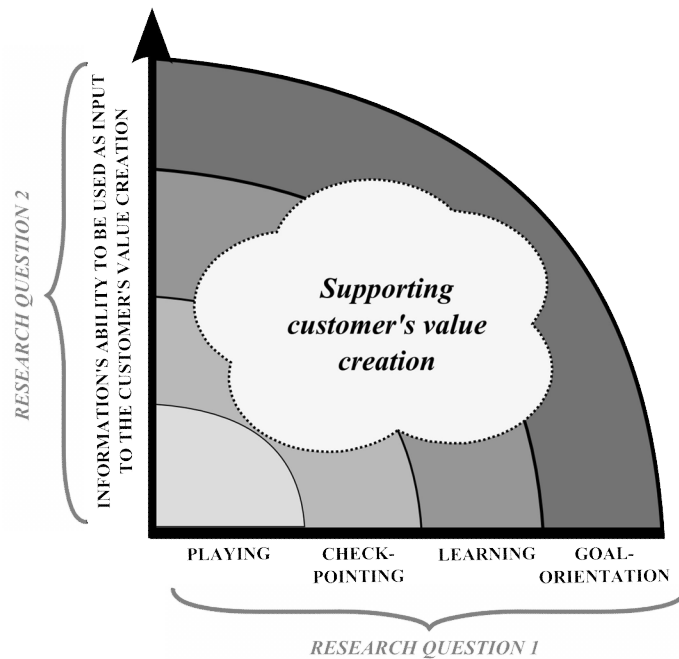


Figure 12. The typology and the information's ability to be used as input to the customer's value creation

A decrease in one or both constituent elements also results in a decrease in the information's ability to be used as input to the customer's value creation (mediated by the customer's adaptability) (vertical axis). The information's ability, in turn, is

related to the way in which information is used in the customer's value creation described by the different types of the typology (horizontal axis). The order of the types is suggestive and based on the researcher's interpretation of how the information succeeded in supporting customers' value creation in the distinct types of the typology.

6. UNDERSTANDING REVERSE USE OF CUSTOMER DATA

To gain a holistic understanding of the research phenomenon it is critically important to employ multiple perspectives to uncover and expose what it is all about. While the fifth chapter focused on capturing the customer perspective, this chapter addresses the firm and the more general perspective to the research phenomenon. This is achieved through investigating first how reverse use of customer data converts into supporting the firm's value creation. Second, during the interviews with firm representatives the informants referred several times to the research phenomenon *per se*; describing what basically constituted and characterized reverse use of customer data within the case study context. This discussion took place at a more general level detached from the customer and firm perspectives. This provided empirical insight into understanding the fundamentals of the research phenomenon – what eventually constituted such reverse use of customer data that resulted in information that could be used as input to customers' value creation.

Related to the two approaches described above, this chapter addresses the third and fourth research questions. The third research question is approached through identifying *themes* that emerged from the empirical data which capture the ways in which reverse use of customer data supports the firm's value creation. To answer the fourth research question, the *elements* that constitute reverse use of customer data as a phenomenon are identified and discussed in detail. This chapter focuses first on the themes (research question 3) and then the elements that constitute the research phenomenon (research question 4).

6.1 Supporting the firm's value creation through reverse use of customer data

In order to understand the research phenomenon as a whole, it is critically important to address the firm perspective and understand how reverse use of customer data supports the firm's value creation. Hence, in accounting for the third research question the aim is to holistically grasp why the Nutrition Code was established, what is it for, and most importantly, how it converts into the firm's value creation.

To answer the research question, interviews with firm representatives together with unstructured customer interviews and customer feedback data were used as data sources. Both customer and firm insights were used to build a more versatile understanding of the firm perspective and the way in which reverse use of customer data supports the firm's value creation. Using both firm and customer informants in data generation ruled out the danger of identifying such issues that are only acknowledged by the firm or are semantic in nature without any real-world counterpart from the customers' side. In other words, when addressing the firm's perspective and the way in which reverse use of customer data supports the firm's value creation, customer insight was included to 'verify' the aspects brought up by the firm representatives³⁵; nevertheless it is finally the customer who is the ultimate determinant of the firm's value creation as well.

In the case of the Nutrition Code, four distinct themes emerged from the empirical data that capture and characterize the ways in which reverse use of customer data supports the firm's value creation. First of all, increasing the level of customer loyalty emerged as the main theme through which the firm's value creation is supported. Some customers became more loyal to the firm as a result of being provided with information about the healthfulness of their groceries. In addition, firm differentiation and repositioning, firm values and strategy, and firm image emerged from the empirical data as themes that capture the ways in which the firm's value creation is supported in the case of the Nutrition Code. Through the service, the firm was able to differentiate from competition, implement firm values and strategy, and enhance firm image.

³⁵ Yet customers were not asked to 'verify' anything in particular. Given the nature of the interviews customers talked freely about issues related also to the firm's value creation and how reverse use of customer data contributed to that.

When considering the interrelations of these themes it was noticed, however, that they occupied different levels of analysis. For example, firm image can be regarded as a somewhat more intangible and hard to measure construct than customer loyalty, which in turn is more closely linked to the firm's value creation in terms of increased future revenue. All the identified themes are important for the firm's value creation, but it is important to understand their different roles in terms of how and at which point they contribute to supporting the firm's value creation. These issues are discussed next through a more detailed description of the themes.

6.1.1 Customer loyalty

The basic reason for establishing the Nutrition Code was to provide an additional service targeted at Kesko Food's loyal customers, i.e. K-Plussa cardholders. Loyal customers wanted to be offered a service that would be genuinely beneficial to them. Reverse use of customer data was regarded first and foremost as a means to increase the loyalty of existing customers.

This is a service for our loyal customers, and the idea is to create such benefit to our loyal customers that it's worthwhile for them to be our customers and therefore they will shop at our stores.

- Representative of Kesko Corporation

This objective was to a large extent empirically illustrated by customers as well. From the customers' point of view, Nutrition Code was perceived as an additional service among the existing set of other K-Plussa -related customer loyalty benefits, such as conventional monetary compensation for customer loyalty. Naturally, the Nutrition Code was found especially beneficial by those customers that were interested in monitoring the nutritive substances of their groceries. As described in the following citations, Nutrition Code was perceived as an additional service that strengthened the already established and existing loyalty toward the food retailer, but did not necessarily result in concentrating more shopping in K-food stores:

And I think the idea is just great, basically as I am a Kesko client and I mainly do my grocery shopping at the K-stores, Citymarkets and K-supermarkets, so I thought that it

might be a useful added service for me if I want to track my shopping then why not, and it's for free so that you can use it or then you can forget about it.

[...]

I use the stores in question, so in a way I get information about my own customership, my own buying behaviour. So it is an added value for me.

- Ilona, 40

However, the theme of customer loyalty was found to be far more diverse in nature than Ilona described. Altogether four distinct sub themes of customer loyalty were identified from the empirical data of which the above described theme was labeled as 'Strengthening existing loyalty'. Here, the customers' loyalty toward that retailer was not increased in terms of buying more or concentrating more of their shopping in K-food stores; the information did not necessarily directly affect their patronage behavior. However, they became more committed as a result of being provided with additional service.

Secondly, some customers were willing to prefer K-food stores in the future just because of the Nutrition Code; they were more willing to buy more of their groceries from K-food stores.

Otherwise this might lead to, like I said earlier, that if I had those small markets closer by, or along my route I would probably use them because of the service, I mean it would be another incentive that if there were two stores side by side then which would I choose.

- Amanda, 48

Well yeah, sure if I've got an S-market and a K-supermarket side by side I'll go to the K-store, if not for any other reason then just because what I've bought will be registered in the Nutrition Code...

- Mikael, 19

Well yeah I guess if I would go to the store somewhere else and they'd have an S-market and a K-market I would probably prefer the K-store.

- Johanna, 30

As illustrated by Amanda, Mikael and Johanna, K-food stores would be preferred *if no additional sacrifices* were needed. For example, in the case of different retailers' food stores being located side by side they would prefer K-food stores just for the

sake of getting the information provided by the Nutrition Code. Although these customers acknowledged that the service had a positive effect on their loyalty toward the food retailer, the increase in loyalty was conditional; Nutrition Code was perceived to increase their loyalty if no additional sacrifices were needed³⁶. From the value creation point of view, the service and the information it provided was not that important due to the fact that although recognizing the benefits of the service, they did not want to endure any additional sacrifices for the sake of those benefits. In that respect, this sub theme is labeled here as ‘Conditional loyalty’.

Thirdly, Nutrition Code was perceived by some customers as being so important in their value creation that they simply concentrated more of their groceries in K-food stores:

I tend to shop a lot more at K-group stores.

[...]

I used to go to Citymarket something like 75 per cent of the time but now I'd have to say it's more like 90 per cent just because of this.

- Helmi, 30

Being provided with information about the nutritive substance of their groceries was regarded as such a benefit for which customers were willing to buy more from K-food stores. No conditions for the increase in loyalty were reported; in that respect, the service increased customers' loyalty unconditionally. The information provided by the Nutrition Code simply encouraged and motivated customers to buy more from K-food stores, which is why the theme is labeled ‘Motivated loyalty’.

Fourthly, providing customers with information resulting from reverse use of customer data made some customers reassess their current customer loyalty entirely and as a result, shift from one retailer to another.

I have to say that when I first heard of this me and my husband always went to the Prisma supermarket, as we tend to go to the Sello shopping mall in Leppävaara, but when this service came up I thought this is such a good idea that you can get information about what

³⁶ It is important to note that the customers' descriptions related to ‘Conditional loyalty’ are not based on actual experience, but are more or less resulting from imagination and illustrating how they would behave under certain circumstances.

you buy and what you should eat, so it was because of that really that we moved over to being Kesko customers, or K-group customers...

[...]

I mean at Kesko they take it down with that, I think this is a really good service and I feel that we won by changing sides. So we're such Kesko fans now we wouldn't have dreamt of it before, because for many years we always went to Prisma supermarkets, and it was precisely because of this Nutrition Code that we did it, because I was interested in knowing how healthfully we eat. So now I even try to go close to my workplace there's a K-store, and they are added up to the same figures, so I really do focus on K-stores now.

- Katariina, 64

As illustrated above, Katariina perceived the information provided by the Nutrition Code to be so important that she and her husband shifted from being loyal customers of S-group to being loyal customers of Kesko Food, just for the sake of the Nutrition Code. She perceived the benefits of the information resulting from reverse use of customer data to be so high that she was even ready to face considerable sacrifices in terms of changing the place where she had used to do all her grocery shopping. Similarly, Matilda found the information provided by the service so important that she found herself almost 'forced' to concentrate all their food shopping in K-food stores:

If I shop somewhere else then I wouldn't know how healthfully I eat. I want to go there to register my purchases in the service and then I can keep track of how healthful our diet is. So I forgive myself for the stock-up items. Well my husband does sometimes shop at this store whose name I shall not mention which is of German origin, to buy some healthful sausages. But I kind of forgive both of us for these. Because they are just to stock up. But the basic ingredients, our main diet for the most part as much there is to it we get from the K-store.

- Matilda, 53

Consequently, reverse use of customer data does more than just increase existing customer loyalty: it can even initiate totally new customer relationships, a sub theme labeled here as 'Reassessed loyalty'. The firm is thus able to provide customers with a service that is not available from other retailers and as a result, facilitate both existing customer loyalty as well as attract new customers. Customers were ready to

overcome obstacles and make considerable sacrifices (time and effort) in order to get the information provided by the service in return. The theme of customer loyalty and its sub themes are illustrated in Figure 13.

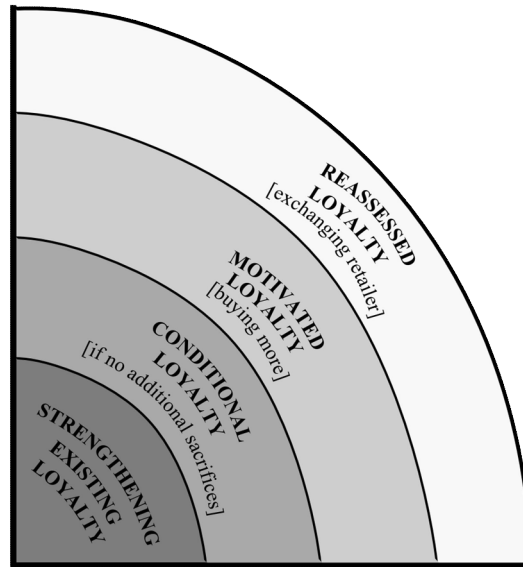


Figure 13. Increasing customer loyalty through the Nutrition Code

In addition to the different levels of customer loyalty described above, customers considered the provision of information as a fresh and new way of rewarding loyalty, and a good way to encourage them to buy more. In that respect, providing customers with interesting and useful information resulting from reverse use of customer data can be regarded as going beyond conventional customer loyalty rewarding that is often characterized by mere monetary compensation. The traditional methods for loyalty rewarding are based simply on the amount of money consumed in the retailer's outlets. Customers' loyalty is fueled by progressive rewards, as is the case, for example, in S-group's customer loyalty scheme: the more you spend the more you get back within a predefined time period. The progressive nature of customer loyalty rewarding also occurs in the case of the Nutrition Code: the more you buy (in relative terms from K-food stores) the more accurate picture of the overall healthfulness of your groceries you get. Hence, similarly with the progressive nature of the more traditional money-based customer loyalty schemes, customers are encouraged to concentrate more of their grocery shopping in K-food stores in order to receive more detailed information about their nutritional profiles.

This in turn further increases the information's ability to be used as input to customers' value creation.

Today it is rather difficult to differentiate from competition on the basis of conventional money-based customer loyalty schemes as they are relatively easy to imitate. Reverse use of customer data is a good way to differentiate from competitors and to complement the traditional ways of rewarding customer loyalty. The Nutrition Code was perceived as an additional and innovative way to reward customer loyalty. Instead of being rewarded in monetary terms only, customers were provided with information that can be of interest to them, and more importantly, is about them and for them. With the help of this information customers are then able to monitor the healthfulness of their groceries. Thus, the reward from being a loyal customer is 'embedded' in the information that can help customers in their own activities, in their own value-creating processes, for example, in losing weight.

Well with these customer loyalty cards it's only a monetary benefit that you receive, so the Nutrition Code service is significant precisely because you can see your shopping list in front of you and think about it and then it hopefully guides you toward a better lifestyle, so it's not the monetary benefit but the health benefit, that's how I would see it.

- Aurora, 55

These bonus systems they are purely about money, but the Nutrition Code service itself doesn't have anything to do with money but with food and nutrients, so it doesn't bring up money issues at all, which is good since it doesn't need to.

- Helmi, 30

The customer loyalty themes identified from the empirical data can be compared with the widely cited loyalty phases introduced by Oliver (1999). Oliver divides loyalty into four phases: cognitive loyalty, affective loyalty, conative loyalty, and action loyalty. In the first phase (cognitive loyalty), the information available from the product/service attributes indicates that a brand is preferable. The second phase of loyalty development (affective loyalty) includes an attitudinal component where a liking toward the brand has resulted from cumulatively satisfying usage occasions. In this phase, the customer's commitment to a certain brand is characterized both by cognition and affect. In the third phase, customer loyalty includes a behavioral intention to repurchase and is more akin to motivation. Finally, customer loyalty can

enter the action loyalty stage that is characterized by desire to overcome obstacles that might prevent the customer from buying from other stores (Oliver, 1999).

Although not entirely consistent, the loyalty themes resulting from reverse use of customer data share similarities with the proposed loyalty framework by Oliver (1999; see also 1997). ‘Strengthening existing loyalty’ and ‘Conditional loyalty’ can be compared with the cognitive loyalty phase; customers’ loyalty toward the food retailer is increased as a result of cognitively evaluating the attributes of the service. The customers find it useful in their value creation, but at the same time may set conditions for the increase in loyalty (if no additional sacrifices emerge). ‘Motivated loyalty’, in turn, can be compared with the conative loyalty phase as customers are motivated to buy more from the food retailer in order to receive information about the healthfulness of their groceries. Thus, there is a well-established commitment to repurchase. ‘Reassessed loyalty’ similarly with action loyalty means that customers are willing to overcome existing obstacles and make considerable sacrifices to be able to stay (or become) loyal to the food retailer.

In conclusion, as mentioned in the beginning of this chapter, customer loyalty was identified as the main theme uncovering how reverse use of customer data supports the firm’s value creation. In the context of reverse use of customer data, it can be regarded as the main driver of the firm’s value creation because it manages to capture how the Nutrition Code eventually supports the firm’s value creation. It is the positive changes in customer behavior (customers buying more) that eventually result in the firm’s value creation. In addition to the theme of customer loyalty, three themes were identified that result in supporting the firm’s value creation: firm differentiation and repositioning, firm values and strategy, and firm image. In relation to the main theme of customer loyalty, these themes were not directly linked to the firm’s value creation. Instead, they could be seen as converting into the firm’s value creation indirectly, for example, through a more favourable competitive positioning or a better image that could both result in gradual increases in the firm’s turnover. Nevertheless, this indirectness does not decrease their importance in terms of the firm’s value creation.

6.1.2 Firm differentiation and repositioning

Despite the fact that the retail market in Finland is one of the most consolidated retail markets in Europe, the competition is nevertheless hard and harsh. Retailers seek ways to strengthen their existing customer base as well as to attract new customers through differentiating from competitors and positioning the firm more favourably in customers' minds. Establishing a service that is based on reverse use of customer data can be regarded as a way to differentiate from that competition. Providing customers with information about the healthfulness of their groceries is genuinely an innovative service, not only in the Finnish scale, but also at an international level. Customers were offered an Internet-based service application that was not available from other retailers. Although the service was first and foremost targeted at existing K-Plussa cardholders, i.e. the existing customer base, there was also the possibility that the service would attract customers who were so interested in food-related health issues that they were ready to switch from one retailer to another, as described earlier in this chapter. In that respect, the service was a tool to differentiate from the competition.

