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# Digitalization-enabled evolution of customer value creation: An executive view in financial services

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## ABSTRACT

Digitalization and related transformation in services is disrupting existing businesses and changing the positions and roles of incumbent and new players in the industry, as well as customers. This study aims to create an understanding of how digitalization has driven change in customer value creation, and how companies can enhance customers' digital value creation in the present situation. For this purpose, we conduct a qualitative inquiry and use inductive logic with rich data from the represented industry – the financial sector – which enables us to detect the evolution of value creation during the last thirty years from an executive perspective. Our contribution is based on defining change processes involved in the evolution of customer value creation due to digitalization and revealing its microfoundations.

## 1. Introduction

### 1.1. Background of the study

Technology infusion has led to remarkable changes in the service industry, which has traditionally relied on personal contacts between customers and employees (Schumann et al., 2012; Gomber et al., 2018; Crittenden et al., 2019). Digitalization, a process in which businesses use digital technologies to change their business models and achieve new revenue opportunities (Gartner, 2015), is changing interaction between the service provider and the customer (Oviatt and Cohen, 2015; Hennig-Thurau et al., 2010; Pousttchi and Dehnert, 2018; Schmidt et al., 2017), and how the value is created in customer relationships (see e.g. Westerlund et al., 2014). In the near future, it can be assumed that the digitalization-enabled transformation in services will be even further amplified with new technologies such as those related to 5G or 6G, the internet of things, artificial intelligence (AI), open interfaces, and blockchain (Gomber et al., 2018).

In the financial service sector, digitized services – such as mobile wallets, payment apps, and automated wealth advisors – have entered the market as replacements (not just improvements) for established banking services (Basole and Patel, 2018). Technologies like natural language processing, mobile computing, and geo-positioning enable the provision of personalized solutions for customer-specific needs such as instant and secure mobile payments, speech-based banking services, and

structured account information (Robinson et al., 2019; Weingärtner, 2018). In line with this, Riikinen et al. (2018b) suggested that the latest technologies such as chatbots enable firms to enter a space that has previously been inaccessible for companies, enabling them to support customer value creation in novel ways.

New technologies are not the only driving forces behind the changing customer value creation. The role of regulation is remarkable especially in the financial sector, where it has traditionally protected incumbent service providers from competition. For example, however, the European Union's new Payment Services Directive (PSD2) opens competition for new entrants to use information on consumer payment accounts if they have an appropriate licence and the customer's consent. The changing influence of regulation – with new entrants that include not only FinTech start-ups but also technology giants such as Google, Amazon, and Alibaba – can dramatically change the competition landscape, generate new operation modes, and affect customer expectations of financial services.

It can be assumed that the customer will get more and better services. However, change is not without its tension from the customer perspective. There are issues that support customer empowerment in the markets, as well as those that can make service providers even more dominant. For example, within financial services, Gomber et al. (2018) describe how giant companies – such as Amazon, Apple, and Google – are already active in the field, and their access to vast amounts of customer data provides them with great potential to control the

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customer interface (see also Vives, 2017; Boot, 2017) and even strengthen provider dominance.

However, there are also other types of new entrants such as small start-ups that are designing novel services that seek to address customer value creation differently – for example, by extending accessibility to services or the personalization of services – and seem in many cases to do this better than the incumbent companies in the industry (Riikinen et al., 2018a).<sup>1</sup>

## 1.2. Why this research?

The importance of studying digitalization and its effect on how service providers are expected to renew their customer relationship management accordingly is said to be at the core of future service research (Ostrom et al., 2015; Wilden et al., 2017; Zeithaml et al., 2020). An understanding of customers and their value-creating processes in the digitalized world is indeed critical for a company's success (Payne et al., 2008; Yrjölä et al., 2018; Fan et al., 2020). It is said that a digitalization-enabled service transformation can happen only if those who are leading the transformation can see its potential from a customer perspective (e.g. Kandampully et al., 2021), grounding our approach of investigating changing customer value creation from the perspective of executives.

The digitalization-enabled transformation of customer value creation may mean we begin to see the customer as an independent value creator beyond interaction with the service provider (e.g. Holmqvist et al., 2020). This view has often been neglected thus far in the literature but is something executives should understand. For the same reason, more should be known about the involvement of other actors not directly under the control of a focal service provider (e.g. other service providers, friends, relatives, and family members) in the customer's value creating process (see Fan et al., 2020). The extent to which their presence is a focus in digitalization is a valid question. Despite visible and rapid developments, an understanding of how the basic fundamentals of value creation are changing due to digitalization has been lacking. For example, digitalization is still often seen as a service-provider-focused process, creating value primarily for the firm – as it used to be in the traditional analogue world. Seeing the full potential of digitalization therefore often assumes a radical change in executive mindsets (see e.g. Kandampully et al., 2021).

We suggest that analysing the influence of digitalization in the long term and in the specific industry allows a contextual understanding to illuminate the changes happening in actor roles and in value creation, which is essential for inductive theory generation and an explorative approach (e.g. Glaser and Strauss, 1967). It also helps us understand how service providers can utilize this changing situation to meet new demands. Our longitudinal, qualitative data are gathered from executives who have been actively leading service transformation in financial services at different times throughout the last thirty years. Financial services constitute a rich setting to research this phenomenon. The field has been constantly under pressure to develop digital services. However, it is also an example of a very regulated and traditional branch with various friction forces for service transformation (e.g. Lähteenmäki and Nätti, 2013). This regulatory environment is now changing radically, posing new challenges for all the players in the industry. Such a situation offers an opportunity to examine the change, compared to many newer “born-digital” industries. In addition, financial services represent services that are often embedded to other services in the present situation, which extends the opportunities for value creation. A qualitative approach is suitable here, because it facilitates a holistic and sufficiently

detailed understanding of the evolution process over time, also supporting this study's microfoundational ontology (see Barney and Felin, 2013). This aim is fulfilled by using multiple data collection methods. Primary interview data collected from executives in different eras throughout the evolution enable a vivid executive perspective on this transformation.

## 1.3. Research gap in detail

The evolution of customer value creation due to digitalization is a highly relevant yet under-researched phenomenon. Its microfoundations<sup>2</sup> especially deserve more attention, as the value creation literature tends to be more general in its focus and conceptualizations (see Storbacka et al., 2016), which is also true when examining the related evolution processes due to digitalization.

In the previous literature, there are theoretical discussions that are somewhat close. However, a focus on customer value creation evolution and its microfoundations is lacking. For example, the digitalization-focused literature in the field of *information systems* (e.g. Häikiö and Koivumäki, 2016; Wulf and Blohm, 2020) has its strengths in defining technological innovations such as AI or blockchain and their disruptive power within the industry (see e.g. Gomber et al., 2018; Boot, 2017), but the focus in this literature has been on information technology, digital platforms, or on more general structural change caused by digitalization, not on customer value creation or its microfoundations per se.

The discussion around the *digitalization capabilities* needed to facilitate value creation (e.g. Lenka et al., 2017; Kamalaldin et al., 2020; Niemand et al., 2020; Crittenden et al., 2019; Matarazzo et al., 2021) takes a very service-provider-oriented approach, focusing more on capabilities enhancing digital transformation in companies offering digital services than on the nature of the customer value creation, or how it changes. Close to this, there are also numerous examples of research on the influence of digitalization on *business model innovations* (e.g. Rachinger et al., 2019; Bouwman et al., 2018). The disconnect with value creation here is that although customer value creation is seen as a “guiding force” for business model development, the focus has been more on enablers of digital business model innovation than on the evolution of value creation due to digitalization itself.

The *network perspective on digital value creation* (e.g. Senyo et al., 2019; Iden et al., 2020) has focused on digitalization in ecosystems but from a more structural perspective, focusing on the ecosystem structure, technology, artefacts, and institutional arrangements constructing these entities or the collaborative development of digital services within them. This perspective does not highlight customer value creation, or its transformation due to digitalization. *Digital platform and related modularity approaches* (e.g. Breidbach and Ranjan, 2017) do not shed much more light on these issues either but emphasize value co-creation practices within platforms, platform design, or modularity aspects within them, an approach that is more technology oriented than ours. Finally, *application perspectives*, defining certain concrete tools or applications of digitalization (like chatbots [Riikinen et al., 2018b], big data [Lim et al., 2018], or self-service [Zainuddin et al., 2016]), generate an understanding of the use of such tools or related self-service in customer contact points, excluding microfoundations or their evolution from scrutiny.

To summarize, we suggest that the discussions defined above lack a sufficient connection with the customer value creation discussion, failing to offer a detailed understanding of how digitalization changes

<sup>1</sup> For example, a Fintech start-up, Enfuze, sophisticates the customer's payment data to show her/his carbon footprint based on the calculation of individual lifestyle and country-specific scientific data. This calculator is an example of using commodity payment data to develop a service that is integrated into the customer's primary activities inside their own ecosystem.

<sup>2</sup> Microfoundations are about explaining the higher analytical level with lower-level units, e.g. explaining origins and evolution of a certain macro phenomenon by examining how it emerges as a function of lower-level factors (e.g. decisions of individuals) and social interaction. Microfoundations are not solely about individuals but also about their interactions and context (Barney and Felin, 2013).

the traditional roles of parties in service delivery, the modes of value creation, and the consequent changes needed for customer relationship management. Deeper insights into the microfoundations related to digitalization's influence on value creation are needed for the service management literature to focus on relevant facets of value creation processes (e.g. Gummerus, 2013) to understand the impacts of digitalization and for researchers to make paradigmatic choices within customer value creation research (see Barney and Felin, 2013; Storbacka et al., 2016; Zeithaml et al., 2020).

To address the above research gaps, *the present study seeks to understand how digitalization has changed customer value creation*. This main question is answered through two sub-questions: *what are the microfoundations of the digitalization-enabled evolution of customer value creation*; and *what change processes are involved in the digitalization-enabled evolution of customer value creation*?

The remainder of this paper is structured as follows: first, the theoretical background and key concepts relevant to framing the evolution are presented; the methodology and research setting of the paper are then defined; third, the aspects related to the evolution of value creation are presented thoroughly in the empirical results section with the aid of several complementary research data sets; the discussion section follows the empirical analysis to synthesize our findings with the existing literature; finally, conclusions are drawn, the limitations of the study are analysed, and ideas for future research in the field are suggested.

## 2. Theoretical baseline of the study

As described in the previous section, despite the well-developed conceptualizations of customer value creation, research on the intersection point between digitalization and customer value creation is still emerging. This is despite the fact that through digitalization, the customer can be empowered and activated in their relationship with the company in novel ways, and that digitalization enables various new means to engage the customer in service provision (see e.g. Grönroos, 2011; Jaakkola and Alexander, 2014; Payne et al., 2008; Ostrom et al., 2015). From technologies' perspective, value creation can either be considered *a property* of a certain new technology or constructed as an *outcome of using* these technologies (see Nussipova et al., 2020; Vargo and Lusch, 2018), reflecting the dichotomy between *value-in-exchange* (e.g. Bagozzi, 1974) and *value-in-use* (e.g. Vargo and Lusch, 2004), which is defined in detail in the following.

