

## Customer's Perspective on Customer Data Usage in Mobile Banking Context

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### Abstract

Digitalization provides various opportunities for organizations to collect, analyze and exchange a massive amount of customer data. However, the extant research on customer data usage has mainly focused on how this could benefit firms and ignored the perspective of the customers. The purpose of this study is to explore how customer data can create value for customers in mobile banking context. Customers are increasingly aware of firms' (e.g. banks) interest to collect data and are becoming more conscious about giving away their personal information. This forces firms to think how to use customer data to explicitly benefit also customers. Along with the recent research within service and customer-centric logics that emphasizes customer-oriented thinking, there is a growing need to explore customer data usage from the perspective of customers. This paper presents an empirically grounded qualitative, exploratory study. The data was collected through 23 in-depth interviews among Finnish mobile banking customers and it was analyzed using theory-based content analysis method. Findings suggest that customers still have difficulties to understand the possibilities that customer data collected by companies could bring to them. The attitudes towards banks collecting customer data are primarily negative and customers do not see much value in banks' use of customer data. Theoretically, this study contributes to extant service research by exploring this under-researched topic in a timely context, i.e. mobile banking services. In addition, the opportunities and challenges brought by digitalization into customer data management is a topic that needs further research attention. From the managerial perspective, understanding the reconfigured role of customer data helps in creating new ways to serve customers better, which will result in engaging customers into long-term relationships and thus creating more value for both the service providers and their customers.

**Keywords:** customer data, customer value, digitalization, mobile banking, service marketing, value creation.

**JEL classification:** M31.

### 1. Introduction

Digitalization has created a massive capacity to capture customer data through different channels, thus providing variety of ways to develop deeper customer understanding and further customer engagement (Kunz et al., 2017). Customer data usage is commonly equated with conventional customer relationship management (CRM) activities aimed at supporting firm's internal processes, e.g. segmentation, identification of the most profitable customers and supply chain management (Payne and Frow, 2005). These methods for using customer data are inherently very firm-oriented and focused on using customer data for the benefit of a company (Thaler, 2011). At the same time, the examples of customer data benefiting customers have remained scarce (Saarijärvi et al., 2014). Traditional use of customer data is not in tune with the current service research as service and customer-centric logics emphasize the importance of understanding customers, their experiences and value creation (e.g. Grönroos, 2008; Vargo and Lusch, 2008; Heinonen and Strandvik, 2015). Only by creating this understanding, firms can understand their customers' everyday life, provide superior value and further engage customers in the long-term relationship, thus creating more value for both parties.

The massive amounts of data under the control of organizations and public bodies have inspired discussions on data privacy, data ownership, regulations and data usage in general. For instance, the new data protection legislation (GDPR) in Europe is a topical example of the phenomenon. This also compels firms to take a closer look at their existing marketing practices;

how do they collect, share and use the customer data. On the other hand, consumers are also aware of firms' increasing interest towards customer data and are becoming more and more conscious about giving away their personal information. This forces firms to think how to use the customer data to benefit also their customers. The major question then is: how to utilize customer data to benefit both service providers and their customers? Saarijärvi et al. (2014) use the concept of "reverse use of customer data" which refers to converting customer data into information that directly support customers' value creation. This represents a major future development in service business environment and thus demands further attention from marketing and service researchers.

This study explores customer data usage in banking context that is experiencing rapid and widespread changes due to technological changes such as immediate payment infrastructures across bank borders, blockchain, and mobile applications. This blurs the boundaries between banks and makes competition of the customers fierce. In relation to this, providing superior value for the customers and engaging them in joint service development and value co-creation becomes critical. Banking services have traditionally been to a great extent provider-oriented, i.e. their mindset gives primacy to banks' own processes and the customer is often seen only as a target of banks' marketing activities (Lähteenmäki and Nätti, 2013; Medberg and Heinonen, 2014). Banks also have a wide access to various different customer data. However, customer data cannot be viewed anymore as exclusively owned or used by the banks but rather as a way to provide customers more value. Shifting the focus from internal to external use of customer data finds also theoretical support in recent discussion about customer-centered logic (e.g. Heinonen and Strandvik, 2015) suggesting that value is formed in the joint processes between service providers and customers and determined by the customer.

