ARCADA

Customer Response on the Digitalization of the Retail Banking Services

A quantitative study on different customer groups and their response regarding the online banking services

Fred Nyqvist

EXAMENSARBETE	
Arcada	
Utbildningsprogram:	International Business
Identifikationsnummer:	15660
Författare:	Fred Nyqvist
Arbetets namn:	Customer Response on the Digitalization of the Retail Banking Services. A quantitative study on different customer groups and their response regarding the online banking services
Handledare (Arcada):	Kaj-Mikael Björk
Uppdragsgivare:	

Sammandrag:

Bankindustrin har för tillfället på gång en av de största reformationerna den genomgått ända sedan bankindustrin fick sin början. Med hjälp av ny teknologi blir det hela tiden lättare att sköta sina bankärenden var man än är, utan att behöva gå in till banken. Digitaliseringen är i sig själv redan en stor förändring, men också nya direktiv så som PSD2 kommer att ändra industrin. I det här arbetet analyseras kundrespons för de digitala banktjänsterna fördelat på olika kundgrupper. Syftet med undersökningen är att hitta skillnader mellan gruppernas kundrespons och därefter presentera teorier om varför skillnaderna framkommer. Arbetet kommer också att presentera trender för kundrespons om de digitala banktjänsterna i Finland, och kundernas perspektiv på förändringarna kommer att diskuteras. Undersökningen är en kvantitativ undersökning som följer en explorativ modell för att finna skillnader mellan kunderna. För att undersökningen följer en explorativ modell används den induktiva metoden. De största skillnaderna mellan de olika kundgrupperna förekom inom fördelningen av nationalitet. Finländare tycker att de digitala banktjänsterna är tryggare än vad icke-finländare tycker. Bara sju stycken icke-finländare svarade på undersökningen och för att reliabelt kunna konstatera att finländare känner sig tryggare med de digitala banktjänsterna, skulle flera svar krävas av icke-finländare. Trenden som förekommer i undersökningen är att allt fler kunder använder sig av de digitala banktjänsterna minst två gånger i veckan. Största delen av respondenterna håller med om att de kommer att använda sig av de digitala banktjänsterna oftare i framtiden jämfört med vad de använder för tillfället. Ungefär var fjärde håller inte med. Så gott som alla respondenter svarar dock att de till största delen kommer att använda sig av de digitala banktjänsterna i framtiden. För att starkare svara på forskningsfrågorna skulle det behövas betydligt fler respondenter i en del av grupperna. I fördelningen av ålder framkommer det inte en enda skillnad mellan åldersgrupperna vilket kan bero på antalet svar, vilket ledde till att grupperna delades i två större grupper. Det kan dock konstateras från undersökningen att en del större skillnader finns men det behövs mer data för att få starkare reliabilitet på analysen.

Nyckelord:	
	Digital, bank, kundnöjdhet, digitala banktjänster, mobilapplikationer.
Sidantal:	49+5
Språk:	Engelska

DEGREE THESIS	
Arcada	
Degree Programme:	International Business
Identification number:	15660
Author:	Fred Nyqvist
Title:	Customer Response on the Digitalization of the Retail Banking Services. A quantitative study on different customer groups and their response regarding the online banking services
Supervisor (Arcada):	Kaj-Mikael Björk
Commissioned by:	

Abstract:

The banking industry is currently undergoing one of the largest reformations to date. With the help of new technology, it becomes all the time easier to deal with personal banking anywhere. Digitalization is already a major change, but also new directives such as PSD2 will drastically change the industry. This study analyzes customer response for the digital banking services by different customer groups. The purpose of the study is to find differences between the groups' responses and present theories as to why the differences emerge. The study will also present the trends in customer response for digital banking services in Finland and discuss the customers' perspectives regarding the changes in the banking industry. The survey is a quantitative survey that follows an explorative model to find differences between customers. The study follows an explorative model; hence the inductive method is used. The biggest differences between the different customer groups was found when divided by nationality. Finns consider digital banking safer than non-Finns. However, only seven non-Finns responded to the survey and to be able to reliably state that Finns feel more secure with the digital banking services, more responses would be required by non-Finns. The trend that appears in the survey is that more and more customers use the digital banking services at least twice a week. Most respondents agree with the statement that they will use digital banking services more often in the future compared to what they are currently using. About a quarter of the respondents disagree with the statement. However, almost all respondents think that digital banking services will be their primary option for banking in the future. To increase the reliability of the study, a higher number of the respondents would be required. When dividing the groups according to age, there is no difference between the groups. This might be due to the low number of responses, which led to the groups being divided into two larger groups instead of multiple smaller categories. However, it can be seen from the study that some major differences exist, but more data is needed to get stronger reliability on the analysis.

TABLE OF CONTENTS

Figures

Tables

1 INTRODUCTION

The whole banking industry is in the middle of one of its biggest reformations to date. With continuously improving technology there isn't many things within personal banking you wouldn't be able to do sitting comfortably on your own couch at home. While the digitalization is already something that is drastically going to change the industry, there are also new directions and regulations that will affect the market. On January 13, 2018 one of the directives with expected big impact, PSD2 (Directive 2015/2366/EU) was put in motion. The directive forces banks to open their back-end data with secure access. Some banks in Finland anticipated this and built up their digital services and made big efforts to improve their applications in advance before technology companies gets to use the infrastructure the banks built. Already now there are other companies like Klever which take use of the infrastructure of the banks without the enormous investments by having made an app that helps customers everyday finances and payments.

Most banks do a lot of surveys regarding this topic among their own customers but there is not much information public and there is not much comparison between banks. Last year, a master's thesis "Users' Satisfaction of Digital Services in Finland" was made by Miah (2018). Miah's survey focused on what are the most critical factors to make a customer satisfied and how to convert a satisfied customer to a loyal customer. This survey is not going to measure how customer satisfaction is converted into loyalty like in Miah's survey, and the methods used to analyze data will be fewer as this is a bachelor's thesis. Nevertheless, this study will compare data to Miah's thesis and see if there are any trends in the customer satisfaction for digital banking services. This study is also going to compare if there are any significant differences between different demographic customer groups and briefly review respondent's perspective regarding the future of digital banking services in Finland.

1.1 Research aim and questions

The aim of this thesis is to find if there are differences between different demographic customer groups and their response about the digital services in banking. The thesis will also compare the primary data from the questionnaire to secondary data to see if there are

any trends in the customer satisfaction for the digital banking services. There are still customers who rather go to the bank physically instead of using digital services, this thesis will aim to answer the customers perspective regarding the future of digital banking services.

As a result of the research aim is the research question is the following:

RQ 1. Does the customer satisfaction for digital banking services in Finland significantly differ between different demographic customer groups?

RQ 2. What is the trend of customer satisfaction for digital banking services in Finland?

RQ 3. What is the customers perspective regarding the future of digital banking services in Finland?

In order to answer the different research questions this study will be divided into smaller objectives both theoretical and empirical.

The theoretical goals are:

-To review literature and previous studies about banking industry in Finland.

-To review literature and previous studies about the digital transformation in the Finnish banking industry.

-To develop hypothesis based on the reviewed literature and previous studies in order to test the effect of customer satisfaction on digital changes.

Empirical goals are:

-To collect data among Finnish customers and empirically test the hypothesis.

-To develop managerial information to help understand the level of customer satisfaction for the digital services in Finnish banks.

This study aims to contribute to the understanding of modern consumers need and their response to new digital banking services. This research is not only going to measure the level of customer satisfaction towards the digital banking services but also analyze if there are significant differences between customer groups.

1.2 Delimitations

This survey will only include responses from retail banking when the nature of other types of banking differs so much. The text will focus on the Finnish market; hence the data will be collected exclusively from people with a Finnish bank account. This study will also exclude customers under 18 years of age since they are not allowed to use all banking services on their own.

2 THEORETICAL FRAMEWORK

Like most other industries these days also the banking industry is moving rapidly towards a fully digitalized future. Already now it is possible in some Finnish banks to take care of everything, from opening an account to taking a mortgage without ever physically stepping inside the bank. Most of the processes can be done online by yourself and only in a handful of matters you need to contact the bank by phone or other ways. The biggest visible change has however been in the daily banking. When smartphones came and dominate the phone markets all kinds of applications quickly became a part of our everyday life, the banking industry is no different. With digitalizing their services, the banks will save time and become more cost effective. Even if the majority of the customers have been open to a change and found it easier to take care of their banking online there are still a lot of customers who would prefer to go physically to the bank and let someone else take care of their daily banking.

In this chapter both online banking and digital banking will be defined and explained the difference between the two. Mobile applications and the use of them in banking services is also briefly discussed. This chapter also consist of information from the banking industry in Finland and small brief descriptions and history of the banks that will be focused on in the study.