The concept of customer value creation has been researched within service marketing for some time now (Grönroos, 2011; Vargo and Lusch, 2004; Woodruff and Flint, 2006). In addition to recognizing the distinction between the value outcomes perceived by the customer (e.g. direct and indirect, monetary or non-monetary outcomes [see e.g. Möller and Törönen, 2003]) and the value creation process itself (see e.g. Gummerus 2013; Payne et al., 2008), the discussion has also centred on the roles of the service provider and customer in these processes (see Ballantyne and Varey, 2008; Grönroos and Voima, 2013; Akaka et al., 2021), an aspect that digitalization has clearly changed.

Several marketing researchers have highlighted that value creation happens in a dynamic and temporal process in which customer value is formed during the use of products, processes, and resources (see e.g. Grönroos, 2006b; 2008; 2011; Vargo and Lusch, 2008a). In other words, value is understood as *value-in-use* instead of *value-in-exchange*, which is a traditional focus in marketing, and considers value as embedded in a product or solution, for example (Akaka et al., 2021; Grönroos, 2006b; Grönroos, 2011; Heinonen et al., 2010; Vargo and Lusch, 2008b; Voima et al., 2010). This traditional approach, based on “*goods-dominant logic*” (e.g. Sheth et al., 1988), is also challenged in all key approaches to value creation (service-dominant logic [S-DL], service logic [SL], and customer-dominant logic [C-DL]) because of the latest digitalization developments and the resulting new possibilities to interact with customers.

In current marketing thinking, a customer's leading role in value

creation and an understanding of their holistic goals, challenges, and logic (Heinonen and Strandvik, 2018) are increasingly highlighted – in other words, the customer's perspective of the value creation process. Emphasizing a customer's subjective perspective also underlines that value is not always formed in interaction with the service provider (Heinonen and Strandvik, 2018) but can emerge as a result of everyday and mundane activities in the customer's life in interaction with a variety of market and non-market actors (Heinonen and Strandvik, 2018; Vargo and Lusch, 2016), pinpointing the fact that *value formation* is grounded in the customer's contexts and experiences. Accordingly, the customer's experience of value is constantly changing (see Heinonen and Strandvik, 2020) and value emerges spontaneously and even unconsciously in the customer's contexts (see Grönroos and Voima, 2013; Echeverri and Skålen, 2011; Vargo and Lusch, 2017). Indeed, in contrast with earlier times, in the current networked era, customers can create value through their own social contacts wherever they are (see Fan et al., 2020) instead of relying only on service-provider-controlled value creation. It can be assumed that digitalization has also enabled this change by driving the managerial focus from the service provider side towards the emerging nature of customer value formation. Instead of a provider making life easier for customers and satisfying their needs while controlling value creation, it is the customer who either mentally or physically uses the offering in their context for value creation (see Edvardsson et al., 2011; Grönroos and Voima, 2013; Holmqvist et al., 2020). An understanding of the customer's environments therefore becomes important from the value creation perspective. Instead of thinking in terms of how customers can be involved in the provider's activities, the interest should be in “how customers prefer to involve providers in their lives or business activities” (Heinonen and Strandvik, 2018).

In relation to these ideas, it is also important to note that many services are only *instrumental*, secondary to the customer. For example, in our present research context, a financial service itself is rarely a primary service – the most *meaningful* service for the customer; rather, extracting value from them supports some other service/services so that the customer can fulfil their primary goals in life. We therefore suggest that from the customer's perspective, services can be either intrinsic (i.e. internally driven) or extrinsic (i.e. instrumental to achieving a valued outcome) (for more on consumer motivations, see Csikszentmihalyi, 1983); another aspect that digitalization can make more visible with regards to value creation.

Finally, the role of multiple actors in the customer's value creation process is noted (see Fan et al., 2020; Frow and Payne, 2011; Vargo and Lusch, 2017) – for example, the meaning of a wider *ecosystem of actors* like friends, family, and other service providers around the customer (Rihova et al., 2015; Heinonen and Strandvik, 2020) and the customer's *social context* (e.g. Edvardsson et al., 2011; Holmqvist et al., 2020) involved in the value creation. It is therefore meaningful to consider how other actors affect and participate in the customer's value creation. Presumably, digitalization has also shed some new light on this aspect of value creation.

The following empirical analysis analyses various aspects and microfoundations central to the change of value creation due to digitalization. With this processual view, we can detect how and why value (creation) emerges, not only its elements, antecedents, or consequences (see Heinonen and Strandvik, 2020). As we study a change process over time, spatial and temporal (see Helkkula et al., 2012), as well as social (e.g. Fan et al., 2020; Vargo and Lusch, 2011), aspects in value creation prove central.

## 3. Methodology

### 3.1. Data sets

When considering the complex and multi-sided phenomenon in question, we suggest that an explorative qualitative research method is



appropriate, enabling a holistic and simultaneously detailed understanding of the evolution process (Denzin and Lincoln, 2008), which also supports this study's microfoundational ontology (see Barney and Felin, 2013). Our aim was to understand the interconnection between varied microfoundations and more general change processes in customer value creation due to digitalization. A qualitative method enables the handling of this research topic flexibly and inductively, which is needed to reveal an emerging phenomenon (Mack et al., 2005). The inductive approach applied here provides a systematic set of procedures for analysing qualitative data, thus helping to producing reliable and valid findings (Thomas, 2006). Moreover, such a qualitative inquiry may offer a novel research avenue for consequent quantitative and confirmatory studies (see e.g. Maxwell, 2004).

Multiple data collection methods were used to cover the scrutinized period. First, primary data in the form of in-depth qualitative interviews (see e.g. Kvale 1996, p. 105) were used from several distinct data sets collected during several research projects (conducted over years) in the field, as Table 1 below shows. This enabled us to see customer value creation from the perspective of different actors and from a variety of time perspectives. Our approach has therefore been retrospective; although the interviews were collected over certain periods, most of the informants, very experienced in their field, could retrospectively “look back in the history of the industry and their professional life” and thus enabled us through their stories to cover a sequence from the beginning of the 1980 s until the present. Our data were collected from managers and experts in the industry. Our results therefore reflect a managerial, executives' perspective on how customer value creation was seen in the organizations. This is important to understand, as the challenge often seems to be initiating change in executives' mental models to utilize possibilities of digitalization for value creation (Holmlund et al., 2017). On the other hand, those who can have a holistic view of the field of customer value creation are the executives, whose areas of responsibilities are radical innovations and lead the transformation from a customer perspective (e.g. Kandampully et al., 2021). Although the

question is about the *customer* value creation, customers as such may be unable to see the opportunities of digitalization, lacking a holistic, strategic and field-specific perspective.

The primary interview data were further triangulated with secondary data from archival materials such as annual reports, histories, notes, professional magazines, and authority reports from that period. These additional data were used to enrich and confirm an understanding of the case from a longitudinal perspective. For example, two series of annual reports by big retail banks were coded by their mentions of *customer value* and *digitalization*. The search was made on annual reports published on the internet between 1995 and 2019.

The methodological challenge was related to the long timeframe of the research with the aim of creating an understanding of how digitalization has driven change in customer value creation. We knew financial services had been digitalized since the beginning of the 1960s. We therefore needed temporal data to cover a sufficiently long timeframe of the phenomenon. We also knew that executives in financial services had been slow to change their traditional mindsets and had a strong producer-oriented way of doing business (e.g. Lähteenmäki and Nätti, 2013). We therefore needed data that told us not only about quite clear phases of the evolution but also about more indistinct and still emerging features (microfoundations) about the change in customer value creation. The selection of data sets and methodological process was therefore both a challenge in this research and a richness when successful.

All the researchers involved have long experience in the field of digitalization, financial services, and customer value creation. The original number of possible data sets was therefore larger than finally selected, for all the authors had various data sets to use. The decision about which data sets should be used in this research was therefore made using investigator triangulation. The selection criteria were as follows:

- Data sets need to cover most of the era of the digitalization of financial services
- Data sets need to indicate a temporal dimension
- Data sets need to show the relationship between digitalization and customer value creation
- Data sets need to enable a holistic and sufficiently detailed understanding of the evolution process
- Data sets need to include descriptions of customer relationships and interactions between the financial service provider and customer
- Data sets need to include a variety of service provider types (e.g. incumbents, start-ups, and new entrants)
- Data sets need to reveal the microfoundations of digital evolution

During the triangulation, a preunderstanding of the phenomenon of each author was abductively reflected on with the prospective data to make the selection of data sets to fulfil our criteria. As mentioned, all data sets were initially collected and analysed for other research projects prior to this research. At least one author of the focal research was involved in these previous studies. In all the data used, authors of the focal research have played an essential role as data collectors and interviewers, as well as analysing the data.

The first data set consists of a study conducted among influential actors in the Finnish banking sector. Twenty-seven thematic interviews were conducted between 2002 and 2005. These retrospective interviews mostly informed us of the early developments from the 1980s. The second data set consists of data collected for a case study conducted in 2010. In the study, the senior management of one retail bank was interviewed (eight interviews). In addition, observation data and notes were collected during several workshops (on two occasions) and five development meetings related to service development. Again, although the interviews were collected during 2010, they were retrospective, covering developments between 2000 and 2010. Furthermore, a customer satisfaction survey was utilized as secondary data, as were internal documents.

**Table 1**

A description of the data.

<b>Data set 1:</b> 27 retrospective interviews in 2002–2005
CEOs 12, Executive VPs 4, VPs 9, Specialists 2
Covering the period from the 1980 s to 2000
Annual reports from banks and JV organizations
Histories
Notes
Professional magazines
Authority reports
(organizations like the Bank of Finland and FIN-FSA)
<b>Data set 2:</b> 8 retrospective interviews in 2010
CEO, Vice CEO, Heads of businesses 6
Observations and notes from 2 workshops and 5 development sessions
Covering the period from 2000 to 2010
Customer satisfaction surveys from the case bank
The case company's internal documents
<b>Data set 3:</b> 10 interviews with managers/owners in 2015–2016
Founders 6, Managers 4
Semi-structured retrospective interviews on the value creation logic of Finnish Fintech start-ups
Covering the period from 2010 to 2015
<b>Data set 4:</b> 8 interviews in 2018
Experts and representatives from multiple stakeholders
Semi-structured interviews about the disruptive potential of emerging FinTech firms in the Finnish retail banking market
Covering the period from 2013 to 2018
<b>Data set 5:</b> 7 interviews with wealth management managers in one Nordic bank in 2015
Executive VP, VPs 3, Specialists 3
Retrospective thematic interviews about the manager's mental model and stance on digitalization's impact on wealth management services
Focusing on events at the time
<b>Data set 6:</b> interviews with two retired financial service CEOs and one financial service start-up owner in 2019
Thematic retrospective interviews about market innovation
Covering the last thirty years

The third data set comprises semi-structured interview data collected in the autumn of 2015 from key representatives of ten Finnish FinTech start-ups. There were then approximately 20 Finnish FinTech start-ups. The informants were founders or managers of these start-ups. The companies were all founded in 2010 or later and represented a large variety of FinTech business fields (personal finance, business banking, crowdfunding, payments, and investments). Most of the interviews (eight) were arranged at a leading Nordic start-up event in Helsinki, Finland, in the autumn of 2015. In addition, the remaining two interviews were conducted at the informant's place of business later in the autumn of 2015 and early 2016. One or two key representatives from each company attended the interviews. The interviews retrospectively covered the period between 2010 and 2015.

