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Mobile banking application post adoption characteristics in Estonia

Master thesis

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Name and signature of supervisor: Isaac Nana Akuffo
Allowed for defense on …………………………………………………….

I have written this master's thesis independently. All viewpoints of other authors, literary sources and data from elsewhere used for writing this paper have been referenced.

(signature of author)

Abstract

This thesis aims to study post adoption user characteristics of mobile banking applications in Estonia more specifically how important is the technology for Estonian Bank account holders. Furthermore, it focuses on understanding if Estonian banks follow the approved application creation steps. For this research 212 beneficiary were surveyed. However only 195 are using m-banking applications, full data was used for analyzing different general characteristics such as internet and mobile phone usage around the country. Analysis is following Mixed research design more specifically Embedded. The findings revealed that usage of bank applications is quite popular in Estonia as majority of interviewed people are using it 3-5 days a week. Moreover, most of the Estonian bank account holders treat the product as highly important. In spite of the fact that usage of mobile banking application is high in the county, the study acknowledged some defects that might be taken into consideration from Banking sector.

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1. Introduction

Despite the fact that several researches are done on how important mobile banking is in general and how banks are developing this innovation, there are limited studies about post adoption of mobile bank applications from customers perspective.

As long as there is a gap in knowing what is the consumers' attitude towards the mobile banking application after they use it, this thesis aims to study how important the mobile banking app is for users, specifically within Estonian market.

This thesis reviews only mobile banking applications because it is a good example of the innovation technology and there are some thoughts that mobile bank applications are not as customer friendly as they should be. This claim is going to be investigated further below.

To start with, technologies have been developing through the years and 21st century became a period when every approach is going from traditional to electronic. One of the clear examples of the technological achievements is Mobile banking and applications created by banks. E-creation mostly is focused on cutting the living cost of the business. Creation of mobile banking was not exclusion.

The inability of banking services for low income society first lead the world to microfinance development (Armendariz and Marduch 2005) and as microfinance sector has been growing by 30% per annum over the last few decades, it has become a possible source of hope to drive out poverty (Ashta, 2010). During the years number of small amount transactions grew and there was a need for technology to reduce operation costs and increase outreach. One technology to make this happen is mobile banking.

Financial institutions use market advantage by offering a variety of value added services to customers through the use of mobile banking (Bankole and Brown, 2011). In the mobile applications nowadays there is an ability to pay domestic utilities, transfer money everywhere in the world, make a loan request and get it smoothly, purchase other currencies, etc.

In the interest of clarity, an application is a customized software that is downloaded and installed in the smartphones or tablets both in Andoid and iOS operational systems (Balabanoff 2014). (Ibid) Applications are created to make e-actions instantly. It allows users to perform certain tasks and functions as well as access different types of information and services.

To move to the mobile banking, its history starts from IVR – Interactive Voice Response. IVR is a technology that interacts with callers, collects appropriate information and delivers to relevant destination. The next step of technology development was SMS – Short Message Service. SMS was used to check current balance and transactions, The SMS service was followed by WAP – Web Application Protocol based functionalities. Banking sector is aiming to provide services to clients through mobile bank applications, for example consumers can request their account information and financial banking related services and receive them within one platform.

Mobile banking is said to be one of the fastest growing markets and is spreading at the same rate as mobile phones (Alafeef, Singh, and Ahmad,2011). Statistics from 2012 show that owning and using mobile phones has driven the sales to 1.75 billion mobile units along with 472 million smartphone sales compared to 2011 sales of 477 million units (Balabanoff 2014). Mobile devices are expected by consumers to be used not only for communication but also for requirements of their daily lifestyle. Developers of the mobile platforms such as smartphones and tablets are being concentrated to create applications that meet the needs of current consumers (Rodríguez-Ardura, Ryan, & Gretzel, 2012). Applications are being

created for consumers to make their life easier and handy in this technologically developed world.

Globally, banks have had to steadily innovate to provide beneficial and safe services to their critical and adapted customers (Bauer, Barnes, Reichardt, & Neumann, 2005). Usage of innovative technologies in banking industry has become more advanced over the last decade (Balabanoff 2014). Creation of mobile banking application opened a new opportunity for a banking industry in delivering financial services not only to financial institutions (banks) but also third parties.

Previous researchers studied the benefits of mobile banking and potential added values to it. Moreover, Laukkanen and Laurone (2005) are claiming that mobile banking helped increase efficiency of bill payments as technology can be used without any limitation of time and location. This thesis will investigate if the statement applies to Estonian bank account holders. Laukkanen (2007) assures that mobile banking is an innovation technology as it allows users to perform bank transactions anywhere and anytime with their own mobile devices.

To make all the above mentioned functional it is undeniable that users should have first the mobile device and the second access to the internet. Hence, Estonia was chosen as the main market of this research as the percentage of internet usage is noticeably growing through the years. Moreover, nearly 95% of Estonia's 1.38 million inhabitants are using mobile phones (Järv et al., 2012)

As described above, analyzing online banking phenomenon and mobile banking is quite common topic among researchers. Even though Chian-son (2014) emphasizes that usage of mobile banking is superior than internet banking in his research, there is no findings regarding this difference among Estonian users (Chian-Son Yu, 2014). So the thesis will try to examine if mobile banking usage is preferable over the internet banking among Estonian bank consumers or not. (The Graph 3 below shows the outcome of the research on this matter)

1.1. Research questions

Research questions of this thesis is aiming to understand as follows:
1. How important are mobile banking applications from post adoption perspective among Estonian bank account holders according to their usage behavior?
2. What are the challenges in the usage of Estonian mobile bank applications?

2. Literature review

In this paragraph scientific articles and literature will be analyzed in order to support research objectives. Considering the fact that the main research technology – mobile banking is precisely connected to Internet, this part of the thesis will overview the history of internet and how it is connected to the research aim. Moreover, since the thesis target country is Estonia, the internet consumption in the country will be outlined too.

The literature review of Internet in Estonia will be used to compare other researchers findings to the research done for this thesis below in Discussion of findings.

2.1. Internet in Estonia

The history of the internet brings us back to 1960s in the United states. There was need to maintain communication between distant locations from scientists perspective. Early internet

concept was only implemented in American universities, research departments and telecommunication companies (Cohen, 2011). The logic of the technology is the protocol that allows two computers/devices to communicate with each other(Ibid)

In the world there are 3.1 billion people who have an access to the internet (West, 2015). According to Global Internet user Survey, majority of society thinks that internet should even be a basic human right and 96% of them enters the internet at least once per day (GIUS, 2012). In terms of Internet usage Estonia has been quite progressive. One of the reaseons why the country was chosen is exactly this behavior. The table below (Table 1) shows, the number of internet users were growing continuously.

Table 1 Internet Usage and population statistics (Internet world stats, 2012)

Year	Users	Population	% pop.
2000	366,600	1,299,000	28.2 %
2004	621,000	1,344,840	46.2 %
2006	690,000	1,332,987	51.8 %
2007	760,000	1,332,987	57.0 %
2010	969,700	1,291,170	75.1 %
2012	993,785	1,274,709	78.0 %

Source: https://www.internetworldstats.com/eu/ee.htm

The research has shown that in the ten most visited Estonian homepages the one of the first is Internet bank portals (Andre Krull, 2003). Around 70-80% of the internet users in Estonia are using internet banking (Sokolov, 2007), this statistics strengthen the fact that Estonia was chosen as a research country.

Other than Internet, while discussing the Mobile banking phenomenon it is crucial to deliberate the preliminary technology that is Online as known as Internet banking too. There are many debates about whether one solution has advantage over another, hence this thesis will try to collect all thoughts spread in the literature and compare it to the view of bank account holders in Estonia later on in Discussion of findings.

2.2. Mobile banking vs online/internet banking

Internet has become a weapon for banks to operate, compete and deliver services to their users. Implementing internet banking allowed banks to distribute flexible financial management tool to their customers. Online banking supports consumers to execute different banking transactions through the bank's web page (Tan and Teo, 2000)

Technology gave banks opportunity to establish virtual branches and deliver the product to their customers online (Furst, et al.,2002)

Usage of mobile phones over last years has been impressive (Obaidat et al., 2012) Hence it became necessary for businesses to become flexible towards the technology.

Bank transactions nowadays are preferably done by mobile phones than other methods (Shambare, 2013). Customers are now accessible through bank's own mobile application from where bank can provide any kind of information to monetize the product (Luštšik, 2003).

To start with pros of the technology, mobile banking is appreciated by users because it saves their time to perform financial activities no matter where they are (Mallat, et al., 2004). Consumers of mobile banking are able to get attractive opportunities from the bank, such as:

easy access to their bank account, transfer money, pay different bills, monitor balance, etc. (Ahmed, et al., 2017)

According to Chandran (2014), there are several advantages that should be emphasized: Mobile banking is believed to be more secure than internet banking is. It saves users time as they do not need to wait for the service physically in the bank branch queues.