Well it's that, by being a loyal customer you get a service like this, which you can't get anywhere else.

- Representative of Kesko Corporation

Retailing is about selling goods to customers. From the customer perspective, by establishing a service that provides customers with information about the healthfulness of those goods, the firm can readjust its role in the customer's value creation. In addition to goods, customers are provided with information about the healthfulness of the goods; customers are provided with additional resources for their use, which also repositions the retailer as a resource provider to the customer's value creation. The focus is shifted from goods toward a more holistic perspective to customers' value creation consisting of goods as well as the information that helps customers monitor the healthfulness of their eating.

The fact of the matter is that we sell these food products, so why wouldn't we also offer the related health information.

- Representative of Kesko Corporation

[...] but now going to the store doesn't end with me getting a product from there and me giving my money to the retailer, but the retailer offers me something for which they won't get any money, they give me information, they gather the information for me...

- Johanna, 30

As seen in the quotations above, providing customers with information that is based on reverse use of customer data also adjusts the retailer's role in the customer's value creation; a shift in the resource integration process takes place. As reported by Johanna, instead of only being sold goods, the food retailer provides her with information; i.e. additional resources that the customer does not have to pay but can use in her value creation. Thus, it can be argued that providing customers with such information makes the firm more service-oriented. More importantly, this differentiates the firm from competition through shifting the focus from merely selling goods to providing customers with additional resources.

6.1.3 Firm values and strategy

Kesko Corporation has four core values that are being emphasized within the organization. These include exceeding customer expectations, being the best operator in the trading sector, creating a good working community, and bearing corporate responsibility. Strategically, Kesko Corporation emphasizes achieving "a level of customer satisfaction and sales growth that exceeds the level achieved by competitors" (Kesko Corporation's web pages). In addition, leveraging efficiently on customer data that is generated through the loyalty card scheme is also a strategic focus. Thus, providing a service such as the Nutrition Code can be seen as a concrete example of implementing firm values as well as the firm strategy in practice.

Corporate responsibility is a central value of Kesko Corporation and the firm has been awarded for its achievements within that area³⁷. Reverse use of customer data

³⁷ For example, Kesko Corporation was ranked 33rd on the "The Global 100 Most Sustainable Corporations in the World" list (2010) and was qualified in the SAM Silver Class in the Food & Drug Retailers sector (2011). The list and awards were published by SAM, which is an investment group focusing on sustainability investing. The list of the most sustainable corporations of the world has been published since 2005 and Kesko Corporations has been rated among the best 100 corporations every time.

was seen as a way to implement corporate responsibility into practice. There were three motivations. First, the Nutrition Code is a practical tool to manage the increasingly topical concern over food healthfulness. It introduces a way to decrease problems related to national health that are particularly evident in Finland, such as diabetes and obesity, and is therefore seen as beneficial for the whole society. Furthermore, it even facilitated customers' interest toward health-related topics because customers became more interested in their own health as a result of using the Nutrition Code. Being provided with information resulting from reverse use of customer data triggered customers' interest toward the increasingly important food healthfulness phenomenon:

Well let's say that it has sparked my interest so that. It has kind of sparked my interest in finding out more about it. When you see those green dots and red dots and what you have bought in a concrete way. So that has sparked my interest even more.

[...]

I've become more interested in getting more information about what kind of an effect my purchases will have. Like what I get too much of and what I lack and from where I might get what I'm missing and what I could, what I should give up because I'm getting something too much.

- Emilia, 61

While you're at it you start following your eating habits more closely and you pay attention to how healthful or unhealthful they are - it kind of wakes you up.

[anonymous customer feedback]

Second, the service is offered free of charge and accessible to all. Customers only need to apply for the K-Plussa loyalty card and register to the service – the service is not limited or made chargeable for any customer. All customers have the chance to get access to the information about the healthfulness of their own groceries and also use that information to improve the quality of their diets.

Third, since food retailers in general are close to the everyday lives of consumers, there has been discussion about the role of the food retailer in terms of what services could or should be on the responsibility of the food retailer and which services should not. By developing a service such as the Nutrition Code the firm

also participates in this discussion by suggesting an extended role for the retailer; instead of being a seller of grocery items, the retailer should take care of customers' healthiness more broadly by providing them with information about the healthfulness of their groceries. From the point of view of corporate responsibility, this is a clear step toward taking more responsibility of customers' value creation related to food consumption.

Responsibility is a truly important issue for us... and it creates something positive, which probably wasn't the first viewpoint to this, but people within the firm like the idea that we're taking part in an undertaking such as this one and that we're involved in responsible projects. And then of course on the outside too, we hope that people will see that we are really looking for solutions that will benefit our customers. And oftentimes the discussion about responsibility revolves around how a firm is this or that and a firm is highly energy-efficient or something, but quite rarely do you see responsibility being truly about helping your customers lead a more healthful or more responsible life.

- Representative of Kesko Corporation

Maybe the grocery sector, if you think about it on a national level in Finland, so maybe the grocery sector could intervene more with people's eating habits because obesity in Finland is a huge national disease and all the diseases caused by it, so we could prevent many of them through a more healthful diet and the grocery sector could even take a bigger role in this.

- Aurora, 55

In addition to corporate responsibility discussed above, offering a service such as the Nutrition Code is closely linked to another core value of the firm: exceeding customer expectations. As the Nutrition Code is the first of its kind, not only nationally but also internationally, customers are not used to being provided with information about their groceries that is based on the actual purchase data, in this case, pos-data. Hence, customers' expectations are exceeded by offering unique resources for customers.

So I think they are ahead of their time. It's like really something positive. They care about what we, or what the people want and what they eat. That they really consider what's going on with us. Anyhow I think it's a big deal coming from a big institution like this that they have a service like that. No one else has the same thing anyway. So I think it's a really positive thing.

- Olivia, 34

To summarize, through reverse use of customer data, Kesko Corporation is able to implement its core values. Moreover, the service can be understood as a tool for strategy implementation: it helps the firm to meet the expectations set by its strategic emphases. Furthermore, leveraging on loyal customers' data and rewarding customer loyalty with significant product and service benefits is also strategically emphasized by the firm. These strategic issues are woven logically together in the case of the Nutrition Code. Through the service, customer loyalty is rewarded with information that is interesting to customers and more importantly, is provided as a result of reverse use of customer data.

6.1.4 Firm image

Well from my point of view a store like this that develops or offers services like this, I see them as forerunners and that it really benefits me as a customer...

- Ilona, 40

As demonstrated above, the Nutrition Code is an innovative and new service that makes customers perceive the firm's image generally as more positive. On the basis of the empirical data, it can be argued that there are two reasons for this. First, as emphasized in the citation by Ilona, Nutrition Code is perceived to offer a real benefit to customers, which also contributes to viewing the firm as a pioneer and strengthening the firm image. Second, customer data is traditionally used for the benefit of the firm, i.e. customers are often provided only with information about the amount of money they have spent in the retailers' food stores and how many 'loyalty points' they are entitled to. In the case of the Nutrition Code though, customer data, i.e. pos-data, is refined (complemented with information about the nutritive substances of the groceries) and given back to customers for their own use. Thus, customer data is not only used for the purpose of the firm, but for the benefit

of the customer. In that respect, customers perceive that they are ‘finally’ receiving something useful in return for their customer loyalty card usage, which influences the way they perceive the firm image.

So what the store takes from me except for the money, it gives something back to me. I think this is one of those, even though it’s not that functional yet that it would give me as much benefit as I would hope, then still I think it’s a smart move, it gives you the feeling that they aim at something good.

- Amanda, 48

Conclusively, in the context of the Nutrition Code, providing customers with information resulting from reverse use of customer data contributes to firm image. Customers are not used to being provided with such information that is based on their actual purchase data. In that respect, Nutrition Code surprises customers positively, and can even exceed customers’ expectations.

6.1.5 A summary – supporting firm’s value creation

Overall, providing customers with information resulting from reverse use of customer data can support the firm’s value creation in a variety of ways. These include increasing customer loyalty, being able to differentiate from competition, implementing corporate values and firm strategy as well as strengthening firm image. The central characteristics of these themes are summarized in Table 18.

Table 18. The central characteristics of the themes supporting the firm's value creation

Theme	Central characteristics
Customer loyalty	Through the service the firm is able to increase the loyalty of those customers that find the information provided by the service relevant and/or interesting. Different levels of customer loyalty resulting from the use of the service were identified. These included strengthening existing loyalty, conditional loyalty, motivated loyalty, and reassessed loyalty.
Differentiation and repositioning	Given the novelty value of the service the firm is able to differentiate from competition and even attract new customers. In addition, while the firm provides customers with additional resources (information) than the goods alone, it positions itself more as a service firm.
Corporate values and firm strategy	Reverse use of customer data has several characteristics that can be related to corporate responsibility and the strategic emphases of the firm. For example, offering customers information that can help them to take better care of their health can be regarded as a way to implement corporate responsibility in the context of food retailing.
Firm image	Providing customers with information that is relevant for them influences customers to perceive the firm in a more positive light. For example, in this case, customers perceived the firm as a pioneer because it provides such a service.

It can be argued that these themes related to the firm's value creation could be the natural consequences of almost any marketing action of the firm. However, it is important to notice that here the focus is solely on reverse use of customer data and how it is converted into the firm's value creation. Instead of resulting from a conventional marketing communications campaign, these themes have emerged as a result of a new way of leveraging on customer data and providing customers with such information that can be used as input to their value creation.

6.2 Constituting reverse use of customer data

Using customer data to offer customers information is not something new or innovative per se. In industries such as telecommunications or banking, customers have been provided with some type of customer information, e.g. total time used for making phone calls or annual statements of expenditures. In the food retailing context, customers who use loyalty cards have received, for example, monthly summaries of what has been bought or what kind of loyalty rewards they are entitled

to. That type of customer data usage is more or less based on the utilization of pos-data only and it fails to utilize the full potential created by pos-data in providing information that is useful in customers' various value-creating processes. For many customers, the information resulting from the traditional use of customer data described above is not that beneficial at all; it is not data endowed with relevance and purpose; it does not meet the criteria of information that can be used as input to the customer's value creation.

Not to the customers, for them it's only the economic benefit that you've got and it shows you that this is the sum total. This is how much you've bought and this is the amount of bonus you'll receive now. I'm not interested in looking back and seeing how much I've spent in Musta Pörssi [an electric appliance store] or if I've had dinner somewhere and come back from there, it doesn't make a difference to me because I know whether I bought a fridge or a TV or something else...

- Amanda, 48

In the context of the Nutrition Code, reverse use of customer data differs from the traditional use of customer data applied by many retailers. As described when addressing the second research question, what constitutes the information resulting from reverse use of customer data is fundamentally the data- and phenomenon-related elements that both determine the information's ability to be used as input to customers' value creation. Providing customers with such information resulted in diverse ways (types of the typology) in which customers were using the information in their value creation, as described when addressing the first research question. For customers that were interested or became interested in health-related food issues the information provided by the Nutrition Code was beneficial and could be used as an additional resource to their value creation.

Furthermore, even for customers who were not so much into food healthfulness, the service provided fun and entertainment. The service offered a fresh and innovative perspective to customer data usage. In comparison to the traditional use of customer data, it was based on the idea of adding an external informational element to pos-data. There was a distinct phenomenon-related element (food healthfulness) that was combined with the data-related element (pos-data) in order to provide new information that customers could use in their value creation.

Approaching reverse use of customer data only through its constituent elements (data- and phenomenon -related) and the way it supports the customers' value creation (the typology) or the firm's value creation (themes), does not result in a holistic and adequate understanding of what eventually constitutes the research phenomenon. Consequently, the fourth research question focused on identifying elements that go beyond the customer and the firm perspectives and aim at investigating and exploring reverse use of customer data at a more general level. The focus was on understanding what fundamentally constitutes reverse use of customer data. This was due to realizing during the data analysis that some empirically occurring elements did not seem to fit into the constructed typology or the themes that caused dissatisfaction toward the information. Nor did they illustrate the firm perspective to the research phenomenon. Further investigation of these elements uncovered that they basically described the nature and logic of the research phenomenon *per se*, detached from both the customer and the firm perspectives. Altogether, customers talked about what fundamentally constituted the research phenomenon, what eventually constructed and characterized reverse use of customer data in the context of the Nutrition Code.

Consequently, elements were identified that can be considered as the building blocks that constitute the research phenomenon. Elements that *enable* or *facilitate* the research phenomenon were identified. In comparison with the customer and firm perspectives addressed earlier in this research, these elements contributed to approaching the research phenomenon from a more general perspective. Through these empirically-grounded elements the fourth research question could be addressed.

6.2.1 Enablers

Enablers refer to such elements that have a fundamental role in constituting the research phenomenon. In other words, they *enable* reverse use of customer data resulting in information that can be used as input to customers' value creation; without these enabling elements reverse use of customer data would not be possible.

First, food-related health problems such as diabetes and obesity have become relatively common, especially in Finland³⁸. A high number of customers face these national diseases at some point in their lives, which makes food healthfulness as a phenomenon relevant for increasingly larger groups of customers and an important issue also for food retailers. Customers become more interested in information about food healthfulness as they are confronted with the reality of these problems and as a result become interested in food-related health issues. This can be, for example, because the consumer knows that diabetes has been a problem in the family for people in his or her age. Hence, the element of *internal factors* refer to customers that have in-built need for information about the healthfulness of their groceries:

Well yeah, both of us have these diseases that are of the chronic kind. So I think it does. At least now during the summer I've felt that it is useful and that you get. That you can see how it adds up. Say for example that you get enough calcium when you see that you've bought cheese, milk, yogurt, sour whole milk and other such dairy products that you buy. Because they are important.

- Maria, 55

The thing is in our family that we have high cholesterol and fat and blood pressure and all these diseases like old-age diabetes and I'll be facing all of that as I get older and so I've started to keep track of what we eat and I thought that oh, that's an interesting service that maybe it might be useful, I wonder how it works.

- Amanda, 48

Food-related health problems such as described by Maria and Amanda illustrate the role of internal factors as an element enabling the phenomenon of reverse use of customer data. The demand for information about food healthfulness emerged from customers' everyday lives and from their diverse value-creating processes. There was an internally-determined need for information about food healthfulness. The information provided by the Nutrition Code was perceived as being *for them*.

Second, food healthfulness as a general phenomenon has gained an increasing amount of attention recently, which is why customers have been exposed to the discussion. Customers have become more interested in food-related health issues not

³⁸ There are approximately 300 000 diabetics in Finland of which five out of six have the type 2 diabetes (Finnish Diabetes Association's web pages).

necessarily because of their personally-derived and acknowledged need for such information, but because “everybody is talking about it”.

Well they talk about it so much, it’s all over the place really, they always talk about weight and excess salt and fat, so it comes, it’s thrown at you from all directions really, so this is a handy way to see that when you check what you’ve bought that where does the column go.

-Katariina, 64

As is described by Katariina, discussion around food healthfulness makes customers think about their own consumption in terms of what is eventually bought from the food store. Therefore, food healthfulness as a general phenomenon molds customers’ perceptions of what constitutes a healthful diet.

But I feel that the proportion of those nutrients, that it’s bigger than we’ve thought. That it’s a sensitive topic, I mean how big an effect all the additives and such have. And I particularly want this, like this newspaper article says that all this industrially processed food that it’s bad for your system. So that food that is made of the best and purest ingredients possible with no additives, so that would be the best alternative.

-Emilia, 61

Altogether, the quotations above illustrate the importance of *external factors* – another demand-driven element – in constituting the research phenomenon. As emphasized when discussing the element of internal factors, this element was also characterized by the information’s ability to be something that is for the customer. Here the need for such information does not derive from customers’ health problems, but is more proactive in nature. In a way, customers’ demand for information about food healthfulness is created by others. As described by Olivia, food healthfulness as a phenomenon influences the way she thinks about her own food consumption, which in turn fuels the need for information about the healthfulness of their groceries.

Well these days they talk so much about this healthful diet and everything like that. So it is, it does support that. And it does have a bigger role all the time in my opinion and at least for myself it does. So that I do think about it even before I go to the store that what am I going to buy. And why do I buy what, and then at the store I can make my decisions, like will I

choose this product or the other. So it does make me think about it more than like. That I make the right choices.

- Olivia, 34

To summarize, internal and external factors as enablers represent the demand-driven elements; they capture what enables the research phenomenon from the customer point of view resulting in creating the value potential for reverse use of customer data. Although these factors are considered as fundamentally enabling the phenomenon, the presence of both is not obligatory, because either the internal or external factors contribute to creating what enables reverse use of customer data in the case study context. The internal and external factors are referred here together as 'Demand factors' and they constitute the *demand-side of the research phenomenon*.

The demand factors constitute the need for a specific type of information. Naturally, there also has to be an actor that meets that need. In that respect, three elements emerged that constitute the research phenomenon and are supply-driven in nature. First, there has to be 'Firm motivation' to provide customers with information resulting from reverse use of customer data. The antecedents of firm motivation are not discussed further here since they were explored to a large extent earlier in this chapter³⁹.