The fourth data set comprised semi-structured interviews about the disruptive potential of emerging FinTech firms in the Finnish retail banking market. In the study, eight experts and representatives from multiple stakeholders were interviewed in 2018. In particular, this data set enabled us to understand both the change of the new service providers in the financial sector and the impact on the customer experience between 2013 and 2018.

The fifth data set consists of thematic interviews conducted in 2015 about the mental model of managers and their stance on digitalization's impact on wealth management services. Even interviews were conducted with wealth management managers in one large bank that was operating in all the Nordic countries at the time. This data set allowed us to understand the digitalization-enabled change in value creation within a specific segment of financial services.

The sixth data set consists of three thematic interviews from 2019. Two of the interviews were conducted with retired financial services CEOs, and one was conducted with a start-up founder with long experience in the field. The interviews with these informants covered their whole career until the time of the interview. The information is gathered in Table 1. How and where different sets were used can be found in Fig. 1 (data structure and data sets).

### 3.2. Analysis and processual interpretation

We engaged in reanalysing the data collected for prior projects to develop themes not discussed in our previous studies (see Wästerfors et al., 2014). Our analysis followed inductive reasoning (e.g. Gioia et al., 2013) when a theoretical understanding of the topic was developed

while analysing and interpreting the empirical data. We suggest that this approach was beneficial for uncovering the microfoundations of evolution over time and from different data sets (see e.g. Gioia et al., 2013; Ragin, 1987).

First, following a thematic analysis of the whole data pool, we were able to define first-order themes, microfoundations related to digitalization in the financial sector (for example, “institutional thinking”, “embeddedness of value creation to time, context and service provider”, “open banking”, “customer's selected time”, or “empowerment of customers”). Given the nature of our data (as a collection of different data sets from different periods), these themes are snapshots from different periods. Second, through several analysis rounds, we were able to synthesize those themes as second-order themes (“service-provider controlled value creation”, “customer-controlled value creation”, “ecosystem formation and related integration between ecosystem actors”) that were common denominators for the group of first-order themes. The following illustration (Fig. 1) gathers the idea of the data structure, illustrating first-order and second-order themes, as well as how the different data sets were linked to different themes.

Moreover, with the help of microfoundations found in first-order themes, we were able to find “continuums” of change happening over the years (see Fig. 3 below, for example, from “value creation embedded in time” to “value creation freed from embeddedness in time”). Finally, applying this processual view enabled us to compare earlier categories and change paths with the existing value creation research (Goulding, 2005) and thus conceptualize change processes involved in the evolution of customer value creation due to digitalization (see Fig. 4, which includes the development processes found).

To increase confidence in the findings, we used the investigator triangulation (e.g. Archibald, 2015). The data were shared between the authors and analysed using the same qualitative method. The findings were thoroughly discussed in weekly meetings, and the interpretations of each author were compared and discussed. A deeper understanding of how digitalization could influence customer value creation in the financial service sector was formed based on the joint findings.

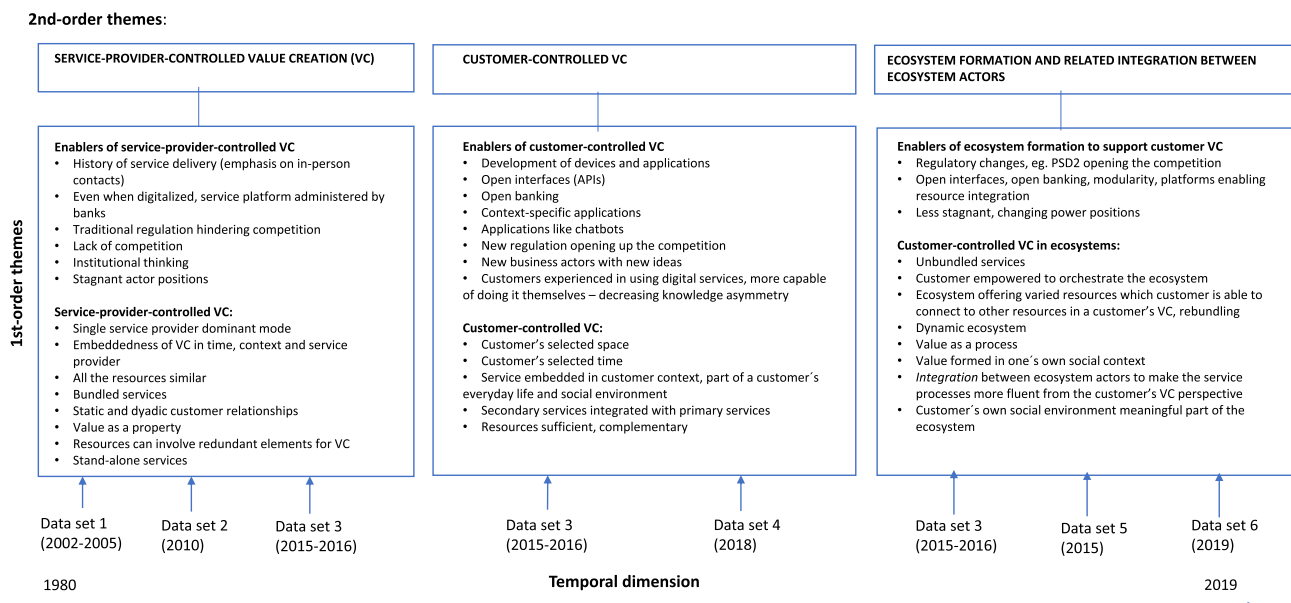


Fig. 1. Data structure and data sets.

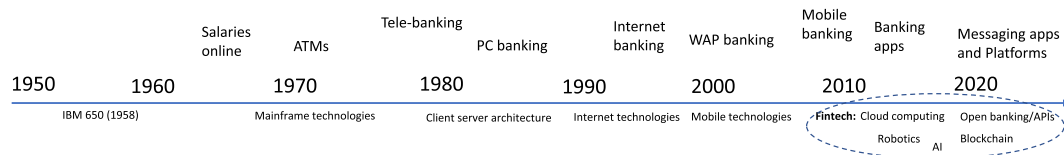


Fig. 2. Digitalization development of banking delivery channels.

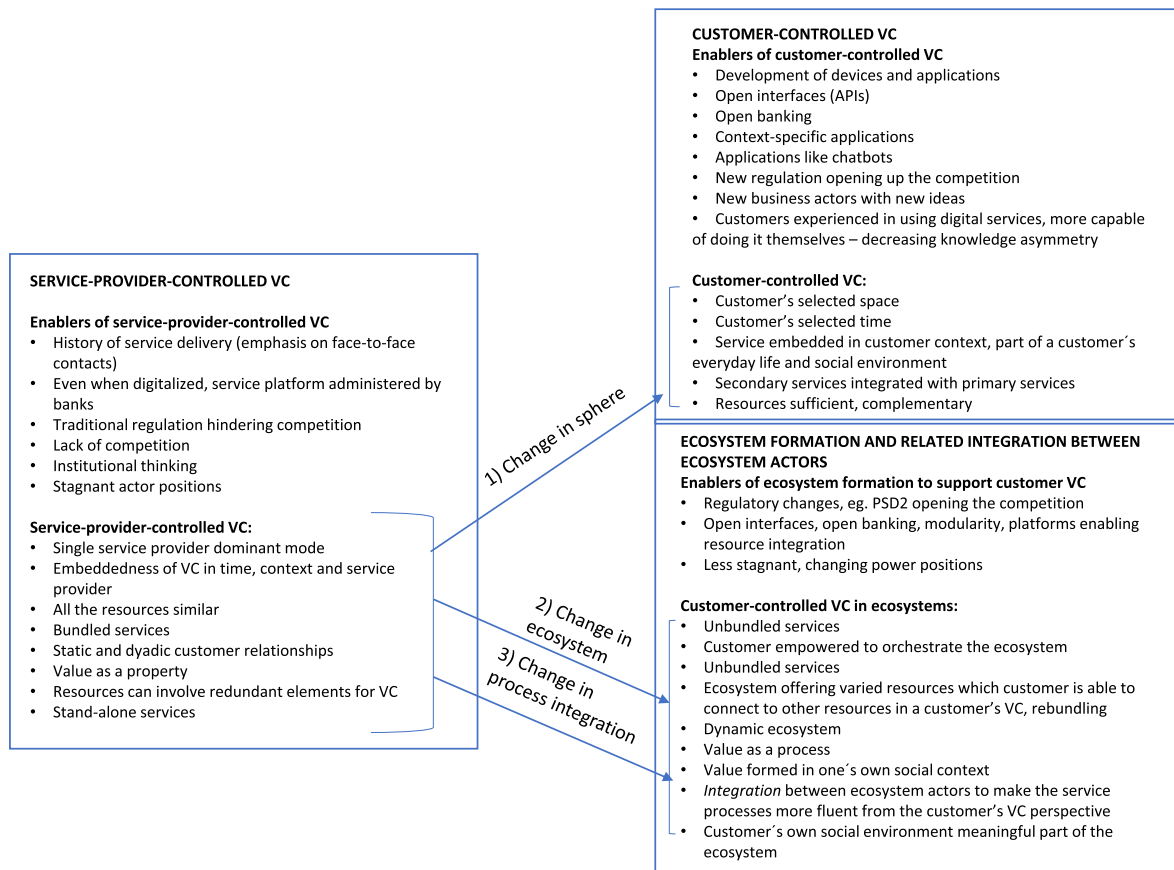


Fig. 3. Enablers and characteristics (microfoundations) of service-provider- and customer-controlled value creation, and consequent change processes.

#### 4. Findings – Microfoundations of the evolution of value creation due to digitalization

##### 4.1. From past to present – Development of digitalization in the financial sector

Fig. 2 illustrates the main phases of digitalization development in banking platforms. The lower line shows the technological base of the development, and the upper line platforms for customer interaction especially.