To move to cons of the mobile banking, we should have a look what Chandran (2014) offers regarding that. He explains that the model of the device can be one of the limitations for m-banking to perform well. The size of the screen, the year of the production might have an influence on behavior of the mobile banking.

In his research Chian-Son (2014) suggests that mobile banking is complex technology to adopt compared to internet banking so learning how to use it is harder than online banking. He claims that demographic characteristics might have influence on this behavior.

2.3. Importance and involvement

To support research questions, it is necessary to fully understand what is importance and how it is related to product as main objective of this thesis is to interpret post adoption characteristics of Mobile bank application users.

According to Bloch and Richins (1983) importance is intensity of activities that makes customer do something, while involvement is interest and attention product receives from consumer.

In the article (Ibid) researchers represent two types of importance: Instrumental and Enduring and 2 types of involvement: Enduring involvement and Situational.

For better understanding authors are offering detailed description of all 4 terminology they are using: *Instrumental importance* is when we face temporary usage of the product. It is important at some phase, when there is a need, but after some period of time it becomes less important. *Enduring importance* is when we face long-term usage of the product. In case of Enduring importance product becomes the integral part of the consumers' life. Additionally, Enduring importance has an influence on Instrumental importance. These two might change one another in a timely manner. *Enduring involvement* is when we face high usage of the product and user feels passionate about it. *Situational involvement*: is when we face short term usage and low involvement from consumers perspective.

From the definition of the Instrumental and Enduring importance we can see the connection between them, time and usage. Based on research held in Sweden (Efimini and Lech, 2015), researchers offered Matrix, that demonstrates the Bloch and Richins's research visually:
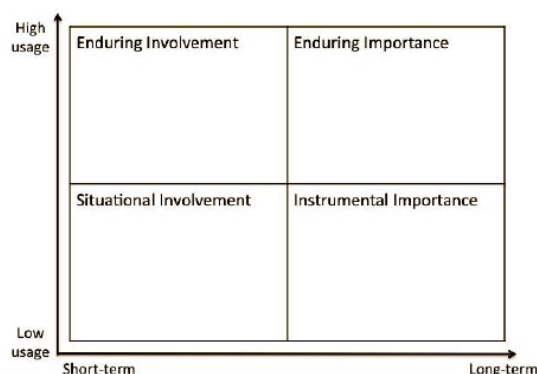
Figure 1 Product Importance and Involvement Matrix (Source Efimini and Lech, 2015)

Using to Bloch and Richins (1983) research and Efemini and Lech (2015) matrix this thesis will represent research oriented, modified model, that will be used for final findings.
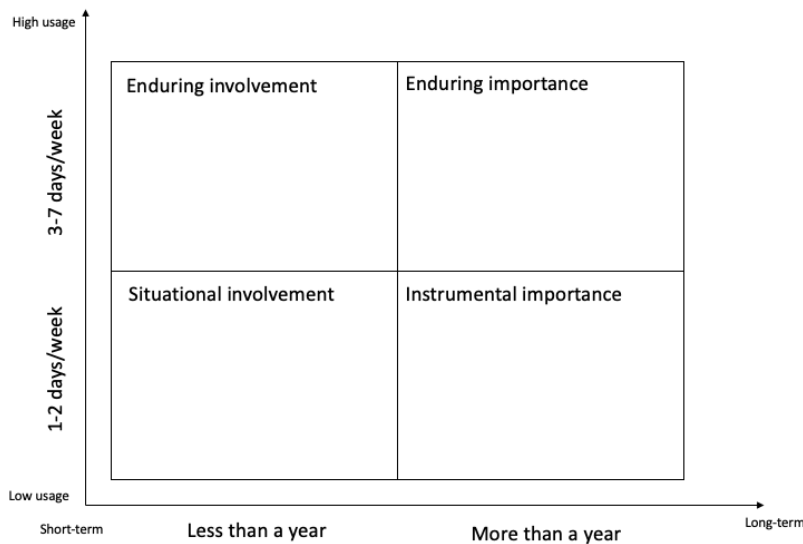
Figure 2 Product importance model according to Bloch and Richins and Efemini and Lech findings. Compiled by author

The Figure 2 aims to find out the characteristics of mobile bank application users, how often do they use app and how important it is for them. After the matrix is analyzed it will be possible to predict consumers behavior.

2.4. Acknowledged mobile application features

As nowadays mobile applications are the part of everyday life and highly consumable product, it is thought-provoking what are the determinant features that are thought to be beneficial for satisfactory performance. Several researches will be discussed in this part in order to encourage research question two and find relevant findings in literature.

According to Hoehle and Venkatesh (2015) it is essential that mobile application navigates easily through different content. The feature is important because complex content has a negative influence on user interactions. The same authors are claiming that mobile application should not ask user to make extra actions for access as it might cause the user irritation and might lead to the dissatisfaction. Consumers prefer easy and quick access to the content they are trying to get.

Kurniawan (2008) defends the idea that the communication channels through the application should use the appropriate terminology that users can easily understand (avoid technical jargons). The feature is vital since consumer should understand all content within the product to use it in an adequate way.

Another necessary feature that is stated in Asipas, et al, (2011) work is that most used information by users should be presented on the top of the device screen, where it is uncomplicated to notice. The feature is influential on customer's behavior, if users need to perform several clicks to get to desired place (bank section) it might annoy them.

According to all above mentioned considerations this research aims to see whether Estonian banks are taking all characteristics into account. These discoveries from the literature will support the second research question and will help to analyze findings collected through this particular research process.

3. Methods and data

In this paragraph methodology and data of the thesis will be defined. Researcher aims to present 3 different: Qualitative, Quantitative and Mixed approaches followed by survey questionnaire and sample.

3.1. Methods

In the academic world methodology is considered to be a crucial part of the research (Jonker and Pennik 2010).
Saunders et al. (2009) confirm that finding the convenient methodological approach is fundamental to analyze the data since it defines the direction of the study. No matter what approach you chose if it is well adjusted to the research, all will have same importance. Kothari in his book states that quality of the research is highly depending on the chosen technique (Kothari, 1990). Both qualitative and quantitative approaches can be applied to any research paradigm. Hence, in this thesis there will be discussed both techniques of the research and one of them will be chosen according to the research aim.

3.2. Qualitative and Quantitative approaches

According to Ohman, (2005) qualitative method of research is focused on quality not quantity. Technique builds a holistic picture and analyzes words as its aim is to understand the view of the people. Method is focused on getting explanations from society's perspective, what is their reality, what is their opinion on a particular topic.
As qualitative approach focuses on personal reality and reality is a social construct, research needs to unite different group of people, with common characteristics. Moreover, there can be influential factors during the research as researcher and target audience are interacting with each other face to face.
According to Bricki and Green (2007) there are some aspects that restricts the qualitative analysis: It is hard to generalize the results as samples are small and it does not represent the broad population; Findings cannot be accurate as long as there is no guarantee of research participants to express their own ideas. However, Rahman (2017) in his paper states the same arguments on behalf of disadvantages of the method, he adds that qualitative analyzes are given low credibility from policy makers as it has generalization, accuracy and other limitations.
As a result of the method characteristics that it only focuses on quality of the answers and not quantity, it has limitation to generalize the findings and as the goal of this thesis is to collect as many data as possible, Qualitative approach is not fully supporting the design of the thesis. Despite the mentioned aspects, quantitative approach targets to analyze data according to what people think. However this thesis will use closed-ended questions, they will be designed so that pattern of the users' attitude will be determined.
Whereas, Quantitative analysis is based on measuring events, collecting statistics and numeric data (Matveev 2002).
In accordance with Kohthari (2004) in Quantitative paradigm population is observed to study their characteristics and then generalize it. The main idea of the quantitative method is that it evaluation is stable, accurate, and generalizable in its clear indicator of cause and effect. As

Rohman (2017) explains the technique depends on variables measurement and is concentrated more on positivism than interpretivist unlike qualitative analysis.

To discuss some objectives of the approach we can use Rohman (2017) research that states that methodology fails in explanations as it only investigates and estimates the result. As other research paradigms Quantitative has it's methods how to be conducted. According to McEvoy and Richards (2006) structured interviews and questionnaires are one of them.

In spite of the fact that full quantitative method needs support of the different variables and existence of some hypothesizes that will be confirmed or denied at the end of the research, the author of this thesis aims to use the qualitative approach partially not only for big amount data collection but also generalizing it as in this research there is no urgency for adopting any hypothesis strengthened or weakened by different variables.

Moreover, merging qualitative and quantitative methods in a research is approved methodology of the research. Two paradigms can be mixed because of several reasons one of them is that they share the same goal and logic (Sale, et al., 2002) moreover, they share theoretical facts, lack of knowledge and the aim to collect a data for particular use.

Yoshikawa, et al., (2008) in their paper are describing tree factors why can qualitative and quantitative approaches can be united. First – mixing the techniques can bring a researcher closer to learn the development process that each of them separately. Integrated paradigms can make research more acceptable from larger audience. Second – the main questions of the research should define methodology of the thesis and no other way round. Third – as qualitative and quantitative methodologies are limited themselves (size of sample, data collection, etc.) mix of them might decrease restrictions.