Second, 'Nature of data' refers to the type of customer data that is being used as the data-related element to be able to personalize the information, i.e. to make the information to be about the customer. In the case of the Nutrition Code, the basic idea was to provide customers with information about the healthfulness of their groceries. There was an automated function that was nearest to eating: the transaction and the pos-data that was automatically emerging from that transaction. This provided a customized and existing platform on which the nutrition information about the groceries could be built. As a data-related element, pos-data offered several advantages. It was an already existing function that generated a vast amount of useful data about the customers. It offered data about what was bought, when was bought, and more importantly – if loyalty card was used – by whom was bought making the information personalized through linking it specifically to the

³⁹ Firm motivation is understood here simply through the themes that support the firm's value creation: customer loyalty, differentiation and repositioning, corporate values and firm strategy, and firm image.

customer. These three pieces of data shaped the very nature of the data-related element (see Figure 14). They provided an applicable basis for the information that linked specific grocery items to a specific customer during a specific period of time. In addition, pos-data was considered as the best way to reflect what eventually was eaten by the customer, and thus, how healthfully the customer ate.

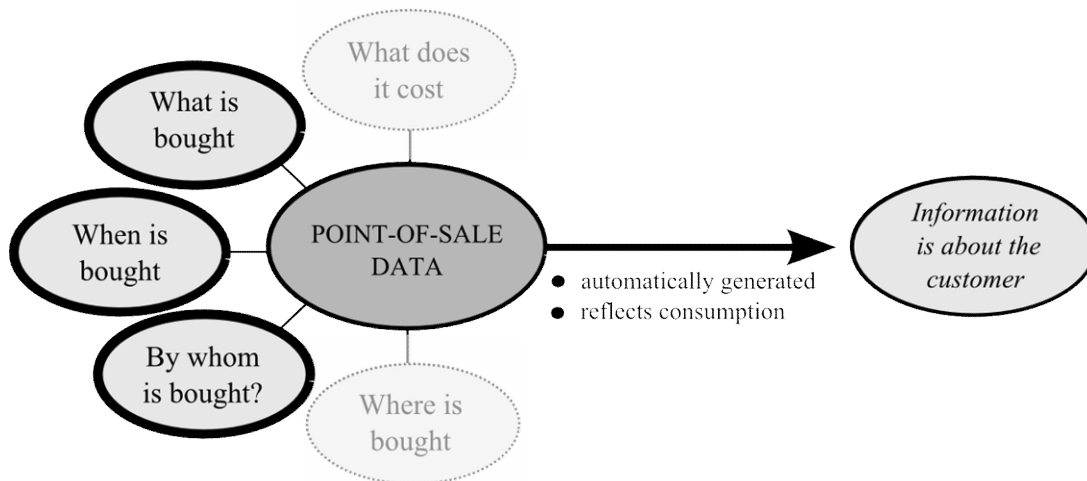


Figure 14. *Pos-data as a basis for the information that is about the customer*

In a way, pos-data created a platform to provide customers with additional information about their groceries that was not already included in pos-data. If no pos-data was available, the provision of nutritional information that is about the customer and for the customer would be difficult if not impossible to implement. Furthermore, if the generation of pos-data would not be automatic, the costs and sacrifices to attain the same level of preciseness related to that data would likely be too high. Understanding the nature of data as a constituting element is critically important when considering the possibilities of reverse use of customer data.

The third supply-driven element that enables reverse use of customer data is related to the measurement of the phenomenon-related element; i.e., what constitutes a healthful diet. While the 'Nature of data' was about the data-related element, and its ability to make the information about the customer, here the focus is on how to make food healthfulness concrete and tangible to customers. In order to provide customers with information about the healthfulness of the groceries, i.e. the food healthfulness phenomenon itself, the phenomenon-related element must be added to the pos-data. 'Phenomenon measurability', i.e. how to measure food

healthfulness was critically important in terms of providing customers with information that was valid in the sense of offering accurate information about the healthfulness of the groceries. Too fuzzy, abstract or disputable way to capture the central characteristics of the phenomenon under a single measurement system would decrease the information's ability to be used as input to customers' value creation. This is because customers would perceive the information as something that is not for them.

In the case of the Nutrition Code, measuring the healthfulness of the groceries was based on comparing the relative shares of single grocery items' energy content with the energy content of the overall groceries. Energy-standardized values of the grocery items were used in the recommendations, which is why the number of family members, for example, did not affect the validity of the information. The nutritive substances of the groceries were calculated by using the food content database (Fineli) maintained by the National Public Health Institute (KELA) (see Figure 15). Although there was some critique, this was considered as a generally acceptable way to measure the healthfulness of the groceries.

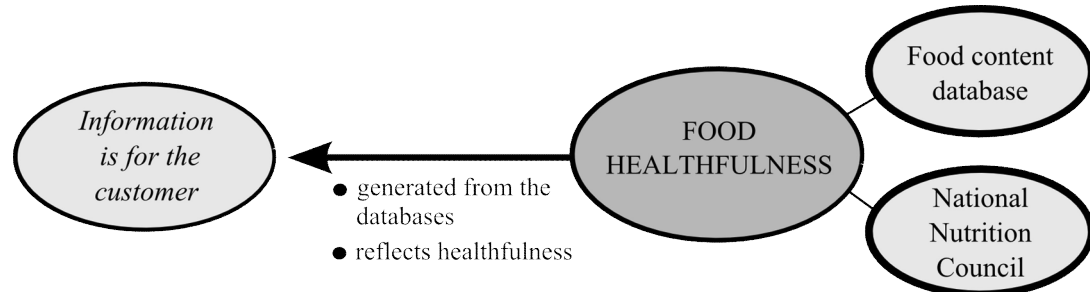


Figure 15. The basic elements of the information that is for the customer

Altogether, the supply-driven enablers are central elements that enable reverse use of customer data within the research context; together they contribute to understanding what enables the research phenomenon from the firm's point of view. In relation to the demand factors discussed earlier, these elements constitute *the supply-side of the research phenomenon*; without 'Firm motivation', suitable 'Nature of data' and 'Phenomenon measurability' the research phenomenon as such could not exist.

Table 19. Summarizing the central characteristics of the enablers

	Enabler	Description
Demand-side enablers	Internal factors	Customers increasingly have an in-built need for food healthfulness information due to, for example, health problems. This fundamental need for knowing the nutritive substance of their groceries enables reverse use of customer data within the research context.
	External factors	Food healthfulness as a phenomenon has gained attention and customers are more interested in food-related health issues not because of their personally-derived utilitarian need for such information, but because “everybody is talking about it”. This stresses customers to find out how healthful their groceries are, which contributes to enabling reverse use of customer data within the research context.
Supply-side enablers	Firm motivation	The firm must be motivated to provide customers with information about the healthfulness of their groceries. It has to serve firm purposes also, i.e. support the firm’s value creation, which is naturally a critical enabler of reverse use of customer data.
	Nature of customer data	The firm must have convenient access to such customer data that can be used as a basis for the information that is provided for the support of customers’ value creation. In the research context, the firm was able to utilize pos-data that offered several critically important advantages in terms of being used as a basis for information provision, which is why it is considered as enabling reverse use of customer data.
	Phenomenon measurability	The firm must have understanding and knowledge how to measure the phenomenon that the information is about. Too fuzzy or abstract way to measure food healthfulness would result in decreasing the information’s ability to be used as input to the customer’s value creation. This would decrease the firm’s possibilities to provide relevant information for customers’ use, which is why it is considered as an important enabler of reverse use of customer data.

Table 19 summarizes the enablers and their key characteristics. The elements (both demand- and supply-driven) discussed in this sub chapter describe what enables the research phenomenon of reverse use of customer data. They do not capture how value is created or what resources are needed in the customer’s or firm’s value creation respectively. On the contrary, in relation to the fourth research question, they focus on capturing what enables *the phenomenon* of reverse use of customer data resulting in information that customers can use in their value-creating processes.

In addition to the enablers, elements that characterize the research phenomenon in some other way than being the critically important antecedents could be identified

from the empirical data. Next, elements that *facilitate* the research phenomenon are discussed in more detail.

6.2.2 Facilitators

In addition to the elements that were *enabling* the research phenomenon a group of elements that *facilitate* the research phenomenon emerged from the empirical data. These elements were characterized by their ability to support, i.e. to facilitate reverse use of customer data as a phenomenon.

Being ‘Already a loyal customer’ facilitated the use of the service because no additional sacrifices were needed in order to receive the benefits of the service. All that the customer needed to do was register in the service with the help of a simple procedure conducted online. Importantly, being already a loyal customer was not an element that enabled the research phenomenon, i.e. it was not an element that was critically important for the research phenomenon to exist. On the contrary, it facilitated the research phenomenon through increasing demand for the service.

Well my nearest grocery store is a K-store so almost all of the food will be in their register, so then it's an easy way to get information about your diet so you know, or get a rough idea, about what you should pay attention to and what is okay.

[...]

Almost all our groceries come from that one store, so I felt that it gives quite a thorough picture of it. If it had been a service by another chain it wouldn't have done me any good because I rarely go to other stores.

- Johanna, 30

[...] and it also happens to be by Kesko, whose stores I use and where I would buy my groceries anyway. It suits me fine.

- Ilona, 40

What basically facilitated customers' usage of the service was the fact that a majority of their groceries was already concentrated in the food retailer that provided the service. Pos-data that was used to provide the information in the

Nutrition Code was already emerging as a result of customers' existing value-creating processes.

In addition, customers found the service as 'Easy to use'. All that the customer needed to do was to register in the service and the pos-data combined with the nutritive substances was automatically transferred to the service.

I found it easy to start using it...

- Johanna, 30

The service saves your time and money as it functions as an automatic food diary and clearly emphasises the big picture of your diet. It's an easy way to keep track of your diet without self-deception.

[anonymous customer feedback]

It's easy to follow your family's diet from different angles. It's good that you can view the nutritional facts for each of the products separately - this way correcting your diet is much easier.

[anonymous customer feedback]

Another facilitating element is that the service is provided 'Free of charge'. This element is basically closely related to the element of being already a loyal customer and the fact that customers do not face any additional sacrifices.

The service seems absolutely magnificent! Thank You so much for this! I'm eagerly looking forward to my product details - I only registered for the service today. And also a clever marketing technique - if this doesn't draw consumers to K-stores then what will? It's absolutely brilliant, and it's good that the service is completely free! I take good care of my well-being, I exercise and I study biotechnology, so I find the service both extremely useful and interesting.

[anonymous customer feedback]

That is doesn't cost you anything. You can check what you should pay more attention to and at the same time you can see where you've done ok.

[anonymous customer feedback]

In the long run you'll get interesting information and you can check what you might need to change. I've 'opened up the site' a long time ago but nowadays I come here often as I don't

need to pay separately for registering my purchases. I'm glad you have found a good co-operation partner for this.

[anonymous customer feedback]

As emphasized in the above anonymous customer feedbacks, the fact that the information provided by the Nutrition Code does not cost anything facilitates the customers' service usage.

The fourth facilitating element is the "Novelty value of the service". Nutrition Code as an innovative and unique service was regarded as something new and exciting. An Internet-based service application that combines customers' pos-data with nutritive substances of the groceries has not been available before, which naturally increased the general interest toward the service as such, not necessarily toward the information it provided.

Well there's been when I've been on the Kesko website I've seen an article about that service. And then I just got curious and wanted to know what it is. I had seen these brochures at the store about this Nutrition Code thing. Well then I just thought like, I wonder what that is. And then when I had seen it in a concrete way that it is a useful thing. Then I just wanted to go and check out what that service is about.

[...]

Well it was a bit strange like what is this about now. Like when you hadn't seen it in action yet like how does it really work. Like where you have those things you've bought and you can check like, okay, these things are listed and okay, what do all of these contain, like the nutrition levels they contain. It's so interesting. It's like you get all excited and see that, well, this and this and this ingredient contains that. So I thought it was quite fun to look at them.

- Olivia, 34

Well at first it was just plain curiosity about what is this thing, and then I browsed through it and then it keeps on getting more and more interesting when I started thinking about how I could use it myself. It's great.

- Aurora, 55

The incentive for using the service emerged from the service application itself urging customers to try it.

You need to be able to try it, to register and try it out, to see how it works, and how it looks and how it works and what it does for you, and what do you get out of it, and how do you use it.

- Julia, 47

In summary, the service itself can act as a facilitator for the research phenomenon. However, in comparison with the enablers, the novelty value of the service is not fundamental in that sense; it does not enable reverse use of customer data as a phenomenon, but it can facilitate it. As the novelty value of the service gradually fades away the information it provides must be relevant in the customer's value creation for a longer period of time, as was described when constructing the typology in the first research chapter. The novelty value of the service can facilitate customers to start using the service, but it is the customer who defines whether the service is capable of providing additional resources to his or her value creation in the long run.

Table 20. Summarizing the central characteristics of the the facilitators

Facilitator	Description
Already a loyal customer	Loyal customers perceive that while they are already concentrating their groceries in the food retailer offering such a service they could also start using it. Hence, the use of the service is facilitated by the fact that the customer is already a loyal customer of the food retailer, which is why the groceries are already automatically being 'registered' to the specific retailer.
Easy to use	Customers found the service as easy to use; it does not require big sacrifices in terms of time and effort, which also facilitated its usage.
Free of charge	The service is provided to customers free of charge, which further facilitates customers' usage of the service. Customers perceive it as an additional service.
Novelty value of the service	The service itself is something genuinely new and not being introduced by other retailers. The service arouses interest among the customers, which facilitates its usage.

Table 20 summarizes the central characteristics of the elements that facilitate customers' usage of the Nutrition Code. They do not enable the use of the service, i.e. they do not fundamentally trigger customers' usage of the service, but act more as another reason to start using the service. Therefore, the facilitators are subordinate to the more fundamental enablers.

6.2.3 A summary of the constituting elements

The reason for identifying the enablers and facilitators that eventually constitute reverse use of customer data was to gain a deeper understanding of the basic building blocks of the research phenomenon; to understand how it is constituted at a general level. The focus was on understanding what characterizes such reverse use of customer data that results in information that can be used as input to customers' value creation. Four central elements were identified that enable reverse use of customer data: 'Demand factors' (internal and external), 'Firm motivation', 'Nature of customer data', and 'Phenomenon measurability' are fundamental elements that enable the research phenomenon; without these building blocks reverse use of customer data resulting in information that can be used as input to customers' value creation would not be possible. They create the opportunity for firms to leverage on customer data through providing customers with information that is based on reverse use of customer data.

In addition, four elements that facilitate reverse use of customer data were identified. These include 'Already a loyal customer', 'Easy to use', 'Free of charge', and 'Novelty value of the service'. The facilitators are not as fundamental as enablers, i.e. the former are subordinate to the latter, but they both contribute to the value potential for reverse use of customer data. The demand- and supply-side enablers enabled reverse use of customer data from the customer and the firm point of views respectively. Without both sides the phenomenon as such would have not existed. The facilitators, in turn, increased the customer value potential for reverse use of customer data by decreasing customer sacrifices. Moreover, the 'Novelty value of the service' also facilitated customers use because customers perceive the service as being something new and exciting. These facilitators did not enable the phenomenon of reverse use of customer data. They were not regarded as that decisive, but were considered more as facilitating the research phenomenon.

Altogether, the enablers and facilitators contribute to increasing and complementing the understanding of the research phenomenon from the customer and the firm perspectives respectively. Together with the other research questions, they provide empirical insight to the building of the general framework for reverse use of customer data.

7. BUILDING THE GENERAL FRAMEWORK

The purpose of the research was to build a general framework for reverse use of customer data in the context of food retailing. This was approached through four research questions that have been empirically addressed in the previous result chapters. All of the four research questions provided important insight to the research phenomenon and contributed respectively to the building of the general framework. In this chapter, the results of the four research questions are integrated to address the research purpose.

7.1 The process of building a general framework

Reverse use of customer data was viewed from multiple perspectives in order to gain a holistic understanding of the issues and aspects related to the research phenomenon. Methodologically, the research phenomenon was approached through a case study research setting, where the case itself was seen as intensive, exploratory, and instrumental in nature (compare with Harré (1979), Yin (1994; 2009), and Stake (2005)). Data generation was guided by the research questions; each question uncovered new and empirically-grounded insight about the case study and contributed to the building of the general framework. Table 21 summarizes the key findings to the research questions.

Table 21. The key findings to the research questions

Research question	Key findings
<p>Research question 1</p> <p><i>How do customers use the information resulting from reverse use of customer data in their value creation?</i></p>	<p>The first research question was approached through constructing a typology which describes how customers use the information resulting from reverse use of customer data in their value creation. Through four distinct types ('Playing', 'Check-pointing', 'Learning', and 'Goal-orientation') the typology captured the diverse nature of customers' value creation where information was used as input to support varying value-creating processes; they illustrated how the information resulting from reverse use of customer data supported customers' value creation. The role of the information in customers' value creation differed considerably; for some it was only something that was nice to know, whereas for others the information supported their value creation at a higher level and was not necessarily directly related to food consumption.</p>
<p>Research question 2</p> <p><i>What determines the information's ability to be used as input to the customer's value creation?</i></p>	<p>The second research question focused on investigating what determines the information's (resulting from reverse use of customer data) ability to be used as input to the customer's value creation. In other words, what characterizes such information that customers can use in their value creation. In addition to the constructed typology, further empirical insight was generated. To answer the question themes were identified that caused dissatisfaction toward the information; these themes were perceived as decreasing (or increasing) the information's ability to be used as input to the customers' value creation. The themes were used further in identifying two central elements: the data-related element (the information is about the customer) and the phenomenon-related element (the information is for the customer). In addition, customers' adaptability was identified as another element determining the information's ability to be used as input to the customer's value creation.</p>
<p>Research question 3</p> <p><i>How does reverse use of customer data support the firm's value creation?</i></p>	<p>The third research question focused on understanding how reverse use of customer data supports the firm's value creation. Customer loyalty emerged as the main theme resulting in supporting the firm's value creation. Four levels of customer loyalty were identified ('Strengthening existing loyalty', 'Conditional loyalty', 'Motivated loyalty', and 'Reassessed loyalty'). For some the information strengthened existing customer loyalty whereas for others it was a trigger to restructure their loyalty entirely in the sense of switching from one retailer to another. In addition, the firm's value creation was supported through the themes of differentiation and repositioning, implementing corporate values and firm strategy, and strengthening firm image.</p>
<p>Research question 4</p> <p><i>What constitutes reverse use of customer data?</i></p>	<p>The fourth research question addressed what fundamentally constitutes the research phenomenon of reverse use of customer data; the focus was on understanding the research phenomenon at a more general level and exploring the circumstances where reverse use of customer data can result in such information that can be used as input to customers' value creation. Toward that end, altogether nine elements emerged from the empirical data that enable and facilitate reverse use of customer data and hence, constitute the research phenomenon in the case study context.</p>

The research questions employed three distinct but interrelated perspectives (Table 22). This multi-perspective approach to the research phenomenon contributed to the credibility of the general framework; it reduced the risk of taking a too narrow or limited perspective to reverse use of customer data. The first and second research questions addressed *the customer perspective* to the research phenomenon whereas the third and fourth research questions focused on *the firm* and *the general perspectives* respectively. As a result, a holistic understanding of the research phenomenon could be gained, which created an empirically well-grounded basis for the construction of the general framework.

