Challenges of introducing and implementing mobile payments

A Qualitative study of the Swedish mobile payment application WyWallet

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**Abstract**

Citizens of Sweden are now facing a large shift in their habits of managing money transferring using mobile phones. They are now forced to use an application called WyWallet when making purchases with cell-phones. WyWallet is an application based on a new EU-directive that has led to a law concerning the new payment service act that wants to prevent money laundering and terrorist financing. This has led to a lot of consequences for the citizens and also other agencies relying on donations via text messages. This research has its focus on investigating how a mobile payment method in a modern society has failed in meeting their customers’ demands and requirements by having a customer focus. The material was collected through a focus group and subsequent in-depth interviews in order to reach an understanding of customer’s feelings, attitudes and expectations towards mobile payment methods. The findings show that several factors such as expectations, environmental issues, technological aspects, compatibility issues and convenience issues are not targeted in order to meet the requirement of customers and the current infrastructure of the society.

**Keywords:** mobile payment methods, acceptance, adoption, compatibility

**1 Introduction**

Purchases with cell phones are a phenomenon and a method that are slowly being more and more adopted in our society. Everything around us is constantly being improved in terms of becoming more efficient and accustomed to people’s everyday lives. This reality is one of many background reasons for the idea of mobile payment systems. In pace with the improved performances of mobile phone technology more doors are opening in terms of what is possible with a regular cell phone. Its possibilities reaches beyond what we believed were possible just a few years ago and yet we already rely on it to work at all times whatever we want the technology to do, weather it is to search for food recipes, finding the nearest restaurant via an integrated GPS, or see what movies that are showing at the theatre. So with all these possibilities in mind when thinking of all the things we can do, and feel comfortable doing with our cell phones, it does not seem like a big step to also make purchases with our cell phones as a normal routine in our lives. Although this has been an issue that has been struggled with over a long period of time. Mobile payment methods have not reached the level of being a standardized payment method nor do people seem to be comfortable enough to trust the cell-phone technology when transferring money.

A lot of research has addressed the acceptance of new technology, the adoption of new innovations and also factors that inhibit or prohibit us to use a specific technology. The most frequently used research and findings within this area of concern are the Technology Acceptance Model (Davis, 1989) and the Innovation Diffusion Theory (Rogers, 1962). These findings have also been joined by other researcher’s findings that have identified additional factors and circumstances that also affect user adoption and acceptance of mobile payment methods. These also need to be taken in consideration, for example issues related to

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transaction convenience (Chen, 2008), security concerns (Suh & Han, 2003) and compatibility (Van der Heijden, 2002).

The aim of this paper is to further develop knowledge related to users experiences, feelings and thoughts about mobile payment methods. It has its focus on the launch of the mobile payment service WyWallet that has been present in Sweden since February the year of 2013 and was about to have great effects on the society.

WyWallet is a mobile application created through collaboration between four of Sweden’s biggest telecom operators. It was initially formed to develop the application because of a new EU directive with the purpose of preventing money laundering and terrorist financing. Since this law came into force in February 2013, WyWallet has been the application that Swedish citizens are forced to use whenever they are making a purchase with their cell phone. This was found to result in a lot of negative events in the lives of people in Sweden and what was initially meant to decrease problems and risks with this new application proved to be the opposite from its customers and other agencies point of view.

1.1 Aim and research question

The aim for this research has been to investigate the mobile payment service WyWallet more closely. With the help of previous research and by having a customer focus the aim is to reach an understanding of the factors or situations that might have been affecting peoples thoughts concerning the implementation of WyWallet in our society, and thereby contribute to existing research made within the acceptance and adoption of mobile payment methods. To be specific the research question for this study is: Why has WyWallet been struggling with initial problems in its implementation and introduction on the Swedish market in terms of being accepted and used by its customers?

2 Related research

All sorts of new and innovative technologies are slowly but steady taking more and more control over our lives. New technology is opening up new possibilities and is constantly simplifying our everyday lives. Traditional payments are nowadays “competing” with digital ways of transferring money. This paper has its focus on mobile payments and the introduction of WyWallet, and how this method is starting to take over the handling of money transfer.

There has been a lot of research made within the field of mobile payments. Frequent topics include consumer acceptance and adoption, successful introduction and implementation of new technology but also different models that are developed as help for understanding the issues concerning mobile payments. Often used to explain and predict mobile payments are the TAM model (Technology Acceptance Model) by Davis (1989), and IDT (Innovation Diffusion Theory) by Rogers (1995). The main interest of this paper is grounded in mobile payments and the difficulties the new solutions and innovations struggle with. A lot of research has highlighted several challenges and problems for such payment technologies in order to be able to overcome them and be successful. For example, Van der Heijden (2002) argued that in 2001 there was not a standardized mobile payment solution
and he highlights that as a reason for mobile payment to be inhibited in that time. This is still relevant because today in 2013 there is still not a standardized mobile payment method existing. It is also relevant since this shows that ever since the beginning of the 21st century a standardized solution has been something to be aimed for but still, even if WyWallet in our time represents an attempt to make mobile payments a standardized method for transactions it is still problematic in terms of getting its customers to accept it. According to Schierz et al. (2009) only 1% of all mobile phone users have used mobile payment services in the year of 2008. Since the focus has been on users and customers, the studied research concerning users of mobile payments has been both within TAM and IDT but also further and more deeply studied within research of other approaches.