Even though the importance of understanding reverse use of customer data has been explored e.g. in the food retailing context (Saarijärvi et al., 2013), current research lacks empirical evidence from different types of service contexts. Due to its topicality and specific features, more research is needed in the field of banking services and mobile banking services in particular. This paper will address the topic by presenting an empirically grounded study conducted among Finnish bank customers. The purpose is to answer the question: *How can customer data create value for the customer in mobile banking context?*

Theoretically, this study contributes to the extant service research by exploring this under-research topic in the timely context, i.e. mobile banking services. Despite the growing amount of research emphasizing customer-centricity, more research is needed from the consumers' perspective (Heinonen et al., 2013). In addition, the opportunities and challenges brought by digitalization into customer data management are a topic that needs further research attention. From the managerial perspective, understanding the reconfigured role of customer data has important implications. It helps in creating new ways to serve customers better, which will result in engaging customers into the long-term relationship with the service provider and creating more value both for the company and its customers. In addition, reverse use of customer data combined with digitalization opens up new ways to support customers' value creation. Most importantly, it enables companies to get involved in their customers' everyday life and thus better responding to their continuously changing needs by providing services that create improved value for the customers.

The remainder of this study is organized as follows. First, literature review sheds light on the previous research in the field of (reverse) use of customer data and value creation. After that, methodology of the study is described and next, the empirical findings are discussed. Finally, conclusions present theoretical contributions, managerial implications and future research avenues of the study.

## 2. Literature review

### 2.1 Mobile banking

Banks can be considered as pioneers in the digitalization of services as they have developed numerous new methods for their customers to handle the daily banking and financial operations (Heinonen, 2006; Chemingui and Iallouna, 2013). Recently, the importance of mobile banking services has emerged as one of the key priorities for banks (Sahoo and Pillai, 2017). Generally defined, mobile banking can be seen as “a service or product offered by financial institutions that makes use of portable technologies” (Tam and Oliveira, 2017, p. 1046). In practice, consumers can use mobile banking services to perform different banking activities such as paying invoices, conducting payment transactions, checking the balance of their account and retrieving credit card details.

The benefits of mobile banking for end customers relate to immediate access to banking services regardless of time or location, enabling time savings and real-time information, and creating feelings of convenience and control (e.g. Laukkanen and Lauronen, 2005; Mortimer et al., 2015). Banking industry is experiencing rapid and widespread changes even more than before as digitalization is creating new ways for banks and other financial institutions to operate and develop their services. Consequently, customers’ needs are changing as more and more transactions take place on mobile devices. As competition in banking industry is growing and customers become more demanding, creating superior customer value has become increasingly important (Lähteenmäki and Nätti, 2013; Medberg and Heinonen, 2014). Therefore, it is crucial for banks to create understanding of their customers’ everyday value creation, as it can help them to differentiate their services on the market and enhance customer satisfaction and loyalty (Frow and Payne, 2007; Gentile et al., 2007). Related to this, finding new ways to use customer data in order to create more value for the customers is one important future development.

### 2.2 Customer data usage

Traditionally, customer data has mainly been used instrumentally to serve companies’ purposes (e.g. Saarijärvi et al., 2013). For example, with support of CRM technologies companies have used customer data e.g. to customized communications, cross-selling or segmentation (Payne and Frow, 2005), in other words to support their own processes and efforts to sell more products or services. However, increasing number of private and public initiatives challenge conventional CRM activities and suggest new, innovative ways of using customer data (Saarijärvi et al. 2013). Even though companies’ traditional use of customer data can also be useful for customers in an indirect way through e.g. category management (i.e. better fit between customers’ needs and the company’s product categories) or direct marketing campaigns, the current CRM framework has been inherently very firm-centric and focused on using customer data mostly for the benefit of a company (see Thaler, 2011; Thaler & Tucker, 2013). Saarijärvi et al. (2013) found in their study that there has been evolution from data dispersion through data organization and data ownership towards data sharing, since companies are constantly seeking new ways to refine and give customer data back to customers to support their value creating processes. In relation to this, they suggested four emerging themes that characterize the reconfigured role of customer data. First, due to customer data reconfiguration the companies are able to *increase the loyalty of customers* that find the information provided relevant and interesting. Secondly, companies are able to *differentiate* themselves from the competitors and attract new customers because of customer data reconfiguration. Thirdly, by reconfiguring the customer data companies can *put their values and strategy into practice* e.g. by emphasizing customer orientation and providing customers with access to their own data. Finally, the customer data reconfiguration may *improve companies image* and customers may perceive companies in a more positive light, e.g. as pioneers that give customer data back to