In their research article Venkatesh, et al., (2013) are listing four mixed research method types: *Triangulation* – combine qualitative and quantitative data to get to the research problem. *Embedded* – use one type of data to answer a research question within either quantitative or qualitative study. *Explanatory* – help explanation of quantitative results with qualitative data. *Exploratory* – use quantitative data to find relationship within qualitative data.

Wadongo and Indeche (2014) believe that the mixed research method, particularly Embedded allows researcher to accomplish the research purpose. Way of answering the research questions depends on the researcher, truth is "what works" (Howe 1988)

As stated above, it is highly recommended to find the proper way to analyze the data. For this thesis it is planned to collect findings in a quantitative way as the method gives an opportunity to collect good amount of data but for generalizing results and analyzing them qualitative approach will be used, hence, as Embedded methodology is giving a freedom to maneuver between these two techniques it is considered as the most suitable way to interpret the results collected by online closed-ended questionnaire that is discussed below.

3.3. Questionnaire

To follow the rules how questionnaire should be built, this thesis uses the book "Research Methods for Business students" (Saunders, et al, 2009). The book offers general structure of the questionnaire that gives a full flow how the data should be collected by using questionnaire.

Authors of the book are stating that first of all researcher should be clear about the data required and designs a question, the second step is to contact a respondent who decodes the

question in the way researcher intended then respondent answers the question and researcher decodes the answer in the way respondent intended.

The above stated structure will be used for this thesis to design the questionnaire followed by the questionnaire type used in the same book that offers two different questionnaire designs: Self-administrated and Interview-administrated. Conducting interviews has its difficulties as it needs well defined target audience, scheduling interview time, find and persuade focus groups to participate, etc. In order to have opportunity to generalize the results and the result was more accurate, researcher chose self-administrated questionnaire, more specifically – Internet based.

As it is shown on the Figure 3 below, to conduct the survey with reasonable amount of people this thesis will use the following research design: Self-administrated questionnaire that is standardized with internet based close-ended questions.

Tylavsky and Sharp (1995) are defining close-ended questions the type, where answers are specified by investigator. As nowadays people do not have much time to participate in surveys, researcher decided to find an efficient way to collect the data.

Questionnaire	Self-administrated	Standardized	Internet-based close-ended questions

Figure 3 research design visualization, (Author)

The questionnaire is divided into several question groups that serve the research to collect relevant data. The purpose of each question is pre-defined and presented below (Figure 4):
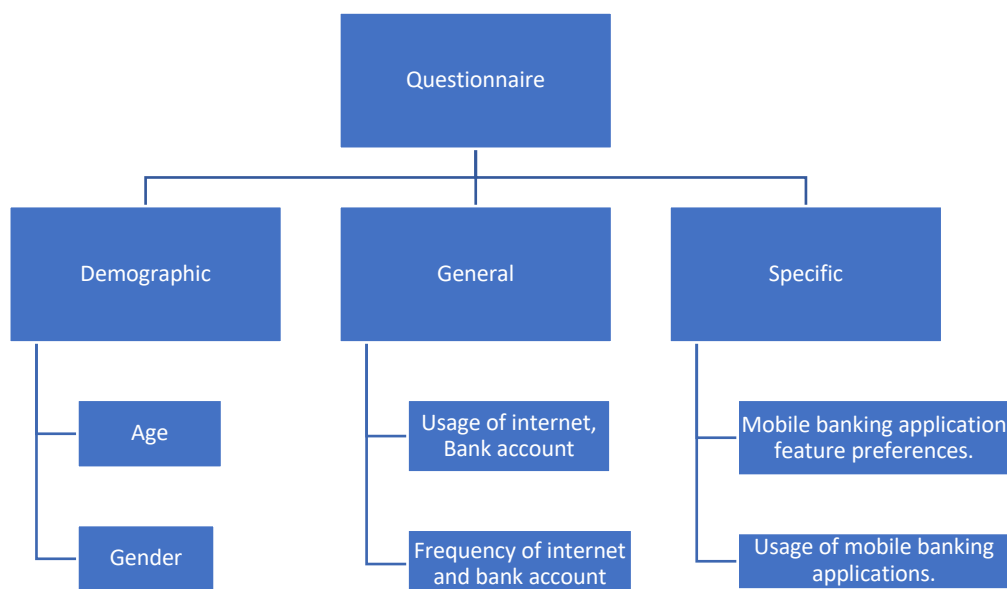
Figure 4 research Questionnaire division (Author)

To analyze Figure 4 according to the main research questions the connection is as follows: Using the demographic questions it is planned to get the division of gender and age among the bank account holders in Estonia to have an overview of the demographic pattern. In the "General" section researcher wants to collect the data to see the characteristics of usage of

the internet and internet banking in Estonia as it is highly connected components to the main research topic – mobile banking applications. The General part is followed by "Specific" questions that will be shown to the survey participants after they answer to the question "Do you use mobile banking?" positively. The aim of this questionnaire part is to accumulate data about how important is the bank mobile applications for the users, how often do they use it and what challenges do they face.

In this section there will be listed several features of the application that are discussed in the literature to analyze if Estonian mobile banking applications are created the way it is suggested to be.

The researcher used a University of Tartu survey platform – UT LiveSurvey to build a questionnaire and share to target audience. The list of questions is presented in the Appendixes below.

3.4. Sample

The sample of this research is purposive and unites individuals having Estonian bank account. No other restrictions were applied to the sample as there are objectives in the thesis, where general questions bring the value too. The sample gather the people, working in different international companies in Estonia and as mentioned having Estonian bank account. The Sample was chosen according to the accessible data to the researcher. Several Estonia based global firms were contacted to spread the questionnaire among their employees plus students also were part of the sample.

For collecting the survey participants researcher used different internet channels, such as social media and email.

Names of different Estonian private companies that were used to define the part of the sample will remain anonymous.

The number of research participants in total were 212. More specific division of the sample will be presented in the thesis below.

3.5. Ethical standards

In order this thesis to be ethically standardized, as survey was conducted online, participants had opportunity to answer the questions without any influence on their decisions.

Full, clear description was pre-defined and presented to addressees in the questionnaire in order them not to have second thoughts what the survey was about and how should have they acted. Moreover, questionnaire was tested beforehand in a small group of people. The data collected is considered to be reliable as each answer belongs to unique person having Estonian bank account.

4. Empirical presentation

In this paragraph findings from the research statistics will be presented visually with graphs and numbers. The survey was held in Estonia from 12 April, 2020 to 20 April, 2020 that brought 212 valid responses in total.

As mentioned above, collected data will be represented according to Demographic, General and Specific findings. Demographic questions consist of gender and age, General questions –

usage of internet, mobile phone and internet banking while Specific questions aimed to collect the behavior of the specifically mobile banking application users. This division will fully support answering all ideas stated in Literature review and main research questions.

4.2 General questions are focused on understanding what are the characteristics of using Internet and Online banking in Estonia, as both of them are inseparable parts of Mobile banking. 4.3 Specific questions were created to assist answering main research questions.

1. How important are mobile banking applications from post adoption perspective among Estonian bank account holders according to their usage behavior?
   - For how long do you use Mobile banking?
   - How often do you use mobile banking?
   - Please chose the importance level of the mobile banking for you
2. What are the challenges in the usage of Estonian mobile bank applications?
   - Select all features that you use in Mobile bank application
   - Please select all features that your mobile banking application has

Demographic and general questions were answered by 212 person from which 17 did not have mobile banking application, hence, in the section "Specific" 195 records will be considered as total.

4.1. Demographic questions

Differentiated by gender, 107 Female and 105 Male participated in the survey. In the Graph 1 percentage of the numbers can be visualized.
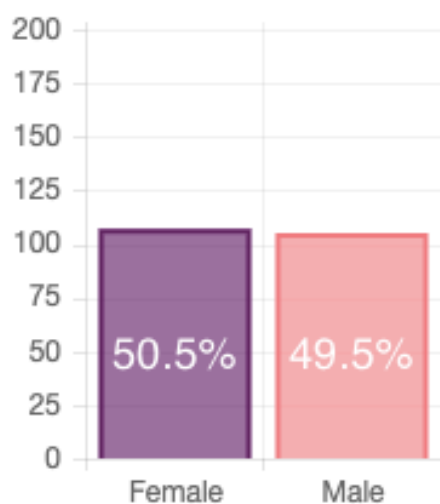
Graph 1Gender (Author)

Gender analysis of the questioned is followed by Age distribution that is presented on the Graph 2. 54 person was from the age range of 18-24, 25-31 age range collected 104 person, 35 was the number of 32-38 age group, 39-45 united 12 addresses, 2 people were in 46-51 and 5 in 52-58 age ranges.