Table 22. The perspectives that were addressed in relation to the research phenomenon

Perspective	Research question	Aim
Customer perspective	Research questions 1 & 2	Understanding reverse use of customer data and the customer's value creation.
Firm perspective	Research question 3	Understanding reverse use of customer data and the firm's value creation.
General perspective	Research question 4	Understanding reverse use of customer data as a phenomenon.

In the context of the research, a general framework is understood as a set of basic principles that account for the research phenomenon; it captures the fundamentals of a certain phenomenon and more importantly, is at least to some extent applicable to other contexts as well as gives guidance for further research. In the construction of the framework, it was critically important to carefully consider, investigate, and weigh the empirical insight generated through each research question respectively. The objective was to find a coherent combination where the building blocks of the framework would be naturally woven together. Following the logic of hermeneutics, this process was highly iterative including several occasions where the framework was demolished to its parts in order to find a more logical and suitable outcome for the reconstruction of the whole from its parts. The process was characterized by an ongoing quest for a more coherent interpretation of the research phenomenon.

During the research process it became obvious that the three perspectives addressed by the four research questions were the key building blocks of the general framework as well. In that respect, the basic structure of the general framework was

threefold involving the customer, the firm and the general perspectives. The focus was on understanding what basic principles of the research phenomenon these perspectives addressed and more importantly, how they were interrelated.

Gradually the themes and elements, the types of the typology and general issues and aspects related to the research phenomenon started to fit together. The interplay between the parts (typology, themes, elements; perspectives) and the whole (general framework) evolved toward taking a more synthesized and coherent shape. Eventually, in the construction of the framework, multiple levels of analysis (I-III, see Figure 16⁴⁰) were employed to bridge the gap between the empirical world and the theoretical world; they illustrated the path from empirical evidence to theory.

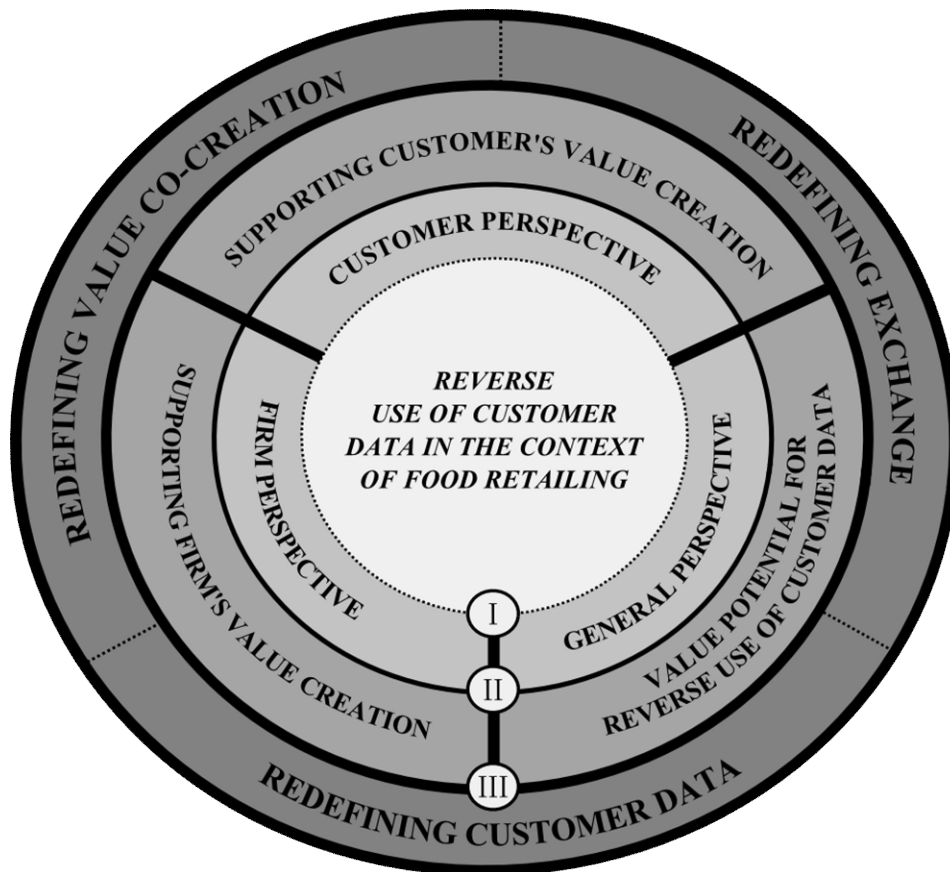


Figure 16. The general framework for reverse use of customer data in the context of food retailing

⁴⁰ The different levels of analysis (I-III) refer here to the shifts from the empirical research phenomenon to the perspectives (I), from the perspectives further to being confronted and connected with current theoretical concepts and constructs (II), and finally toward refining related concepts in the research context (III).

First, the empirical interest toward the real-world marketing phenomenon (at the center of the framework) was guided through the four research questions that employed three critically important and distinct perspectives to the research phenomenon. These perspectives constitute the first level of the framework (I); they illustrate the set of perspectives on which the framework is fundamentally built and that must be addressed when approaching reverse use of customer data as a phenomenon.

Second, the perspectives – fueled by the empirical insight generated by the respective research questions – contributed to understanding what fundamentally constituted and characterized the value potential for reverse use of customer data (the general perspective) and how reverse use of customer data supported both the customer's (the customer perspective) and the firm's value creation (the firm perspective) (II). At this level, the empirical world of the case study context was also connected and confronted with the current understanding generated from the two major theoretical literature streams that were used in this research (i.e. CRM and the service perspective).

However, the set of existing theoretical concepts and constructs proved to be inadequate in understanding the research phenomenon. Therefore, the outermost circle of the framework presents implications for developing specific concepts further on the basis of the empirical data from the case study context (III). It uses the friction resulting from the confrontation of empirical data with the current theoretical understanding to provide implications and redefinitions for the concepts and constructs that are central within the research context.

The three perspectives (I) were discussed already extensively in the previous chapters, which is why the focus is here on exploring and describing the two outermost circles (II & III) of the framework. The second level focuses on *understanding the role of reverse use of customer data in value creation* and the third level is about *redefining business logic*. These two levels of the framework are discussed next.

7.2 The role of reverse use of customer data in value creation

One of the most central issues in this research is to understand how reverse use of customer data can support value creation. However, the focus is not only on understanding how reverse use of customer data supports both the customer's and the firm's value creation, but to gain an in-depth understanding of the elements that constitute such reverse use of customer data that can eventually contribute to value creation in the first place. In other words, in what kind of circumstances can reverse use of customer data support the customer's and the firm's value creation; i.e. in what kind of circumstances can reverse use of customer data be used as a *mechanism* to adjust customer/firm roles in the resource integration process. Consequently, to understand the role of reverse use of customer data in value creation all the three perspectives (customer, firm, general) needed to be addressed.

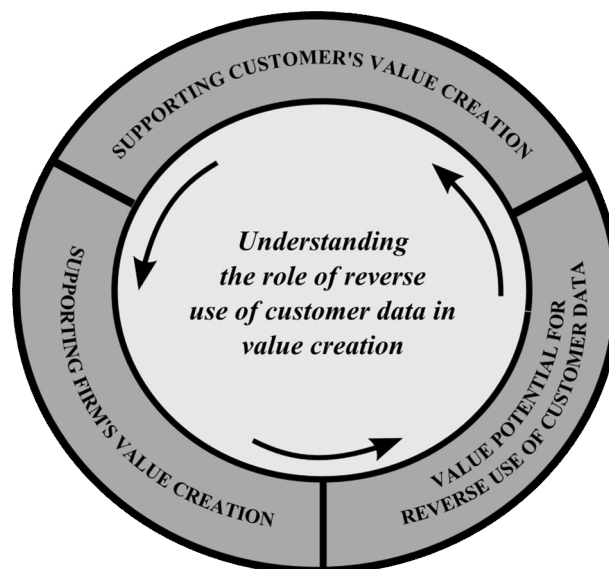


Figure 17. Understanding the role of customer data in value creation

Next, understanding the role of reverse use of customer data in value creation is discussed in more detail through its building blocks (value potential for reverse use of customer data, supporting customer's value creation, and supporting firm's value creation) that are illustrated in Figure 17.

7.2.1 Value potential for reverse use of customer data

The fourth research question focused on the elements that constitute the research phenomenon and create the value potential for reverse use of customer data. As a result, elements were identified that *enable* and *facilitate* reverse use of customer data. These elements provided insight into understanding the general perspective to the research phenomenon and more importantly, helped to see what foundationally characterizes reverse use of customer data in the research context.

Reverse use of customer data is foundationally about identifying, understanding and utilizing the value potential of customer data from the customer's value creation point of view. In the context of the Nutrition Code, this resulted first and foremost from identifying the phenomenon of food healthfulness. Customers are today increasingly concerned about the healthfulness of their groceries; in other words, customers' creation of value-in-use is increasingly characterized by food healthfulness issues. In the customer's process of cooking meals and eating, knowledge and understanding of issues related to food healthfulness is increasingly considered as an important customer resource (for an example of customer's value creation in the context of food retailing, see Grönroos 2008a, 302–303). Consequently, there was a demand for information about the healthfulness of their food, whether being driven by internal or external factors. Altogether, these demand factors⁴¹ were considered as enabling reverse use of customer data in the first place, making it possible; providing the firm with an opportunity to actually give support for the customer's creation of value-in-use.

Naturally, supply factors⁴² were also needed to satisfy this demand for food healthfulness information. Firm motivation, the nature of customer data, and phenomenon measurability were identified as elements that were foundational in terms of constituting the research phenomenon from the firm point of view. Without these elements, the research phenomenon would not have existed in the case study context and most importantly, the value potential for reverse use of customer data would not have been realized. Hence, both demand- and supply-side enablers were

⁴¹ Demand factors can be regarded here as a sign that customers need additional resources (other than the goods) in their value creation.

⁴² Supply factors can be regarded here as a sign that the firm is motivated to provide customers with additional resources. Reverse use of customer data was perceived as supporting the firm's value creation also.

needed to fuel the research phenomenon. Due to these elements it was possible to apply reverse use of customer data as a mechanism through which additional firm resources were engaged in customers' value-creating processes. What the mechanism fundamentally created was a change in the traditional resource integration process; it evoked a change in the roles of the customer and the firm. This change took place because the value potential of reverse use of customer data was actualized in both the customer's and the firm's value creation; it was regarded as beneficial for both actors.



Figure 18. The value potential for reverse use of customer data

The demand- and supply-driven elements that enabled the research phenomenon were elaborated in more detail when addressing the customer and the firm perspectives respectively in chapters 5 and 6.

Additional elements were also identified that contributed to facilitating reverse use of customer data. These included 'Already a loyal customer', 'Easy to use', 'Free of charge', and 'Novelty value of the service'. These elements were not considered as foundational in terms of enabling the phenomenon, but as facilitating the demand-driven factors that in turn were enabling reverse use of customer data. Both the enabling and facilitating elements provided important insight into understanding what eventually constituted reverse use of customer data as a phenomenon. They created the basis to address the phenomenon in more detail from the customer's and firm's value creation perspectives.

7.2.2 Supporting the customer's value creation

Research questions 1 and 2 explored how reverse use of customer data eventually resulted in supporting the customer's value creation. The focus was on the typology

capturing how customers use the information as input to their value creation (research question 1) and what customers value in that information (research question 2). The latter helped to understand the nature of the information that was used in the customer's context. The ways in which it eventually contributed to customers' value creation was in turn explored by the former research question. The constructed typology offered empirical insight into the value-creating potential of reverse use of customer data *from the customer's point of view* by introducing the ways in which the information was eventually used in customers' creation of value-in-use; characterized both by utilitarian and hedonic aspects of consumption. Identifying the data- and phenomenon-related elements helped to gain an in-depth understanding of what fundamentally is valued in the information; i.e. what constituted and characterized the information's ability to be used as input to the customer's value creation. As a whole, the typology and the elements illustrated how reverse use of customer data supported the customer's value creation – a central element of the general framework.

In the context of this research, the customer's value creation was thus not supported only through grocery items that the customers consumed in their daily activities. Instead, customers were also provided with information, i.e. additional resources, resulting from reverse use of customer data. These additional resources were perceived as important and useful in customers' value creation process related to food consumption, and were thus considered as being of *support*. Through the mechanism of reverse use of customer data the firm provided additional input resources for the customer's value foundation (see Grönroos, 2008a) and was able to go beyond the traditional exchange. The firm was not restricted to providing resource bundles (i.e. goods) through conventional exchange, but employed a broader perspective to facilitating customers' value creation. Customer's value creation was perceived in a new way; the perspective was widened and extended.

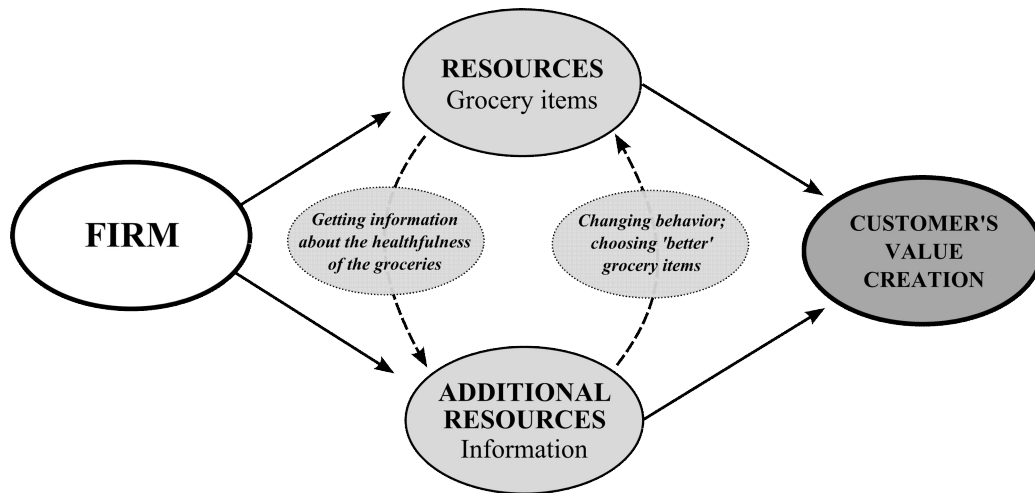


Figure 19. Supporting the customer's value creation

As illustrated in Figure 19, the new information can change customers' value-creating behavior as they become more aware about which grocery items they want to use in their value-creating processes. The firm does not only provide grocery items for the customer's value foundation, but also offers information that can change customer behavior.

The information has an effect on the customer's value creation; customers' increased level of understanding results in better choices regarding their food consumption and they end up being better off than before. In other words, the additional resources convert into 'actual' resources as customers change their behavior and choose grocery items that fit their value creation better. The firm is able to influence the customer's value creation by telling him or her how to enhance the value-in-use resulting from the groceries he or she buys from the firm. An interaction occurs between the customer and the firm. However, they are not interacting in the traditional sense where two actors share activities at the same time. Interaction is understood in a broader sense; interaction takes place through the information provision (by the firm, resulting from the customers' buying behavior) that results in a changed buying behavior (by the customer, resulting from the firm's information provision). Hence, the firm and the customer interact; they have a reciprocal action where they have an effect upon one another (Grönroos & Ravald, 2011). Through this interaction, the firm is able to reach out to the customer's context and affect its customers' value creation process beyond traditional exchange.

Going beyond the traditional exchange that deals with goods and money agrees with the basic tenets of the service perspective. The focus is not on goods or services (or the additional resources alone), but on the *service* they render as their value potential is actualized in the customer's value-creating processes.

7.2.3 Supporting the firm's value creation

As pointed out when addressing the general perspective of the research phenomenon, firm motivation was considered as one of the enablers constituting reverse use of customer data as a phenomenon. Without a firm and its willingness to engage in reverse use of customer data the full value-creating potential of customer data in supporting the customer's value creation could not be utilized. In that respect, the third research question focused on investigating firm motivation in more detail uncovering how reverse use of customer data eventually supported the firm's value creation.

Consequently, four themes emerged from the empirical data that shed light on understanding how reverse use of customer data supports the firm's own value creation. First and foremost, reverse use of customer data was perceived as driving customer loyalty in different ways: strengthening existing loyalty, increasing conditional loyalty (if no additional sacrifices), increasing motivated loyalty (buying more), and reassessing loyalty (changing from one retailer to another). In addition, the firm's value creation was supported through themes such as differentiation and repositioning of the firm, enhancing firm image, and implementing corporate values and firm strategy (Figure 20).