customers. It is therefore suggested (*ibid.*) that this shift towards customer data sharing opens up many new business and service opportunities. For example, healthcare actors could return data about customers (i.e. patients) back for customers' own use and social media applications enable firms to use customer data to support their customers' processes. Therefore, customer data cannot be seen anymore as exclusively owned and useful for the service providers, such as banks, but rather as a way to better serve customers and provide them more value.

### **2.3 Value creation and customer orientation**

Value has been broadly studied in the field of marketing and during the last decade specifically in relation to services (see e.g. Heinonen *et al.*, 2013). Traditionally there has been numerous ways of approaching customer value, such as value component models (focusing on product or service features), benefits/costs ratio models (exploring trade-offs customers are expected to make between benefits and sacrifices) and means-end models (based on the assumption that customers acquire and use products/services to accomplish favourable ends) (Khalifa, 2004). One of the most used conceptualizations of value defines it as the "consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given" (Zeithaml, 1988, p. 14).

In this study, the recently emphasized customer-centric perspective on value is adopted and value is here seen as experiential and closely involved in the context of customer's everyday life (e.g. Helkkula and Kelleher, 2010; Heinonen and Strandvik, 2015) and thus more comprehensively than traditional value approaches. More specifically, a customer-oriented perspective on customer data usage is being used here. It means approaching customer data collection and usage from the customer's perspective, i.e. how to improve customer value with the aid of customer data, instead of focusing on the company's (in this case bank's) perspective. Therefore, in line with the study of Saarijärvi *et al.* (2013) our starting point is that customer data needs to be viewed as a way to provide customers with additional resources in order to better serve those customers and enhance their value creation processes in their everyday life. With this theoretical understanding, we will next move on to empirical part of the study to see how customer data usage is currently perceived by the customers of mobile banking service providers. Before that, the methodology of the study is shortly discussed.

## **3. Methodology**

This paper presents a qualitative exploratory study (Denzin and Lincoln, 2000). The research process follows an abductive logic, in terms of constantly going back and forth between empirical observations and theoretical concepts (Dubois and Gadde, 2002). The data was collected through 23 interviews with Finnish bank customers. Interviewees were 21-64 years old, and both genders as well as various occupational groups were represented equally. Interviews were conducted as semi-structured theme interviews, and they varied in length between 20 and 55 minutes. All interviews were recorded and transcribed word-for-word. The interviews and their themes were based on a comprehensive literature review of current studies relating to customer-centered thinking, value creation, and reverse use of customer data.

The data was analysed using content analysis method. As suggested by Miles and Huberman (1994), the analysis was implemented through phases of data reduction, data display and drawing conclusions. NVivo 8 software was used to facilitate the content analysis.

## **4. Findings**

### **4.1 Customers' knowledge of customer data usage**

Based on the empirical data, customers seem to be quite well aware that banks are collecting data about them while they are using mobile banking services and also other banking services.

Some of the interviewees assumed that they know exactly what kind of data banks are collecting about them whereas some admitted that they do not have a clue about it. However, most of the customers seem to know that some kind of data is being collected but they are unsure about what this data actually is and for what purposes it is being used. This causes a lot of uncertainty and suspiciousness among customers and they think there is nothing they can do about it. This is illustrated in the following quotation:

*“Information (about customer data usage) is usually hidden into the long and unclear clauses, those service terms and conditions you have to accept before you start using the service. Nobody reads them and there are definitely some surprises and things that you cannot even think about.” Woman, 38 years*

However, interviews clearly indicate that when the service provider is a bank, customers are more trusting and less suspicious in their attitudes compared to e.g. other mobile service providers. Many of the interviewees seem to have a strong confidence on banks' data security and that they are reliable in taking care of their customers' private matters.