2.1 Online Banking

Online banking, or e-banking is defined as "A method of banking in which the customer conducts transactions via the internet." (Oxford Dictionaries, 2019). Online banking includes all the banking that customers do online on the computer, phone or other devices. Online banking is not restricted to the normal online bank service most customers have been used to for decades already, but also includes other software and applications that helps customers in their everyday banking. The trend there has been in the banking industry shows that more and more banks are gradually moving towards digitalized services. According to Eurostat statistics "Finland, the Netherlands and Denmark are the three most active European countries in terms of online banking: 89% of their citizens use online banking." (Finance Finland, 2019). As can be seen in Figure 1, online banking has been constantly increasing for the past 10 years but the big difference has been that even elderly people has started to prefer using online banking. "On a European scale, Finnish senior citizens are in the vanguard of online banking. The actual figures are now probably even higher," says Kristiina Siikala, head of development at FFI. (Finance Finland, 2019)
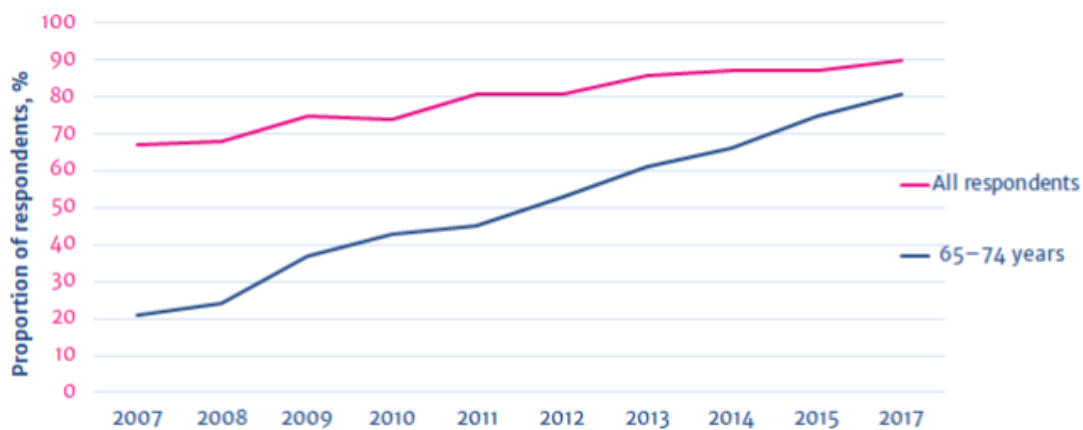
Figure 1 Online Banking and e-invoice as preferred payment method 2019

Source: Saving, borrowing and paying in Finland http://www.finanssiala.fi/en/news/Pages/Finns-leading-online-banking-users-in-Europe.aspx

2.1.2 Digital Banking

Digital banking is often used as a synonym to online banking, whereas their definition is close to each other digital banking has a broader context and includes online banking. Digital banking also includes the automated processes inside the bank that enables customers to do transactions and take loans without anyone in the bank processing it. Like in online banking, also in digital banking the bigger banks in Finland has taken a head start. Automating the processes in a bank is not cheap, even if in the long run it might help with the labor costs the initial investments are still big. This has led to some smaller banks rather choosing a local and easy to visit strategy to appeal to people who still prefers to physically visit the bank.

2.1.3 Mobile applications

According to Finance Finland's survey the constant changes for the mobile services are changing the online banking. The survey states that already now 23% of customers using online banking services are primarily using a mobile device and the increase has been 10% in less than two years. Also, about half of the bank customers in Finland uses a mobile device when using online bank services. (Finance Finland, 2017)

2.2 Customer satisfaction

Customer satisfaction is a crucial part of any kind of business and the banking industry is no different. Customer satisfaction is how a person feels after purchasing a product compared to what the initial expectations has been. (Kotler and Keller 2009)

EPSI Rating is a company that have been researching correlations between satisfied customers, staff and the company, together with Stockholm School of Economics since 1989. EPSI Rating makes annually a survey of the customer satisfaction in the Finnish banking industry. They are following the customer satisfaction with these three questions:
-Think about all the experiences you have from your bank. How satisfied are you?
-In what measure does your bank fulfill all your expectations?
-Imagine a bank that is perfect in all ways possible. How close or far is your bank from this perfect bank? (Laitinen. 2018)

13

Figure 2 shows the factors and the method the EPSI Rating is based on. When buying a product or service you normally have some expectations about what you are buying. A lot of times this is a result of the image that the company or product has but it can also be a result of never hearing about them before. If the product or service, you bought had good quality it results in you feeling that you got value for your money which leads to customer satisfaction. Now the customer might be satisfied or dissatisfied about the product which might lead him in influencing other customers which changes the image of the company. In the end if a customer is satisfied it might lead to customer loyalty towards the company.

When it comes to banks the principle is the same as in other services, if the product is bad customers won't think they got what they paid for. However, with an industry that is experiencing a huge transformation with the digitalization banks are taking different approaches. Some are providing new digitalized software but lowers the costs in bank offices while other banks do not feel the need to invest big amounts on digital services and rather stays as a local bank where customers can walk in whenever they want to. Customer opinions might differ a lot depending on many variables and the purpose of this study is to find common nominators among customer samples that would explain their experience of the online customer services of different banks.
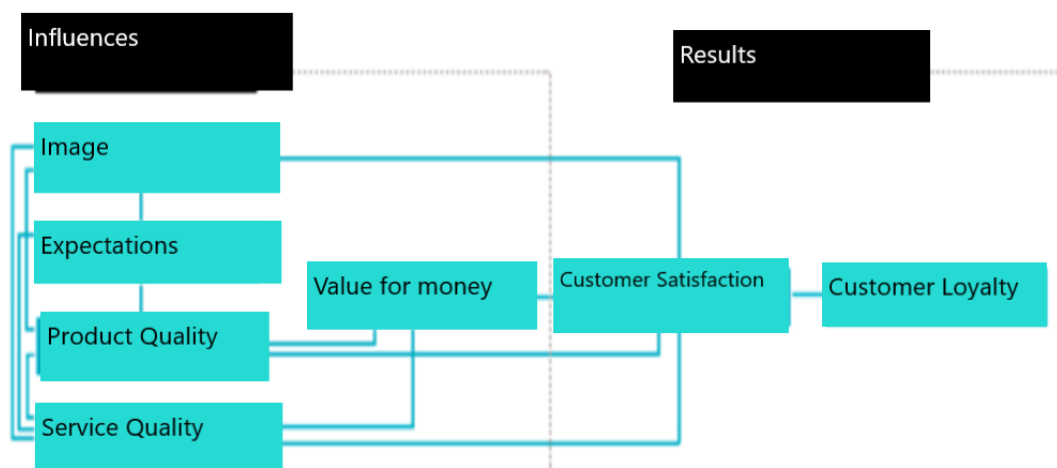
Figure 2 The figure shows what the EPSI method is based on. The original figure is in Finnish and have been translated to English to make it easier for readers.

Source http://www.epsi-finland.org/report/pankki-ja-rahoitus-2018/

2.3 Banking industry in Finland

	Loans granted to non-MFIs in Finland	Housing loans to households[1] in Finland	Loans to non-financial corporations[2] in Finland	Deposits placed by non-MFIs in Finland
	Stock EUR m (Market share)	Stock EUR m (Market share)	Stock EUR m (Market share)	Stock EUR m (Market share)
Credit institutions, total	224 895 (100 %)	96 065 (100 %)	51 005 (100 %)	154 689 (100 %)
OP Financial Group	79 914 (35,5 %)	37 737 (39,3 %)	19 736 (38,7 %)	57 232 (37,0 %)
Nordea	59 469 (26,4 %)	28 353 (29,5 %)	15 672 (30,7 %)	40 261 (26,0 %)
Municipal Finance	21 651 (9,6 %)	279 (0,3 %)	3 469 (6,8 %)	0 (0,0 %)
Danske Bank	21 476 (9,5 %)	10 916 (11,4 %)	4 311 (8,5 %)	22 139 (14,3 %)
Handelsbanken	12 823 (5,7 %)	2 836 (3,0 %)	3 951 (7,7 %)	3 940 (2,5 %)
Savings Bank Group	7 737 (3,4 %)	4 890 (5,1 %)	915 (1,8 %)	6 106 (3,9 %)
Aktia Bank	5 798 (2,6 %)	3 966 (4,1 %)	392 (0,8 %)	4 108 (2,7 %)
S-Bank	3 721 (1,7 %)	2 064 (2,1 %)	126 (0,2 %)	5 002 (3,2 %)
POP Bank Group	3 319 (1,5 %)	1 885 (2,0 %)	353 (0,7 %)	3 522 (2,3 %)
Bank of Åland	2 576 (1,1 %)	1 409 (1,5 %)	502 (1,0 %)	2 135 (1,4 %)
Hypo Group	2 205 (1,0 %)	676 (0,7 %)	87 (0,2 %)	1 511 (1,0 %)
Oma Savings Bank	2 136 (0,9 %)	1 048 (1,1 %)	405 (0,8 %)	1 639 (1,1 %)
Other	2 070 (0,9 %)	6 (0,01 %)	1 086 (2,1 %)	7 094 (4,6 %)

Figure 3. Market shares of credit institutions operating in Finland, December 2017

Source: https://www.suomenpankki.fi/en/Statistics/mfi-balance-sheet/older-news/2018/suomen-pankki-alkaa-julka-ista-tilastoa-luottolaitosten-markkinaosuuksista/

According to Bank of Finland there are nine banks, or banking groups, that had in 2017 deposits consisting of at least 2 billion placed by non-monetary financial institutions (non-MFIs). The tree biggest banks OP Financial Group, Nordea and Danske Bank market shares for the non-MFI deposits accounted for a combined 77.3% of the whole market. In the housing loans the market is even more top heavy with OP Financial Group at 38,7% and Nordea at 29,5% respectively. (Bank of Finland. 2018)

As the banking industry in Finland is relatively top heavy, this study is going to mirror those results and have more responses from the bigger banks due to not handpicking the recipients of the survey. However, because of the digital services vary so much between the banks, this survey will take in regard answers from all the nine banks that has over 2 billion non-MFI deposits and smaller banks than that will share a 10th group.

2.3.2 OP Financial Group

"Established in 1902, OP Financial Group is a cooperative financial services group formed by independent cooperative banks and the Group's central cooperative with its subsidiaries operating under the principle of joint and several liability." (OP Financial Group. 2019.)