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After analyzing results it appeared no person took part in the survey from the age of 59 and above, hence, after answers were collected it occurred the survey applies to the total group age of 18 – 58.
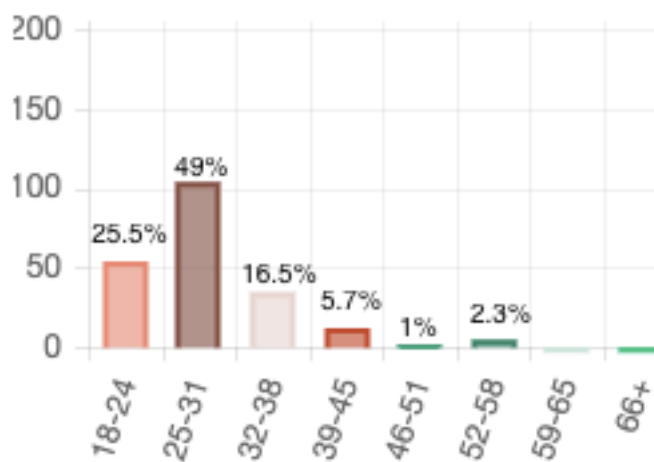
Graph 2 Age (Author)

4.2. General questions

As it was stated in the Questionnaire structure above, General section was designed to collect behavior of Estonian bank account holders: how often do they use Internet a day, as it is strongly related component of the technology as we discussed in Literature review.

The survey showed that out of total 212 people 204 uses internet more that 2 hours a day, comparing to 8 who uses less than 2 hours a day. As it is recognizable, the number of high internet users is much dominant over those who rarely uses internet during the day.

Internet usage is followed by the time, for how long people are having bank account in general. This statistics will be used later on to analyze the nature of the users as length of the product owning is crucial factor in this research. Statistics showed that 15 people from surveyed have Estonian bank account less that 1 year whereas, 197 of them marked more than a year as their answer.

While discussing literature in this thesis it was stated that Internet banking is one of the dependencies the process of mobile banking application development has. It is interesting to have a number of Estonian bank account owners who are using Internet bank for controlling their accounts. The study showed that 97.1% (206 people) are not only the account holders but also internet bank users.

In order to move to the specifically mobile banking related data collection, it was needed to filter surveyed people down to only those who are using mobile bank application. For avoiding confusion between mobile banking (using bank mobile webpage) and mobile banking application the question was formed as follows: "Do you use mobile banking? (meaning mobile bank application)". The results showed that 195 (91.98%) participants are using mobile banking application whereas 17 of them are not, hence, the following statistics will only apply to those 195 whose answer was positive.

4.3. Specific questions

The purpose of the Specific question group is to collect mobile bank application related data. It was turned out that 19 person out of 195 mobile bank application consumers are using the technology less than 1 year where 176 of them have it more than a year. Hence, the thesis concentrates more on those users that are having the application as they are treated as target audience of this research.

After period of mobile bank application owning, it is interesting how often are targeted people using application weekly. The research showed that 73 applicants use it 1-2 days a week, 81 – 3-4 days a week and 41 is the number of persons who are using mobile banking applications 5-7 days a week.

Specific questions went more deep into the application features, when survey participants chose the most used features within the application. The question was created according to the main research question "What are the challenges in usage of Estonian mobile bank applications?". For observing what are mainly used features, questionnaire listed 3 main feature presented in the reviewed literature that are following: Checking account, Transferring money and Paying the bills. As the question was not limited by choosing only one answer, results distributed as follows: 186 user is checking the account in the application, 177 of 195 consumers are transferring money to another account, 151 pay bills with help of bank application.

Features were investigated further in the survey's next question, that collected data which features do the mobile bank application has. The aim of the question is to analyze what features are users recognizing in the application that gives an opportunity to monitor whether Estonian banks are following the approved way of application creation. 147 user thinks it is easy to navigate through different content. 141 considers the terminology used in the product is adequate and easily understandable, 132 consumer think that the most used features of the app is places on the first page so that it is clearly recognizable. The most thought provoking feature majority of the surveyed (142 person) noticed is the need for additional mobile application to enter the bank environment. As it was discussed in the literature review, supplementary actions while using a product is not customer friendly. This matter will be discussed further below in Discussion of findings.

To continue supporting the main research question, how important is the mobile banking application for the users, surveyed users had a chance to choose between Log, Medium and High importance rate. The answers gave 8 people who considers mobile banking application as low important, 38 thinks application has medium importance and 149 users determine application as highly important for them.

Beneficial to the research, the graph 3 shows what is the distribution of the Internet and mobile bank users. 92% of the surveyed appears to use both Internet and mobile banking to control their bank account, whereas 8% is using only Internet banking.
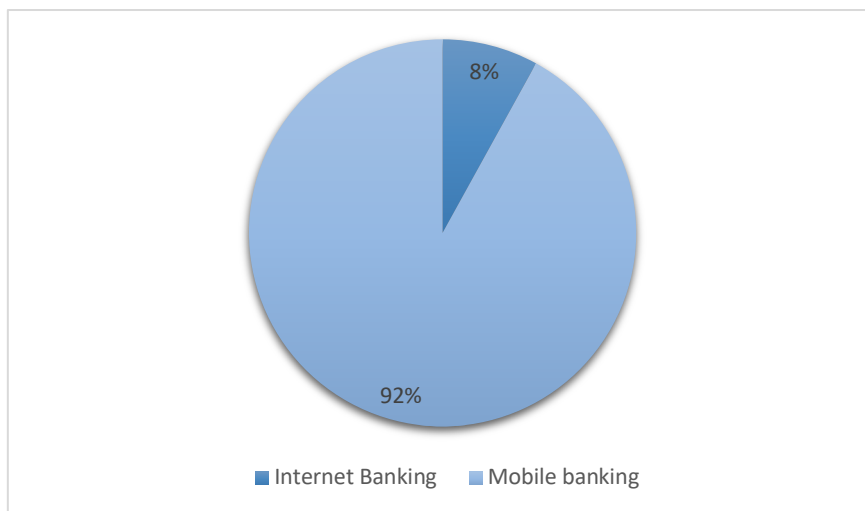
Graph 3 Internet and mobile banking users (Author)

4.4. Combined data

From the research data following (Table 2) comparison between Importance of the mobile bank application and weekly uses are presented: 7 people who use 1-2 days and 8 people who use 5-7 days per week think that their mobile bank application is not important. 20 from researched use app 1-2 day a week and considers it as Medium important. 14 uses 3-4 day a week and for them the application has Medium importance. 4 of those who thinks mobile banking application is medium important are using 5-7 days a week. For High importance statistics showed that 46 of them use it 1-2 days a week, 67 – 3-4 days a week and 3 person uses 5-7 days per week. This table is created to see the pattern between Importance and usage. As it is shown below highest number of users are considering application as highly important and their usage behavior is 3-4 days a week.

Table 2 Importance and daily usage per week

Importance / Usage	1-2 day/week	3-4 day/week	5-7 day/week	Total
Low	7	0	1	8
Medium	20	14	4	38
High	46	67	36	149
Total	73	81	41	195 / 195

Compiled by author

According to Erikson and Kerem (2005), Usage can be defined by two questions, how long has a user been using a product and what is the frequency of usage. As it is crucial to have an insight of the usage behavior in this research, Table 3 represents findings about Usage in general. Survey showed that 12 people from those who are using a m-banking application less than a year uses it 1-2 days a week where 7 people 3-7 days. 61 mobile bank consumers are using app 1-2 days weekly and more than a year while 115 people – 3-7 days a week.

Table 3 Usage

Length of usage / Frequency of usage	1-2 days/week	3-7 days/week
Less than a year	12	7
More than a yeas	61	115

Compiled by author

For the research it is needed to see clear relationship between Usage and Importance of the mobile application for answering the main research question, hence the table 4 was interpreted. Consumers who are using application 3-4 days and 5-7 days were combined as High users and those who are using 1-2 as – Low. Moreover, surveyed who consider mobile banking medium and highly important were united as – High importance and low remained the same. As it is visible from the table, from total 12 interviewed who are Low users of mobile bank 83,3% thinks it's important and rest otherwise. Surveyed that are using application less than a year and 3-7 days a week are 7 (85.7% - high importance, 14.3% - Low). Number of mobile application users that have it more than a year and using 1-2 days a week is 61, the distribution importance among that them is as following: 91.8% - High, 8.2% - Low. Absolute majority of 115 high users recognize the mobile application as highly important for them. The data gives a chance to see a justification of the fact that people who are treating the application as highly important for them are using it logically constantly.

Table 4 Relationship between usage and importance

Importance/usage	Less than a year/1-2 days a week	Less than a year/3-7 days a week	More than a year/1-2 days a week	More than a year/3-7 days a week
Low	2	1	5	0
High	10	6	56	115

Compiled by author

Since it was mentioned several times in this thesis that Internet banking is former technology of the mobile banking, it is appealing to see what is the behavior of the Estonian bank account holders: are they using internet bank more or are they stick to the application. Table 5 performs statistics that shows comparison between these two technology usage. It is visible from the table that 189 Bank account holders are using both Internet and Mobile bank for account management. 6 people are using mobile banking but not Internet (web) banking, whereas 17 from surveyed are using Internet banking but not Mobile application for managing their accounts.