#### **4.2 Customers' attitudes and perceptions of customer data usage**

When discussing about the benefits the customers get as a positive side of customer data usage, some of the interviewees openly stated that there is absolutely nothing positive for them in bank's customer data usage but it only benefits the service provider itself.

*“I cannot think anything good about it. I don't think it provides anything to me. The bank is only one getting benefits from it.” Man, 40 years*

On the other hand, some of the interviewees think that banks are using customer data to develop their services. This, however, does not seem to concretize to customers in any way but they think that service development will be realized somewhere in the distant future and it does not provide any value for them yet. In relation to the service development, some customers had suggestions how the mobile banking service could be developed to provide more value for them in the future. These thoughts were mostly related to tailoring and targeting the mobile banking service according to the customers' behavior, needs and preferences of which bank gets information by collecting data about customers' use habits in mobile banking. This is demonstrated in the following quotation:

*“If there are for example regular money transfers between family members the bank could, in the future, to identify it and suggest for instance a common bank card for that family based on their previous behavior. So yes, I think it could be useful for me that they collect data about us.” Man, 58*

Attitudes and perceived benefits varied also based on for what purposes the interviewees think the bank uses the customer data:

*“It depends on what they use my data for. If they use it to improve the mobile banking application to suit me better, it sounds very good! But if they use it to advertising, then I don't like it at all.” Woman, 33 years*

In contrast to benefits, many interviewees reported negative aspects related to bank's usage of customer data. These negative feelings and suspicions were due to many uncertainties and even fears the customers may have. Some customers were afraid that banks will sell their personal data to third parties without asking their permission. In relation to this, many were unsure about who will finally use their data and for what purposes, which stirred up anxiety. This is illustrated in the subsequent quotation:

*“I'm really annoyed that they sell my personal information and it ends up to somewhere that nobody wanted it to end up. Other parties use it and you don't know anything about it.” Man, 33 years*

One common assumption and even a fear among customers was that their personal data is used purely to commercial purposes:

*“I don’t see any benefits (in banks’ customer data usage) but I see many disadvantages if they put some targeted advertisements into my mobile bank. I don’t like that idea at all.” Man, 58 years*

Some customers were worried about data security and thought that if there were security breach or their data is otherwise leaked to outsiders there might be a thread of serious data misuse or even an identity theft.

*“I’m thinking about for example an identity theft. Because you don’t know what people may do with your personal data. All the scary things they may think of. I’m a skeptical and suspicious person and truly afraid of all these kinds of things.” Woman, 37 years*

Finally, there were some customers that did not have either positive or negative thoughts about banks’ usage of customer data but had very neutral attitude towards it:

*“Well, it does not bother me that they use my personal data but on the other hand, I also think that it doesn’t benefit me at all.” Woman, 20 years*

In sum, it can be said that the general attitude among customers was quite negative and doubtful which is mainly due to the many uncertainties and open questions related to banks’ customer data collection and usage.

#### **4.3 What kind of information customers are willing to share and why?**

When discussing what kind of personal information customers are willing to share with banks their thoughts and opinions varied quite a lot. Some were ready to share for example their location or previous purchasing history if the bank ensures that this will directly benefit the customer. However, they emphasized that the benefits need to be concrete and clear to them before they are willing to share their personal data. Some suggested that banks could offer a certain compensation for data sharing, e.g. money or different discounts, and the customers could then decide whether they share their personal data or not.

*“If it is possible to choose, I usually don’t allow them to collect any data that doesn’t clearly benefit me. For example my GPS or location information. But if I see that it really creates value for me and not only for the service provider, then I could say yes. But it depends on the situation.” Man, 37 years*

Some of the interviewees emphasized that banks have access to their most personal information such as social security number, bank account number and balance in any case. In relation to this, they also considered banks to be such a reliable service provider that they were not worried about it but shared this information without any suspicions. Other service providers, however, were not seen as reliable as banks. Many interviewees stated that they would share their information with banks but not with other service providers, as the following quotation points out:

*“Sometimes I haven’t downloaded an application if it has asked me to fill in too much personal information. But then, with this mobile bank application, I feel like my bank is so secure and reliable that I don’t even hesitate to give them my personal data.” Woman, 37 years*

There were also many customers, who were reluctant to share any kind of information voluntarily, even with their banks. They told that it is best when their personal data is collected and used as little as possible.