OP Financial Group is divided into three segments, the banking for private and SME customers, Banking for Corporate and Institutional Customers, and Insurance Customers. OP Financial Group consists of 156 independent local retail banks that works cooperatively together. Helsinki Area Cooperative Bank has a different structure than the other local banks and engages in the Helsinki Metropolitan Area. (OP Financial Group. 2019)

"Customer experience and its development through digitalizing services and functions lies at the heart of our strategy." (OP Financial Group.2019). OP Financial Group is one of the heavy contenders on the Finnish banking market and is annually investing 400 million euros in developing new products and modernizing their technology. OP recognizes that new regulations will open the banks' customer data to third parties resulting in new competitors from other markets. (OP Financial Group. 2019)

2.3.3 Nordea

Nordea holds the second largest share of the banking markets in Finland right after OP Financial Group, however on the Nordic market Nordea is the largest financial service group. Globally Nordea offers service in 20 countries. Nordea visions themselves as a trusted partner and wants people to be able to reach them anywhere and anytime. Like OP Financial Group, also Nordea have invested in the digital services and have a good head start compared to many other banks. According to Nordea the customers who prefers online advising has been rising and for the moment one out of four meetings are held online. Nordea is about to release a new mobile bank in Finland this year which makes it possible to set up meetings and apply for loans straight through the application. For the moment Nordea's mobile bank application is rapidly increasing and customers are using it more than 45 million times a month. (Nordea.2019)

To find new innovative solutions Nordea has partnered up with fintech hubs and start-ups, they also have a news blog called the Digital Hub where they post thoughts and reflections on the digital transformation within the industry. (Nordea.2019)

2.3.4 Danske Bank

What is now known as the Finnish branch of Danske Bank has been previously known with many different names. In 1887 the Finnish government first established a bank called Postisäästöpankki. In 1958 Postisäästöpankki became the first Finnish company to proceed to the computer age. Postisäästöpankki shortened its name to Postipankki in 1970 and in 1998 when the bank was turned in to a Joint-stock company the bank also changed its name to Leonia. A safer e-bank was introduced in 1998 and for the first time, customers could pay their bills completely online. One year later in 1999 Leonia introduced the first mobile bank in the world which was first taken to use in Finland. Leonia emerged with Sampo in 2000 and later in 2001 the name was changed to Sampo Pankki. Finally, in 2007 Sampo Pankki was bought by Danske Bank. The name Sampo Pankki stayed all the way until 2012 when Danske Bank decided to unify their brands and changed the name to Danske bank. (Danske Bank. 2019)

Today, Danske Bank is a global bank with full customer services in 16 countries. In Finland Danske Bank has nearly one million customers in retail banking which makes them the third largest bank on the Finnish market. Danske promotes that since the start they have always been in a central role of renewing the financial services and their Finnish customers were the first ones in the world to be able to take care of their daily banking with a mobile phone. Other innovations Danske Bank has pioneered in Finland includes the first mobile bank for smartphones in 2010, the first tablet-bank in 2012 and in 2013 they launched MobilePay as the first application to help customers in mobile transactions. (Danske Bank. 2019)

2.3.5 Savings Bank Group

The Savings Bank Group in Finland has its roots in 1822 when Savings Bank of Turku. The Savings Bank of Turku was the first bank established in Finland and a few years later in 1825, Helsinki followed, and the Savings Bank of Helsinki was established and opened its doors a year later in 1826. Today, the Savings Bank Group consists of 23 independent Savings Banks, and other financial services totaling 150 branches throughout Finland. Today, the Savings Bank Group has nearly half a million customers and according to the Banking and Finance 2016 survey by EPSI Rating, Savings Banks Group came second in the customer satisfaction and third in being the most innovative bank in Finland. Some of the Savings Bank Groups objectives include ensuring excellent customer satisfaction and loyalty. They also follow the industry trend and offers their services both physically and digitally. (Savings Bank Group.2019)

2.3.6 S-Bank

As a member of the S Group, S-Bank is a slightly different bank than the others. They have built their services in cooperation with stores, where you are able to withdraw and deposit money, and other businesses within the S Group. S Group is a Finnish retailing cooperative organization which helps S-Bank in knowing their customers and providing them service in the most convenient ways. S-Bank strives to be a responsible bank and in 2018 they were voted the sixth time in a row as the most responsible bank in the broadest Nordic brand study on sustainability, Sustainable Brand Index. The physical services S-

Bank provides are mostly located together with stores, they also provide service on the phone, social media, online and with their mobile application, S-mobiili. (S-Bank.2019)

2.3.7 Aktia Bank

Aktias Banks roots goes all the way back to 1825 when the Savings Bank of Helsinki was established. In 1991 the Savings Bank of Helsinki emerged from the Savings Bank Group together with eight other Savings Banks which together became Aktia Bank. Today, Aktia Bank serves roughly 380 000 customers with over 30 offices, e-bank and telephone services. Aktia Banks strategy consists of three new keystones out of one is "Make use of digitalization: We invest in flexible digital concepts and user interfaces in order to offer our services." One of the new innovations Aktia Banks has pioneered to the Finnish market is a full digital credit card which has a CVV number that changes after every purchase to make online payments even safer. (Aktia Bank. 2019)

2.3.8 Handelsbanken

Handelsbanken was established in 1871 in Stockholm and branched out to Finland in 1985. In 1991 Handelsbanken was the first foreign bank in Finland to receive full branch office rights. Today, Handelsbanken has 36 offices spread around Finland. Handelsbanken has always had a cautious credit policy and thanks to that they were the only major Nordic bank that didn't have to take any aid from the government during the recession in the 1990s. (Handelsbanken. 2019)

Like Savings Bank Group, also Handelsbanken has been receiving good results in the EPSI Rating, see Figure 4. As can be seen from the Figure, Handelsbanken is in the top 3 for personal customer satisfation and topping the chart in corporate customer satisfaction. Handelsbanken was also the only bank able to increase the satisfaction among corporate customers from the previous year. (Laitinen. 2018)
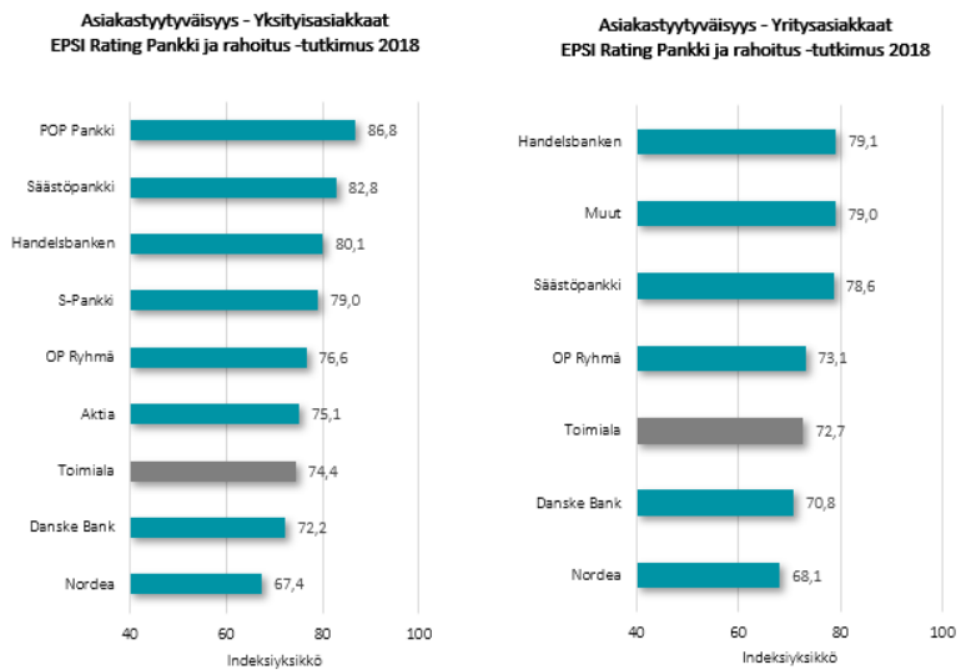
Figure 4 EPSI Ratings for customer satisfaction in both personal and corporate banking in Finland. Pankki ja rahoitus -tutkimus 2018.

Source: http://www.epsi-finland.org/report/pankki-ja-rahoitus-2018/

2.3.9 POP Bank group

"POP Bank Group was established in 1997 to pursue truly independent local cooperative banking and activities in favor of its members and their clients." (POP Bank Group. 2019). POP Bank Group consists of 26 banks and has a total of 85 offices and service points. Their strategy is based on being a bank that is local and easy to approach. Surveys show that POP Bank Group has the most satisfied and loyal customers in the whole industry. (POP Bank Group.2019)

In Figure 4 on the EPSI Rating of the personal customer satisfaction you can see POP Bank Group clearly topping the chart with a 4-point margin to the second bank on the list, Savings Bank Group.

2.3.10 Bank of Åland

Bank of Åland was first established in 1919 by a group of farmers and sea captains who wanted to have their own bank in Åland. From the start Bank of Ålands strategy has been

20

to have a close relation with their customers without unnecessary titles and rather do business that supports both partners. In 1982 Bank of Åland was the first bank on the Finnish market to start providing Private Banking-services to customers. During the recession in the 1990s Bank of Åland was the only Finnish bank which survived without taking any aid from the government. Bank of Åland defines themselves as "A big bank in Åland. A small bank in Finland and Sweden. A secure, stable bank with satisfied customers." and that is how they also want to be in the future without any major expanding. Still today the head office is in Mariehamn Åland. (Bank of Åland.2019)

3   METHODOLOGY

This chapter will present the methodology and provide a clarification on the research methods chosen for this study. The deductive and inductive research approaches will also be discussed. Both quantitative and qualitative research methods will be defined briefly and explanations why the quantitative method was chosen for this study will be provided. The primary- and secondary material will be identified and information regarding on how the data will be collected is provided. This chapter will also explain the structure of the survey and why a 4-point Likert scale, also called the forced Likert scale, is chosen over the typical 5-point Likert scale format. For the data analysis SPSS is used to find significant differences in different sample groups by using the independent t-tests. The reliability of the study and methods for analyzing the data is also discussed in this chapter.