In banking, the development from analogical platforms such as branches into digital ones started with the digitalization of salary payments in the 1960s and ATMs at the beginning of the 1970s. The locus of interaction with the customer was completely dominated by the bank until mobile banking and apps started to change the setting, recently amplifying the change brought by AI and chatbot technologies. It has since been possible to select a service provider (e.g. mobile wallets and payment apps) outside the incumbent offering, and this has created a novel FinTech scene. On mobile banking platforms, customers can integrate banking services with primary services by themselves (e.g. online buying and payments with mobile wallet), and on platforms such as Apple Pay, Messenger, WhatsApp Pay, customers can integrate

banking services with their social lives. We can see here that who *controls the technology* is a particularly meaningful aspect. In the financial sector, the development of different service technologies has moved from company-controlled telephone banking, through “adaptable service technology” like online banking and mobile banking, towards customer-controlled service technology like voice-controlled devices.

This findings section is structured based on second-order themes found in the analysis (see Fig. 1 in the methodology): 1) service provider-controlled value creation; 2) customer-controlled value creation; and 3) ecosystem formation and integration between ecosystem actors. First, we define what is meant by service provider-controlled value creation and analyse the enablers behind this tendency in this industry. The first-order themes within them (see Fig. 1) are in *italics*. When quoting the interview data, the relevant data set is marked (for example, “DS 1” in the following). When reading the analysis, it is noteworthy that it represents a managerial perspective: how developers and executives in this industry have seen the change and its microfoundations from their strategic perspective.

##### 4.2. Service provider-controlled value creation

The baseline for digitalization and the related evolution of customer

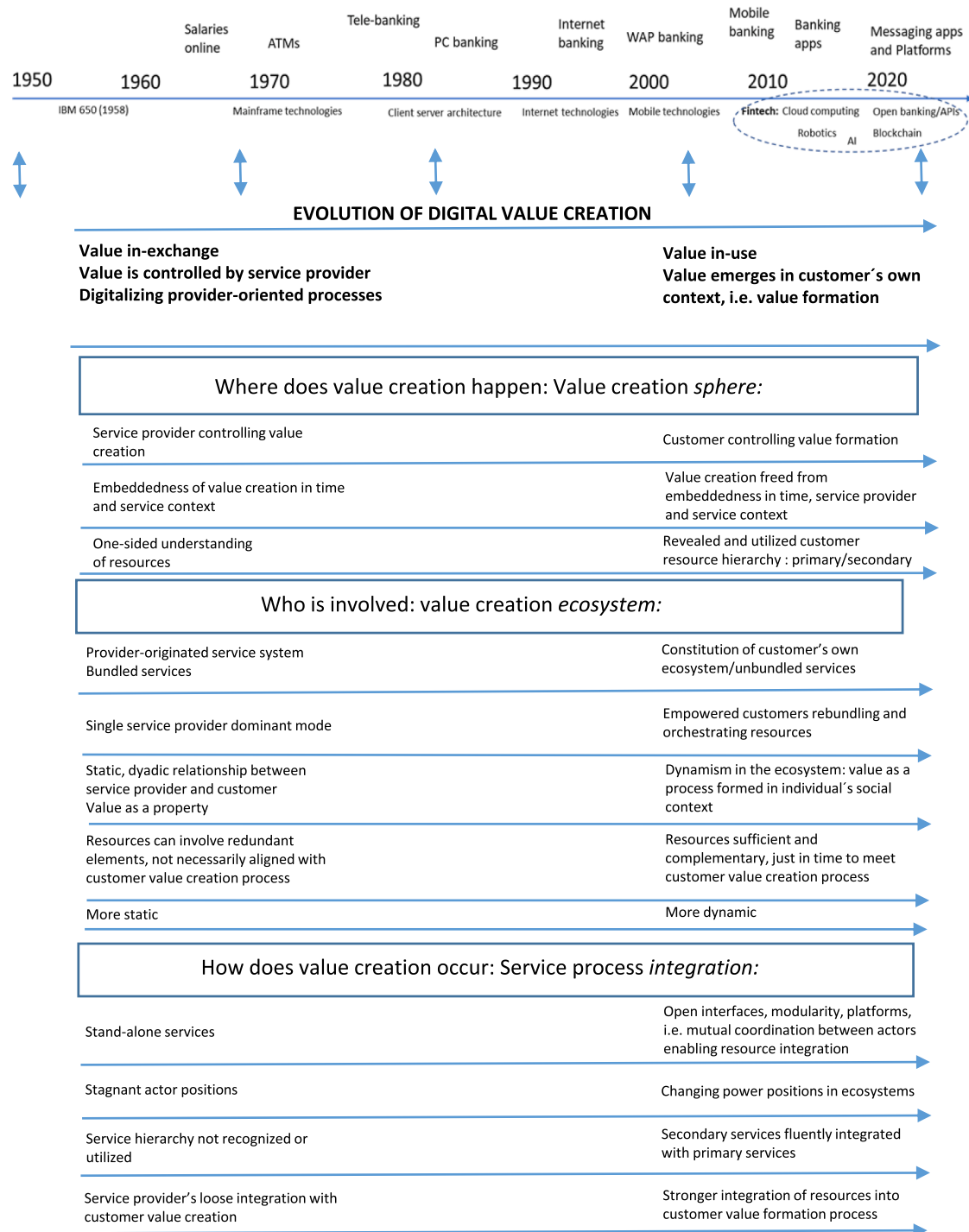


Fig. 4. Evolution of customer value creation due to digitalization: change in sphere, ecosystem and service integration.

value creation has been far from easy for incumbent players in the industry. Traditionally, the financial service sector has been very service-provider-oriented, as the following quote from 2002 (focusing on everything other than customers) demonstrates:

*Our mission in the Finnish cooperation network is to be the best payment partner for banking and retail service providers. [...] One of our main sources of competence is the board of directors, which has an extraordinarily broad understanding and view of the future* (CEO of a payment service provider, DS 1).

There are natural reasons for this orientation. Previously, the most

*common way to interact with the customer was in-person contacts* – customers visited the bank office. Value creation was therefore *embedded in a predetermined time, the offered context, and the service provider*. Even when the digitalization started to evolve, *customers had to use digital platforms owned and administered by banks* (like netbank sites, tablet banks, mobile banks, and service applications).

The customer's role used to be to adapt to the service offered in a *single service provider dominant mode*. Customer relationships were *dyadic and relatively static*, because customers were more loyal to individual service providers. Service providers held quite *stagnant positions* in the market, and the *resources they offered were quite similar* to their



competitors'. Services were more or less *bundled, stand-alone* entities by individual service provider. Because it was about service-provider-controlled value creation, *redundant elements* from the customer's value creation perspective were also involved in the form of redundant activities, for example. In service-provider-controlled value creation, *value is seen as a property* of a service or technology itself (value-in-exchange).

In the following quotes, some reasons for this bank-dominated approach are described, showing that provider-orientation is still involved. This is also highlighted in differences between the incumbent and new players in the financial sector. As we can see, the reasoning can differ between the incumbent player and the novel start-up representative. On the one hand, traditional strong *regulation* in financial services has protected incumbent players from competition. On the other, this *lack of competition* is mentioned as a remarkable friction force in capability development to harness digitalization to engage better with customer value creation.

*There are several reasons we are still provider-focused in financial service behaviour: banks are still trusted parties, [and they] worry about security, regulation, unknown new service providers, and institutional thinking* (Payment expert from a large retail bank, DS 1).

*I think that banks and investing companies have been really lazy at service development. If there's no competition, and when the profit is enormous, there is no need to develop services or change anything* (Start-up E, CEO, DS 3).

By *institutional thinking*, we mean that a long history in banking can generate a collective assumption of the "right ways of taking care of customers", which are not easily changed and can create a strong friction force for digitalization-enabled developments. Indeed, many of our informants suggest that although consumers' use of financial services has changed remarkably over the decades, the underlying logic of incumbent service providers has perhaps not changed at all. Although the context is now more digital than physical, it has been and still often is controlled by the service provider, and underlying processes remain provider-originated and controlled by the service provider. The most critical views state that it still seems today that these underlying assumptions and procedures of service provider dominance have not changed, and digitalization at its best is *about digitalizing service provider-oriented processes*, not digitalizing to facilitate customer value creation. For example, customers must still interrupt their everyday life (and actions that create genuine value for them) to visit the bank-dominated digital platform and pay their bills. This is the critical view, but there are also other views that discuss enablers of digitalization and means of embedding financial services in customer value creation. These are further discussed in the following section dedicated to the second-order theme, "customer-controlled value creation", including related enablers and characteristics.

#### 4.3. Customer-controlled value creation

Despite the friction forces defined above, there are also enablers of change towards a novel, customer-centred value creation facilitated by digitalization. Indeed, the recent development of *new technological devices and applications, APIs* (application programming interfaces), and *open banking* has enabled value creation to occur on platforms outside traditional banking. For example, digitalization enables context-specific applications, embedding payment fluently through an API in the process of ordering food and its transport to one's home.<sup>3</sup>

Furthermore, *chatbots* are examples of technology-oriented service platforms on which the customer does not literally move to the service

provider's platform, but where they choose the joint interaction sphere and open the interface for the service provider. While proprietary service applications (e.g. a netbank) are impersonal, leaving the customer to do the hard work of reaching the service or inputting the required information, virtual assistants like Bank of America's Erica offer more personal and situation-specific interaction.

According to the informants, *new regulations such as the EU's PSD2* have further supported innovation outside traditional banking and enabled the *entry of new innovative players* to the industry. Meanwhile, customer experiences from other service sectors have also shaped the expectations and *capabilities of customers* regarding banking services. Indeed, *knowledge asymmetry between financial experts and customers is diminishing* alongside digitalization empowering customers and making more complex services available for them. It can be assumed that customer involvement in planning and even generating new digital platforms for themselves will increase in line with the ever-increasing digital capabilities of ordinary service users.

How is all this realized in the form of customer-controlled value creation? Overall, a *spatial and temporal sphere* and the *ability to choose* it are often what define value creation from the customer's perspective. Customers have increasing options to choose the *space and time* to use financial services – ranging from global platforms like Google and Facebook to activity-specific applications. Customers therefore have more options to create value individually or with their peers in the *customer's own context, everyday life, and social environment*:

*We've been thinking about how to get even closer to the consumer. For example, via WhatsApp and Facebook; so we go to these interfaces where the consumer is every day, and we make things easier for them. So they don't have to interrupt her or his life and go to the bank: we bring the services closer* (Start-up B, founder, DS 3).

What is noteworthy in the data is that new FinTech actors in the field seem more capable of pioneering new means to approach the customer, also forcing slower traditional retail banking actors to change in the new competitive environment:

*We have the entire world of broadband with different means to approach consumers at convenient moments and in new places – the means can even be attached to other services. This has radically changed the landscape. The reachability of consumers has increased, which provides these new players with an opportunity to fare [better] against the competition [...]* (An entrepreneur and consultant, DS 4).