#### **4.4 Attitude towards customer data sharing to third parties**

Again, there were great variations in customer’s attitudes towards banks sharing their data forward to third parties. Some thought it was acceptable if the customer was aware of this and had given his/her permission. Some even brought out that it is quite self-evident for them that

service providers are sharing data with each other. Then again, some saw this as very negative and felt that they cannot affect this data distribution, as only market forces rule:

*“Unfortunately you cannot do anything about it but they give away your personal data anyway. If somebody wants to buy it, banks only think about their economic benefits and how to get all the possible money out of it.” Man, 40 years*

Some interviewees pointed out that similarly with banks collecting and using customer data for their own purposes, sharing this data with third parties was acceptable as long as it creates value for the customers and makes their daily life easier. For example taking care of insurance or healthcare processes could be made easier if the customer data was available between different instances. Also different discounts or other monetary benefits were pointed out as useful aspects as the next quotation reveals:

*“We have this mobile bank that is owned by the cooperative retail society. So you can easily see your shopping history and how much money you have spent and also the bonuses you have collected from different stores. And there are also monthly discounts and other useful information. I find it quite cool.” Man, 38 years*

On the contrary, many customers pointed out that giving their personal data purely for commercial or advertising purposes was very distracting. It was seen important to whom the customer data is distributed. For some it was acceptable to give customer data to tax authorities or research institutions but not to other commercial actors. To sum up, customers seem to think it is highly important that they can control the sharing of their personal data to third parties (i.e. give or decline their permission) and it needs to provide them clearly identifiable benefits.

#### **4.5 Development ideas concerning customer data usage in mobile banking services**

Based on the data, mobile banking customers have interesting insights and ideas about the future development of mobile banking service from the customer data perspective to meet the customers' needs better and to create more value to them. For example, many interviewees suggested utilizing the temporality or the location of the customer.

*“It could utilize location of the user or the time s/he is using the service more effectively than now. So that ‘you are in this location and you might find this kind of content useful here’. Those kinds of things would be very nice to have.” Woman, 38 years*

Providing real-time and topical information was seen useful by many interviewees since mobile bank service is always available and in hand in the mobile phone. Information could be about money or spending, such as investment or saving tips or it could be purely entertaining content.

*“Joy and entertainment would be nice to have in your mobile bank and maybe it could also give you some new ideas or experiences. If it would proactively give you such information, I'd be happy to receive it. But not too much, I don't want any information overflow.” Man, 40 years*

Some hoped that mobile banking service could use customer's usage history to predict his/her consuming behavior and react to it by offering e.g. discounts in their regular shopping places. Also proactively providing tailored and relevant information was seen as a good thing. On the contrary, some strongly pointed out that in their opinion mobile banking service and use of customer data should be used merely in communication between the bank and the customer and nothing else.

#### **5. Conclusions**

The purpose of this study was to increase understanding about how can customer data create value for the customer in mobile banking context. To answer this question, an empirically grounded study was conducted among 23 Finnish bank customers. It reveals that customers still have difficulties to understand the possibilities that customer data collected by service

providers, such as banks, could bring to them. The attitudes towards banks collecting customer data are primarily doubtful and negative and specifically in mobile banking context customers do not currently experience much value from reverse use of customer data. However, this study provides suggestions how this situation could be improved and how the usage of customer data could be developed further to create more value to both the service providers and their customers.

As one of the key findings of this study, we suggest that it is highly important for service providers to develop in-depth understanding about their customers' value-creating processes and about how to support these processes in their daily life. In this, effectively collecting and utilizing customer data plays an important role. Using the customer data to develop such mobile banking services that create superior value for the customers helps banks to increase service usage and thus engage their customers into enduring relationships with them, which in turn creates value for both parties in the long run. Furthermore, customer data usage should not be looked at only from the service provider's perspective but the benefits for the customer need to be understood and emphasized as well. Purely firm-oriented approach easily results in negative and suspicious attitudes among customers and further leads to decrease in voluntary information sharing and service usage.