3.1   Research approaches

Normally when conducting a quantitative study, the research approach follows a deductive approach where the main purpose is to test the theory. In a deductive research the theory is used as the main source of information and is followed by hypothesis formulation and data collection. The deductive approach can be defined as a scientific research, as it involves the development on propositions that are subjected to testing. According to Saunders a deductive research has the following five steps:
-Developing hypothesis from the theory.
-Operationalize the hypothesis in order to express what they are supposed to measure.
-Actual testing of the hypothesis.

-Examination of the outcome either confirms or rejects the theory.

-If rejected it is possible to modify the theory. (Saunders. 2009)

Usually the inductive research is connected to qualitative studies. However, when conducting an exploratory research, it is also viable to use an inductive approach in a quantitative study. According to Saunders the inductive approach is used to gain understanding for certain outcomes. When conducting an inductive research, the study follows these steps:

-Observations and defining a problem.

-Seeking patterns and to analyze the findings.

-Using the analyzes to form a theory.

This study follows the inductive approach and identifies the research problems and aim as observations. The responses from the questionnaire is analyzed to find patterns and a theory is formed based on the analyzes. (Saunders. 2009)

3.2 Quantitative research

There are two types of research methods, quantitative and qualitative. The difference between the two methods lies between the type of information collected. Qualitative studies are based on verbal information and gather data mostly through interviews while quantitative studies are based on numbers and figures. Qualitative studies are more based on observation and in-depth interviews whereas quantitative research relays on surveys, tests and statistics with a bigger sample. In qualitative research it is important that the author takes a subjective role whilst in a quantitative research the author needs to be as objective as possible to interpret the data without bias. (Saunders. 2009)

In order to have enough data to compare the customer satisfaction between different banks and sample groups the quantitative method will be better suitable for this study. A quantitative study also ensures that the sample is big enough and minimalizes the risk for a margin of error and biased results.

3.3 Material

The primary data is collected by a social survey from a random sample to find different factors that affects customer response of the digital banking services. Secondary data are collected from books, articles, publications and banks own researches is also going to be utilized (Bryman, Alan. Quantity and Quality in Social Research 1988:11).

3.4 Approach

Responses will be collected with an online questionnaire on Google Forms to distinct if there are significant factors for specific customer response. Different banks will also be taken into consideration in the research. The research will be focusing on the Finnish market; thus, the survey will only include people with a Finnish bank account. There is an age requirement of 18 years for the survey because some of the services cannot be used before the age of majority. Because a lot of people have more than one bank account there will only be the option to give response regarding one bank and their services in the survey to be able to differ between the banks.

3.5 Structure of the survey

When conducting a quantitative survey, the questionnaire usually follows a Likert-type format, see Figure 6. "From a statistical perspective, scales with two response options have less reliability than scales with five response options" (Cited in Hayes. 2008). With giving the survey answer options ranging from one to five the customers can express their opinion instead of just giving a yes or no answer. Furthermore, it is not recommendable to have more answer options than five because it might diminish the reliability and does not add any noteworthy utility for the questionnaire. (Hayes.2008)

Figure 5 A model for the Likert-type format questionnaire answers

Source: Hayes 2008. Measuring Customer Satisfaction and Loyalty: Survey Design, Use, and Statistical Analysis Methods. 2008

However, when the researcher wants to force respondents to have an opinion instead of giving a neutral answer, a questionnaire with four options can also be used. In this research a 4-point Likert-scale, see Figure 6, also called the forced Likert-scale will be utilized. (Saunders. 2009)

Please read the following statements and choose the number that represent best your opinion (Strongly disagree - 1, Disagree - 2, Agree - 3, Strongly agree -4).

9. *

Mark only one oval per row.

	1	2	3	4
Digital banking services are useful in my daily life	⬭	⬭	⬭	⬭
I find Digital banking services quicker to use	⬭	⬭	⬭	⬭
Digital banking services help me to be more productive	⬭	⬭	⬭	⬭

Figure 6 A model for the forced Likert-type format adopted from Saunders (2009) and used in the questionnaire for this survey.

The survey consists of seven demographic questions regarding age, gender, whether you are Finnish or non-Finnish, primary bank, primary device for banking and how often the customer uses digital banking services. The demographic questions are followed by 17

different questions regarding customer satisfaction. Questions about customer satisfaction are divided in six different groups: performance, effort, responsiveness, reliability, security and satisfaction. At the end of the survey there is also two questions each, about trend and future. The demographic questions are the factors that gets compared to when looking at the data from the survey.

The questions about customer satisfaction follows the forced Likert-type format and the rankings are as follows:

1. Strongly disagree

2. Disagree

3. Agree

4. Strongly agree

The customer satisfaction questions are adapted and modified according to Table 1. The questions about trend and future are made up with the purpose of this study.

Table 1 Customer satisfaction questions and where they are adopted from.

Variable	Label	Question	Source
Performance expectancy	Q1, Q2 Q3	1) Digital banking services are useful in my daily life. 2) I find Digital banking services quicker to use. 3) Digital banking services help me to be more productive.	Adopted and modified from Venkatesh et al. (2012)
Effort expectancy	Q4, Q5 Q6	4) I find it easy to learn how to use new digital banking services. 5) Digital banking services are clear and easy to understand. 6)Digital banking services are easy to use.	Adopted and modified from Venkatesh et al. (2012)
Responsiveness	Q7, Q8 Q9	7) Digital banking services offer a quick service 8) Digital banking services make it easier to solve problems 9) Questions and requests made through digital banking services are processed quickly	Adopted and modified from Gi-Du Kang & Jeffrey James (2004) and Tero Pikkarainen et al. (2004)
Reliability	Q10, Q11, Q12	10) Overall, Digital banking services are reliable 11) Digital banking services deliver the promised service on time 12) Digital banking services are performed without errors	Adopted and modified from Gi-Du Kang & Jeffrey James (2004) and Tero Pikkarainen et al. (2004)
Security	Q13 Q14	13) Digital banking services are secure 14) When using digital banking services my privacy is safe	Adopted and modified from Tero Pikkarainen et al. (2004)
Customer satisfaction	Q15 Q16 Q17	15) Overall, I am satisfied with digital services that my bank provides. 16) I have a positive opinion of digital banking services 17)I am satisfied with my experience of digital banking services	Adopted and modified from G. J. Udo et al. (2010)

3.6 Data Analysis

The data will be analyzed with SPSS statistics software to make comparisons between the different demographic groups and if the customer response has significant differences based on them. There are different methods to test the customer satisfaction between demographic groups. One method is to use a bivariate analysis where the answers for the demographic questions is compared to the answers about customer satisfaction to distinct if there are any demographic variables that clearly affect the customer satisfaction (Bryman, Alan. Social Research Methods 2004:230)

T-tests are a method that can be use for experimental researches. When using T-tests you look for differences in means in randomly taken samples. To be able to find significant variations between different demographic groups and their response for customer satisfaction this study utilizes Independent-Samples T tests. E.g. demographic question "gender": male/female compared with a customer satisfaction questionnaire on a forced Likert-type format "How satisfied are you on the variety of digital services your bank offers you": 1. Strongly disagree – 4. Strongly agree. (Aronsson. 1999)

4 RESULTS AND ANALYSIS

4.1 Descriptive Statistics

In order to differentiate between different customer groups, some background information was asked from the respondents. The questionnaire had questions regarding gender, age, education level, nationality, primary bank, how often you use the services and which platform you prefer. 66 respondents took part of this survey.
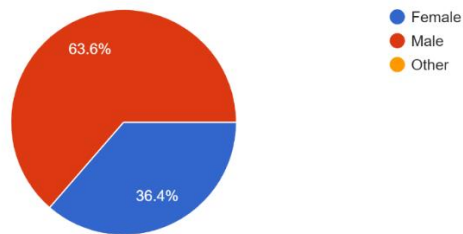
Figure 7 Gender distribution of the respondents

From 66 respondents 42 were male and 24 were female, the percentages can be seen in Figure 7.
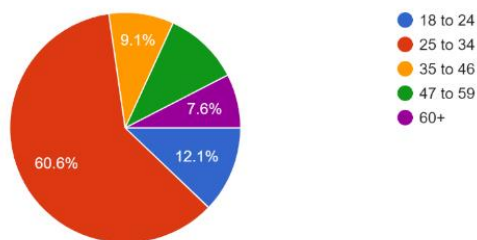
Figure 8 Age distribution of the respondents

As seen in Figure 8, 60.6%, a total of 40 respondents were of age 25 to 34. 8 respondents were between 18 and 24 years old and 5 of the respondents was over 60 years old.

What is the highest level of education you have completed?

66 responses
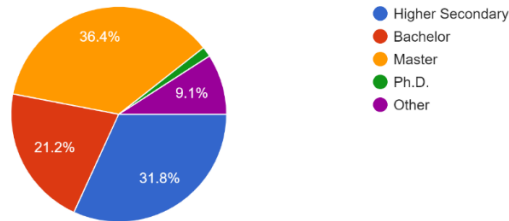
Figure 9 Highest level of education of the respondents

One respondent with a Ph.D. took part of this survey and biggest group of respondents had a Masters.

Nationality?

66 responses
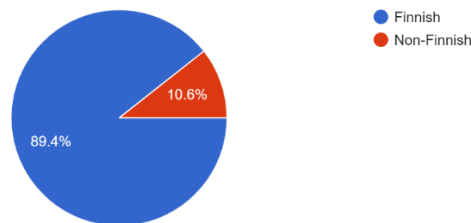
Figure 10 Nationality distribution of the respondents

For this survey the nationalities were divided between Finnish and non-Finnish. As can be seen from Figure 10 the major part of the respondents in this survey were Finnish with a strength of 59. Non-Finnish respondents were a total of 7.

What is your primary bank?