So, do we need new actors to enter the scene to harness the possibilities digitalization enables for customer value creation? Is it the case that incumbent players are not flexible enough to change their dominant logic to meet new demands? Based on our data it seems it is, at least partly. However, it is worth remembering that new start-ups are free from the burden of history and friction forces characteristic of big players in traditional retail banking.

To summarize, while banking services have traditionally been delivered in bank-dominated channels, various enablers also offer opportunities to move service delivery to customer-selected channels that are more context-related and more connected and *complementary* to other resources and social contacts in the customer's life, thus also reducing redundant resources from service delivery. This means that *secondary services* (like paying) are often integrated with *primary services* (like eating), revealing the service hierarchy in a novel way. These changes also make the networked approach to value creation remarkable in relation to digitalization, which is also seen in our data. This ecosystem perspective is discussed next (see the second-order theme "Ecosystem formation and integration between ecosystem actors" in Fig. 1).

<sup>3</sup> For example, the Fintech firm Stripe offers integration of payment products on websites and apps using APIs.

#### 4.4. Ecosystem formation and integration between ecosystem actors

As mentioned, *new regulations like PSD2* have forced banks within the EU to open the interfaces in the payments area since 2019, thus supporting the development of *open banking*, which enables a multitude of actors to combine their resources to engage in customer's life and facilitate value formation. This enables the resources needed for customer value formation not to be generated by one actor alone but with other, equal resource providers and social actors who are meaningful from the customer's perspective, *unbundling services*. Consequently, ecosystems of service providers and customers start to form. In this new mode, the customer is empowered to *re-bundle* resources more flexibly to complement their needs for their value formation in the *customer's own social context*:

*The customer will become more empowered. Paying has been pretty much [done] under a monopoly – the customer was probably unaware that there was another way of doing things. And now there are other agile actors who are forcing the older ones to do things better. And the customer has the power to choose what is better. That's always a good thing (Start-up G, business developer, DS 3).*

*Nowadays, the finance world is developing more and more in a network-like direction, so actors are already networked with each other from birth, building up a value chain or ecosystem for this new kind of digital financing (Start-up B, founder, DS 3).*

Our informants suggest that in the present situation, the customer can be *empowered to orchestrate a set of resources* that is offered by a variety of service providers and collect a combination of the resources most suitable for their own value formation. Thus, actors other than a focal service provider and the customer, the customer's own social environment, can become a meaningful part of customer value creation. This means service providers must see the networking and *integration needed between ecosystem actors* from another angle, from a customer perspective, which has not traditionally been the case. Instead of seeing value as a property, it is seen as a *process*, supporting the unique “life-worlds” of each customer. This further creates a need for ecosystems to be *dynamic*, constantly emerging to support customer value formation.

Indeed, new entrants – such as start-up firms, firms from other industries, and platform giants – have also been active change agents in building connections between financial services and other resources relevant for customer value formation. The change in networks is occurring as consumers increasingly use a multitude of digital services that are transferred through open interfaces, enabling this change themselves and further facilitating change in the system. The “other side of the coin” in relation to the ecosystem concerns how resources are transferred between service providers and customers in it – the integration of ecosystem actors. However, global digital platforms like GAFA (Google–Amazon–Facebook–Apple) and BAT (Baidu–Alibaba–Tencent) are examples of *service ecosystems* that enable the connection of *the wider spectrum of service providers to the customer's life* and can thus facilitate customer value creation by offering more options. These platforms connect a multitude of services as a coherent service, also providing banking services and thus competing with incumbent banks:

*Mobile financial applications used to be separated (e.g. netbank vs applying customer data about buying habits). Now, they're integrated. Customers prefer one (banking) platform that has interfaces to data sources integrated without the customer needing to use different applications. PSD2 will support this development (the CEO of a payment service provider, DS 5).*

In these changes, it is essential that they make it *possible to link the customer's “secondary goals” (such as paying for food) to “primary goals”, derived from the customer's life (such as ordering food to eat and enjoy the meal)*, making “secondary services” mere functionalities and the service

processes more fluent and connected to the customer's intrinsic value formation. For example, such a service is provided by the Finnish start-up Wolt, which has built its business model around the core consumer process of ordering food or beverages, and in which the payment service does not exist in any physical form during this core process, but the platform itself integrates service providers such as restaurants, delivery partners, and customers. Indeed, many financial services such as payments, money management, and expense tracking are becoming secondary from the customer's perspective due to digitalization and the customer's chosen channels like messaging applications.

Indeed, digitalization drives the customer-dominant management perspective by facilitating customer value formation through the *resources and processes integrated by a variety of service providers*. Buying new services, opening an account, and executing regulatory rules can form value for the customer if they are implemented in such a way that the customer's workload is minimal, or the service is completely automated. For example, the German company N26 uses a smartphone, the N26 application, and video calls for identification and account opening. Regulatory issues such as KYC (know your customer) and AML (anti-money-laundering) often require the customer's patience and time today. The Finnish company Evervest developed a robo-advisors service based on algorithms to digitalize wealth management. To establish a portfolio, it takes about ten minutes to profile the customer's needs. In the following quote, one start-up representative describes how they integrate several financial services under the same platform as a favour to their business customers:

*What is unique with this technology is we've combined all of that [our services], so that with the help of partners, we can offer a bank substitute to our customers. We have combined accounts and accounting; customers don't need a separate net store, bank account, payment transfer partner, programs offered by accountants. We try to be everything and refine customer data so that customers don't have to collect it from different sources and then combine it (Start-up C, founder, DS 3).*

In the future, personal data-based services such as MyData services may provide new opportunities to offer personal data collection and management for individuals, releasing the locks between separated services. This further strengthens the power of individual consumers to take the lead in their own process and the resources needed for it, as described in the following quote.

*We can also talk about service and “view” integration – meaning that after you have chosen your services from certain producers, your view is not locked into the [defined bank's] netbank, but instead, there is a common site where you can administer all your services independently of the service provider. Again, this creates value and freedom for the consumer (Start-up A, founder, DS 3).*

In this findings section, we have explored the first-order themes found in our empirical analysis. This section has shown the kind of issues that have changed and the kind of enablers we can define behind these change processes, either for the previous service-provider-controlled mode of value creation or for later movements towards customer-controlled value creation and related ecosystem changes. In the following discussion section, we will use a higher level of abstraction to conceptualize – based on this empirical analysis – what the evolution of customer value creation due to digitalization includes from the executive perspective.

#### 5. Discussion – From microfoundations to change processes in customer value creation

Overall, digitalization-enabled change in customer value creation can be seen as an evolution from goods-dominant (e.g. Sheth et al., 1988) and service provider orientation, understanding value as value-in-exchange (Bagozzi, 1974), towards seeing it from the value-in-use

(Vargo and Lusch, 2004) perspective, and recognizing processual and contextual views of value creation. Perspectives have changed from value creation being controlled by the service provider to value emerging, i.e. value formation (Heinonen and Strandvik, 2018;), in customer's social, temporal, and spatial context through customer's activities (Grönroos and Voima, 2013; Heinonen and Strandvik, 2015; Nussipova et al., 2020; Vargo and Lusch, 2017), and value creation becoming more customer-controlled. Digitalization has enabled this change. In addition to the question of who is “in charge” of value creation, this change seems to assume changes in various intertwined dynamics of value creation, including the roles the service provider and customer play, the customer's level of engagement in service provision, the related empowerment and motivation of the customer to participate, customer involvement, the locus of value creation, and whether value creation can be seen as a dyadic/relational or networked phenomenon.

In the following, we answer the main question “How has digitalization changed customer value creation?” by answering the sub-questions: “What are the microfoundations of the digitalization-enabled evolution of customer value creation?” and “What are the change processes involved in the digitalization-enabled evolution of customer value creation?” By microfoundations, we mean both enablers defined first, and characteristics that form “continuums” of change in the following sections. The defined change processes are thus constructed with the aid of microfoundations found in data sets.

### 5.1. Enablers – Microfoundations of stagnation, or boosting change

The service-provider orientation realized in provider-controlled value creation was rooted in long history and institutionalized practices that maintained the control and locus of value creation on the service provider side. Even when digitalization was brought into use, it was more about digitizing service-provider-based processes, not about using digitalization for the customers' own value formation. Traditional regulation and the intertwined lack of competition in the financial industry forced this tendency.

New regulation opened interfaces, and the consequent emergence of open interfaces and open banking tore down the incumbent players' ivory towers. Alongside rapid technological developments, new devices and applications, new entrants in the business with novel ideas, and increasingly capable customers, customer-controlled value creation is about to take over the industry's traditional dominant logic.

The change that has happened can be summarized in three core change processes that define and conceptualize the evolution of customer value creation: (1) *change in the value creation sphere*; (2) *change in the value creation ecosystem*; and (3) *change in the process integration* (see Figs. 3 and 4 below).

In the following, these changes are defined in detail and reconciled with the existing theory of value creation. Fig. 4 therefore gathers the detailed composition of each perspective, including the continuums of change we suggest are related to different perspectives.

### 5.2. Change in the value creation sphere due to digitalization: Where does value creation occur?

Based on the empirical findings, we suggest that a more explicit conceptualization of where (and when) value creation occurs due to digitalization is needed for managers to understand digital value creation. Adopting the concept of *value creation sphere* helped us in this. The value creation sphere refers to the locus of value creation and the related roles and activities of the service provider and the customer (Grönroos and Voima, 2013).

Our findings indicate that alongside digitalization, customer value creation has increasingly shifted from service-provider owned, and administered channels to customer-selected contexts (e.g. Heinonen and Strandvik, 2020; Vargo and Lusch, 2017). Thus, due to digitalization, the power to choose the interaction and value creation sphere, “the

locus” (Grönroos and Voima, 2013), has often moved to the customer. In a time of unlocked service boundaries on platforms with open interfaces, the customer is the party that “informs” service providers about where they want to be served, without being forced to go to a proprietary service channel such as a netbank or a mobile app.<sup>4</sup> Digitalization has thus brought more opportunities for customers to choose, making value creation more customer-driven (see Nussipova et al., 2020).

Our data also highlight how executives perceive that customers increasingly expect a seamless service experience between different platforms, with a higher level of responsiveness in meeting their expectations (Pousttchi and Dehnert, 2018). Their decisions are more often made beyond the control of companies on numerous digital platforms (see e.g. Gummerus et al., 2019). Changes in consumer behaviour suggest changes in value creation along the service journey, engendering new roles for both service providers and consumers (e.g. Taiminen et al., 2018).

Unquestionably, digitalization has freed services from embeddedness in time, the service provider, and the service context (see Gummerus et al., 2019), which implies that the perception and creation of value are constantly changing (see Helkkula and Kelleher, 2010; Helkkula et al., 2012) in the customer's sphere.