Table 5 Internet and Mobile bank uses

	Mobile bank Uses	Does not use Mobile bank
Uses Internet bank	189	17
Does not use Internet bank	6	0

Compiled by author

While literature reviewed in this thesis stated the idea that age of the users might have influence on the consuming behavior, there was need to see if the idea applies to Estonia too. Table 6 describes, usage of bank mobile application in the age range of 18-24 is as follows: 7 of them 5-7 day a week, 26 – 3-4 day a week and 17 - 1-2 day per week. 31 surveyed from age 25 – 28 picked 5-7 days of application usage weekly, 47 – 3-4 days a week and 52 – 1-2 days per week. 3 representative from age group 39-51 uses mobile banking 5-7 days a week, whereas 8 of them are consuming it 3-4 days and 4 – 1-2 days weekly.

Table 6 Age group and mobile bank application usage

Age group/ Usage	5-7 d/w	3-4 d/w	1-2 d/w
39-51	3	8	4
25-28	31	47	52
18-24	7	26	17

Compiled by author

As it is thought that Internet banking is highly used from consumers side since it is time saving, comfortable to use, alternative for standing in physical bank branch queue and furthermore, this research needs to see how former technology of mobile banking is used in Estonia, Graph 4 was created to show that 86% of the internet bank users are at least checking their accounts.
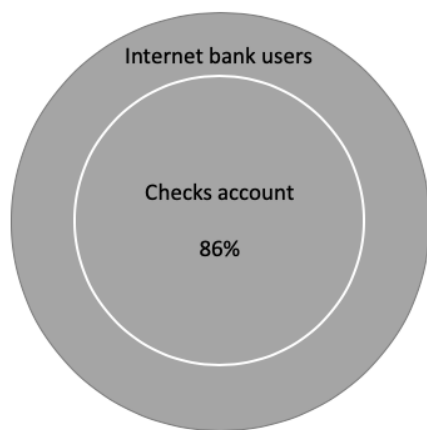
Graph 4 How many internet bank users are checking their account (Author)

To visualize the data from High and Low importance users behavior in the application, the table below was created and presents image of activities that are done by people who are considering the m-banking application either Low important or high. As it was defined before, this thesis aims to focus on importance of the product. Described above visualized by Figure 2, there are two types of importance: Instrumental and Enduring. Table 7 and 8 below are representing findings related to both types for this particular research. This matter will be discussed more in details below in Discussion of findings part and numbers collected will support the creation of the adopted matrix presented as Figure 2. Moreover, both tables below are supporting main research question: *How important are mobile banking applications?* And understanding how mobile application users who are treating product as Low and Highly important are behaving.

Table 7 Instrumental importance activities

Importance/Behavior	Check account	Transfer money	Pay bill
Low	4	3	2
High	52	50	42

Compiled by author

Table 8 Enduring importance activities

Importance/Behavior	Check account	Transfer money	Pay bill
Low	0	0	0
High	111	107	93

Compiled by author

5. Discussion of findings

In this paragraph above stated theoretical and empirical statements will be analyze together with findings. According to both reviewed literature and collected data analysis will represent specific characteristics in Estonia.

To evaluate findings this part of the thesis will unite 212 surveyed Estonian bank account holders' answers.

It should be emphasized that 195 from 212 had mobile bank application in Estonia so in the "Specific" section statistics are shown out of that amount.

5.1. Internet in Estonia

As long as internet is indivisible component of usage of the online and mobile banking it is important to see the pattern of its usage in Estonia. In the theoretical part of this thesis statistics of the internet usage was states not only in the world but also specifically to Estonia. To recall the West (2015) findings, 96% of human kind enters internet at least once a day. This study showed that 204 person out of 212 is using internet more than two hours a day that is 96.2% of total amount.

Moreover, if we observe more specifically to Estonia, since 2000 the usage of the internet in the population was growing by geometric progression. By 2012 internet usage percentage was equal to 78% whereas this research held in 2020 presented that 100% of taken sample is using Internet.

5.2. Mobile banking vs Online/Internet banking

As Tan and Teo (2000) stated, internet banking in general helps users to proceed with different transactions through website, findings showed that 86% of internet bank users are at least checking their account online (Graph 4). This proves that internet banking is still popular in Estonia.

There is no doubt about statement made by Furst, Lang and Nolle (2000) that technology gave banks chance to make virtual branches online as far as this study also found out that total majority of the 212 surveyed people are using either mobile or internet banking.

To continue with innovations in the banking sector, we should emphasize how important it is to create mobile oriented product, as usage of the mobile phones over last years has been

massive (Obaidat et al., 2012). This investigation shown that 93% of participants of the survey conducted are using mobile phone more than 5 times a day while 7% uses less than 5 times per day.

5.2.1. Mobile banking pros and cons

Shamprate (2013) in his work specifies that nowadays bank transactions are preferred to be done by mobile phones than other ways. To apply this view on this research it showed that 195 (92 %) of total surveyed are using mobile banking whereas 17 (8%) of them are operating only with Internet (web) banking.

Benefits of mobile banking application are following: easy access to the bank account, opportunity to transfer money, pay bills and monitor balance as Ahmad, Kader, Rashid and Nurunnabi (2017) listed in their paper. Finding shows that 186/195 users are using mobile bank application to check their account, 177 - to transfer money and 151 consumer is paying bills with help of the application.

Several negative thought from literature should also be reviewed here, as Chandran (2014) tells mobile banking performance depends on mobile phone model and how big is its screen for content to be well placed. The survey revealed that 67.7% of mobile bank users see the most used features on the first page and they can easily find them.

Moreover, Chian-Son Yu (2014) claims that demographic factors might be influential on usage behavior of mobile banking. Regarding this thought, the research held for this thesis shows that 1.5% application users age from 39 to 51 are using it 5-7 days a week, 4.1% 3-4 days a week and 2.1% 1-2 days a week. Weekly usage of 25-38 age group is as follows: 15.9% 5-7 days per week, 24,1% 3-4 days per week and 26.7% 1-2 days per week. The last age group was identified as 18-24 and their usage percentage is following: 3.6% 5-7 days weekly, 13.3% 3-4 days weekly and 8.7% 1-2 days weekly. (Table 6)

5.3. Importance and involvement

As it is visible from Bloch and Richins (1983) paper, both involvement and importance are depending on usage.

To analyze collected data according to Importance and involvement matrix offered by Richins and Efemini on the motives of Bloch and Richins Figure 2 will be used with the data from Table 3.
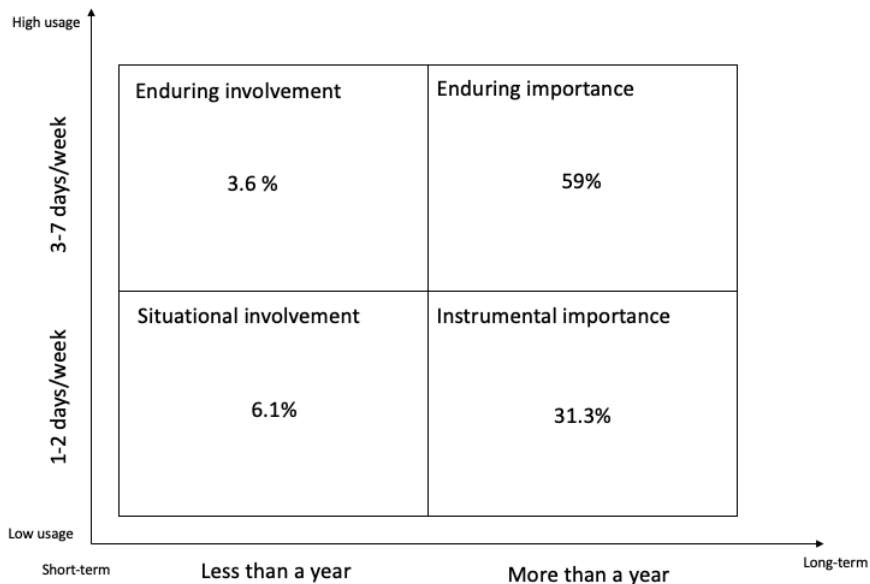
Figure 3 Importance and Involvement for High and Low users (Author)

As matrix shows for Estonian mobile bank market distribution is following:

Situational involvement: 6.1% of total surveyed are those who are using the app for a short period of time and not that frequently. From the research it was shown that majority of Estonians (83.3%) that are in Situational involvement stage at the moment see the product as a Highly important.

Questionnaire participants who were allocated in the Enduring Involvement are 3.6% of total target group. These people are those who have product for a short period of time but are using it quite often to adopt it. For this group of consumers High importance rate was stated as 85.7%.

To move to users that are using the product for long time but not consuming it frequently Figure 7 shows that they are 31.3% of the total number. As Bloch and Richins (1983) declare, Instrumental importance is provisional by nature so we can call 91.8% of those who consider the m-banking application as Highly important – temporary.