66 responses
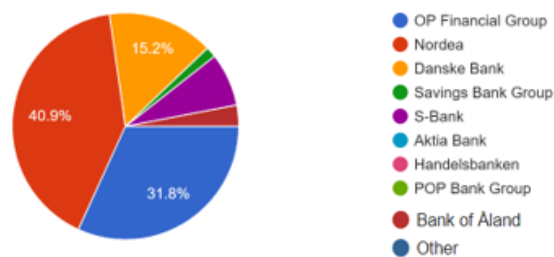
Figure 11 Primary bank distribution of the respondents

Most of the respondents followed the trend with being customers of the two biggest banks in Finland, Nordea and OP, with a close third in Danske Bank. Two of the respondents were customers of the small bank from the archipelago, Bank of Åland.

How many times do you use digital banking services per week?
66 responses
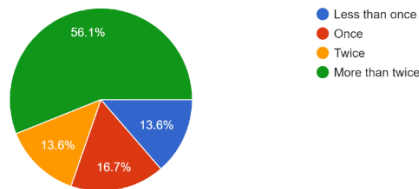
Figure 12 How often customers use digital banking services

Roughly half of the respondents uses their digital banking services more than twice per week and the rest were divided between twice, once and less than once.

Which platform do you prefer when using digital banking services?
66 responses
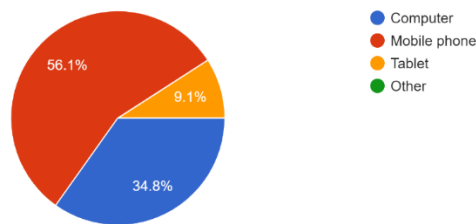
Figure 13 Preferred platform of respondents

Figure 13 shows that most respondents have already started to use their mobile phones as their primary platform for banking but people who are using a tablet is still few.

4.2 Reliability and Validity

For a research to be reliable its concept needs to be tested and the answer proved consistent. One way of measuring the reliability of a research is with the help of Cronbach's Alpha. When using Cronbach's Alpha, you measure if the combined value of a question group is higher than 0.70. If the value is over 0.70 it implies that the value is significant, and the reliability of the questions are proved. If the value is under 0.70 the results are not consistent, and the results are not reliable. Bryman, A. and Bell, E. (2011)

Figure 14 shows the six different groups; performance, effort, responsiveness, reliability, security and satisfaction and their values measured with Cronbach's Alpha. When looking at the values of Cronbach's Alpha from the Figure it is possible to see that all six of them are over 0.70 hence, they are proven reliable.

According to Aronsson, one way to test the validity of a research is the Levene's Test for Equality of Variances, see Figure 16. If the value for significance is over 0.05 the data is valid. In Figure 16 you can see that Q8 has a significance of 0.363 and is considered valid. When looking at Q9 you can see that the value for significance is 0.004 and the data for that question is not valid, in this case you should look at data from the line "Equal variances not assumed" instead of "Equal variances assumed" which is normally used. (Aronsson. 1999)

Scale: Performance

Case Processing Summary

		N	%
Cases	Valid	66	100,0
	Excluded[a]	0	,0
	Total	66	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,721	3

Scale: Effort

Case Processing Summary

		N	%
Cases	Valid	66	100,0
	Excluded[a]	0	,0
	Total	66	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,872	3

Scale: Responsiveness

Case Processing Summary

		N	%
Cases	Valid	66	100,0
	Excluded[a]	0	,0
	Total	66	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,732	3

Scale: Reliability

Case Processing Summary

		N	%
Cases	Valid	66	100,0
	Excluded[a]	0	,0
	Total	66	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,735	3

Scale: Security

Case Processing Summary

		N	%
Cases	Valid	66	100,0
	Excluded[a]	0	,0
	Total	66	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,792	2

Scale: Satisfaction

Case Processing Summary

		N	%
Cases	Valid	66	100,0
	Excluded[a]	0	,0
	Total	66	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,867	3

Figure 14 Cronbach's Alpha calculated in SPSS for the six different question groups regarding customer satisfaction in the digital banking services

4.3 Independent Samples T-Test

The statistics of the Independent Samples T-tests is presented in two figures for each demographic group that was analyzed. The Demographic groups that was chosen to be analyzed for this research was gender, age and nationality.

The first figure is about group statistics and presents the dividing between the groups, mean, standard deviation and standard error of mean for each question asked. In the second figure the Levene's Test and the Independent Samples T-test is presented. In Levene's test the f-value shows the variation of the means and the significance is calculated based on that. The Independent Samples T-test has a t-value which measures the difference between the groups, the closer to 0 the t-value is the smaller the difference between groups. DF stands for the degree of freedom and shows how much the values can vary without changing the calculation. Sig. (2-tailed) is a two tailed p-value. If the Sig. (2-tailed) is significant and over 0.05 the groups does not have a significant variation, if it is under 0.05 the groups have significant variations. (Aronsson. 1999)

4.3.2 Gender

In Figure 15 the dividing between what females and males has answered to the questionnaire is presented. The biggest differences can be seen in Q11 "I find it easy to learn how to use new digital banking services" where the mean for females are 3,17 respectively males 3,71. Q15 "Digital banking services make it easier to solve problems" had also a slightly bigger difference in the mean with females at 2,54 and males at 3,10.

From Figure 16 it is possible to see that only Q9 "I find Digital banking services quicker to use" did not pass the Levene's Test because the value is under 0.05 and not significant. This means that for Q9 the second row is used while the first row is be used for the other questions. When looking at data from the Sig. (2-tailed) column it is possible to see that most of the questions are over 0.05 which means they are significant, and the gender does not affect them significantly. However, Q11 "I find it easy to learn how to use new digital banking services", Q15 "Digital banking services make it easier to solve problems" Q23 "I have a positive opinion of digital banking services" and Q24 "I am satisfied with my

experience of digital banking services" all have a value lower than 0.05 which would imply that there are significant differences in how females and males responded to these questions. From the questions that had significant differences two were from the "satis-faction group" and would imply that females do not have as positive of a picture of digital banking services and their experiences are not as satisfied as the male customers.

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Q8. Performance	Female	24	3,71	,464	,095
	Male	42	3,76	,431	,067
Q9. Performance	Female	24	3,63	,495	,101
	Male	42	3,81	,397	,061
Q10.Performane	Female	24	3,17	,816	,167
	Male	42	3,31	,811	,125
Q11.Effort	Female	24	3,17	,761	,155
	Male	42	3,71	,554	,085
Q12.Effort	Female	24	3,13	,680	,139
	Male	42	3,33	,721	,111
Q13.Effort	Female	24	3,25	,676	,138
	Male	42	3,55	,670	,103
Q14.Responsiveness	Female	24	3,46	,658	,134
	Male	42	3,48	,707	,109
Q15.Responsiveness	Female	24	2,54	,833	,170
	Male	42	3,10	,850	,131
Q16.Responsiveness	Female	24	2,58	,881	,180
	Male	42	2,79	,813	,125
Q17.Reliability	Female	24	3,63	,495	,101
	Male	42	3,48	,594	,092
Q18.Realiability	Female	24	3,21	,658	,134
	Male	42	3,52	,634	,098
Q19.Reliability	Female	24	2,83	,761	,155
	Male	42	3,17	,762	,118
Q20.Security	Female	24	3,38	,647	,132
	Male	42	3,55	,705	,109
Q21.Security	Female	24	3,25	,737	,150
	Male	42	3,38	,825	,127
Q22.Satisfaction	Female	24	3,33	,565	,115
	Male	42	3,57	,547	,084
Q23.Satisfaction	Female	24	3,33	,565	,115
	Male	42	3,74	,445	,069
Q24.Satisfaction	Female	24	3,21	,588	,120
	Male	42	3,62	,539	,083

Figure 15 Group statistics from the responses in the in the survey divided by gender

Independent Samples Test

		Levene's Test for Equality of Variances				
		F	Sig.	t	df	Sig. (2-tailed)
Q8.Performance	Equal variances assumed	,841	,363	-,472	64	,638
	Equal variances not assumed			-,463	45,100	,646
Q9.Performance	Equal variances assumed	8,871	,004	-1,658	64	,102
	Equal variances not assumed			-1,562	40,050	,126
Q10.Performane	Equal variances assumed	,001	,970	-,687	64	,495
	Equal variances not assumed			-,685	47,740	,496
Q11.Effort	Equal variances assumed	1,340	,251	-3,364	64	,001
	Equal variances not assumed			-3,088	37,103	,004
Q12.Effort	Equal variances assumed	,807	,372	-1,152	64	,254
	Equal variances not assumed			-1,171	50,418	,247
Q13.Effort	Equal variances assumed	,001	,979	-1,731	64	,088
	Equal variances not assumed			-1,727	47,666	,091
Q14.Responsiveness	Equal variances assumed	,019	,890	-,101	64	,920
	Equal variances not assumed			-,103	50,906	,918
Q15.Responsiveness	Equal variances assumed	,296	,589	-2,564	64	,013
	Equal variances not assumed			-2,578	48,816	,013
Q16.Responsiveness	Equal variances assumed	,731	,396	-,944	64	,349
	Equal variances not assumed			-,923	44,870	,361
Q17.Reliability	Equal variances assumed	2,869	,095	1,038	64	,303
	Equal variances not assumed			1,091	55,437	,280
Q18.Realiability	Equal variances assumed	,239	,626	-1,918	64	,060
	Equal variances not assumed			-1,899	46,525	,064
Q19.Reliability	Equal variances assumed	,337	,564	-1,709	64	,092
	Equal variances not assumed			-1,710	48,058	,094
Q20.Security	Equal variances assumed	,009	,923	-,985	64	,328
	Equal variances not assumed			-1,009	51,532	,318
Q21.Security	Equal variances assumed	,234	,630	-,644	64	,522
	Equal variances not assumed			-,664	52,589	,509
Q22.Satisfaction	Equal variances assumed	,038	,846	-1,681	64	,098
	Equal variances not assumed			-1,666	46,770	,102
Q23.Satisfaction	Equal variances assumed	3,958	,051	-3,219	64	,002
	Equal variances not assumed			-3,017	39,436	,004
Q24.Satisfaction	Equal variances assumed	,164	,687	-2,881	64	,005
	Equal variances not assumed			-2,812	44,594	,007

Figure 16 Independent Samples T-test and Levene's Test conducted on females respectively males

34

4.3.3 Age

The questionnaire originally had five different age groups but in this analysis the groups have been combined in two bigger groups of 18-34 years old and over 35 years old in order to see the bigger picture. When divided in age groups, no big differences can be found in the mean as can be seen in Figure 17.