Furthermore, examining the change in value creation due to digitalization reveals that we can see that many services are only *instrumental*, secondary to the customer. For example, in our present research context, a financial service itself is rarely a primary service – the most *meaningful* service for the customer; rather, extracting value from them supports another service or services so that the customer can fulfil their primary goals in life. We therefore suggest that from the customer's perspective, services can be either *intrinsic* (i.e. internally driven) or *extrinsic* (i.e. instrumental in achieving a valued outcome) (see Csikszentmihalyi, 1983); being one more aspect that digitalization can make more visible in regards value creation. Thus, from the managerial perspective, it is important to enable the customer's “secondary goals” (such as paying for food) to be linked to “primary goals” derived from the customer's life (such as ordering food to eat and enjoy a meal), making “secondary services” mere functionalities and the service processes more fluent and connected with the customer's intrinsic value formation.

### 5.3. The change of the value creation ecosystem due to digitalization: Who is involved?

Moreover, digital disruption is said to redefine industries (Basole and Patel, 2018; Bouwman et al., 2018) to deconstruct their value chains, generate new business architectures, engage in complex collaborations, and adopt new business models. From the customer's perspective, it has also *unbundled services* so that instead of one service provider, several potential service providers are available for them to choose from and *re-bundle* the service (Alt and Puschmann, 2012; Basole and Patel, 2018), which highlights the customer's central role in integrating services according to their value formation processes as a central actor in their ecosystem (Akaka et al., 2021; Vargo and Lusch, 2017; Heinonen and Strandvik, 2020). Our data strengthen the previous notions that digitalization enables the customer to be a more active subject in their value formation (see also Boot, 2017; Payne et al., 2008), placing the customer at the centre of the ecosystem and in the role of an orchestrator of ecosystem resources.

In line with Heinonen and Strandvik (2018; 2020), we suggest that managers need to understand who the other relevant parties for value

<sup>4</sup> Through an API, a financing chatbot may be embedded in a customer-selected (primary) context, e.g. on a shopping site to help the customer decide on the payment method.



creation are, such as other service providers, family members, or friends, in the customer's social context (see also Fan et al., 2020).<sup>5</sup> This means it is important to understand how to deal with customer ecosystems to facilitate digital value creation by genuinely understanding how the customer fulfils their individual needs (cf. Csikszentmihalyi, 1983; Bagozzi and Dholakia, 1999; Bagozzi, Baumgartner, and Pieters, 1998). This shift from *seeing value as a property* to *seeing it as a process formed in the individual's social context of using resources that the customer chooses* (see Nussipova et al., 2020; Basole and Patel, 2018) has been digitalization-driven and varyingly visible in executives' perspectives over the years. In this respect, the approach's digitalization-enabled change guarantees that such *resources are sufficient and complementary* from the customer perspective, arriving *just in time* in the unique customer value formation process. In contrast, a service-provider-driven approach to the ecosystem can involve redundant elements that do not actually support an individual customer's needs or goals at all – in the form of unnecessary bureaucracy, for example.

Moreover, we suggest that the change in the logic of value creation due to digitalization pursues an understanding of *dynamism* in the customer's networked ecosystem instead of focusing on a static, dyadic relationship between the customer and service provider. We emphasize that digitalization enables the customer's digital ecosystem to constantly change as the resources needed for value creation change. The roles of actors in value creation may change accordingly. In contrast, in a closed system and dyadic relationships, customer needs were also traditionally perceived as static. For example, payment services or wealth management were designed based on demographics such as assumed turning points in customers' lives. However, the customer's real-life situation is rarely this static, which is the notion of the customer ecosystem recognizes.

#### 5.4. Change in service process integration due to digitalization: How does value creation occur?

As the previous chapter describes, how provider-oriented service systems are arranged and organized is essential in the service ecosystem (e.g. Vargo and Lusch, 2017). Although digitalization has led to “service unbundling” from the customer's perspective, it drives changes in service systems and their more coherent organization from the service provider's perspective. Accordingly, *deepening service process integration* is the third line of change we identified with respect to the customer value creation process due to digitalization. Our findings suggest that digitalization drives increasing integration of resources among service providers. For example, the integration within service platforms requires the use of open interfaces, complementarity with other service elements (from other parties), and coordination, as is known in the information systems and service science literature (e.g. Breidbach and Ranjan, 2017; Chowdhury and Åkesson, 2011; Wulf and Blohm, 2020). On the other hand, to enable flexibility in providing a variety of resources for the customer value creation process, service modularity and platforms are required (see e.g. Breidbach and Ranjan, 2017; Ulkuniemi and Pekkarinen, 2011). Technology affects who can be the integrator, and which services and processes are being integrated.

Furthermore, for service providers, this development means changes and even *change in power positions in ecosystems* (see Niemand et al., 2020; Crittenden et al., 2019). A strategic question for those actors is therefore how to maintain or strengthen their position in ecosystems in a customer-centred reality. This further highlights the importance of understanding the customer's context in the executive position.

Our findings also highlighted the hierarchy of resources offered for the customer. The empirical context of financial services enables a

clarification of this aspect. For example, intrinsic and instrumental services have previously been discussed from a consumer motivation perspective (Csikszentmihalyi, 1983; Bagozzi and Dholakia, 1999; Bagozzi et al., 1998). Digitalization sheds light on this dichotomy in a very novel way: when a customer perceives a financial service such as paying as instrumental to achieve more primary goals (e.g. dining with friends), these secondary services (like paying for the food) should be fluently, easily, and seamlessly offered to the customer. Digitalization enables this, an aspect that managers should attend to in facilitating digital value formation.

To summarize: service process integration refers to the *two types of integration* that digitalization drives: first, integrating previous stand-alone services into a coherent service offering by the service ecosystem actors and/or the customer (see e.g. Alt and Puschmann, 2017); and second, *enabling the integration of that offering into the customer value formation process* (Heinonen and Strandvik, 2018; Payne et al., 2008). As Heinonen and Strandvik (2018, p. 3) note, this refers to “how customers prefer to involve providers in their lives or business activities”. Because individual customer value processes are dynamic and vary, *how* service modularity and functioning interfaces between ecosystem actors facilitate the customer value formation process is essential, for example. This is important, because alongside digitalization, such coordination not only occurs through the actions of service providers – customers are increasingly empowered to participate in and even coordinate this process themselves (see e.g. Jaakkola and Alexander, 2014). Furthermore, this clarifies the emergent and spontaneous nature of customer value formation (see e.g. Heinonen and Strandvik, 2020), an aspect that service providers may facilitate with novel service combinations, for example.

## 6. Conclusions and recommendations

### 6.1. Theoretical conclusions

This study contributes to the literature on customer value creation by adopting a processual and empirical view of the digitalization-enabled evolution of customer value creation as perceived by executives in the financial sector. Previously, the customer value creation literature in general – and from the digitalization perspective in particular – has lacked such comprehensive empirical, longitudinal research showing the influence of digitalization on customer value creation, and related microfoundations in the form of enablers and characteristics.

First, by giving examples of how digitalization drives change towards a customer-focused management perspective in financial services, the study contributes to revealing contextual changes in the conceptualization of customer value creation, a perspective that has previously received little attention (see Zeithaml et al., 2020). Second, this study increases an understanding of the customer as a sometimes independent value creator beyond interaction with the service provider and as an active subject in their own context, thus responding to calls by e.g. Holmqvist et al. (2020) and Nussipova et al. (2020), and especially specified under this study's second-order themes “Customer-controlled VC” and “Customer-controlled VC ecosystems”. For example, the customer's interaction can remain non-existent with the service provider, which is secondary for the customer's primary goal but meaningful for their value creation through the primary service with which it is integrated.

More precisely, this study contributes to the vocabulary of customer value creation by suggesting that addressing the 1) spatial and temporal aspects (value creation sphere, see Grönroos and Voima, 2013) and 2) the social context (customer's ecosystem, Heinonen and Strandvik, 2018) of customer value creation (or formation) separately enables an understanding of its contextual nuances (see Edvardsson et al., 2011). Consequently, this study's third contribution is that it increases knowledge of the involvement of other actors and multiple service providers in the value creating process, described by Fan et al. (2020),

<sup>5</sup> MobilePay Box is a shared cashbox for private users to collect and manage payments, e.g. for a school class occasion or for a group of friends in their travel arrangements.

for example. This is visible in the second-order theme “Ecosystem formation and related integration between ecosystem actors”, showing, for example, that customers can bundle and re-bundle the resources offered by the actors chosen by themselves, and the ecosystem’s business actors can integrate their services accordingly. These other actors could be other consumers providing services in the sharing economy, such as crowdfunding or peer-to-peer lending, service providers the customer flexibly chooses and combines as a value creating bundle, or the digital services that help customers in this service integration. Because value is formed in the customer’s own social context, actors such as family members may also participate in customer value creation. For example, in the Wolt food delivery service, the customer chooses the restaurant and delivery time and place according to their social context, and Wolt handles business relationships between its restaurant and courier partners that are invisible to the customer but indirectly affect the customer’s value creation.

The study’s fourth contribution is that we suggest that both service integration and process integration be added inherently to the vocabulary of customer value creation, and that the modularity or interfaces needed in the provider’s ecosystem be noted. Service modularity and functioning interfaces between ecosystem actors facilitate the customer value formation process. In this study, this is especially reflected in the definition of changing process integration (see Fig. 4). The suggested notions lead to the following definition of digital value formation: “*Digital value formation is characterized by the value creation sphere selected by a customer, the customer’s central role in the customer’s ecosystem, and the fluent integration of hierarchical services in the process of customer value formation.*”.

Fifth, our study adds to the value creation literature by suggesting that digitalization drives dynamism in value formation, which is increasingly shifting to customer-selected platforms in customer-driven ecosystems. Although the dynamism of customer relationships is a well-researched area (e.g. Zhang et al., 2016), the present financial sector case forcefully clarifies how digitalization has revealed a hierarchy of services in value creation. Digitalization results in many financial services being embedded in other services (consider, for example, digital food ordering services, where payment is embedded in the system), changing service providers’ traditional roles. In general, understanding these changing roles arising from digitalization is important.

## 6.2. Managerial implications

Managerially, this study adds to the literature by highlighting companies as potential facilitators of the customer’s *digital value formation*. To do this, the study suggests that it is essential to understand where (and when) customer value creation occurs, who is involved, and how it occurs. Traditionally, the bank held the dominant position in selecting the “locus of interaction” (see Grönroos and Voima, 2013). However, technological developments (e.g. open interfaces) and regulatory changes (e.g. PSD2), have opened new opportunities for customers to use banking services through other platforms such as social media and messaging apps. In other words, customers can draw on resources to add to their value formation in new ways. Managerially, it is crucial to understand that the role of financial services is often only facilitative compared with other services (see Lähteenmäki and Nätti, 2013). Payments, lending, account management, and investment services are usually “subordinate” to other services in which a customer participates or uses to form value. Due to digitalization, the selection of the space in which the customer uses financial services is increasingly the customer’s choice.<sup>6</sup> It will also more often be a channel offered by an actor other

than the traditional delivery channel owned by the bank, for example.