More than half of the questioned seems to be under Enduring importance. These are users who has behavior to use the product and it is part of their lifestyle. They have the bank for more than a year and the usage of it is 3-7 days a week.

Following Bloch and Richins (1983), Instrumental importance and enduring importance can change each other in some period of time. This research showed that these two types of importance has similar characteristics. As Table 7 and 8 are presenting, behavior of each type representative are the same and we might also consider them as identical groups.

5.4. Acknowledged mobile application features

Reviewing literature about mobile application features that are considered to be there for all applications assures that simple navigation within the interface content is highly important as long as complexity annoys a user and give a bad user experience (Hoehle and Venkatesh, 2015). The survey conducted for this thesis showed that 147 person out of 195 thinks that application gives them chance to change the content easily. However same authors Hoehle and Venkatesh, (2015) are suggesting that need of other application is not appealing for user

perspective as it does not allow them to perform quickly, 72.8% still needs additional application to proceed. This last result outlines the fact that there is a easily recognizable disadvantage in the bank applications that might lead user to dissatisfaction.

According to Kurniawan, (2008), usage of suitable language in the mobile application is crucial as user should understand the content clearly. Study showed that 72.3% considers the feature is fulfilled and they do not find language use in the mobile app complicated.

If we refer to Asipat et al. (2011), most needed information and icons should be presented on the first page of the application in order consumers to recognize them easily and get information without any additional clicks. The questionnaire result has shown that 67.7% of mobile bank application users think their bank app accomplishes this statement.

6. Conclusion

The aim of this thesis was to analyze how important is mobile bank applications in Estonia after using the product. 212 Estonian bank account holders were surveyed and some characteristics were found that are discussed below.

It was identified that the tendency of using m-banking applications is quite high in Estonia, between age of 18 – 58.The age was defined on its own as no survey participant was older that the mentioned age group.

Long description was allocated to finding how important it is for customers to have the application. According to usage and importance level pepper presents that more than half of interviewed (59%) are under Enduring importance that means they are using the product for a long time and frequently, moreover study showed that absolute majority is considering the m-banking as highly important. Moreover, as Ahmed, et al., (2017) defined, the most common features such as checking account, transfer money and pay bills are done by more than half of the population using both internet and mobile banking.

Related to studies discussed in 2.4 part of the thesis "Acknowledged mobile application features" Estonia is recognized to follow the rules of creating adequate application according to suggestions that are known worldwide. More than 70% of the people are recognizing that the apps they are using is easy to navigate, it is using appropriate language so that everyone can understand and all regularly used features/icons are placed in the interface so that majority can see them smoothly.

However, post adoption of the mobile banking application in Estonia seems to be successful, there still are some recommendations on behalf of this research that would be good to be taken into consideration and they are listed below in "Limitations and recommendations" section.

6.1. Limitations and recommendations

6.1.1. Limitations

One of the limitations that can be mentioned for this research was time. Data was collected in short period of time that prevented the researcher to get more data.

Moreover, there was no in depth qualitative research done to understand more in details how bank mobile application users are feeling about the product.

The second limitation can be the fact that only working people and students were surveyed that does not give us an overview of different parts of the society such as home-stayed moms/dads, retired people, business owners, etc.

In addition, the limitation that appeared during the study is that this research only applies to the age group of 18 – 58 as there were no 58+ participants who filled the questionnaire. As Chian-Son (2014) states in his work demographic characteristics can be influential on internet and mobile bank usage behavior. If there were 58+ age group participants in the data collection process, it might have changed some statistics.

6.1.2. Recommendations

To go more in details what are the characteristics of mobile banking applications in Estonia this thesis recommends to have face to face interviews with clients and go deeper into their feelings about the product.

It is highly recommended to get answerers to following questions: does mobile banking really saves their time? Do they feel secure using the app?

In the thesis it was stated that usage of the application is really high, it would be good to know if this behavior stays the same or the usage will decrease. Because this research is focused to collect data for a particular time, it was not be possible for a researcher to conduct survey later on so Banks are highly recommended to measure the pattern in some time period.

It is highly recommended to focus on demographic aspects, it would be interesting if other component than age and gender has influence on users' experience. More of a quantitative analyses might be beneficial to find out variables that has an impact on users' experience.

Researcher extremely suggests banks to focus on users that are in Instrumental importance group as their usage is not stable, it should be targeted them to move to Enduring importance society by offering them better service and product.

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Appendixes

Appendix 1Questionnaire.

1. Your gender
   - o Female
   - o Male

2. Your age group
   - o 18-24
   - o 25-31
   - o 32-38
   - o 39-45
   - o 46-51
   - o 52-58
   - o 59-65
   - o 66+

3. For how long do you use internet a day?
   - o Less that 2 hours
   - o More than 2 hours

4. For how long do you have bank account?
   - o Less than 1 year
   - o More than 1 year

5. Do you use Internet banking (through web) for managing your bank account?
   - o Yes
   - o No

6. How many times do you use mobile phone a day?
   - o Less than 5 times
   - o More than 5 times

7. Do you use Mobile banking? (Meaning Mobile bank application)
    o Yes
    o No

8. For how long do you use Mobile banking?
    o Less that 1 year
    o More than 1 year

9. How often do you use mobile banking?
    o 1-2 days a week
    o 3-4 days a week
    o 5-7 days a week

10. Select all features that you use in Mobile bank application
    o Check account
    o Transfer money to other accounts
    o Pay bills
    o None of above

11. Please chose the importance level of the mobile banking for you
    o Low
    o Medium
    o High

12. Please select all features that your mobile banking application has:
    o Easy navigation trough different content
    o Need for other, additional app(s) to get an access to some content (e.g. Smart-ID)
    o Terminology used in app is fully understandable
    o Your most used features are presented on the first page so that you can find them easily
    o None of the above

Appendix 2 - Collected data

General questions

Response ID	5	6	7	8	9	10	11	13	14	15
Start language	en	en	en	en	en	en	en	en	en	en
Your gender	Male	Female	Male	Male	Male	Female	Male	Male	Female	Male
Your age group	25-31	25-31	18-24	25-31	25-31	25-31	32-38	25-31	25-31	32-38
For how long do you use internet a	More than 2 hours	More than 2 hours	Less than 2 hours	Less than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours
For how long do you have bank	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year
Do you use Internet banking	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
How many times do you use mobile	More than 5 times	More than 5 times	Less than 5 times	Less than 5 times	More than 5 times	Less than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times
Do you use Mobile banking?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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#	Language	Gender	Age	Column5	Column6	Column7	Column8	Column9
16	en	Male	18-24	More than 2 hours	More than 1 year	Yes	Less than 5 times	Yes
17	en	Male	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
18	en	Female	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
19	en	Female	39-45	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
20	en	Female	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
21	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
22	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
23	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
24	en	Male	52-58	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
25	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
26	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
27	en	Male	25-31	Less than 2 hours	More than 1 year	Yes	More than 5 times	Yes

#	Language	Gender	Age	Column5	Column6	Column7	Column8	Column9
28	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
29	en	Male	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
30	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
31	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
32	en	Male	25-31	Less than 2 hours	More than 1 year	Yes	Less than 5 times	Yes
33	en	Male	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
35	en	Male	25-31	More than 2 hours	More than 1 year	No	More than 5 times	Yes
37	en	Male	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
38	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
39	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
40	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
41	en	Male	39-45	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes

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ID	Lang	Gender	Age	Hours	Duration	Q1	Times	Q2
42	en	Male	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
43	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
44	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
45	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
47	en	Male	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
49	en	Female	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
50	en	Female	25-31	More than 2 hours	More than 1 year	Yes	Less than 5 times	Yes
51	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
53	en	Male	46-51	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
54	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
55	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
56	en	Female	25-31	More than 2 hours	More than 1 year	No	More than 5 times	Yes

57	60	61	62	63	64	65	66	67	68	69	70
en	en	en	en	en	en	en	en	en	en	en	en
Male	Male	Female	Male	Male	Male	Female	Male	Female	Male	Female	Female
25-31	18-24	18-24	25-31	52-58	39-45	18-24	25-31	46-51	25-31	25-31	25-31
More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	Less than 2 hours	More than 2 hours	More than 2 hours	Less than 2 hours
More than 1 year	More than 1 year	Less than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	Less than 5 times	More than 5 times	More than 5 times
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

ID	Language	Gender	Age	Hours	Duration	Q1	Frequency	Q2
72	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
73	en	Female	52-58	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
74	en	Female	18-24	More than 2 hours	Less than 1 year	Yes	More than 5 times	Yes
76	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
77	en	Male	18-24	More than 2 hours	More than 1 year	Yes	Less than 5 times	Yes
78	en	Male	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
79	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
80	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
81	en	Male	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
83	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
84	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
86	en	Male	18-24	More than 2 hours	Less than 1 year	Yes	More than 5 times	Yes