Levene's Test gives a significant number to all questions expect Q8 and Q18 which is analyzed according to the second row, see Figure 18. When looking at the Sig. (2-tailed) for Q8 the first row would not be significant but because of the significance in Levene's Test we are looking at the second row which is significant. This implies that there are no big variations in Q8. In age groups all the Sig. (2-tailed) values are over 0.05 which implies that there are no clear differences between the age groups measured and customer satisfaction.

Group Statistics

	Age	N	Mean	Std. Deviation	Std. Error Mean
Q8. Performance	18-34	48	3,81	,394	,057
	35+	18	3,56	,511	,121
Q9. Performance	18-34	48	3,79	,410	,059
	35+	18	3,61	,502	,118
Q10.Performane	18-34	48	3,33	,781	,113
	35+	18	3,06	,873	,206
Q11.Effort	18-34	48	3,58	,679	,098
	35+	18	3,33	,686	,162
Q12.Effort	18-34	48	3,27	,644	,093
	35+	18	3,22	,878	,207
Q13.Effort	18-34	48	3,44	,649	,094
	35+	18	3,44	,784	,185
Q14.Responsiveness	18-34	48	3,52	,618	,089
	35+	18	3,33	,840	,198
Q15.Responsiveness	18-34	48	2,98	,863	,125
	35+	18	2,67	,907	,214
Q16.Responsiveness	18-34	48	2,65	,863	,125
	35+	18	2,89	,758	,179
Q17.Reliability	18-34	48	3,58	,539	,078
	35+	18	3,39	,608	,143
Q18.Realiability	18-34	48	3,48	,652	,094
	35+	18	3,22	,647	,152
Q19.Reliability	18-34	48	3,08	,767	,111
	35+	18	2,94	,802	,189
Q20.Security	18-34	48	3,48	,714	,103
	35+	18	3,50	,618	,146
Q21.Security	18-34	48	3,29	,849	,123
	35+	18	3,44	,616	,145
Q22.Satisfaction	18-34	48	3,50	,583	,084
	35+	18	3,44	,511	,121
Q23.Satisfaction	18-34	48	3,67	,519	,075
	35+	18	3,39	,502	,118
Q24.Satisfaction	18-34	48	3,48	,583	,084
	35+	18	3,44	,616	,145

Figure 17 Group statistics from the responses in the in the survey divided by age

36

		Independent Samples Test				
		Levene's Test for Equality of Variances				
		F	Sig.	t	df	Sig. (2-tailed)
Q8.Performance	Equal variances assumed	10,295	,002	2,169	64	,034
	Equal variances not assumed			1,928	24,984	,065
Q9.Performance	Equal variances assumed	6,101	,016	1,497	64	,139
	Equal variances not assumed			1,365	26,013	,184
Q10.Performane	Equal variances assumed	,366	,548	1,246	64	,217
	Equal variances not assumed			1,184	27,838	,246
Q11.Effort	Equal variances assumed	,135	,715	1,329	64	,189
	Equal variances not assumed			1,322	30,305	,196
Q12.Effort	Equal variances assumed	1,816	,183	,246	64	,806
	Equal variances not assumed			,214	24,187	,832
Q13.Effort	Equal variances assumed	,119	,731	-,037	64	,971
	Equal variances not assumed			-,034	26,245	,974
Q14.Responsiveness	Equal variances assumed	1,391	,243	,991	64	,325
	Equal variances not assumed			,863	24,249	,396
Q15.Responsiveness	Equal variances assumed	,726	,397	1,292	64	,201
	Equal variances not assumed			1,263	29,259	,217
Q16.Responsiveness	Equal variances assumed	2,497	,119	-1,052	64	,297
	Equal variances not assumed			-1,116	34,558	,272
Q17.Reliability	Equal variances assumed	,537	,467	1,260	64	,212
	Equal variances not assumed			1,193	27,650	,243
Q18.Realiability	Equal variances assumed	,660	,420	1,429	64	,158
	Equal variances not assumed			1,434	30,807	,162
Q19.Reliability	Equal variances assumed	,171	,680	,647	64	,520
	Equal variances not assumed			,634	29,406	,531
Q20.Security	Equal variances assumed	,316	,576	-,109	64	,913
	Equal variances not assumed			-,117	35,092	,908
Q21.Security	Equal variances assumed	1,824	,182	-,696	64	,489
	Equal variances not assumed			-,804	42,163	,426
Q22.Satisfaction	Equal variances assumed	,973	,328	,356	64	,723
	Equal variances not assumed			,378	34,666	,708
Q23.Satisfaction	Equal variances assumed	,086	,770	1,953	64	,055
	Equal variances not assumed			1,984	31,556	,056
Q24.Satisfaction	Equal variances assumed	,052	,821	,212	64	,833
	Equal variances not assumed			,207	29,165	,837

Figure 18 Independent Samples T-test and Levene's Test conducted on age groups 18-34 and 35+

37

4.3.4 Nationality

For this survey nationalities were divided into Finnish and non-Finnish. As seen in Figure 19, the sample size of non-Finnish people was considerably smaller than the group with Finnish respondents. When analyzing the data, various big differences can be seen in the mean. To have stronger data, a bigger sample size of non-Finnish customers would be needed but by looking strictly at the mean this would imply that non-Finnish customers are not as satisfied on the digital banking services as Finnish customers are.

According to Levene's Test only Q24 follows the second row of data. The questions; 11, 13, 20, 21 and 24 does not have a significant value which means that they are questions with a lot of variation. Two of the questions which have clear differences are connected to performance and two are from the group of security questions. This would mean that if the sample sizes would be excluded the non-Finnish customers does not consider the digital banking services to be as secure and convenient as the Finnish customers do.

Group Statistics

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
Q8. Performance	Finnish	59	3,76	,429	,056
	Non-Finnish	7	3,57	,535	,202
Q9. Performance	Finnish	59	3,76	,429	,056
	Non-Finnish	7	3,57	,535	,202
Q10.Performane	Finnish	59	3,25	,801	,104
	Non-Finnish	7	3,29	,951	,360
Q11.Effort	Finnish	59	3,59	,591	,077
	Non-Finnish	7	2,86	1,069	,404
Q12.Effort	Finnish	59	3,31	,701	,091
	Non-Finnish	7	2,86	,690	,261
Q13.Effort	Finnish	59	3,53	,626	,081
	Non-Finnish	7	2,71	,756	,286
Q14.Responsiveness	Finnish	59	3,49	,679	,088
	Non-Finnish	7	3,29	,756	,286
Q15.Responsiveness	Finnish	59	2,95	,879	,114
	Non-Finnish	7	2,43	,787	,297
Q16.Responsiveness	Finnish	59	2,71	,832	,108
	Non-Finnish	7	2,71	,951	,360
Q17.Reliability	Finnish	59	3,54	,567	,074
	Non-Finnish	7	3,43	,535	,202
Q18.Realiability	Finnish	59	3,42	,649	,084
	Non-Finnish	7	3,29	,756	,286
Q19.Reliability	Finnish	59	3,10	,781	,102
	Non-Finnish	7	2,57	,535	,202
Q20.Security	Finnish	59	3,54	,652	,085
	Non-Finnish	7	3,00	,816	,309
Q21.Security	Finnish	59	3,42	,747	,097
	Non-Finnish	7	2,57	,787	,297
Q22.Satisfaction	Finnish	59	3,51	,569	,074
	Non-Finnish	7	3,29	,488	,184
Q23.Satisfaction	Finnish	59	3,61	,526	,068
	Non-Finnish	7	3,43	,535	,202
Q24.Satisfaction	Finnish	59	3,54	,567	,074
	Non-Finnish	7	2,86	,378	,143

Figure 19 Group statistics from the responses in the in the survey divided by nationality

39

Independent Samples Test

		Levene's Test for Equality of Variances				
		F	Sig.	t	df	Sig. (2-tailed)
Q8.Performance	Equal variances assumed	2,194	,143	1,087	64	,281
	Equal variances not assumed			,913	6,948	,392
Q9.Performance	Equal variances assumed	2,194	,143	1,087	64	,281
	Equal variances not assumed			,913	6,948	,392
Q10.Performane	Equal variances assumed	,685	,411	-,096	64	,923
	Equal variances not assumed			-,084	7,046	,935
Q11.Effort	Equal variances assumed	3,790	,056	2,830	64	,006
	Equal variances not assumed			1,790	6,442	,120
Q12.Effort	Equal variances assumed	,427	,516	1,601	64	,114
	Equal variances not assumed			1,621	7,548	,146
Q13.Effort	Equal variances assumed	,291	,591	3,175	64	,002
	Equal variances not assumed			2,730	7,011	,029
Q14.Responsiveness	Equal variances assumed	,038	,847	,750	64	,456
	Equal variances not assumed			,688	7,197	,513
Q15.Responsiveness	Equal variances assumed	,086	,770	1,495	64	,140
	Equal variances not assumed			1,634	7,892	,141
Q16.Responsiveness	Equal variances assumed	,008	,928	-,007	64	,994
	Equal variances not assumed			-,006	7,131	,995
Q17.Reliability	Equal variances assumed	,250	,619	,505	64	,615
	Equal variances not assumed			,529	7,695	,612
Q18.Realiability	Equal variances assumed	,056	,814	,524	64	,602
	Equal variances not assumed			,463	7,089	,657
Q19.Reliability	Equal variances assumed	,420	,519	1,742	64	,086
	Equal variances not assumed			2,344	9,364	,043
Q20.Security	Equal variances assumed	,008	,927	2,028	64	,047
	Equal variances not assumed			1,695	6,938	,134
Q21.Security	Equal variances assumed	,031	,861	2,838	64	,006
	Equal variances not assumed			2,724	7,345	,028
Q22.Satisfaction	Equal variances assumed	2,800	,099	,993	64	,325
	Equal variances not assumed			1,121	8,067	,295
Q23.Satisfaction	Equal variances assumed	,000	,990	,863	64	,392
	Equal variances not assumed			,851	7,446	,421
Q24.Satisfaction	Equal variances assumed	11,981	,001	3,105	64	,003
	Equal variances not assumed			4,261	9,561	,002