### **5.1. Theoretical contributions**

This research makes valuable contributions into both the theory and practice of marketing, specifically in the field of service marketing. Firstly, it explores customer data usage from the customer's perspective instead of focusing on service provider's view that has been prevailing in most previous studies on customer data usage. In addition, this under-research topic is examined in a very timely context, i.e. mobile banking services. Banking business is undergoing drastic changes along, for instance, digitalization, new data protection legislation and banking industry disruption that challenge the traditional banking services and require constant development among service providers in the field. Hence, this study answers to the call of more empirical research on reverse use of customer data in different topical contexts (see Saarijärvi et al. 2013).

Our research finds support from the study of Saarijärvi et al. (2013) in that the role of customer data needs to be reconfigured to increasingly benefit customers and to enhance their value creation processes. This can also benefit the companies in many ways, e.g. by differentiating them from competitors and engaging them into long-term relationship with the customers due to the improved services that create more value to customers. As an extension of their study, this paper reveals customer's actual perceptions and attitudes towards customer data usage that aid the service providers to focus on right things while developing and re-designing their usage of customer data.

Our empirical findings are also in line with previous research addressing the dark side of CRM, i.e. customers becoming more and more suspicious about the customer data usage due to the unethical behavior of some companies that are e.g. misusing information, invading privacy or operating different customer lock-in strategies (Frow et al. 2011). Even though the banks are mainly considered trustworthy and more reliable compared to other mobile service providers, some customers are still concerned about how the banks are using their personal data and whether there is a risk of unethical behavior harming the customers' privacy.

### **5.2. Managerial implications and future research avenues**

As digitalization brings along both opportunities and challenges into customer data management, this paper has concretized these by exploring customer data usage from the customer's perspective in mobile banking context. Thus, from the managerial perspective, this



study also provides many important implications. In relation to customers' knowledge of customer data usage, banks need to be more open and clear in their communications. They need explicitly inform their customers of what kind of information is being collected and more specifically, to communicate the benefits of customer data collection for the customers more visibly. Also concretizing those benefits is important since currently the customers have a very indefinite idea of customer data usage and they therefore assume that banks are using this data only for their own benefit.

Mainly due to the uncertainty and ignorance of benefits, many customers have negative thoughts and attitudes towards customer data usage. It is important that banks are aware of these to be able disprove them. For instance, selling the customers' information further without explicitly asking for their permission and the general uncertainty of who is using the customer data and for what purposes are common doubts among the customers, not to mention data security issues that are highly important to be taken care of. It is also important to acknowledge that banking services in particular are such a critical and fundamental part of customers' life that customer data usage needs to be planned, organized and handled with extreme caution.

In addition, utilizing customer data purely for commercial purposes is something that banks need to be careful with since customers do not want to be bombed with irrelevant advertisements. On the other hand, well-targeted and personalized advertisements related to banking services can be turned into benefits in the eyes of the customers if they are planned carefully, based on the customer data. In general, customers are very conscious and strict with their rights to control the use of their own data so the banks need to provide detailed information about what data is being collected, for what purposes it is used and who has a right to access this data.

In relation to this, sharing customer data to third parties becomes an important issue. Based on our findings, customers seem to assume that this happens quite automatically e.g. between banks and insurance companies or banks and chain stores. On the other hand they see this as normal and acceptable and on the other they want to control themselves what kind of data is being shared and to whom. Again, banks need to make sure that they are as open as possible about their policies to keep customers informed and thus satisfied.

Finally, there are many development ideas concerning customer data usage in mobile banking services that banks can utilize in the future. This study reveals that there is an interesting contradiction in customers' attitudes: they do not want their data to be used for commercial purposes (advertising) but then again they wish that in the future the mobile banking service could identify their buying habits and behavior and based on them, to offer appropriate suggestions e.g. for saving money or making investments. Therefore, it is very important for banks to identify the differences between customers and to target different mobile banking services to certain customer segments. This way it is possible to serve each customer group according to their needs and to provide them optimal value.

In the future, more research is needed on different possibilities, e.g. service and business concepts, brought by reverse use of customer data. Here, taking into account both customers' and service providers' perspectives is imperative, instead of focusing only on firms benefitting from customer data usage in developing their business. Also use of different research methods, such as focus groups or surveys, could be used to create new understanding of this under-research yet important topic.

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