87	88	89	90	92	94	95	96	97	98	99	102
en	en	en	en	en	en	en	en	en	en	en	en
Female	Male	Male	Male	Female	Male	Female	Male	Male	Male	Female	Female
18-24	32-38	25-31	25-31	39-45	18-24	25-31	32-38	39-45	18-24	25-31	32-38
More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours
Less than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	Less than 1 year
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Less than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	Less than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

ID	Lang	Gender	Age	Hours	Duration	Q	Times	Q
103	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
104	en	Male	39-45	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
105	en	Male	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
106	en	Female	18-24	Less than 2 hours	More than 1 year	Yes	More than 5 times	Yes
107	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
108	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
110	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
111	en	Male	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
112	en	Male	32-38	More than 2 hours	Less than 1 year	Yes	More than 5 times	Yes
113	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
114	en	Female	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
115	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes

ID	Language	Gender	Age	Hours	Duration	Response	Frequency	Response
118	en	Female	18-24	More than 2 hours	Less than 1 year	Yes	More than 5 times	Yes
120	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
122	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
123	en	Female	25-31	More than 2 hours	More than 1 year	No	More than 5 times	Yes
124	en	Female	18-24	More than 2 hours	Less than 1 year	Yes	More than 5 times	Yes
125	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
126	en	Female	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
128	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
130	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
131	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
132	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
133	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes

134	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
135	en	Female	25-31	More than 2 hours	More than 1 year	Yes	Less than 5 times	Yes
136	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
137	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
138	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
139	en	Male	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
140	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
141	en	Male	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
142	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
143	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
144	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
145	en	Female	18-24	More than 2 hours	Less than 1 year	Yes	More than 5 times	Yes

ID	Language	Gender	Age	Hours	Duration	Q	Times	Final
146	en	Male	18-24	More than 2 hours	More than 1 year	Yes	Less than 5 times	Yes
147	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
149	en	Male	18-24	More than 2 hours	Less than 1 year	Yes	More than 5 times	Yes
150	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
151	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
153	en	Male	39-45	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
154	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
155	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
156	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
157	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
158	en	Female	25-31	More than 2 hours	More than 1 year	No	More than 5 times	Yes
159	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes

160	162	163	164	166	167	168	169	170	171	172	174
en	en	en	en	en	en	en	en	en	en	en	en
Female	Female	Male	Male	Male	Male	Female	Male	Female	Male	Female	Male
25-31	25-31	18-24	25-31	25-31	25-31	18-24	18-24	32-38	32-38	25-31	25-31
More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours
More than 1 year	More than 1 year	More than 1 year	More than 1 year	Less than 1 year	More than 1 year	More than 1 year	Less than 1 year	More than 1 year	More than 1 year	Less than 1 year	More than 1 year
Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	Lang	Gender	Age	Hours	Duration	Yes/No	Times	Yes/No
175	en	Male	25-31	More than 2 hours	More than 1 year	No	More than 5 times	Yes
177	en	Male	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
178	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
179	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
180	en	Male	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
181	en	Male	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
182	en	Female	25-31	More than 2 hours	More than 1 year	Yes	Less than 5 times	Yes
183	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
184	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
185	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
187	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
188	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes

189	190	191	193	194	195	196	197	198	199	200	201
en	en	en	en	en	en	en	en	en	en	en	en
Male	Male	Female	Male	Male	Female	Female	Male	Female	Male	Male	Female
25-31	32-38	25-31	32-38	18-24	18-24	25-31	32-38	25-31	25-31	25-31	18-24
More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours
More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Respondent	Language	Gender	Age	Hours	Year	Response	Times	Response
203	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
204	en	Female	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
206	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
207	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
208	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
209	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
210	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
211	en	Male	39-45	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
212	en	Male	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
213	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
214	en	Female	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
215	en	Female	25-31	Less than 2 hours	More than 1 year	Yes	More than 5 times	Yes

ID	Language	Gender	Age	Column5	Column6	Column7	Column8	Column9
216	en	Male	39-45	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
217	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
218	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
219	en	Female	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
220	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
221	en	Male	32-38	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
223	en	Female	39-45	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
224	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
225	en	Female	25-31	More than 2 hours	More than 1 year	Yes	Less than 5 times	Yes
226	en	Male	18-24	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
227	en	Male	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes
228	en	Female	25-31	More than 2 hours	More than 1 year	Yes	More than 5 times	Yes

229	230	231	232	233	12	46	52	71	75	93	100
en	en	en	en	en	en	en	en	en	en	en	en
Male	Female	Female	Female	Male	Male	Female	Male	Female	Female	Female	Male
25-31	32-38	32-38	25-31	25-31	32-38	32-38	32-38	18-24	39-45	39-45	32-38
More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours
More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times
Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No

ID	101	109	117	121	127	165	173	186	202	222
	en	en	en	en	en	en	en	en	en	en
	Female	Female	Male	Female	Female	Male	Female	Male	Female	Female
	18-24	25-31	18-24	25-31	18-24	52-58	25-31	52-58	32-38	25-31
	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours	More than 2 hours
	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	Less than 1 year	Less than 1 year
	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	More than 5 times	Less than 5 times
	No	No	No	No	No	No	No	No	No	No

Specific questions

Response ID	5	6	7	8	9	10	11	13
Do you use Mobile banking? (meaning Mobile bank application)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
For how long do you use Mobile banking?	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year
How often do you use mobile banking?	3-4 days a week	5-7 days a week	3-4 days a week	1-2 days a week	1-2 days a week	3-4 days a week	5-7 days a week	1-2 days a week
Select all features that you use in Mobile bank application: [Check account]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Select all features that you use in Mobile bank application: [Transfer money to other accounts]	Yes	Yes	Yes	Yes	No	Yes	No	No
Select all features that you use in Mobile bank application: [Pay bills]	No	Yes	Yes	No	No	No	Yes	No
Select all features that you use in Mobile bank application: [None of above]	No	No	No	No	No	No	No	No
Please chose the importance level of the mobile banking for you	High	High	High	High	Medium	High	High	Low
Please select all features that your mobile banking application has: [Easy navigation through different content]	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Please select all features that your mobile banking application has: [Need for other, additional app(s) to get an access to some content (e.g. Smart ID)]	Yes	Yes	Yes	Yes	No	Yes	No	Yes
Please select all features that your mobile banking application has: [Terminology used in app is fully understandable]	Yes	Yes	No	Yes	No	No	Yes	Yes
Please select all features that your mobile banking application has: [Your most used features are presented on the first page so that you can find them]	Yes	Yes	No	No	No	Yes	Yes	Yes
Please select all features that your mobile banking application has: [None of the above]	No	No	No	No	No	No	No	No

Participant													
14	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
15	Yes	More than 1 year	1-2 days a week	Yes	No	Yes	No	High	Yes	Yes	Yes	Yes	No
16	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	No	No
17	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	No	Yes	No
18	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	No	No	No	No
19	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	No	Yes	Yes	No
20	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	No	Yes	No	No
21	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
22	Yes	More than 1 year	1-2 days a week	Yes	Yes	No	No	High	Yes	No	No	No	No
23	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	Medium	No	Yes	Yes	Yes	No
24	Yes	More than 1 year	1-2 days a week	No	Yes	No	No	High	Yes	Yes	Yes	Yes	No
25	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No

Participant	26	27	28	29	30	31	32	33	35	37	38	39
	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year
	5-7 days a week	3-4 days a week	3-4 days a week	3-4 days a week	3-4 days a week	3-4 days a week	5-7 days a week	1-2 days a week	3-4 days a week	3-4 days a week	1-2 days a week	3-4 days a week
	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
	No	No	No	No	No	No	No	No	No	No	No	No
	High	High	High	High	High	High	High	High	High	High	Medium	High
	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes
	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	No
	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No
	No	No	No	No	No	No	No	No	No	No	No	No

40	41	42	43	44	45	47	49	50	51	53	54
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	Less than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year
3-4 days a week	3-4 days a week	5-7 days a week	5-7 days a week	3-4 days a week	1-2 days a week	3-4 days a week	1-2 days a week	1-2 days a week	1-2 days a week	5-7 days a week	1-2 days a week
Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No
No	No	No	No	No	No	No	No	No	No	No	No
High	High	High	High	Medium	High	High	Medium	Medium	Medium	High	Low
No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No
Yes	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No
Yes	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes
No	Yes	Yes	Yes	No	No	Yes	No	No	Yes	No	No
No	No	No	No	No	No	No	No	No	No	No	No