Figure 20 Independent Samples T-test and Levene's Test conducted groups Finnish and non-Finnish people

4.4 Trend and Future

"Payments and the use of different methods of payment are influenced by the mega trends and drivers of change at work in society as a whole. Digitalisation has already strongly modified traditional practices in many different fields, and, for example, travel bookings and music shopping have largely moved online. This change in customer behaviour has turned traditional practices in these sectors completely on their head." (Kemppainen. 2017)

New digital applications and other online banking services increase in amount all the time. While this happens also the customers use digital banking services more often. One of the research questions of this study was to answer if there are any trends in the digital banking services and what is the customers perspective regarding the future of digital banking services.

Figure 21 implies that over 71% of the respondents strongly agree with the with the statement that they are using digital banking services more than two years ago. Most people also agree with the statement that digital banking services have improved during the last two years. When going back to Figure 12 you can see that 56.1% of the respondents uses digital banking services more than twice a week. If compared to results from Miah's (2018) research a clear increase can be seen. Miah's survey had options for; more than twice 29,47%, once 21,58%, seldom 1,05% and twice 47,89% per week.
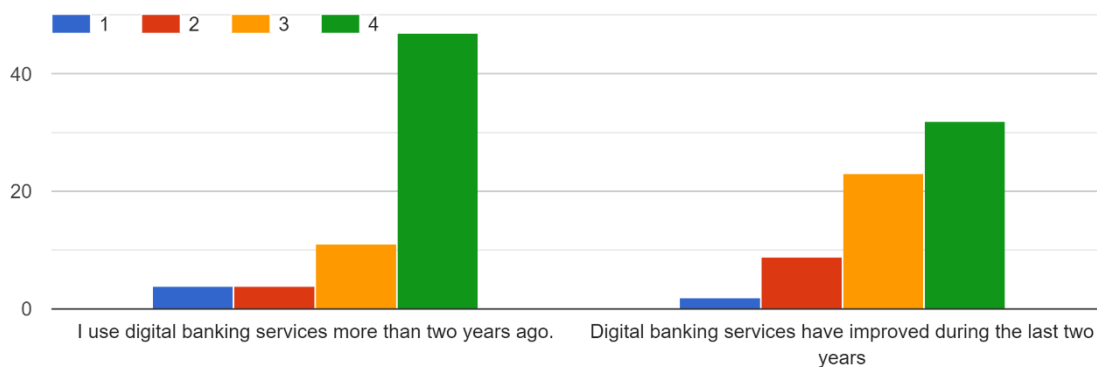

Figure 21 Shows the respondents answers regarding questions of trends in the digital banking services

"Embracing digital technology is an essential part of future-proofing a bank. The financial industry is going through a major transformation, driven by the whole range of digital technologies and the explosive growth of data. Regulators, including central banks, are aiming at finding the right balance between regulation and innovation, so that consumers and businesses can benefit from new possibilities, while maintaining financial stability and a level playing field." (Rehn. 2018)

While it is unarguable that the online banking is evolving in an extremely fast phase and most of the banks are having a race to improve their digital services before the others, the banks are also often getting bad response from the customers regarding the renewals. Because of this it is interesting to look at the customers perspective about how the digital banking services looks like. Figure 22 shows the answers for the statements "I intend to use digital banking services more often in the future" respectively "Digital banking services will be my primary way to deal with banking in the future". The second statement has a strong agreement among the respondents, but the first statement also have some who disagree.
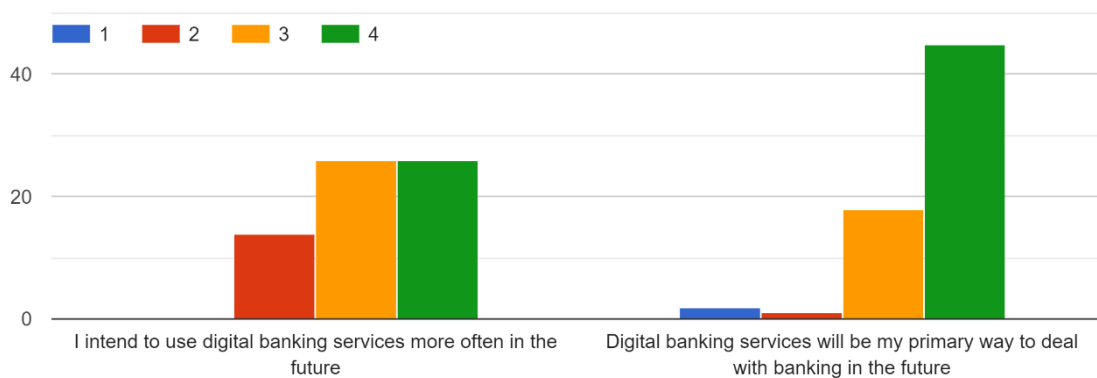

Figure 22 Customers future perspective of digital banking services

4.5 Theories

When conducting an exploratory study with an inductive approach the last part is to form theories from the observations. In this chapter the research questions and theories for them is discussed.

4.5.2 Research Question 1

RQ 1. Does the customer satisfaction for digital banking services in Finland significantly differ between different demographic customer groups?

There were less variations than the author originally thought but according to the analyzes there are some variations between different demographic groups. The only dividing that gave plenty of different questions with a significant difference was the nationalities. While the results might be correct, this dividing had the smallest sample group of the analyses with only seven respondents which might affect the result. By combining the age groups to only two the author recognizes it might affect the results and they could have been different.

The information analyzed showed some variations, but they were not that significant except for nationality. However, the sample groups were too small to be able to reliably state differences.

4.5.3 Research Question 2

RQ 2. What is the trend of customer satisfaction for digital banking services in Finland?

Digital banking services show an increasing trend. Secondary data, comparing data to an older survey and answers from respondents all support this statement.

4.5.4 Research Question 3

RQ 3. What is the customers perspective regarding the future of digital banking services in Finland?

Even if the customers are considering digital banking services as their primary way to deal with banking in the future, they are not as eager to push for a change as the banks. The human nature likes to stay in a comfort zone and does not seek for change.

5 CONCLUSION

The aim was to find variations for customer satisfaction for digital banking services in different customer groups. Secondary aims were to find trends and review customers perspective regarding the future of digital banking services. In order to answer these questions, the author conducted a survey with different statements about customer satisfaction. The sample sizes were too small for some groups to be able to get valid data and in order get proper data at least non-Finnish and older age groups should be more representative. However, some findings were made between different nationalities. The trend of the banking industry is clearly towards an increased usage of online banking services. When banks provide different digital services and applications it gets easier to be aware you personal banking details when it takes less than a minute to check it from the phone. A big part of customers still does not feel secure with mobile applications when it comes to banking. Even if customers do not want the services to change as eagerly as the banks push for it the customers still recognize digital banking services their primary banking method in the future.

5.1 Further Research

For future research the sample sizes should be significantly bigger and differences between banks could be analyzed more thorough. The new PSD2 Directive is also going to come fully in action later this year. With allowing new contenders on the banking market who does not need to play with the same rules as banks the banking industry is facing a huge change.

REFERENCES

Aktia Bank. Official website. [online]. 2019. Available at: https://www.aktia.com/en/
Accessed 10.5.2019

Aronsson, Åke. 1999. SPSS En introduktion till basmodulen. Studentlitteratur.
Accessed 6.6.2019

Bank of Finland. 2018. Bank of Finland begins to publish statistics on credit institutions' market shares. Available at:
https://www.suomenpankki.fi/en/Statistics/mfi-balance-sheet/older-news/2018/suomen-pankki-alkaa-julkaista-tilastoa-luottolaitosten-markkinaosuuksista/
Accessed 9.5.2019

Bank of Åland. Official website. 2019. [online]. Available at:
https://www.alandsbanken.fi/
Accessed 10.5.2019

Bryman, Alan (2004) *Social Research Methods.* (2). Oxford University Press. 592 pages.
Accessed 6.5.2019

Bryman, Alan (1988) *Quantity and Quality in Social Research.* Routledge. 208 pages.
Accessed 3.3.2019

Bryman, A. and Bell, E. (2011) Business Research Methods. Oxford University Press Inc.
Accessed 6.6.2019

Danske Bank. Official website. 2019. [online]. Available at: https://danskebank.com/fi
Accessed 9.5.2019

Directive 2015/2366/EU

of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC. Available at:

https://ec.europa.eu/info/law/payment-services-psd-2-directive-eu-2015-2366/law-details_en

Accessed 8.3.2019

Laitinen, Heidi. 2018. EPSI Rating Pankki ja rahoitus 2018 report. Available at:
http://www.epsi-finland.org/report/pankki-ja-rahoitus-2018/
Accessed 10.5.2019