Second, for managers, it becomes even more important to understand a customer’s ecosystem: its context and activities. It is increasingly important to know what customers *do*, especially outside provider-controlled spaces. However, this raises issues with regard to managing data security issues, for example. Modular and complementary financial services may facilitate the customer’s value formation. This also leads us to the process integration required for customer-centred ecosystems to function properly.

Third, to facilitate customer value formation, we suggest that financial services should be able to integrate themselves with the customer’s primary processes. The examples used in this study show that modern technologies allow the development of systemic services in which the role of financial services can be secondary from the customer’s perspective. The role of the bank is not only to understand the goals, needs, and processes of their customer’s value formation but also to technically facilitate the execution of the customer value formation process within the customer’s ecosystem. In addition, none of the above attributes of the customer value formation process is static; they are highly dynamic, which further highlights the need for lean and flexible reactions by the service provider.

In general, this means that if service management is to facilitate customer value formation, it involves much more than merely managing interactions with customers. It means focusing on how their activities, experiences, and resources are linked and an understanding that customers are driven by goals, aspirations, dreams, and visions. For companies, understanding customers’ goals, an understanding of ecosystem-level value formation enhanced by digitalization, is required. As encouraged by Heinonen and Strandvik (2018), we also suggest that discovering potential gaps and changes in customers’ current configuration represents a business opportunity for companies. For example, Taiminen et al. (2018) have identified the need for a value creation supervisor in healthcare self-services. This role also applies to many digitalized contexts, especially those in which technology enables and is also applied to complex services, not only to routine activities, as our example of BofA’s chatbot Erica shows.

## 6.3. Ideas for future research, and limitations

Focusing on a dynamic service ecosystem as a concept and defining its profound meaning is one interesting research topic that demands further scrutiny. Likewise, appropriability and value-capturing issues are related to radically new types of digital service entities and changing actor roles in the ecosystem, and they require further attention. Indeed, dyadic relationships are becoming multilateral, which also creates a variety of new research gaps. In addition, studying the triggers of the evolution of digital value formation would be interesting – in particular, a study of the role of global crises or the kind of mental models of managers that trigger or inhibit the evolution of digital value formation. How mental models differ between incumbent company informants and representatives of start-ups is also noteworthy, and this would definitely be an interesting focus for further analysis. Regarding the orchestration of dynamic customer-centred ecosystems, it would be interesting to study how the customer does this, specifically in situations of knowledge asymmetry between the service provider and customer: what kind of new roles for orchestration could be developed for ecosystem actors? Finally, what does *customer empowerment* mean regarding digital value formation? For example, customers have the power in principle to choose the platforms for value formation, but – due to the centralized data silos of big players such as GAFA – customer choice is often merely an illusion.

As with studies in general, this study has its limitations. First, although we study customer value creation, we have collected our empirical data from company representatives. This means that zooming into certain details from the customer perspective in the process is possible only in a limited manner. However, we have studied the

<sup>6</sup> For example, customers may select payment processors among a variety of payment rails from incumbents such as Visa or MasterCard to automated clearing houses such as Nacha in US, or the blockchain technology-based Ripple.



evolution of the digital value creation in a particular industry and thus have comprehensive and rich interview data from key professionals with extensive experience (and from both incumbent firms and start-ups) in this industry, gained in recent decades. We suggest that their view of the evolution is valuable in its own right. Second, the fact that we have only studied one industry – financial services – could be a limitation, but at the same time, it represents an interesting context because of its long history and traditions, creating a challenging starting point for digitalization. On the other hand, there are industries in which digitalization and customer value creation have evolved in a similar direction, as in the financial sector, assuming the transferability of our findings to other contexts. For example, in the tourism, retail, and events sectors, digitalization has enabled customers to be more central in their value creation. If a tour operator previously assembled package tours consisting of accommodation, flights, and other services and sold them through travel agencies to customers, today it is increasingly the customer, often aided by digitalized services, who individually bundles services from different providers' offerings and digital channels suitable for them. We can see similar developments in the digitalization of retailing and arranging events, not to mention the consequences of increasing virtualization and remote environments for a range of service industries and their value creation, also providing a fruitful context for further studies. The methodological approach was somewhat challenging, for we used varied data sets from a long period and from various researchers. We thoroughly examined how to tackle the potential problems of this approach in the methodology section by carefully defining the selection criteria for data sets and using investigator triangulation, both in planning and analysing the data. Finally, as always, qualitative research has its limitations in investigating contingencies. This study offers many avenues for future quantitative research to confirm the details it has revealed.

#### CRedit authorship contribution statement

**Ilkka Lähteenmäki:** Writing – review & editing, Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Visualization, Writing – original draft. **Satu Nätti:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Visualization, Writing – original draft, Writing – review & editing. **Saila Saraniemi:** Methodology, Conceptualization, Data curation, Formal analysis, Investigation, Visualization, Writing – original draft, Writing – review & editing.

#### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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#### References

- Alt, R., & Puschmann, T. (2012). The rise of customer-oriented banking – electronic markets are paving the way for change in the financial industry. *Electronic Markets*, 22(4), 203–215.

- Archibald, M. (2015). Investigator triangulation: A collaborative strategy with potential for mixed methods research. *Journal of Mixed Methods Research*, 10(3), 228–250.
- Akaka, M. A., Koskela-Huotari, K., & Vargo, S. L. (2021). Formalizing service-dominant logic as a general theory of markets: Taking stock and moving forward. *AMS Review*, 11, 375–389.
- Bagozzi, R. P. (1974). Marketing as an Organized Behavioral System of Exchange. *Journal of Marketing*, 38(4), 77–81.
- Bagozzi, R. B., & Dholakia, U. (1999). Goal setting and goal striving in consumer behavior. *Journal of Marketing*, 63, 19–32.
- Bagozzi, R. B., Baumgartner, H., & Pieters, R. (1998). Goal-directed emotions. *Cognition and Emotion*, 12(1), 1–26.
- Ballantyne, D., & Varey, R. J. (2008). The service-dominant logic and the future of marketing. *Academy of Marketing Science*, 36, 11–14.
- Barney, J., & Felin, T. (2013). What are microfoundations? *The Academy of Management Perspectives*, 27(3), 138–155.
- Basole, R. C., & Patel, S. S. (2018). Transformation through unbundling: Visualizing the global FinTech ecosystem. *Service Science*, 10(4), 1–18.
- Boot, A. W. A. (2017). The future of banking: From scale and scope economies to Fintech. *European Economy*, 2, 77–95.
- Bouwman, H., Nikou, S., Molina-Castillo, F. J., & de Wever, M. (2018). The impact of digitalization on business models. *Digital Policy, Regulation and Governance*, 20(2), 105–124.
- Breidbach, C. F., & Ranjan, S. (2017). How do FinTech service platforms facilitate value co-creation? An analysis of Twitter data. South Korea.
- Chowdhury, S. and M. Åkesson (2011). "A proposed conceptual framework for identifying the logic of digital services." *PACIS 2011 Proceedings*. Paper 47.
- Crittenden, A. B., Crittenden, V., & Crittenden, W. (2019). The digitalization triumvirate: How incumbents survive. *Business Horizons*, 62(2), 259–266.
- Csikszentmihalyi, M. (1983). Measuring intrinsic motivation in everyday life. *Leisure Studies*, 2(May), 155–168.
- Denzin, N. K., & Lincoln, Y. S. (2008). *The Landscape of Qualitative Research* (3rd ed.). Thousand Oaks, CA: Sage Publication.
- Echeverri, P., & Skälen, P. (2011). Co-creation and co-destruction—a practice theory based study of interactive value formation. *Marketing Theory*, 11(3), 351–373.
- Edvardsson, B., Tronvoll, B., & Gruber, T. (2011). Expanding understanding of service exchange and value co-creation: A social construction approach. *Journal of the Academy of Marketing Science*, 39(2), 327–339.
- Fan, D. X. F., Hsu, C. H. C., & Lin, B. (2020). Tourists' experiential value co-creation through online social contacts: Customer-dominant logic perspective. *Journal of Business Research*, 108, 163–173.
- Frow, P., & Payne, A. (2011). A stakeholder perspective of the value proposition concept. *European Journal of Marketing*, 45(½), 223–240.
- Gartner, (2015): <https://www.gartner.com/en/informationtechnology/glossary/digitalization-1.8.2020>.
- Glaser, B., & Strauss, A. (1967). *The discovery of Grounded Theory – Strategies for Qualitative Research*. London: Weiderfeld and Nicholson.
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, 16(1), 15–31.
- Gomber, P., Kauffman, R. J., Parker, C., & Weber, B. W. (2018). On the FinTech revolution: Interpreting the forces of innovation, disruption and transformation in financial services. *Journal of Management Information Systems*, 35(1), 220–265.
- Goulding, C. (2005). Grounded theory, ethnography and phenomenology. *European Journal of Marketing*, 39(3/4), 294–308.
- Grönroos, C. (2006b). On defining marketing: Finding a new roadmap for marketing. *Marketing Theory*, 6(4), 395–417.
- Grönroos, C. (2008). Service logic revisited: Who creates Value? And who co-creates? *European Business Review*, 20(4), 298–314.
- Grönroos, C. (2011). Value co-creation in service logic: A critical analysis. *Marketing Theory*, 11(3), 279–301.
- Grönroos, C., & Voima, P. (2013). Critical service logic: Making sense of value creation and co-creation. *Journal of the Academy of Marketing Science*, 41, 133–150.
- Gummerus, J. (2013). Value creation processes and value outcomes in marketing theory: Strangers or siblings? *Marketing Theory*, 13(1), 19–46.
- Gummerus, J., Lipkin, M., Dube, A., & Heinonen, K. (2019). Technology in use – characterizing customer self-service devices (SSDs). *Journal of Services Marketing*, 33(1), 44–56.
- Heinonen, K., Strandvik, T., Mickelsson, K.-J., Edvardsson, B., Sundström, E., & Andersson, P. (2010). A customer dominant logic of service. *Journal of Service Management*, 21(4), 531–548.
- Heinonen, K., & Strandvik, T. (2015). Customer-dominant logic: Foundations and implications. *Journal of Services Marketing*, 29(6/7), 472–484.
- Heinonen, K., & Strandvik, T. (2018). Reflections on customers primary role in markets. *European Management Journal*, 36(1), 1–11.
- Heinonen, K., & Strandvik, T. (2020). "Customer-dominant service logic. In E. Bridges, & K. Fowler (Eds.), *The Routledge Handbook of Service Research Insights and Ideas* (pp. 69–89). New York: Routledge.
- Helkkula, A., & Kelleher, C. (2010). Circularity of customer service experience and customer perceived value. *Journal of Customer Behaviour*, 9(1), 37–53.
- Helkkula, A., Kelleher, C., & Pura, M. (2012). Practices and experiences: Challenges and opportunities for value research. *Journal of Service Management*, 23(4), 554–570.
- Hennig-Thurau, T., Malhotra, E. C., Friege, C., Gensler, S., Lobschat, L., Rangaswamy, A., & Skiera, B. (2010). The impact of new media on customer relationships. *Journal of Service Research*, 13(3), 311–330.