ID	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13
55	Yes	More than 1 year	3-4 days a week	Yes	Yes	No	No	Medium	Yes	No	Yes	Yes	No
56	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	No	Yes	Yes	No
57	Yes	More than 1 year	1-2 days a week	Yes	No	No	No	Medium	No	Yes	Yes	Yes	No
60	Yes	More than 1 year	5-7 days a week	Yes	Yes	No	No	High	Yes	Yes	No	No	No
61	Yes	Less than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	No	Yes	No	No	No
62	Yes	More than 1 year	1-2 days a week	Yes	No	Yes	No	High	No	No	Yes	Yes	No
63	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	Medium	No	Yes	No	Yes	No
64	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	Medium	Yes	Yes	Yes	No	No
65	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	No	Yes	No	Yes	No
66	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	No	Yes	Yes	Yes	No
67	Yes	More than 1 year	3-4 days a week	No	Yes	Yes	No	High	Yes	Yes	No	Yes	No
68	Yes	More than 1 year	3-4 days a week	Yes	Yes	No	No	High	Yes	Yes	Yes	No	No

ID													
69	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
70	Yes	More than 1 year	3-4 days a week	Yes	Yes	No	No	Medium	Yes	Yes	Yes	Yes	No
72	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	No	Yes	No	No
73	Yes	More than 1 year	3-4 days a week	Yes	Yes	No	No	High	No	Yes	No	Yes	No
74	Yes	Less than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
76	Yes	More than 1 year	1-2 days a week	Yes	Yes	No	No	Medium	Yes	No	Yes	Yes	No
77	Yes	More than 1 year	1-2 days a week	Yes	Yes	No	No	Medium	No	Yes	No	No	No
78	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	Medium	No	No	Yes	Yes	No
79	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	No	Yes	Yes	No	No
80	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
81	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	No	Yes	No
83	Yes	Less than 1 year	1-2 days a week	Yes	No	No	No	Low	No	No	Yes	No	No

ID													
84	Yes	More than 1 year	3-4 days a week	Yes	Yes	No	No	High	No	No	Yes	Yes	No
86	Yes	Less than 1 year	1-2 days a week	Yes	Yes	No	No	Medium	Yes	No	No	No	No
87	Yes	Less than 1 year	1-2 days a week	Yes	Yes	No	No	High	No	Yes	Yes	Yes	No
88	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	Yes	No	Yes	No
89	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
90	Yes	More than 1 year	3-4 days a week	Yes	No	No	No	Medium	Yes	Yes	Yes	Yes	No
92	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	No	Yes	Yes	No	No
94	Yes	More than 1 year	3-4 days a week	No	Yes	No	No	High	No	Yes	Yes	No	No
95	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	No	Yes	No	Yes	No
96	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	Low	No	No	No	No	Yes
97	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
98	Yes	More than 1 year	1-2 days a week	Yes	No	Yes	No	Medium	Yes	Yes	Yes	Yes	No

ID													
99	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	No	Yes	No	Yes	No
102	Yes	Less than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	No	No	No
103	Yes	More than 1 year	1-2 days a week	Yes	Yes	No	No	Medium	No	Yes	No	No	No
104	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	No	Yes	Yes	No
105	Yes	More than 1 year	1-2 days a week	Yes	No	Yes	No	Medium	Yes	No	Yes	No	No
106	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	No	Yes	Yes	No
107	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	Medium	Yes	Yes	No	Yes	No
108	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
110	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	Medium	Yes	Yes	Yes	Yes	No
111	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	No	Yes	Yes	No
112	Yes	Less than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	No	Yes	No
113	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	Yes	No	Yes	No

114	115	118	120	122	123	124	125	126	128	130	131
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
More than 1 year	Less than 1 year	Less than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	Less than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year
1-2 days a week	1-2 days a week	5-7 days a week	1-2 days a week	1-2 days a week	3-4 days a week	3-4 days a week	1-2 days a week	3-4 days a week	1-2 days a week	1-2 days a week	3-4 days a week
No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No	No	No	No	No	No	No	No	No	No	No	No
High	Low	High	Medium	High	High	High	High	High	High	High	High
No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Yes	Yes	No	Yes	No	No	No	Yes	No	Yes	Yes	Yes
Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
No	No	No	No	No	No	No	No	No	No	No	No

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ID													
132	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	No	Yes	Yes	No
133	Yes	Less than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	No	No
134	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
135	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
136	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	Medium	Yes	Yes	No	Yes	No
137	Yes	More than 1 year	3-4 days a week	Yes	Yes	No	No	Medium	Yes	No	Yes	Yes	No
138	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
139	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	No	Yes	Yes	No
140	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	No	No
141	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	No	Yes	Yes	No
142	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
143	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No

ID													
144	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	Medium	Yes	Yes	Yes	Yes	No
145	Yes	Less than 1 year	1-2 days a week	Yes	Yes	No	No	High	Yes	No	Yes	Yes	No
146	Yes	More than 1 year	5-7 days a week	Yes	Yes	No	No	High	No	Yes	No	Yes	No
147	Yes	More than 1 year	5-7 days a week	Yes	Yes	No	No	Medium	Yes	Yes	Yes	Yes	No
149	Yes	Less than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
150	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
151	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
153	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	No	Yes	No	No	No
154	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	No	No	Yes	No	No
155	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
156	Yes	More than 1 year	1-2 days a week	Yes	Yes	No	No	High	Yes	Yes	No	No	No
157	Yes	More than 1 year	1-2 days a week	Yes	Yes	No	No	High	Yes	No	Yes	Yes	No

158	159	160	162	163	164	166	167	168	169	170	171
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	Less than 1 year	More than 1 year	More than 1 year	Less than 1 year	More than 1 year	More than 1 year
1-2 days a week	3-4 days a week	1-2 days a week	1-2 days a week	5-7 days a week	3-4 days a week	3-4 days a week	3-4 days a week	1-2 days a week	5-7 days a week	3-4 days a week	3-4 days a week
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
No	No	No	No	No	No	No	No	No	No	No	No
High	High	High	High	High	High	High	Medium	High	High	Medium	High
No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No
No	No	No	No	No	No	No	No	No	No	Yes	No

ID													
172	Yes	Less than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	No	No
174	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
175	Yes	More than 1 year	1-2 days a week	No	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
177	Yes	More than 1 year	3-4 days a week	No	Yes	Yes	No	High	Yes	No	Yes	Yes	No
178	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	No	No
179	Yes	More than 1 year	5-7 days a week	Yes	No	Yes	No	Medium	Yes	No	No	Yes	No
180	Yes	More than 1 year	5-7 days a week	Yes	No	No	No	Medium	Yes	Yes	Yes	Yes	No
181	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	No	Yes	Yes	No	No
182	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	Medium	Yes	Yes	Yes	No	No
183	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	No	No
184	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	No	Yes	Yes	No
185	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	Low	No	Yes	Yes	No	Yes	No

187	188	189	190	191	193	194	195	196	197	198	199
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year	More than 1 year
1-2 days a week	1-2 days a week	3-4 days a week	5-7 days a week	3-4 days a week	5-7 days a week	3-4 days a week	3-4 days a week	3-4 days a week	1-2 days a week	5-7 days a week	3-4 days a week
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
No	No	No	No	No	No	No	No	No	No	No	No
High	Medium	High	Medium	High	High	High	High	High	High	High	High
Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Yes	Yes	Yes	Yes	No	No	Yes	No	No	Yes	No	Yes
Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Yes	No	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No
No	No	No	No	No	No	No	No	Yes	No	No	No

ID	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13
200	Yes	More than 1 year	3-4 days a week	Yes	No	Yes	No	High	Yes	Yes	Yes	Yes	No
201	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	No	Yes	Yes	Yes	No
203	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
204	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
206	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
207	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	No	No	No
208	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	Medium	No	Yes	No	Yes	No
209	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
210	Yes	More than 1 year	3-4 days a week	Yes	No	Yes	No	High	Yes	Yes	Yes	Yes	No
211	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
212	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
213	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No

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ID													
214	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	No	Yes	Yes	No
215	Yes	More than 1 year	1-2 days a week	Yes	No	No	No	Low	Yes	Yes	Yes	Yes	No
216	Yes	More than 1 year	5-7 days a week	Yes	Yes	No	No	High	Yes	Yes	Yes	Yes	No
217	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	No	Yes	Yes	Yes	No
218	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	No	Yes	Yes	No	No
219	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	No	Yes	Yes	No
220	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	Medium	Yes	Yes	Yes	Yes	No
221	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	No	Yes	No	No	No
223	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	No	No	Yes	No
224	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	No	No
225	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	No	Yes	No	No	No
226	Yes	Less than 1 year	5-7 days a week	Yes	No	Yes	No	Low	No	Yes	No	No	No

ID	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13
227	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	Medium	Yes	Yes	Yes	Yes	No
228	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
229	Yes	More than 1 year	3-4 days a week	Yes	Yes	Yes	No	Medium	Yes	Yes	Yes	Yes	No
230	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
231	Yes	Less than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	No	Yes	No	No	No
232	Yes	More than 1 year	1-2 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
233	Yes	More than 1 year	5-7 days a week	Yes	Yes	Yes	No	High	Yes	Yes	Yes	Yes	No
12	No			N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A
46	No			N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A
52	No			N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A
71	No			N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A
75	No			N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A

93	100	101	109	117	121	127	165	173	186	202	222
No	No	No	No	No	No	No	No	No	No	No	No
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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