Hence, reverse use of customer data supported the firm's value creation in a variety of ways; i.e. the change in the resource integration process that was evoked by the mechanism of reverse use of customer data also supported the firm's value creation. The established interaction had an effect also on the firm's value creation. This support materialized both directly as customers simply bought more goods, but also indirectly, because of the more favourable firm image. In that manner, the customers' loyalty toward the retailer is not the result of the lowest price or monetary incentives (compare with latent loyalty, see Dick & Basu, 1994), but is

basically related to receiving more accurate information about issues that are found relevant in the customer's value creation.

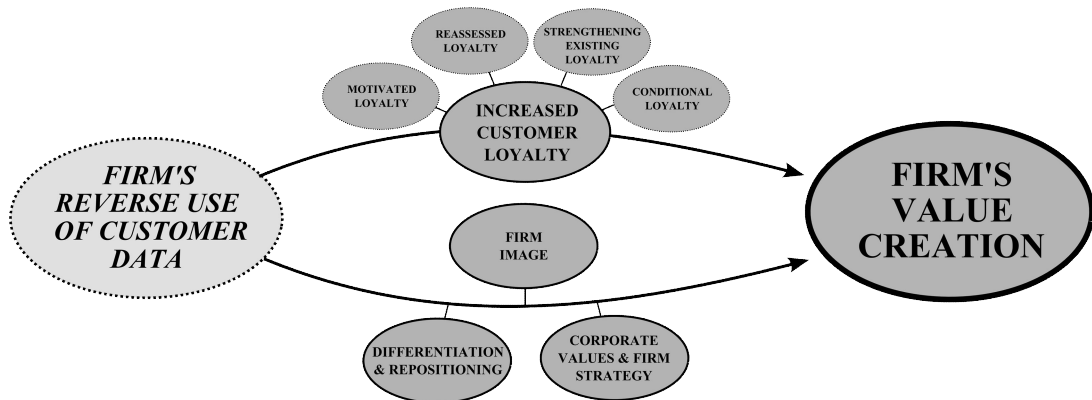


Figure 20. Illustration of how reverse use of customer data supports the firm's value creation

Figure 20 summarizes the ways in which reverse use of customer data contributes to supporting the firm's value creation. Customers become more loyal due to the information they get from the firm. Increased loyalty results in increased revenues for the firm. In addition, reverse use of customer data help the firm also in its internal value-creating processes, such as differentiating itself from competition, implementing corporate values and firm strategy as well as building a favorable firm image.

7.3 Redefining the business logic

Through reverse use of customer data the firm was able to support customers' value creation in a way that goes beyond traditional exchange where goods are exchanged for money; the firm redefined its business logic, it shifted the focus from goods to the construction of a service perspective. However, this necessitates the reconsideration of three theoretical concepts and constructs (see Figure 21).

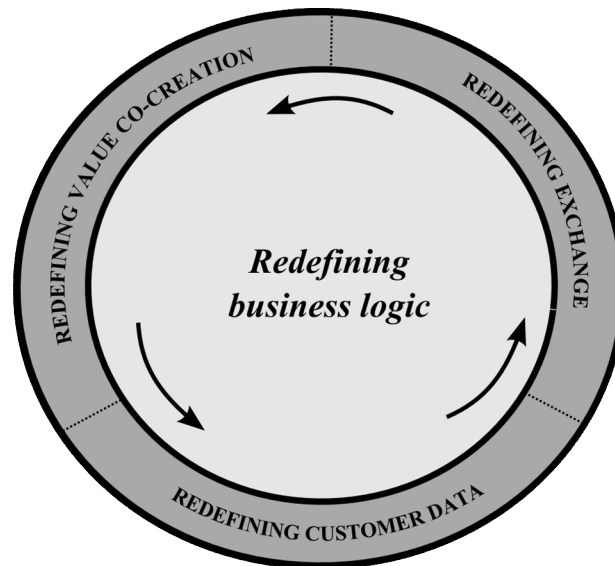


Figure 21. *Redefining food retailing*

At a higher level of analysis, three types of redefinitions⁴³ take place in the research context that contribute to shaping the very nature of the business context, i.e. the case study context; food retailing, and its value-creating logic. These include the redefinition of customer data, the redefinition of exchange, and finally, the redefinition of value co-creation.

7.3.1 Redefining customer data

As illustrated in the empirical part of the research, in the case study context, reverse use of customer data resulted in supporting both the customers' and firm's value creation. By refining and giving customer data back to customers the firm unlocked the value-creating potential of the customer data asset innovatively; the firm harnessed the power of customer data in a new way and unleashed additional resources for the customers' use – customer data was given a refined meaning. As a result, the traditional resource integration process of the firm and the customer taking place within the food retailing context was readjusted. Customer data was considered as an opportunity to provide customers with additional resources to their value-creating processes. Firms' understanding of customer data usage is often

⁴³ Redefinitions do not refer here to creating any clear-cut or precise definitions for the concepts. On the contrary, redefinitions are needed for a fresh perspective to the concepts' roles within a specific business context.

restricted to the data-related elements (pos-data) and used only for firms' internal purposes or to personalize marketing communications. Within the research context, it was the phenomenon-related element that eventually determined whether the information was meaningful to the customer or not; whether it was *for the customer* or not; whether it was endowed with relevance and purpose or not. The customer data asset should also be approached as the basis on which the external phenomenon-related element could be built. This can open firms' eyes to see both customers' value creation and their own business logic in a new light; they can consider customer data as a better way to reach out to customers' contexts. In the case of the Nutrition Code, pos-data (data-related element) was used as a basis on which the nutritional information (phenomenon-related element) was added and delivered to customers as input to their value creation. Through this conversion of customer data into customer information the firm positioned itself more as a service firm.

Providing customers with additional resources resulting from reverse use of customer data necessitated, however, a redefinition of customer data. Customer data was not used only for the benefit of the firm - to supply the firm's informational needs, for it was *refined* and *given back to customers*. Most importantly, this new information could not be used in the firm's internal processes in the first place due to the data protection law; hence, customer data had a fundamentally other agenda than directly serving the firm's purposes. Attention was shifted toward how customer data can be used externally to support customers' value creation; how customer data can better *serve* customers.

Analogous to the Nutrition Code, while customers are becoming more concerned about environmental issues some have become interested in knowing the carbon footprint of their groceries; i.e. there is demand for such information; for some customers it represents an important and relevant piece of information, and thus, is an additional resource that can potentially be integrated in the customer's value creation process. Consequently, pos-data could be used again as the data-related element on which the phenomenon-related element, i.e. information about the carbon dioxide emissions related to the groceries, could be built. As a result, information about the carbon footprint of the groceries could be provided to customers who find it interesting and can use such additional resources as input to

their value creation⁴⁴. Altogether, customer data could be viewed as an opportunity for firms to provide customers with information that is relevant in their value creation and that also supports the firm's value creation. This emphasizes identifying such data- and phenomenon-related elements that can be combined together and used as input to the customer's value creation. Most importantly, it necessitates viewing customer data from the customer perspective, redefining customer data from the customer's value creation point of view; understanding customer data as means to provide customers with such information that supports their value creation.

As a part of the general framework, redefining customer data is located at the intersection of the firm perspective (supporting firm's value creation) and the general perspective (value potential for reverse use of customer data) (see Figure 16). This is because the redefinition of customer data is initially a firm-led process and cannot be performed without the firm's engagement in supplying customers with such information; thus, there has to be firm motivation for refining and giving customer data back to customers, i.e. supply-side enablers must exist. In that respect, the new role of the firm in customers' resource integration has to be beneficial for the firm also; reverse use of customer data must also serve firm purposes. On the other hand, the possibilities of reverse use of customer data are determined by the general perspective including, for example, the nature of customer data (in a given business context) and phenomenon measurability as well as whether there is customer demand for such information in the first place. Thus, these two building blocks of the framework are closely interrelated and they create the basic antecedents for redefining customer data.

7.3.2 Redefining exchange

According to Grönroos (2008a, 303) customers create value for themselves in their everyday practices when they use resources provided by the firm together with other resources and skills:

⁴⁴ The idea of providing customers with information about groceries' carbon dioxide emissions has already been brought up in Finland.

When customers use these resources (goods or services) and add other resources (goods, services, and information) and skills held by them, the value potential of the resources is developed into value-in-use.

Thus, goods are bought to provide input resources to the customer's value creation process. Firms should not be distracted by the distinction between goods and services, but focus on a holistic understanding of customers' everyday practices and value-generating processes (Grönroos, 2008a). In the context of this research, the 'other resources' that Grönroos refers to are provided through the mechanism of reverse use of customer data. Customers are offered additional resources in the form of information about the healthfulness of their groceries to be included in their value-creating processes. In these processes resources embedded in the grocery items and other resources such as customer skills and knowledge (e.g. how to cook good food) as well as the information provided by the Nutrition Code are integrated and actualized into value-in-use.

From the customer's point of view, this adjusts the firm's role in relation to the customer's value creation. The firm is no longer viewed only as a goods provider or merely as an extension of the food supply chain, because it offers additional resources to the customer's value creation process. Providing customers with such additional resources contributes to reconfiguring the firm's role in the customer's value creation. Reverse use of customer data challenges the food retailer's conventional role as a sole goods provider.

So previously the store was the place where you got your groceries, and that's how it still is for the most part, but now it'll give us a lot of information about our buying behaviour as well. So the service isn't limited to my buying their groceries, I receive a lot of information, too. It serves the customers in a way that doesn't directly benefit the retailer, or the chain.

- Johanna, 30

As described by Johanna, in the case study context, the food retailer was not regarded no longer as a place where one can do grocery shopping, but it was perceived more as a service provider that supports the customer's value creation through taking care of the customer's health *as well*. Hence, the retailer's role in the customer's value creation was adjusted; there was *a shift in the resource integration process*, evoked by the mechanism of reverse use of customer data. Customers were

now able to harness the firm's resources (customer data asset) in a new way and not the other way around. Basically, reverse use of customer data represents a direct opposite of the more traditional examples of value co-creation mechanisms where *customer resources* are engaged in the firm's processes, such as co-production or co-design. Here, it is additional firm resources that are integrated to the customer's value creation.

As a result of reverse use of customer data and the firm's readjusted role in resource integration, neither money nor goods were used as vehicles for exchange (see Figure 22). Instead, customer loyalty was exchanged for information; the traditional perspective to exchange in food retailing was thus challenged. Customers were willing to concentrate more of their grocery shopping in the food retailer in order to get a more accurate picture of the overall healthfulness of their groceries, which captures the benefits both actors receive from the change in the resource integration process. As a result of this *parallel exchange*, such value emerged that would not have emerged without the readjusted roles in resource integration. The concept of parallel exchange is in close connection with the interaction concept because it has interactive characteristics: i.e. the information and increased loyalty have an effect upon each other. Interaction captures the mechanism, i.e. the *action* through which actors have an effect upon one another, whereas parallel exchange focuses on the *outcome* of this: exchanging additional resources for additional resources.

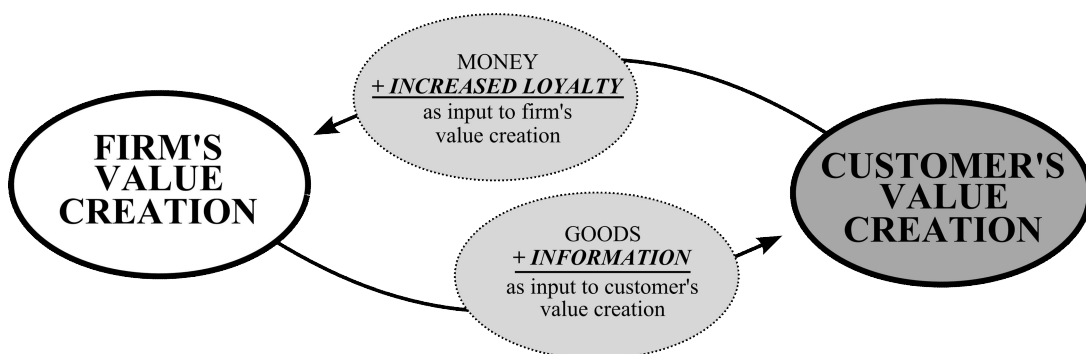


Figure 22. Information and increased loyalty as vehicles for exchange and constituting parallel exchange

The reconfiguration of the customer/firm roles (in the firm's/customer's value creation) challenged the conventional perspective to exchange. More importantly, redefining exchange was something that resulted directly from reverse use of customer data and was context-dependent in nature; determined and characterized by the conventions of a specific business context.

In the general framework, redefining exchange is located at the intersection of the general perspective (value potential for reverse use of customer data) and the customer perspective (supporting customer's value creation). Redefining customer/firm roles is originally a customer-led process in the sense that it is the customer who decides whether or not to accept the firm's suggestion (i.e. new value proposition) of the new role in the resource integration process. The general perspective, in turn, determines the scope and the scale in which reverse use of customer data can be used to provide additional resources to the resource integration process.

7.3.3 Redefining value co-creation

As discussed in the theory chapters, value co-creation has gained an increasing amount of attention within the last years. Despite the fact that the discussion has been extensive (and not limited within the domains of marketing or business economics and administration) its applicability in marketing has remained at a rather abstract level of analysis. This has resulted in a fuzzy set of definitions and interpretations.

As a result of exploring the current literature on value co-creation, it was concluded that to clarify our understanding as well as to further the development of the concept, focus should be on building an outlined perspective to the 'value', the 'co', and the 'creation' in value co-creation (see Table 7). With respect to these sub elements, it was recognized that emphasis should be on understanding *what kind of value for whom, by what kind of resources, and through what kind of a mechanism* does value co-creation eventually result in. Value co-creation was thus not perceived as something that is always taking place, i.e. as a perspective or lens through which a phenomenon is viewed. Similarly with Grönroos (2011, 292), approaching value as always co-created lacks clear theoretical and practical

implications: “it has no explaining power.” On the contrary, conceptually, it was considered critically important that the concept strives to incorporate and capture something new in a contemporary marketing-related phenomenon; it helps to understand the empirical world better. Through dismantling the value co-creation concept into its constituent parts a more outlined perspective can be gained towards understanding what value co-creation eventually is about in a given context; moreover, it helps to understand the consequences of redefining exchange. Table 23 uses this approach to summarize value co-creation resulting from reverse use of customer data in the research context.

Table 23. Value co-creation resulting from reverse use of customer data through its sub elements

	‘Value’ <i>(What kind of value for whom?)</i>	‘Co’ <i>(By what kind of resources?)</i>	‘Creation’ <i>(Through what kind of a mechanism?)</i>
Customer	Information resulting from reverse use of customer data allows customers to create such value that would not otherwise emerge. Information as an additional resource to the customer’s value creation results in value that can be hedonic and utilitarian in nature, and is used more or less instrumentally by the customers.	Reverse use of customer data causes a change in the resource integration process. Additional firm resources are engaged in customers’ value-creating processes. The firm not only provides customers with resource bundles in the form of groceries, but also offers them additional resources as customers are provided with information about the healthfulness of their groceries.	Reverse use of customer data, i.e. refining and giving customer data back to customers, is the mechanism through which the firm’s role in the customer’s value creation is adjusted. Reverse use of customer data is used as a means to provide customers with additional resources and consequently, shifts the firm’s attention from merely selling goods to supporting customers’ value creation.
Firm	The firm’s value creation is supported by increased sales resulting from an enhanced level of customer loyalty. Indirectly, reverse use of customer data results in firm value also through firm differentiation and repositioning, implementing firm values and strategy, and enhancing firm image.		

The firm not only sold goods to customers, but provided the customers’ value creation process with additional resources; thus, the concept of value co-creation goes beyond the traditional exchange consisting of goods (as input to the customer’s value creation) and money (as input to the firm’s value creation).

In more detail, it was the firm who engaged in the co-creation of customer value through supporting customers’ creation of value-in-use by providing additional

resources. This, however, should also be beneficial to the firm. As is argued by Grönroos and Ravald (2011, 13), “as marketing and the whole business process also aims at benefiting the supplier, it is of course not only the customers who should gain value from business interactions with suppliers and service providers”. Therefore, it was also important to understand the firm perspective to customer value co-creation; i.e. why firms establish an interaction in the case study context. Altogether, value co-creation is understood as resulting from changed customer/firm roles in the process of providing resources into each others value-creating processes. This change in customer/firm roles, i.e. change in the traditional exchange, has to be beneficial for both (or all) actors involved and resulting in such value that would not otherwise exist. As a result of the readjusted customer/firm roles, such customer value was created that was also considered to enable the firm to gain financial value in return (see Grönroos, 2011; Grönroos and Helle, 2011).

The readjusted perspective to value co-creation has similarities with the concept of mutual value creation. Grönroos and Helle (2010) argue that mutual value creation should be understood as an interactive process of creating and sharing joint productivity gains. Similarly with the perspective to value co-creation employed herein, these productivity gains result from adjustments to each other’s processes by both parties in order to enhance the value creation process of both parties. Focus is expanded “from value as an assessment to value creation itself” (Grönroos & Helle, 2010, 575). In this research, both the customer’s and the firm’s value creation was adjusted as a result of the change in the resource integration process. Instead of only selling goods, the firm provided customers also with information about the healthfulness of their groceries. Thus, this shift from selling to supporting can also be understood as the readjustment of value-creating processes Grönroos and Helle (2010) refer to.