- Holmlund, M., Strandvik, T., & Lähteenmäki, I. (2017). "Digitalization challenging institutional logics: Top executive sensemaking of service business change" *Journal of Service Theory and Practice*, 27(1), 219–236.
- Holmqvist, J., Visconti, L. M., Grönroos, C., Guais, B., & Kessous, A. (2020). Understanding the value process: Value creation in a luxury service context. *Journal of Business Research*, 120, 114–126.
- Häikiö, J., & Koivumäki, T. (2016). Exploring digital service innovation process through value creation. *Journal of Innovation Management*, 4(2), 96–124.
- Iden, J., T. R. Eikebrokk, and M. Marrone (2020), "Process reference frameworks as institutional arrangements for digital service innovation," *International Journal of Information Management*, 54. In Press.
- Jaakkola, E., & Alexander, M. (2014). The role of customer engagement behavior in value co-creation: A service system perspective. *Journal of Service Research*, 17(3), 247–261.
- Kamalaldin, A., L. Linde, D. Sjödin, and V. Parida (2020), "Transforming provider-customer relationships in digital servitization: A relational view on digitalization," *Industrial Marketing Management*, forthcoming issue.
- Kandampully, J., Bilgihan, A., Bujisic, M., Kaplan, A., Jarvis, C. B., & Shukla, Y. S. (2021). Service transformation: How can it be achieved? *Journal of Business Research*, 136, 219–228.
- Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. London: Sage.
- Lenka, S., Parida, V., & Wincet, J. (2017). Digitalization capabilities as enablers of value co-creation in servitizing firms. *Psychology and Marketing*, 34, 92–100.
- Lim, C., Kim, K.-H., Kim, M.-J., Heo, J.-Y., Kim, K.-J., & Maglio, P. P. (2018). From data to value: A nine-factor framework for data-based value creation in information-intensive services. *International Journal of Information Management*, 39, 121–135.
- Lähteenmäki, I., & Nätti, S. (2013). Obstacles to upgrading customer value-in-use in retail banking. *International Journal of Bank Marketing*, 31(5), 334–347.
- Mack, N., Woodsong, C., MacQueen, K. M., Guest, C., & Namey, E. (2005). *Qualitative Research Methods: A Data Collector's Field Guide*, Family Health International (FHI). NC: Research Triangle Park.
- Matarazzo, M., Penco, L., Profumo, G., & Quaglia, R. (2021). Digital transformation and customer value creation in Made in Italy SMEs: A dynamic capabilities perspective. *Journal of Business Research*, 123, 642–656.
- Maxwell, J. A. (2004). Using Qualitative Methods for Causal Explanation. *Field Methods*, 16(3), 243–264.
- Möller, K., & Törrönen, P. (2003). Business suppliers' value creation potential: A capability-based analysis. *Industrial Marketing Management*, 32(2), 109–118.
- Niemand, T., Coen Rigtter, J. P., Kallmünzer, A., Kraus, S., & Maalaoui, A. (2020). Digitalization in the financial industry: A contingency approach of entrepreneurial orientation and strategic vision on digitalization. *European Management Journal*. in press.
- Nussipova, G., Nordin, F., & Sörhammar, D. (2020). Value formation with immersive technologies: An activity perspective. *Journal of Business and Industrial Marketing*, 35(3), 483–494.
- Ostrom, A. L., Parasuraman, A., Bowen, D. E., Patrício, L., & Voss, C. A. (2015). Service research priorities in a rapidly changing context. *Journal of Service Research*, 18(2), 127–159.
- Oviatt, S., & Cohen, P. R. (2015). The paradigm shift to multimodality in contemporary computer interfaces. *Synthesis Lectures on Human-Centered Informatics*, 8(3), 1–243.
- Payne, A. F., Storbacka, K., & Frow, P. (2008). Managing the co-creation of value. *Journal of the Academy of Marketing Science*, 16, 83–96.
- Poustchi, K., & Dehnert, M. (2018). Exploring the digitalization impact on consumer decision-making in retail banking. *Electron Markets*, 28, 265–286.
- Rachinger, M., Rauter, R., Müller, C., Vorraber, W., & Schirgi, E. (2019). Digitalization and its influence on business model innovation. *Journal of Manufacturing Technology Management*, 30(8), 143–1160.
- Ragin, C. C. (1987). *The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies*. Oakland, California, USA: University of California Press.
- Rihova, I., Buhalis, D., Moital, M., & Gouthro, M. B. (2015). Conceptualising customer-to-customer value co-creation in tourism. *International Journal of Tourism Research*, 17(4), 356–363.
- Riikinen, M., Lähteenmäki, I., & Nätti, S. (2018a). Institutional logics as inhibitors or levers? The case of mobile payments in Finland. In A. Shaikh, & H. Karjalainen (Eds.), *Marketing and Mobile Financial Services: A Global Perspective on Digital Banking Consumer Behaviour*. Finland: Taylor and Francis Group.
- Riikinen, M., Saarijärvi, H., Sarlin, P., & Lähteenmäki, I. (2018b). Using artificial intelligence to create value in insurance. *International Journal of Bank Marketing*, 36(6), 1145–1168.
- Robinson, S., Orsingher, C., Alkire, L., De Keyser, A., Giebelhausen, M., Papamichail, K. N., Shams, P., & Temerak, M. S. (2019). Frontline Encounters of the AI kind: An Evolved Service Encounter Framework. *Journal of Business Research*, 116, 366–376.
- Schmidt, J., P. Drews and I. Schirmer (2017), "Digitalization of the banking industry: a multiple stakeholder analysis on strategic alignment," *Twenty-third Americas Conference on Information Systems*, Boston, 2017.
- Schumann, J. H., Wunderlich, N. V., & Wangenheim, F. (2012). Technology mediation in service delivery: A new typology and an agenda for managers and academics. *Technovation*, 32, 133–143.
- Senyo, P. K., Liu, K., & Effah, J. (2019). Digital business ecosystem: Literature review and a framework for future research. *International Journal of Information Management*, 47, 52–64.
- Sheth, J. N., Gardner, D. M., & Garrett, D. E. (1988). *Marketing Theory: Evolution and Evaluation*. New York, NY: John Wiley & Sons.
- Storbacka, K., Brodie, R. J., Böhmman, T., Maglio, P. P., & Nenonen, S. (2016). Actor engagement as a microfoundation for value co-creation. *Journal of Business Research*, 69(8), 3008–3017.
- Taiminen, H., Saraniemi, S., & Parkinson, J. (2018). Incorporating digital self-services into integrated mental health care: A physician's perspective. *European Journal of Marketing*, 52(11), 2234–2250.
- Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, 27(2), 237–246.
- Ulkunemi, P., & Pekkarinen, S. (2011). Creating value for the business service buyer through modularity. *International Journal of Services and Operations Management*, 8(2), 127–141.
- Vargo, S. L., & Lusch, R. F. (2004). The four service marketing myths, remnants of a goods-based, manufacturing model. *Journal of Service Research*, 6(4), 324–335.
- Vargo, S. L., & Lusch, R. F. (2008a). From goods to service(s): Divergences and convergences of logics. *Industrial Marketing Management*, 37(3), 254–259.
- Vargo, S. L., & Lusch, R. F. (2008b). Service-dominant logic: Continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1), 1–10.
- Vargo, S. L., & Lusch, R. F. (2011). It's all B2B...and beyond: Towards a systems perspective of the market. *Industrial Marketing Management*, 40(2), 181–187.
- Vargo, S. L., & Lusch, R. F. (2016). Institutions and axioms: An extension and update of service-dominant logic. *Journal of the Academy of Marketing Science*, 44(4), 5–23.
- Vargo, S. L., & Lusch, R. F. (2017). Service-dominant logic 2025. *International Journal of Research in Marketing*, 34, 46–67.
- Vargo, S. L., & Lusch, R. F. (Eds.). (2018). *The SAGE Handbook of Service-Dominant Logic*. London: SAGE.
- Vives, X. (2017). The impact of FinTech on banking. *European Economy*, 2, 97–105.
- Voima, P., Heinonen, K., & Strandvik, T. (2010). *Exploring Customer Value Formation: A Customer Dominant Logic Perspective*, Working Paper 552. Helsinki, Finland: Hanken School of Economics.
- Weingärtner, T. (2018). Technological environment. In T. Ankenbrand, A. Dietrich, & D. Bieri (Eds.), *IFZ FinTech Study 2018: An Overview of Swiss FinTech* (pp. 27–30). Switzerland: Institute of Financial Services Zug IFZ, Luzerne University of Applied Sciences and Arts, Business, FH Zentralschweiz.
- Westerlund, M., Leminen, S., & Rajahonka, M. (2014). Designing business models for the internet of things. *Technology Innovation Management Review*, 4(7), 5–14.
- Wilden, R., Akaka, M. A., Karpen, I. O., & Hohberger, J. (2017). The evolution and prospects of service-dominant logic: An investigation of past, present, and future research. *Journal of Service Research*, 20(4), 345–361.
- Woodruff, R. B., & Flint, D. J. (2006). Toward customer value theory for marketing's new dominant logic. In S. L. Vargo, & R. F. Lusch (Eds.), *Toward a Service-Dominant Logic for Marketing: Dialog, Debate, and Directions* (pp. 183–195). M.E. Sharpe: Armonk, NY.
- Wulf, J., & Blohm, I. (2020). Fostering value creation with digital platforms: A unified theory of the application programming interface design. *Journal of Management Information Systems*, 37(1), 251–281.
- Wästerfors, D., Åkerström, M., & Jacobsson, K. (2014). Reanalysis of qualitative data. In U. Flick (Ed.), *The SAGE handbook of qualitative data analysis* (pp. 467–480). SAGE Publications.
- Yrjölä, M., Saarijärvi, H., & Nummela, H. (2018). The value propositions of multi-, cross-, and omni-channel retailing. *International Journal of Retail & Distribution Management*, 46(11/12), 1133–1152.
- Zainuddin, N., Tam, L., & McCosker, A. (2016). Serving yourself: Value self-creation in health care service. *Journal of Services Marketing*, 30(6), 586–600.
- Zeithaml, V. A., Verleye, K., Hatak, I., Koller, M., & Zauner, A. (2020). Three decades of customer value research: Paradigmatic roots and future research avenues. *Journal of Service Research*, Online First.
- Zhang, J. Z., Watson, G. F. I. V., Palmatier, R. W., & Dant, R. P. (2016). Dynamic Relationship Marketing. *Journal of Marketing*, 80, 53–75.

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