Finance Finland. 2017. Säästäminen, luotonkäyttö ja maksutavat. Available at:
http://www.finanssiala.fi/materiaalit/SLM_2017_Tutkimusraportti.pdf
Accessed 9.5.2019

Finance Finland. 2019. Finns leading online banking users in Europe. Available at:
http://www.finanssiala.fi/en/news/Pages/Finns-leading-online-banking-users-in-Europe.aspx
Accessed 9.5.2019

Gi-Du Kang and Jeffrey James. (2004). Service Quality Dimensions: an Examination of Gronroos's Service Quality Model. Managing Service Quality.
Accessed 6.6.2019

Handelsbanken. Official website. 2019. [online]. Available at: https://www.handelsbanken.fi
Accessed 10.5.2019

Hayes, Bob E. (2008) Measuring Customer Satisfaction and Loyalty: Survey Design, Use, and Statistical Analysis Methods. (3). ASQ Quality Press. 311 pages.
Accessed 10.5.2019

Kemppainen, Kari. (2017). Payments becoming increasingly real time and less visible. Bank of Finland Bulletin. Available at: https://www.bofbulletin.fi/en/2017/2/payments-becoming-increasingly-real-time-and-less-visible/
Accessed 6.6.2019

Kotler, P. and Keller, K. L. (2009). Marketing Management. Harlow: Pearson.
Accessed 10.5.2019

Miah, Masum MD. (2018). Users' Satisfaction of Digital Banking Services in Finland. Åbo Akademi. Available at: https://www.doria.fi/bitstream/han-dle/10024/162056/miah_md_masmud.pdf?sequence=2&isAllowed=y
Accessed 5.6.2019

Nordea. Official website. 2019. [online]. Available at:
https://www.nordea.fi/en/
Accessed 9.5.2019

OP Financial Group. Official website. 2019. [online]. Available at:
https://www.op.fi/home-page

Oxford Dictionaries. 2019. [online] Available at: https://en.oxforddictionaries.com/defi-nition/us/e-banking
Accessed 8.5.2019

Pikkarainen Tero, Pikkarainen Kari, Karjaluoto Heikki, Pahnila Seppo. (2004). Con-sumer Acceptance of Online Banking: An Extension of the Technology Acceptance Model. Internet Research.
Accessed 6.6.2019

POP Bank Group. Official website. 2019. [online]. Available at:
https://www.poppankki.fi/fi
Accessed 10.5.2019

Rehn, Olli. (2018). Future proofing your bank? Digital transformation and regulatory reform in the financial sector. Bank of Finland. Available at: https://www.su-omenpankki.fi/en/media-and-publications/speeches-and-interviews/2018/governor-olli-rehn-future-proofing-your-bank/
Accessed 6.6.2019

Saunders, M. Lewis, P. Thornhill, A. (2009). Research Methods for Business Students. (5). Pearson Education Limited.
Accessed 10.5.2019

Savings Bank Group. Official website. 2019. [online]. Available at:
https://www.saastopankki.fi/en/savingsbanksgroup/information-about-the-savings-banks-group
Accessed 10.5.2019

S-Bank. Official website. 2019. [online]. Available at:
https://www.s-pankki.fi/fi/
Accessed 10.5.2019
Venkatesh, James Y. L. Thong and Xin Xu. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. MIS Quarterly.
Accessed 6.6.2019

Udo G.J. et al. (2010). An assessment of Customers. E-service Quality Perception, Satisfaction and Intention. International Journal of Information Management.
Accessed 6.6.2019

Bibliography:

DIAS. Official website. 2019. [online]. Available at: https://dias.fi/en/index.html
Accessed 10.5.2019

Terhemaa, Ahti. 2016. Kauppalehti. Asuntolainaajat vaihtavat pankkia halvemman lai-
nan perässä. Available at:
https://www.kauppalehti.fi/uutiset/asuntolainaajat-vaihtavat-pankkia-halvemman-
lainan-perassa/2c4045f2-5770-3f57-a1f0-6cadf5bd7866
Accessed 10.5.2019

Pavlyushchenko, Dmitriy. 2017 Digitalization of Retail Financial Services. Available at:
https://www.theseus.fi/bitstream/handle/10024/139929/Pavlyushchenko_Dmit-
riy.pdf?sequence=1&isAllowed=y
Accessed 8.3.2019

APPENDICES

Variable	Label	Question	Source
Performance expectancy	Q1, Q2 Q3	1) Digital banking services are useful in my daily life. 2) I find Digital banking services quicker to use. 3) Digital banking services help me to be more productive.	Adopted and modified from Venkatesh et al. (2012)
Effort expectancy	Q4, Q5 Q6	4) I find it easy to learn how to use new digital banking services. 5) Digital banking services are clear and easy to understand. 6)Digital banking services are easy to use.	Adopted and modified from Venkatesh et al. (2012)
Responsiveness	Q7, Q8 Q9	7) Digital banking services offer a quick service 8) Digital banking services make it easier to solve problems 9) Questions and requests made through digital banking services are processed quickly	Adopted and modified from Gi-Du Kang & Jeffrey James (2004) and Tero Pikkarainen et al. (2004)
Reliability	Q10, Q11, Q12	10) Overall, Digital banking services are reliable 11) Digital banking services deliver the promised service on time 12) Digital banking services are performed without errors	Adopted and modified from Gi-Du Kang & Jeffrey James (2004) and Tero Pikkarainen et al. (2004)
Security	Q13 Q14	13) Digital banking services are secure 14) When using digital banking services my privacy is safe	Adopted and modified from Tero Pikkarainen et al. (2004)
Customer satisfaction	Q15 Q16 Q17	15) Overall, I am satisfied with digital services that my bank provides. 16) I have a positive opinion of digital banking services 17)I am satisfied with my experience of digital banking services	Adopted and modified from G. J. Udo et al. (2010)

Digital Banking Services Customer Satisfaction

Thank you for participating in this questionnaire about customer satisfaction in digital banking services. All responses are anonymous and will not be used for any other purposes than my thesis. This questionnaire will take you approximately 5-10 minutes to answer. If you have any questions regarding the questionnaire please do not hesitate to email me at: nyqvistf@arcada.fi

*Required

1. **Have you ever used any digital banking services provided by a Finnish bank? (Any services on the website or mobile applications are considered as digital banking services)** *

   Mark only one oval.

   ( ) Yes - Please continue to the next question

   ( ) No - Thank you for the interest, please end the survey

2. **What is your gender?** *

   Mark only one oval.

   ( ) Female

   ( ) Male

   ( ) Other

3. **What is your age?** *

   Mark only one oval.

   ( ) 18 to 24

   ( ) 25 to 34

   ( ) 35 to 46

   ( ) 47 to 59

   ( ) 60+

4. **What is the highest level of education you have completed?** *

   Mark only one oval.

   ( ) Higher Secondary

   ( ) Bachelor

   ( ) Master

   ( ) Ph.D.

   ( ) Other

5. **Nationality?** *

   Mark only one oval.

   ( ) Finnish

   ( ) Non-Finnish

6. **What is your primary bank?** *

Mark only one oval.

- ( ) OP Financial Group
- ( ) Nordea
- ( ) Danske Bank
- ( ) Savings Bank Group
- ( ) S-Bank
- ( ) Aktia Bank
- ( ) Handelsbanken
- ( ) POP Bank Group
- ( ) Bank of Åland
- ( ) Other

7. **How many times do you use digital banking services per week?** *

Mark only one oval.

- ( ) Less than once
- ( ) Once
- ( ) Twice
- ( ) More than twice

8. **Which platform do you prefer when using digital banking services?** *

Mark only one oval.

- ( ) Computer
- ( ) Mobile phone
- ( ) Tablet
- ( ) Other

Please read the following statements and choose the number that represent best your opinion (Strongly disagree - 1, Disagree - 2, Agree - 3, Strongly agree -4).

9. *

Mark only one oval per row.

	1	2	3	4
Digital banking services are useful in my daily life	( )	( )	( )	( )
I find Digital banking services quicker to use	( )	( )	( )	( )
Digital banking services help me to be more productive	( )	( )	( )	( )

10. *

Mark only one oval per row.

	1	2	3	4
I find it easy to learn how to use new digital banking services	⬭	⬭	⬭	⬭
Digital banking services are clear and easy to understand	⬭	⬭	⬭	⬭
Digital banking services are easy to use	⬭	⬭	⬭	⬭

11. *

Mark only one oval per row.

	1	2	3	4
Digital banking services offer a quick service	⬭	⬭	⬭	⬭
Digital banking services make it easier to solve problems	⬭	⬭	⬭	⬭
Questions and requests made through digital banking services are processed quickly	⬭	⬭	⬭	⬭

12. *

Mark only one oval per row.

	1	2	3	4
Overall, digital banking services are reliable	⬭	⬭	⬭	⬭
Digital banking services deliver the promised service on time	⬭	⬭	⬭	⬭
Digital banking services are performed without errors	⬭	⬭	⬭	⬭

13. *

Mark only one oval per row.

	1	2	3	4
Digital banking services are secure	⬭	⬭	⬭	⬭
When using digital banking services my privacy is safe	⬭	⬭	⬭	⬭

14. *

Mark only one oval per row.

	1	2	3	4
Overall, I am satisfied with digital services that my bank provides	⬭	⬭	⬭	⬭
I have a positive opinion of digital banking services	⬭	⬭	⬭	⬭
I am satisfied with my experience of digital banking services	⬭	⬭	⬭	⬭

15. *

Mark only one oval per row.

	1	2	3	4
I use digital banking services more than two years ago.	◯	◯	◯	◯
Digital banking services have improved during the last two years	◯	◯	◯	◯

16. *

Mark only one oval per row.

	1	2	3	4
I intend to use digital banking services more often in the future	◯	◯	◯	◯
Digital banking services will be my primary way to deal with banking in the future	◯	◯	◯	◯