Reverse use of customer data is only one mechanism for adjusting customer/firm roles and evoking change in the resource integration process. Other mechanisms, such as co-development, crowdsourcing or co-design, could also deliver benefits resulting from readjusted resource integration (for the list of such mechanisms, see e.g. Frow, Payne, & Storbacka, 2010; see also Sheth & Uslay, 2007), and thus, challenge traditional perspective to exchange within a specific business context. However, in those examples, the focus is on the firm value co-creation; i.e. it is the customer who provides the firm with additional resources. Mechanisms such as co-

production or co-design are about customers serving firms; customers provide firms with additional resources than money alone. In that respect, these mechanisms are forms of a somewhat inversed service where the main beneficiary is not the customer, but the firm (compare with service definitions by Vargo and Lusch (2004, 2) and Grönroos (2008a, 300)). They are similar vehicles for altering the traditional customer/firm roles in resource integration and can result in different kinds of parallel exchanges where additional resources (as input to the firm's value creation) are exchanged for additional resources (as input to the customer's value creation). Thus, what distinguishes reverse use of customer data from the more widely acknowledged value co-creation mechanisms is its orientation toward supporting customers' value creation; i.e. serving customers, not the firm.

In the general framework, redefining value co-creation is located at the intersection of the firm perspective (supporting firm's value creation) and customer perspective (supporting customer's value creation) as it involves both actors.

7.3.4 Summarizing the redefinitions

The above described redefinitions were addressed to uncover what conceptual implications can be drawn at a higher level of analysis (third level of analysis). In that respect, redefinitions for customer data, exchange, and value co-creation were provided that strived to capture these concepts' adjusted nature as a result of the case study research. These redefinitions are summarized in Table 24.

Table 24. Summarizing the central characteristics of the redefinitions

Concept	Redefinitions in the research context
Customer data	Customer data is defined from the customer’s value creation point of view; firms focus is on identifying and understanding the potential of customer data in providing customer with additional resources to their value-creating processes.
Exchange	The firm’s role shifts from selling goods to supporting the customer’s value creation; the firm takes a broader perspective on the customer’s value creation than is achieved only through providing goods. The customer is able to harness firm resources through being given refined customer data back. The customer accepts the firm’s new role as a provider of additional resources. Both customers and firms are seen as active participants and dual subjects and possible sources for additional resources for each other’s value creation; customer/firm roles are readjusted in the process of resource integration: the focus is extended beyond traditional exchange.
Value co-creation	Value co-creation (customer value co-creation or firm value co-creation) can take place when a new role of one or both (or all) actors in the process of resource integration is beneficial for both (or all) actors involved resulting in such value that would not emerge otherwise. As a concept, parallel exchange is characteristic to value co-creation as it shifts the locus of exchange from taking place between goods and money toward occurring interactively between additional resources provided by the firm and the customer.

Together these redefinitions result in reshaping the very nature of the business logic – in this case, food retailing. They provide implications concerning what reverse use of customer data can lead to. Moreover, viewing these concepts from a fresh perspective helps to question current ways of thinking and challenge managerial mindsets. Most importantly, they help to approach contemporary marketing phenomena.

7.4 Summarizing the general framework

This chapter has summarized the key results of the research by addressing in detail the building blocks that constitute the general framework for reverse use of customer data in the context of food retailing. While Figure 16 illustrated the general framework for reverse use of customer data in the context of food retailing, Figure 23 summarizes the central conceptual developments and focuses on clarifying their inter-relations.

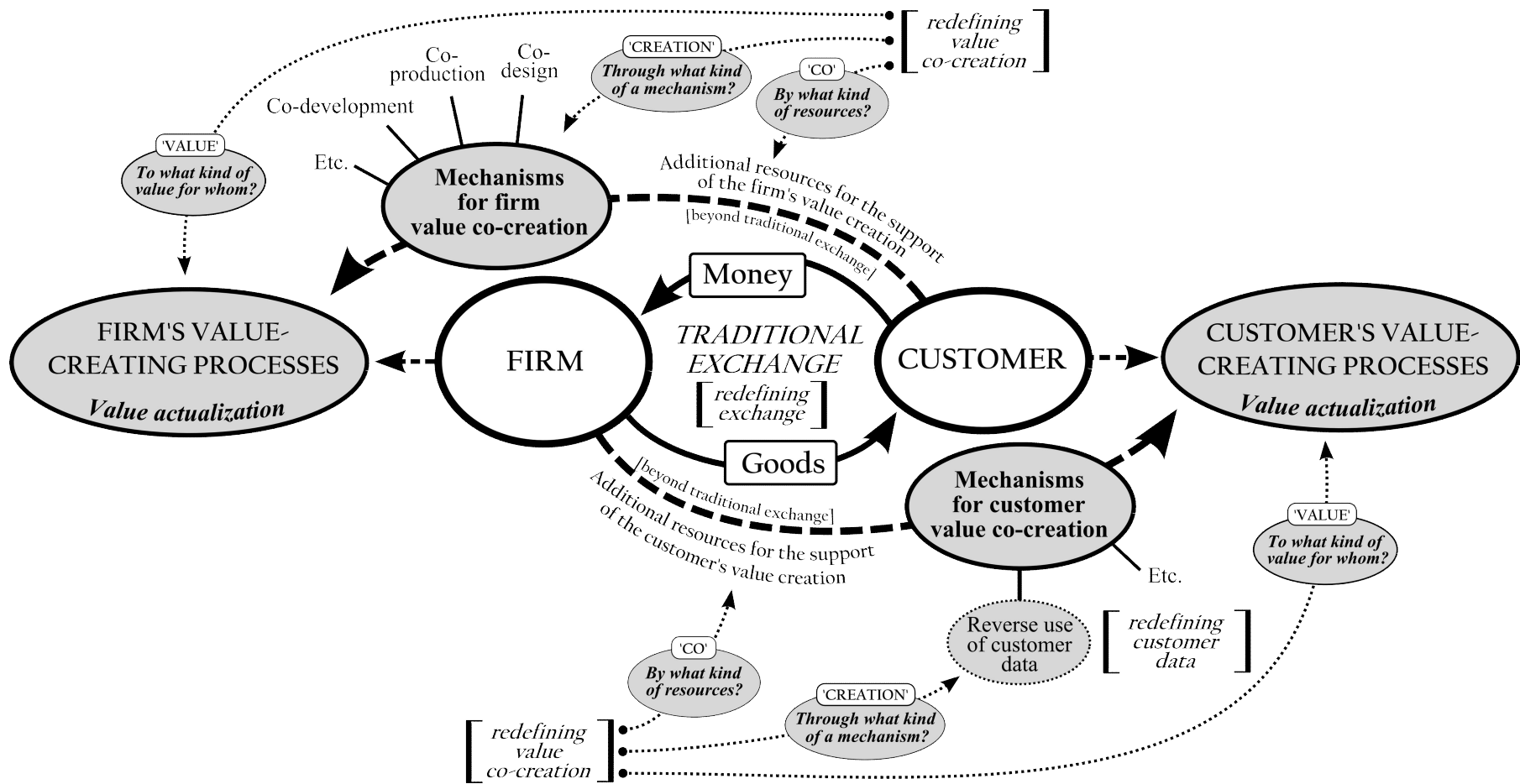


Figure 23. A conceptual summary of the research

The conceptual developments were facilitated by the conceptual analysis on value co-creation. An outlined perspective was built to capture what kind of value for whom ('*value*'), by what kind of resources ('*co*'), and through what kind of a mechanism ('*creation*') value co-creation eventually resulted in (*redefining value co-creation*). This conceptual tool helped to approach the research phenomenon in a more systematic way and shift focus on central issues and aspects of the research (see Figure 23).

The research goes beyond *traditional exchange* between the firm and the customer where goods are exchanged for money. In the research context, in addition to money being exchanged for groceries, customers were provided with additional resources for the support of *customer's value-creating processes*. Customers' various value-creating processes related to food were supported through providing them with information about the healthfulness of their groceries (*redefining exchange*). This was achieved through *a mechanism for customer value co-creation* which in this case was *reverse use of customer data (redefining customer data)*. Through the mechanism additional firm resources were engaged in customer's value creation. As a result, parallel exchange occurred where additional resources were exchanged for additional resources. Reciprocally, through *mechanisms for firm value co-creation*, such as co-production or co-development, additional customer resources could be engaged in the *firm's value-creating processes*. In both cases, the different types of mechanisms are means to reconfigure the *traditional exchange*; they trigger a change in the traditional resource integration process. With the help of the mechanisms, the locus of exchange is shifted toward *value actualization*.

8. DISCUSSION AND CONCLUSIONS

Scientific discoveries may sometimes appear as simple and easy observations, but usually the discovery itself has no intrinsic significance without the researcher relating it with other knowledge and using it in the creation of new knowledge (Beveridge, 1963). There has to be *a creative leap* from data to theory: “The data do not generate theory – only researchers do that” (Minzberg, 1979, 584); the researcher is thus an important research instrument.

The research process as a whole has been inspired by a construction and resolution of a mystery (see Alvesson & Kärreman, 2007). The mystery has been fueled by the inadequateness of existing marketing research to explain reverse use of customer data. A theoretical synthesis was developed to approach the research phenomenon. It helped to gain pre-understanding of the issues and aspects related to it; intellect was placed into the thick of what is going on (Stake, 2005). As a result, implications were provided for theory development as well as managerial decision-making.

This chapter discusses and summarizes the process of making the choices, observations, and discoveries related to the research process. First, the results of the research are shortly reviewed. Second, the research contribution is discussed including both theoretical and managerial implications. Finally, research quality is evaluated by assessing the credibility, transferability, and conformability of the research. Directions for future research are given at the end of the chapter.

8.1 A summary of the research process

The purpose of this research was to build a general framework for reverse use of customer data in the context of food retailing. But what is a general framework? In the context of this research, a general framework was understood as a set of basic

principles that account for the research phenomenon. Four research questions were addressed that each provided new insight to the research phenomenon and contributed to the building of the general framework.

Given the nature of the research as theory-developing rather than theory testing, the role of existing theory was to give guidance (Gummesson, 2002), not to provide a foundational and unchangeable basis for the empirical part of the research. The purpose was not to directly measure the effect that reverse use of customer data has on central marketing metrics, such as customer satisfaction or willingness to buy, but to unravel, investigate and explore its possibilities in supporting both the customer's and the firm's value creation. Relevant literature on service and CRM was reviewed to receive guidance for the research process; to gain an initial understanding about the central aspects of the research phenomenon.

Case study research was selected as the setting of the study and it was regarded more as a research strategy than a mere method for data generation. The focus was on understanding the case study context in depth and providing a rich and well-grounded set of descriptions of the research phenomenon. Multiple data sources were employed. Altogether 17 unstructured interviews were conducted with the users of the Nutrition Code together with 3 semi-structured interviews with firm representatives. In addition, 456 pieces of customer feedback data were generated for further analysis. A thematic analysis resulted in the construction of a typology as well as themes and elements that managed to capture central characteristics of the research phenomenon. Three main perspectives emerged from the empirical data that incorporated the fundamentals of the research phenomenon, and constituted the building blocks of the general framework as well.

The general perspective uncovered what fundamentally constituted reverse use of customer data as a phenomenon and it was approached through the fourth research question. Elements were identified that enable and facilitate such reverse use of customer data that results in information that can be used as input to the customer's value creation. These elements constituted the research phenomenon as such.

The customer perspective was addressed by two separate research questions. The first research question focused on the construction of a typology that captured the ways in which information was used as input to the customer's value creation. Altogether four types were constructed including 'Playing', 'Check-pointing', 'Learning', and 'Goal-orientation'. These types captured how reverse use of

customer data supported customers' value creation. The second research question, in turn, uncovered what determined the information's ability to be used as input to the customer's value creation. Six themes were identified that cause dissatisfaction toward the information and reveal how the information's ability is decreased. Further analysis of these themes resulted in the identification of three elements: the data-related and the phenomenon-related elements as well as customers' adaptability determine the degree to which information can be used in customers' processes. These elements can be considered as a natural consequence of providing customers with information that is based on the one hand on utilizing pos-data, and on the other hand on combining it with nutritional information. However, the identification of these foundational elements is not important per se. Instead, it is imperative to understand how they relate to the whole research phenomenon; how they convert into supporting the customer's value creation. As a whole, the typology, the themes and the elements illustrate how customers' value creation is supported by the information resulting from reverse use of customer data.

The firm perspective was approached through the third research question. Four themes emerged from the data that exposed how reverse use of customer data contributes to the firm's value creation. Customer loyalty was the main theme through which the firm's value creation was supported. Different levels of customer loyalty were identified; for some customers being provided with information about the healthfulness of the groceries strengthened their existing loyalty whereas others were even ready to switch entirely from one retailer to another. In addition, differentiation and repositioning, implementing corporate values and firm strategy, and enhancing firm image were identified as themes that supported the firm's value creation and that were in connection with reverse use of customer data. However, conceptually these themes were seen as subordinate to the main theme (customer loyalty) in the sense that they eventually contributed to the firm's value creation through increases in customer loyalty.

Figure 24 illustrates how the research questions are interrelated and how they contribute to addressing the research phenomenon.

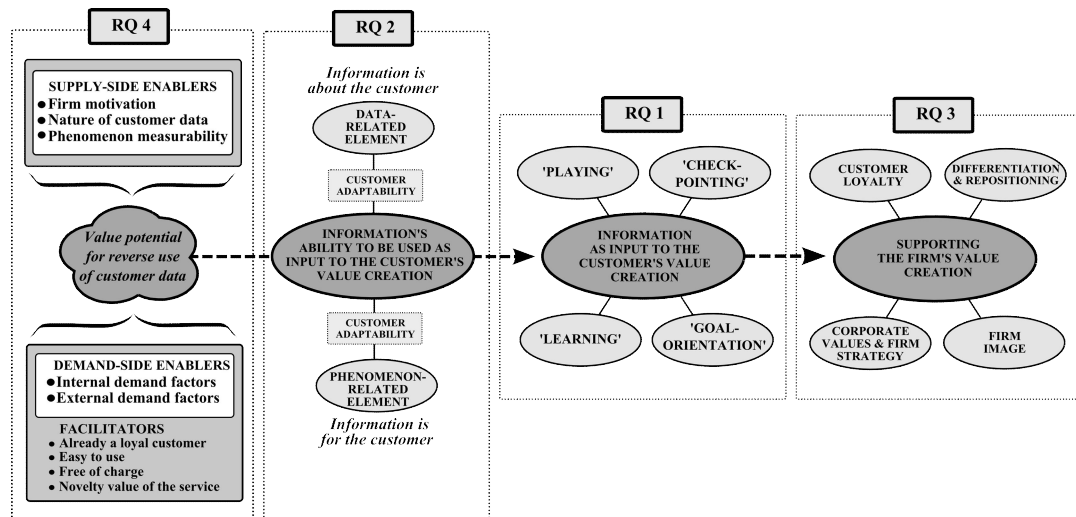


Figure 24. The interrelations of the research questions

Altogether, the general, customer, and firm perspectives to the research phenomenon contributed to the building of the general framework. The framework (see Figure 16) was seen to operate at three distinct levels of analysis. By approaching reverse use of customer data through the three perspectives and through the different levels of analysis it became possible to understand how and under which circumstances it supported both the customer's and the firm's value creation. It also offered empirical insight to develop theoretical concepts and constructs (customer data, exchange, value co-creation) further. Consequently, on the basis of understanding the potential of refining and giving customer data back to customers a set of empirically-grounded implications could be drawn. These implications, both theoretical and managerial, are discussed next in more detail.

8.2 The research contribution

The contribution of the research is often related to the question of what the research adds to existing knowledge. However, the contribution may also result from deepening the understanding of existing knowledge, surprising results, or tackling problems that interest practitioners (Brown & Dant, 2008). Similarly, Ladik and Stewart (2008) – after asking number of journal editors their opinion on what constitutes a research contribution – identified four common themes including target audience, contribution subjectivity, passion for the research topic, and surprise. On

the other hand, a research contribution can be approached through three interwoven domains: theory, method, and context. To establish a contribution, one must assure that there is a meaningful contribution in at least one of the domains (ibid).

Yet another way to consider the contribution is through a continuum. According to Ladik and Stewart (2008), the degree of contribution can be assessed through a continuum where the far left axis is illustrated by studies that are purely replications or minor extensions of existing studies. On the contrary, the right axis characterizes major contributions that shake and shape the very foundations of theories (Figure 25).

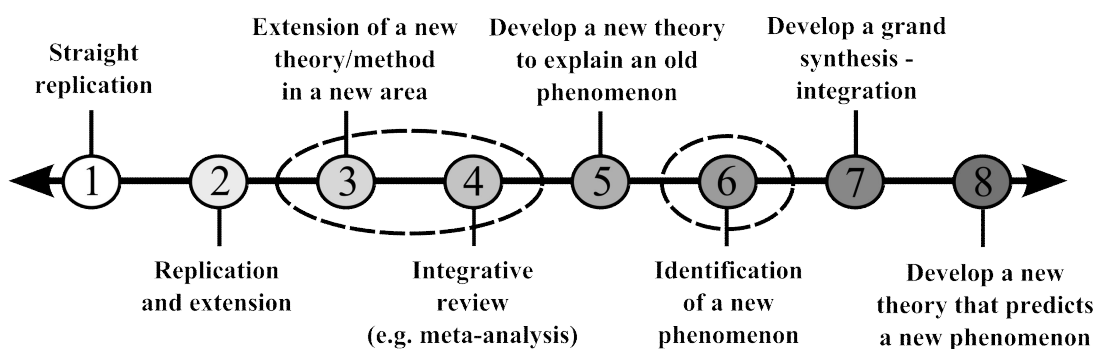


Figure 25. Contribution continuum (slightly modified from Ladik, D. M., & Stewart, D. W. (2008). The contribution continuum. *Journal of Academy of Marketing Science*, 36 (2), 157–165)

In terms of this research, the main contributions can be analyzed through the positions 3, 4, and 6 depicted in Figure 25. The research contributes through extending existing theories (CRM and the service perspective) (position 3). It provides a coherent review of literature with the purpose of integrating and organizing prior research in new and useful ways (position 4). Furthermore, it identifies a new marketing phenomenon, i.e. reverse use of customer data, and focuses on building a general framework for understanding the phenomenon as well as for serving future research, which also has conceptual implications (position 6) (compare with Ladik & Stewart, 2008). Altogether, the research focuses on challenging existing and conventional beliefs, both in theoretical and managerial terms, and as a result, hopefully can contribute to being *interesting* – an important part of research (see Smith, 2003).

8.2.1 Theoretical contribution

The research was built on two theoretical approaches: the CRM framework and the service perspective. The former provided theoretical insight into customer data usage within firms whereas the latter helped to grasp the nature of both customers' and firms' value creation in terms of the recent developments within service theory. Six theoretical contributions can be drawn on the basis of this research that are closely connected with these approaches.

First, the research extends the CRM framework by shifting the focus from firms' internal use of customer data to external use of customer data. Instead of using customer data merely to meet the informational needs of the firm, data can be refined and given back to customers for the support of their value creation. The firm does not engage in customer data utilization in the traditional sense of knowledge-enhancing or action-oriented use of customer data (see e.g. Jayachandran et al., 2005), but first of all for the purpose of providing customers with relevant information that can assist customers in their daily value-creating processes. As also implied by information sharing (e.g. Chandra, Grabis, & Tumanyan, 2007), a widely used concept within supply chain management, information is shared – not with other actors in the supply chain in order to decrease the bullwhip effect and save costs – but with customers to support their value creation and serve them better. The evolution from data dispersion and empowering technology toward data sharing and empowering customers is a natural consequence of more active instead of passive customers (see Table 3). In that respect, the CRM framework needs to be extended to incorporate the customer's value creation instead of the one-sided focus on firm's informational processes. Consequently, customer data should be defined also from the customer's value creation point of view; how can customer data be used to support customers' value creation.

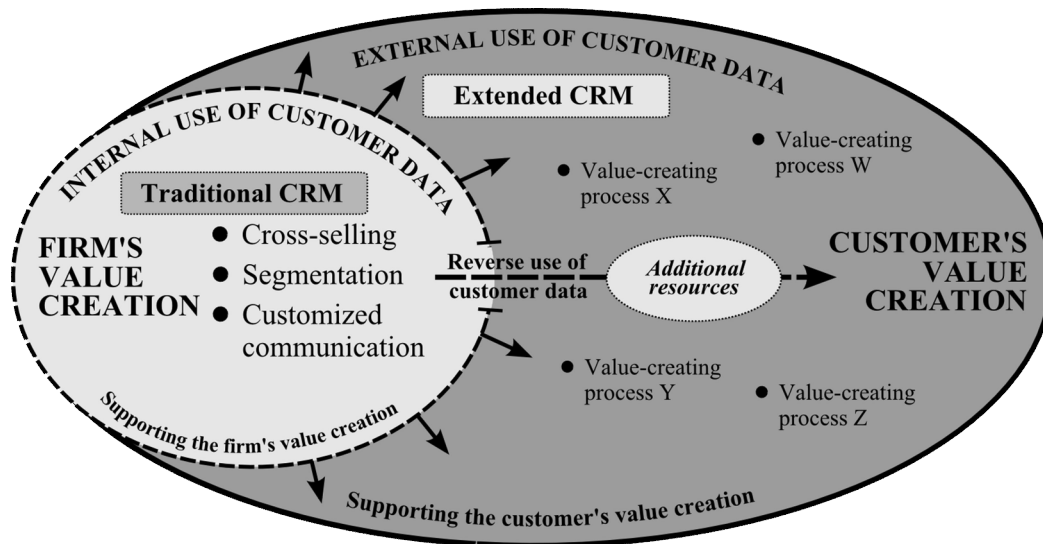


Figure 26. From internal to external use of customer data - extending the CRM framework

The extended view to CRM identifies the full potential of customer data in supporting customers' (and firms') value creation. In terms of reverse use of customer data, the empirical part of the research provided insight into the elements that constitute such information that can be used as input to the customer's value creation. Information that was *about the customer* (pos-data; data-related element) and *for the customer* (food healthfulness information; phenomenon-related element) was perceived as critically important in determining the information's ability to be used as an additional resource to the customer's value creation.

Second, the research revitalizes the CRM-related concept of dual creation of value. Dual creation of value emphasizes that firms applying CRM should focus both on firm performance and customer value. However, as became evident also in the customer interviews, the notion that customers would actually benefit from firms' traditional customer data usage can be questioned. Understanding the value creation potential of giving customer data back to customers can revitalize the concept of dual creation of value. In that respect, reverse use of customer data is a good opportunity to ensure that customer data is used for the benefit of the customer.

Third, the research combines two separate literature streams – the CRM framework and the service perspective in order to enhance current understanding of contemporary marketing phenomena where customer data plays a significant role in

supporting customers' value creation. This research clearly identifies and illustrates the synergic outcomes of integrating these two separate literature streams. Reverse use of customer data can be regarded as an effective mechanism through which additional resources can be generated for the support of the customer's value creation, and for *servicing* customers. Thus, together CRM and the service perspective offer a broader theoretical basis for understanding these types of marketing phenomena and identifying new possibilities for value creation.

Fourth, the research contributes both conceptually and empirically to the discussion around value co-creation, which to a large extent has been rather conceptual and abstract in nature. Five implications, or 'add-ons', are provided. Firstly, value co-creation as a concept cannot be used to refer to everything that is somehow related to value creation, which is often the case in current academic marketing discussion partly due to the trendy nature of the concept and the argument that value is always co-created (e.g. Vargo & Lusch, 2004; 2008a). To further our understanding of evolving marketing phenomena value co-creation should not be regarded as an all-encompassing activity. If value is always co-created, the concept takes a different ontological and philosophical stance towards describing current phenomena, and fails to offer a more applicable basis for marketing practitioners. Both scholars and practitioners must be more precise in terms of when does value co-creation take place, and more importantly, what fundamentally characterizes value co-creation in the given context.

Secondly, as a result of the exploration of current research on the topic, it is suggested that the conceptual fuzziness of the construct results from the slightly differing perspectives to what eventually is understood as constituting the 'value', the 'co', and the 'creation' in the concept of 'value co-creation'. When using the concept, researchers should emphasize what kind of value is co-created for whom, by what kind of resources, and through what kind of a mechanism. This helps to understand the evolving nature of contemporary exchange.

Thirdly, in the context of this research, value co-creation was approached through the insight generated from the conceptual analysis and from the empirical data generated from the case study context. In more detail, the former (conceptual analysis of value co-creation) provided the key to understand and approach the latter (research phenomenon). It can be argued that what eventually determines value co-creation in the context of this research are the readjusted roles of the customer/firm

in the firm's/customer's value creation. Value co-creation can take place when a new role of one or both (or all) actors in the process of resource integration is beneficial for both (or all) actors involved resulting in such value that would not otherwise exist. Furthermore, it is critically important to distinguish between customer value co-creation and firm value co-creation. Some value co-creation mechanisms provide additional resources for the support of the customer whereas others engage additional customer resources for the benefit of the firm. Consequently, in tune with the conceptual analysis, these two different sides of value co-creation must be kept apart.

Fourthly, value co-creation mechanisms can result in *parallel exchanges* where the locus of exchange is not on exchanging money for goods/services, but where additional resources (provided by the other actor) are exchanged for additional resources (provided by the other actor), such as increased customer loyalty. As a result of the customer-firm interaction occurring through a value co-creation mechanism the exchange evolves into another level; in a way, the market is reconfigured (see Storbacka & Nenonen, 2011). To establish parallel exchange as an important marketing concept, additional empirical research is needed.

Fifthly, the research offers a real-world empirical illustration of building a service perspective into a goods-based business environment. Since the service perspective was understood in the context of this research more as a logic and a mindset, viewing the research context through its characteristics can hardly be regarded as contribution per se. However, given the lack of empirical research conducted within this literature stream and acknowledging the danger of it becoming too 'knowledge-itis' and resulting in empirically empty structures irrelevant to real-world problems (see Arndt, 1985, 13), the research offers empirically interesting insight. The research relates to the recent developments within service research and marketing in general by providing a rich and well-grounded description of a contemporary marketing phenomenon. Shifting the focus from selling goods to supporting the customer's value creation has several characteristics that can be found in the recent theoretical discussion around the evolving service perspective. For example, goods (grocery items) are resources, but they cannot transmit services alone – other resources are needed as well (such as information about the healthfulness of the groceries) (e.g. Grönroos, 2006a).

Sixth, the research contributes to the discussion around interaction as the central concept within marketing. Grönroos (2008a, 308) has argued:

Adopting a service logic and creating interactions with customers provide the supplier with an extended role in value creation. Instead of being restricted to acting as a value facilitator only, the firm can actively take a role in the customers' value-generating processes and directly influence them. The supplier becomes a co-creator of value with its customers.

By integrating itself in the customer's value-creating processes the firm is able to develop opportunities, i.e. interactions, to co-create value with its customers. The firm is not restricted to making value propositions, but is able to engage itself in the customer's value actualization process as well (Grönroos, 2008a). Reverse use of customer data can be seen as a way to interact with customers; it has an effect on both parties (Grönroos & Ravald, 2011).

However, interaction is not understood as something that can take place only when the customer and the firm engage in activities at the same time. On the contrary, a broader perspective to interaction is employed; interaction takes place through the information provision (by the firm, resulting from the customers' buying behavior) that results in changed and enhanced buying behavior (by the customer, resulting from the firm's information provision); the firm and customer have an effect upon each other's value creation. Hence, the firm and customer interact as they have a reciprocal action that influences both the customer's and the firm's value creation. In other words, firms can communicate with their customers by providing them with information about the healthfulness of their groceries and customers can talk back through their decisions concerning their food consumption; the firm is able to affect the customer's value actualization process by providing them with additional support to their value creation which in turn is determined by the customer's actions. In the context of this research, this led to a parallel exchange; in addition to exchanging goods for money, information was exchanged for increased customer loyalty. The traditional perspective to what eventually is exchanged was challenged. This necessitated the successful implementation of reverse use of customer data, i.e. providing customers with information that is *about them and for them*.

8.2.2 Managerial implications

From the firm perspective, the research phenomenon is about taking a new role in the resource integration process that takes place between the firm and the customer. Refining and giving customer data back to customers challenges the traditional way of doing business in the context of food retailing. It is about *servicing* customers; going beyond exchange, moving from goods-centric thinking toward building a service-based business model and seeing the customer's value creation in broader terms – shifting attention from selling goods to supporting the customer's value creation. Thus, the importance of seeing the role of customer data in a new light is increasingly important, which is also noted by Tesco – one of the biggest retailers in the world and the pioneer in customer data utilization (Humby, Hunt, & Phillips, 2003, 151, emphasis added):

What creates loyalty is how much we understand your life and what we do about it that helps your life. If you wanted to, you could just use data to make customers do what you want them to do, you're just using it as *a tool to sell more things to them*. You could approach it that way. We never wanted to do that. Our competitors had all the details of what their customers bought too, but if you don't have the vision as a retailer that you are doing this to understand customers better, and deepen that relationship, you're always going to wonder why you're making the effort.

- Sir Terry Leahy, former CEO of Tesco

In Tesco customer data was not used as a tool to sell more things to customers. It was not used only to gain better customer understanding either, for it was simply used to serve customers better. In that sense, the research phenomenon of reverse use of customer data represents the business logic of tomorrow, where conventional roles of customers and firms are increasingly being challenged in their quest for a better service – often fueled and facilitated by the possibilities offered by technology and the Internet. Specifically in the case study context, i.e. Finnish food retailing, Nutrition Code and reverse use of customer data illustrate the increasingly central role of the customer. The retail business is no longer solely about products, vendors and the firm itself, for the importance of customer co-operation is critically important (see Mitronen, 2002; Julkunen, 2010). In conclusion, the research

provides high managerial relevance that is outlined here in the form of five managerial implications.

First, the research introduced a novel approach to customer data utilization. Instead of defining customer data from the firm point of view, managers should assess the possibilities of customer data from the customer's value creation perspective. Customers need other resources than the goods or services alone in their value creation. Hence, customer data should be understood as an opportunity to provide customers with such additional resources, i.e. information that is found relevant and purposeful in their value creation. In many cases, the answer to harnessing the full potential of customer data might be a rather simple one: give it back to your customers. This may need reformulation or refinement of customer data in the particular business context, but nevertheless, understanding its potential for the customer's value creation opens up new possibilities for firms to leverage this asset, which also contributes to avoiding the "dark side of CRM" (Boulding et al., 2005, 159; for managerial insight, see Humby, Hunt, & Phillips, 2003, 160–161). Here, it is important to understand how the data-related element provides information that is *about the customer* as well as how the phenomenon-related element contributes to information being *for the customer*.

In the context of the Nutrition Code, customer data was based on purchase data, not on actual consumption data. For example, in the context of car industry, providing customers with refined information resulting from the actual use of the car (i.e. consumption) is a way to move further toward supporting the customer's value creation⁴⁵. Similarly, location data has set new standards for the mobile phone and application industry and opened up new opportunities to support customers' various value-creating processes. In a way, location data can be understood as the actualization of redefining 'customer data' from the customer's value creation point of view; through refinement of location data customers can be provided with additional resources that are *about them* and *for them* and are eventually made available through various mobile applications. Understanding the logic of these two foundational elements helps to refine customer data and use it further to support

⁴⁵ Fiat's EcoDrive (<http://www.fiat.com/ecodrive/>) is a good example of giving 'customer data' back to customers in car industry. EcoDrive collects data about customer's driving habits, refines it, and as a result provides customers with information about, for example, how to develop a more environmental friendly driving style and save money.

customer's value creation. In that respect, although being context-dependent, the empirical part of the research also provided generalizable insight into the elements that decrease the information's ability to be used as input to the customer's value creation. Understanding the role of these elements has managerial relevance when supporting customers' value creation through reverse use of customer data.

Firms should carefully analyze the potential of their customer data in light of the legislation in the given business environment. Offering customers with information that is *about the customer* and *for the customer* can face severe challenges related to data protection legislation. In addition to redefining customer data from the customer's value creation point of view, firms ought to carefully analyze the limits of reverse use of customer data in the given business context.

Second, as the research was located within a food retailing context, it provided interesting insight into how value eventually actualizes in the customer's context; what constitutes value-in-use that is increasingly characterized by customers' concern over food healthfulness. From the managerial point of view, it should be interesting to notice how the information about the healthfulness of customers' groceries is used as input to value creation and more importantly, how far-reaching implications the information has in the customer's value creation. For example, being provided with such resources made customers think of themselves as better mothers or more in control of their lives. The constructed typology and particularly the four types can be used as a basis for effective marketing communications. Through the typology the diverse ways in which reverse use of customer data supports customers' value creation can be approached, which is a good starting point when trying to promote the service and its benefits to target customers.

Third, while firms are to a large extent becoming more service-minded, providing customers with information that is based on reverse use of customer data is a logical step toward establishing themselves more as service-oriented firms. In that respect, reverse use of customer data is a good possibility to differentiate from competition because customers perceive the role of the firm in a new light in relation to their value creation; it facilitates the firm's shift from goods to service. Customers' varying value-creating processes are thus being assisted by the firm; the firm offers more than resource bundles in the form of goods; it provides service that is more dynamic in nature. Rather than only selling groceries the firm also takes care of customers' healthiness. Consequently, firms should actively and broad-

mindedly search for opportunities for co-creating customer value through identifying possibilities for parallel exchanges. Exchange as a central business construct is facing a major paradigm shift; the role of money as the sole vehicle of exchange is being challenged. Therefore, firms should not retain conventional ways of doing business, but dare to challenge existing exchange processes and extend their view on both how they can support customers' value creation and how customers can support their value creation. In that quest, reverse use of customer data can offer unique competitive advantages and provide possibilities to deliver the core of the firm's value proposition.

Fourth, a detailed description of the case study context provided implications related to harnessing the power of the Internet. Firms should view the Internet not only as another channel for sales and marketing communications, but rather as a possibility to provide customers with complementary resources that support their value creation. Furthermore, Internet-based service applications, such as the Nutrition Code, offer firms possibilities to extend customer experiences. In other words, the way in which the firm supports customers' value creation is not limited to the store, but can be extended to a multi-channel environment. Moreover, it also offers firms the possibility to make the shopping experience more personalized and reach out to specific customer groups that are interested in, for example, food healthfulness or sustainable development. Thus, in the context of food retailing, understanding the possibilities of Internet in supporting customers' value creation extends the one-sided and limited focus on place, price, product and promotion as the main determinants of competitive strategies. Understanding customers' value creation in broader terms helps firms to respond to the challenge of contemporary markets and marketing.

Fifth, the research introduces reverse use of customer data as a novel and fresh way to reward customer loyalty. On the basis of the case study research, it can be argued that giving customer data back to customers offers good possibilities to both strengthen existing loyalty and acquire new customers. Traditionally, customer loyalty rewards have been progressive monetary compensations. Here, however, money or earned customer loyalty points are not that central. The more the customer buys from the food retailer the more accurate overall picture he or she receives of the healthfulness of the groceries. In that respect, reverse use of customer data is also progressive with an in-built incentive for customers to concentrate their food

shopping in a specific food retailer and thus, it offers interesting possibilities for the development of firms' customer loyalty programs.

8.2.3 Implications for service-based business models

As firms are increasingly shifting their attention from goods to service and from selling to supporting new and innovative service-based business models are introduced. These business models help firms to be organized to meet both customer needs and competition. What characterizes these models is that the firm takes a new role in the customer's resource integration process. Instead of selling customers distinct resource bundles in the form of goods, the firm decides to go further in supporting customers' resource integration processes where the value potential of the goods eventually actualizes. The firm shifts attention from the exchange toward customers' creation of value-in-use and identifies and innovates ways in which it can reach out to customers' context by providing them with additional resources for their value-creating processes. Driven by the service-based value proposition, the firm's organization is harnessed to serve this overarching goal of supporting customers' value creation.

In this research the overall aim was to understand reverse use of customer data and the way it can facilitate this type of change in actor roles that is characteristic of service-based business models. Consequently, the theoretical and managerial contributions discussed above also have some implications for these types of business models. Most importantly, they urge firms to change their perspective from internal to external customer data usage and explore in depth the opportunities of their customer data asset in providing customers with relevant information for their use. Even the most commoditized goods-based business can redefine itself more as a service firm if it is able to harness the customer value potential of the customer data asset in order to serve customers. Consequently, reverse use of customer data as a customer value co-creation mechanism can trigger such a change that makes the very difference between goods- and service-based business models.

Firms aiming at introducing or developing service-based business models through reverse use of customer data should concentrate on three issues. First, an in-depth understanding of the customer's context should be gained; i.e. how value-in-

use actualizes in the customer's resource integration process. Without knowing which resources are used the firm lacks the knowhow to provide such additional resources that are relevant in customers' value-creating processes.

Second, after understanding how the customer creates value, the firms should explore how additional resources can be refined from the firm's customer data asset for the support of the customer's value creation. Depending on the context, firms should consider whether they have or can have adequate access to transaction data or consumption data. The former relates to such data that emerges at the moment of the transaction, such as point-of-sale data in retailing, and the latter is about data that emerges when a good or a service is being consumed; in this case, industries such as telecommunications and energy are good examples of industries that possess large amounts of consumption data. Alternatively, firms can generate other customer data, for example, by conducting customer surveys. Altogether, firms should evaluate the value-creating potential of their customer data asset from the customer's value creation point of view; i.e. does the firm possess such data that can be refined into an additional resource for the customer's use.

Third, the customer data asset is refined – i.e. combined with other informational elements – and given back to customers. In other words, customer data is converted into information that is relevant in the customer's value-creating processes. The Internet offers a good opportunity here for developing such an application through which this new information can be supplied to customers. Conclusively, when successfully implemented, these three steps can mark a quantum leap in terms of changing a business model based on goods into a service-based one.

8.3 Research quality

An important part of any research process is to evaluate the trustworthiness of the research. Qualitative research faces the challenge of not having such clear-cut metrics for research reliability and validity as quantitative research has. Yadav (2010) argues that while there is an extensive range of methods for evaluating and assessing the justification phase of knowledge development, less is known about how the outputs of the context of discovery should be evaluated. In qualitative research, adopting a certain set of evaluation criteria contributes to the transparency

of the research and provides the researcher with means to emphasize the strengths and limitations of the research process (Eriksson & Kovalainen, 2008, 290). Although the evaluation of the research is often discussed at the end of the research report, it is present throughout the research process.

There is a variety of different criteria available to approach the quality of qualitative research. Gummesson (2000, 186–187) has presented a set of eight guidelines including, for example, the credibility of the research and adequate access to data. Corbin and Strauss (2008, 297–309) emphasize the role of purpose clarity, the researcher’s experience and methodological awareness in evaluating qualitative research, to name but a few. Eisenhardt (1989, 548) argues that “a strong theory-building study yields good theory (i.e. parsimonious, testable, and logically coherent theory) which emerges at the end, not beginning, of the study”. Alvesson and Sköldbberg (2000, 274–276), on the other hand, highlight the importance of issues such as empirical ‘arguments’ and credibility, an open attitude to the interpretive dimensions, and theory development. Altogether, the variety of criteria set to qualitative research is wide and diverse (see also Carson et al., 2001, 67–69), and they emphasize and highlight different aspects of the research process, and are characterized by different paradigmatic foundations.

As described in the methodology chapter, this research is ontologically and epistemologically based on the constructivist worldview and focused on acquiring new knowledge through interpreting empirical data. In the process of interpretation the researcher is seen as a research instrument between the empirical data and the research phenomenon and is embedded with (and aware of) his own pre-understanding and experience rather than an objective examiner. In addition, the research is theory-developing in nature and applies case study research setting as a research strategy. In that respect, following the guidelines for constructivistic research criteria provided by Denzin and Lincoln (2005, 24) is a natural choice. The quality of the research is approached through discussing research trustworthiness⁴⁶, credibility, transferability, and conformability that can be perceived to replace the traditional positivistic criteria, i.e. internal and external validity, reliability, and objectivity (Denzin & Lincoln, 2005, 24). In addition, the widely used criteria including adequate data access and researcher introspection are briefly discussed.

⁴⁶ Research trustworthiness is here discussed together with research credibility.

8.3.1 Research credibility

Research credibility is often preferred over reliability as a research quality criterion for qualitative research because the latter is perceived to carry a more quantitative connotation. Credibility indicates that the research findings are trustworthy and believable (Corbin & Strauss, 2008, 301):

...they reflect participants', researchers', and readers' experiences with a phenomenon but at the same time the explanation is only one of many possible "plausible" interpretations possible from data.

In a case study research setting, it is important to highlight the importance of the context and to "take the reader into the real-life setting of the case but also to the mysteries of the theoretical issues in questions" (Eriksson & Kovalainen, 2008, 131). Perceiving research credibility as being able to replicate the research with the same research findings is inadequate. The research context and the case study research setting characterized by time, place, and people involved determine the uniqueness of the research. In the context of this research it has been important to describe transparently and in detail how the research process has been conducted and how it has progressed. This gives the reader the possibility to evaluate him- or herself the credibility of the path from empirical evidence to theory and further to implications of the research; to evaluate the adequacy of the research process and its outcomes (Eisenhardt, 1989). Furthermore, multiple perspectives to the research phenomenon were employed to decrease the risk of taking a too narrow and limited approach to understanding the research phenomenon as a whole, and as a result, the credibility of the research was increased.

8.3.2 Research transferability

Research transferability refers to the research results' ability to be transferred to other contexts (e.g. Eriksson & Kovalainen, 2008, 294). As an evaluation criterion, it is closely linked to research generalization that is more suitable in quantitative research where the focus is on the generalizability of the results from the used sample to wider populations. Here, however, the research does not build on

statistical testing. As argued by Dubois and Gadde (2002, 559): “Case studies cannot build on statistical inference. They have to rely on analytical inference.” The focus has rather been on generating a detailed and thick description of the case study from multiple perspectives, investigating and exploring it in depth, and relying on interpretation and analytical inference. In other words, the transferability or generalizability of the research does not derive from statistics, but from the better understanding that is gained from the emerging phenomenon. This new understanding can then be used to approach similar research settings in other contexts.

This research focused on a food retailing context; the purpose of the research was to build a general framework for reverse use of customer data in the context of food retailing. In that respect, the overall aim has not been to maximize the transferability of the research; the focus has instead been on gaining an in-depth understanding of the research phenomenon in the case study research context. The research setting was located within food retailing using only one case study by one food retailer, which naturally affects the transferability of the research results. However, despite this context-dependability of all case study research, central findings of the research are to some degree transferable. The general framework is built to uncover the basic principles that account for the research phenomenon of reverse use of customer data. The idea of how the potential of the customer data asset should be understood from the customer’s value creation perspective; i.e. refined and given back to customers, is novel and important in all business contexts. Consequently, the building blocks of the general framework can be used to approach, understand, and consider the possibilities of reverse use of customer data also in other business contexts. Concepts and constructs that were central in the general framework (e.g. customer data, exchange, value co-creation) are also relevant in other business contexts. Naturally, each value-creating environment has its own special characteristics, but the general framework can give guidance when attempting to capture the core of reverse use of customer data in other contexts. Additional research is needed to enrich and develop the proposed framework further.

8.3.3 Research conformability

Research conformability refers to how the relationship between empirical data and interpretation should not be an imaginary one; it describes the ability of the research to link the findings and interpretation in a way that is easily understood by others (Eriksson & Kovalainen, 2008, 294). Thus, research conformability relates to research validity, i.e. the consistency between what is researched and what was intended to be researched. Validity refers to “the extent to which conclusions that have been drawn in research give an accurate description or explanation of what happened” (Eriksson & Kovalainen, 2008, 292). However, given the ontological and epistemological foundation of the research, research validity can be regarded as a concept derived from the positivistic research tradition, which is why research conformability is preferred.

In the context of this research, to follow the guidelines of research conformability, the research process has been described in a detailed way. The chain of empirical evidence is linked with the interpretation that has been made. In practice, the focus has been on conducting the coding, categorization, and thematic analysis of the empirical data in a transparent manner. The use of multiple data sources was also seen as contributing to research conformability through enriching the linkage between data and interpretation. The amount of citations that were used to illustrate a specific type, theme or element was also considered to be rather high, making the empirical part of the research and interpretation in general more transparent.

In addition, during the data generation and analysis it was critically important to understand what the data fundamentally was about, as described by Alvesson and Kärreman (2007, 1269):

Rather than assume that the subject is reporting authentic experiences, we can see the subject as a politically motivated producer of what are, for him or her, favorable “truths,” or as a person repeating institutionalized standard talk about a specific theme.

Thus, it was important to distinguish whether the customer was talking about actual experience or just imagination or preferences.

8.3.4 Adequate data access

Adequate data access is considered as another important element of successful qualitative research. In a qualitative research setting, it refers to the methods and techniques that have been used to ensure adequate data access. Any difficulties and problems related to data access should be reported in the research (Gummesson, 2000). In this research, unstructured interviews with customers, semi-structured interviews with the firm representatives, and customer feedback data were used as sources for data generation. Hence, data triangulation was used to generate multiple sets of empirical data from different sources that managed to capture varying aspects of the research phenomenon.

An effort was made to build a trusted relationship with the informants. Although the topic of the interviews was not that sensitive, creating an open, relaxed and trusted atmosphere was nevertheless found to be a critical antecedent for the informant to contribute toward rich and thick descriptions of the phenomenon. This was achieved, for example, by communicating with the informants in an open and precise way. The informants were contacted first by phone and then the interview time and location were confirmed via email. All the way from the very beginning the general purpose of the interviews was openly communicated and informants were encouraged to tell freely about their usage of the service.

8.3.5 Self-reflection

Having self-awareness during the research process is generally considered as an important criterion for implementing successful qualitative research. Self-reflection⁴⁷ means that the researcher should be aware of his or her own pre-understanding of the research phenomenon and the effect s/he has on the research process. The basic idea behind self-reflection is that the researcher carries a taken-for-granted cultural stance that must be counteracted (Alvesson & Sköldbberg, 2005, 144). That is why self-reflection during the data generation and analysis is often considered as fundamental element of the research process (Corbin & Strauss, 2008, 31). Given that phenomenological hermeneutics was chosen as the theoretical

⁴⁷ Self-reflection is especially widely applied within the critical research tradition (Alvesson & Sköldbberg, 2005, 144).

perspective of the research, the researcher's pre-understanding is not perceived as a weakness or a drawback, something that must be bracketed or set aside from the process of interpretation (see Laverly, 2003, 28). Self-reflection can be a useful and valuable tool, for example, to investigate the effect of the researcher's position, perspective and presence (Finlay, 2002).

In this research, an important element regarding self-reflection was the research diary held by the researcher during the research process, which is commonly regarded as being helpful in the process of interpretation and reflection (Laverly, 2003). This resulted in altogether 80 pages of notes including general and more abstract as well as more detailed elaboration on the subject field. It helped to assess the research process in a systematic way and provided another forum to explore, analyze, and investigate the empirical evidence as well as the theoretical constructs that were relevant in the research. Furthermore, keeping the diary helped to evaluate the research process as a whole; how the interpretation of empirical evidence progressed and how the general framework started to take shape. Writing down both the ideas and challenges during the research process helped to take a more researcher-oriented approach to utilize the ideas and tackle the challenges.

8.4 Directions for future research

To meet the theory development needs of the discipline, the richness and range of research approaches must match the complexity of the maturing discipline's substantive domain. To accomplish this, the discipline must strike a sustainable, synergistic balance between conceptual and empirical articles; both forms of scholarship are essential. Understanding, creating, and maintaining this balance is of utmost significance for a discipline because it represents the discipline's priorities and collective mind-set that fuels its intellectual endeavors.

- Manjit, S. Yadav (2010, 17)

This research has focused on exploring reverse use of customer data. The research was characterized more by discovery than justification; it was theory-developing in nature opening up new perspectives to customer data utilization and value creation in general. It can be argued that reverse use of customer data is an under-developed research area. In the future, service applications such as the Nutrition Code will

become increasingly important as firms seek ways to support customers' various value-creating processes and activities, which is why more empirical research about the emerging phenomenon is clearly needed. In this collective effort for knowledge development, focus should be on achieving a synergistic balance between conceptual and empirical research, as emphasized by Yadav (2010). Thus there has to be a continuous interplay between discovery and justification; both are needed to further our understanding of contemporary marketing phenomena. Understanding, creating, and maintaining this balance is of outmost importance also when generating new insight of the phenomenon of reverse use of customer data. Hence, four propositions are given for future research.

First of all, the research context, i.e. food retailing, has some special characteristics that affect the transferability of the results to other contexts. For example, customers pursue different kinds of food religions that eventually determine whether one's food consumption is considered as good or bad. In addition to the more subjectively-defined food religions, there is an established and widely acknowledged 'official' and 'objective' recommendation for food consumption⁴⁸. In other words, in the context of food retailing, customers' value creation is characterized by what is considered as right and wrong, which is for most customers determined by the authorities. Using similar case study research settings in multiple business contexts and in different value-creating environments with special characteristics would result in an enhanced level of understanding of reverse use of customer data. This would necessitate keeping eyes open for new service applications where customer data is redefined to serve the purposes of the customer's value creation rather than the needs of the firm in traditional terms. Learning from multiple case environments could contribute toward a better understanding of the interaction taking place between a phenomenon and its contexts (see Dubois & Gadde, 2002) and in addition, better match the complexity of the maturing discipline's domain (Yadav, 2010). Business contexts always have context-dependent characteristics that determine and define the nature of customer data, which naturally has implications to the way it can be used as input to customers' value creation.

⁴⁸ The official recommendations provided by the National Nutrition Council.

Nevertheless, the common denominator is the idea of refining and giving customer data back to customers to support their varying value-creating processes. For example, analogous to the Nutrition Code, Fiat has established a service application called Fiat Ecodrive that assists customers to drive their cars more economically helping them to save both money and the environment. This is achieved by gathering every single piece of data generated when the customer is driving the car. However, here the data does not emerge from the transaction (as in pos-data), but it emerges at the very moment when the car is used; the data emerges as the product is *consumed* not when it is *bought*. Fiat has redefined customer data in terms of building an informational infrastructure to collect it, refine it, and give it back to customers through the service application. This is done to support the value-creating processes of increasing number of customers interested in economical driving. As in the Nutrition Code, customers are provided with information, i.e. additional resources, to support their value creation. It is the context-dependent nature of the automobile industry that eventually determines the supply-side enablers for reverse use of customer data in that specific value-creating environment. The specific industry characteristics thus affect the way customer data is used to support customers' value creation. The basic logic of providing customers with additional resources to support their value creation, however, remains the same. The general framework consisting of the three central perspectives can provide a good starting point to grasp the special characteristics of the research contexts at hand. Yet more empirical research is needed to strengthen the suggested framework.

Second, more empirical emphasis should be given to uncovering and identifying the ways through which reverse use of customer data eventually converts into supporting the firm's value creation in different kinds of business contexts. This would require a holistic understanding of the firm's strategy, value proposition, internal value-creating processes, and more importantly, how reverse use of customer data can support those processes. This is important not only for knowledge development in general, but for justifying the business relevance of reverse use of customer data. Supporting the customer's value creation through reverse use of customer data often requires substantial investments, for example, in IT infrastructure, which is why firms need information about the drivers and the

diversity of benefits to determine the contribution to the firm's value creation and shareholder value.

Third, future marketing research should emphasize generating empirical insight about customers' various and diverse value-creating processes. Instead of replicating the marketing discipline's embedded product fixation researchers should concentrate more on understanding how value emerges in the customer's sphere. It is the customer who creates value, and it is in the customer's context, where value-in-use emerges. Thus, it is these value-creating processes that fundamentally determine and shape the purpose of marketing – understanding customers' value creation in depth and discovering ways to support it. Developing methodological approaches and tools to access customers' everyday life and value-creating activities is therefore of outmost importance in the future for justifying marketing's role as a discipline that understands contemporary real-world phenomena.

Fourth, the research introduced a new approach to value co-creation by dismantling the concept into its sub elements. More empirical research is needed where the research focus is on different kinds of case studies characterized by various value co-creative environments where some kind of a mechanism evokes a change in the resource integration process of the customer and the firm. Hence, a more solid and empirically well-grounded basis for developing the basic idea of dismantling value co-creation could be achieved. Research interest could also be directed at identifying the variety of both customer and firm value co-creative mechanisms through which the process of resource integration is adjusted and more importantly, investigating what kind of value do these mechanisms eventually result in. It is the emerging of these mechanisms that challenges and shakes the very nature of exchange as one of the most central constructs of marketing.

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APPENDICES

Appendix A. The interview guide for the unstructured customer interviews (translated from Finnish)

- Please tell me everything that comes to your mind related to the Nutrition Code.
- What is especially of interest to you in all this?
- Why do you use the Nutrition Code?
- Why is that important to you?
- What benefits do you get from using the Nutrition Code?
- What is the role of the information provided by the Nutrition Code in your consumption?
- Has the Nutrition Code changed your behavior in terms of doing groceries? If it has, how?
- Has the Nutrition Code changed the consumption experience you get from food and groceries?
- What information do you consider as most important in the Nutrition Code?
from
- How the Nutrition Code should be developed?
- In comparison with other information sources, what is the advantage of the information provided by the Nutrition Code?
- How the information received from the Nutrition Code differs from other sources of information?
- What other type of information would you like to get related to grocery items?