The following sections will give a further overview of previous research concerning topics related to mobile payment studies. The method of transferring money with cell phones has been possible in many years but the problem has been to get people to use these payment methods. Previous research has been striving to reach an understanding targeted towards these issues such as user acceptance and implementation of new technology connected to the theoretical models of TAM and IDT. These are two of the most used models/theories when explaining the phenomenon and dimensions of new technology such as mobile payments, connected to the extent to which people are using and accepting it. Although the models are quantitative to its nature they describe a number of elements that are noted to be important in the acceptance and diffusion of new technology. The following section will start with a short definition of what mobile payments are (2.1) and will thereafter be followed by a short description of the TAM model (2.2) and the Innovation Diffusion Model (2.3). Lastly other relevant research are presented and summarized into a table of key findings in extant research.

### 2.1 Mobile payment definition

Mobile payment is a way to transfer money with a mobile phone. It is sometimes referred to as mobile money or mobile wallet. With mobile payments you can pay without using traditional money in forms of cash, credit cards or checks. Mobile payments can be used for purchasing both digital products and physical products. Mobile payment is meant to decrease the payment transaction processing and also to decrease the circulation of physical money. The changes in payment habits have resulted in a development of new services such as mobile payments in order to meet customer demands and also to enhance efficiency (Dahlberg & Öörni, 2007).

### 2.2 Foundations for research on mobile payment methods

In the work of reviewing related research within the area of mobile payments, most have been aimed towards identifying factors that will affect user adoption and acceptance. For the most part the factor-based research are extensions and additions to two of the most commonly used theories within mobile payment adoption and acceptance – The Technology Acceptance Model and the Innovation Diffusion Theory. The following sections will give a brief explanation to what they mean and consist of.
The Technology Acceptance model, developed by Fred D. Davis (1989) has its primary purpose to present a better way of measuring and predicting system use for practical value. The research is focused on two theoretical constructs and they are “perceived usefulness” and “perceived ease of use”. These factors are theorized to be determinants of acceptance. People tend to use technology to the extent they believe it will help them perform their job better. This is what he calls “perceived usefulness”. Even if people think that the technology will help them perform better, but the system is too hard to use, they will not use it because of the effort needed, therefore it is also influenced by “perceived ease of use”. “Perceived ease of use” refers to which degree a person believes that the usage of the particular system is free from effort. An application that is easier or equally easy to use compared to other methods is perceived more likely to be accepted. The things Davis mention to be determinants for user behaviour is not taken from thin air. He has grounded his theories based on a lot of research made by previous authors that have created a number of different theories to explain human behaviour, and he also did studies of his own. The results he came up with concerning his hypothesized determinants “perceived ease of use” and “perceived usefulness” were shown to be very successful within user acceptance. He conducted two studies and with the help of the results and previous research, new measurement scales could be developed in order to measure the different relationships between determinants for user acceptance. The studies conducted by Davis have been frequently used by a lot of researchers since the year of 1989 when his article was published. Because of the reason that a lot of reviewed literature rely on TAM in order to estimate the acceptance of mobile payments of potential user, it is important to mention the model for the purpose of reliability.

Everett Rogers (1962) who is a professor in rural sociology developed the Innovation Diffusion Theory which has been a large corner stone for the research concerning pace and factors connected to the adoption of new technology. The theory comes from his book “Diffusion of Innovations” first edition written in the year of 1962. Innovation diffusion is a theory with which he tries to explain why, how and at what pace new ideas and technology is spread throughout cultures. He explains diffusion as a process where innovation is communicated through different channels during a period of time among members of a social system. The theory is based on four elements that he detected to be influencing the spread of new innovations. They are the innovation itself, communication channels, time, and a social system. For an innovation to be successful and self-sustained, it needs to be used widely and be adopted. And who are these adopters? They are mentioned to be innovators – the ones that are first to adopt an innovation, early adopters – the second fastest people to adopt the innovation, early majority – the ones that adopt an innovation after a period of time, late majority – the people who adopt the innovation after the average members of the society, and laggards – the last ones to adopt the technology. Further Rogers explains five factors that are proven to be determinants for an innovation to be adopted and they are Relative advantage – how improved the innovation gets over time, Compatibility – the level to which the innovation is matched to an individual’s life style, Complexity – how easy or difficult the innovation is perceived to be, Trialability – how easy the innovation is to be experimented with by the user, Observability – how visible the innovation is to others.
This section gave a brief explanation of the two models and how they are used to determine acceptance, adoption and diffusion. To further investigate factors and determinants for the use of mobile payments services, more relevant research related to the area have been investigated. A lot of earlier research has been concentrating on determinants from both the TAM model and the IDT theory to explain phenomenon connected to new technology. But, a lot of researchers have also found additional factors, not mentioned in TAM or IDT that also have proved to have effects on user acceptance and adoption. Following section will present these findings (2.3).

2.3 Additional factors affecting

Other authors have found further factors that also seem to affect user acceptance of new technology. The development of mobile payment solutions has rapidly been spreading and as it seems, it will also remain so. We are still very used of having multiple payment methods depending on what suits the best or which payment method is the most convenient. But, since everything are becoming more and more electronic and mobile, the diffusion or spreading of mobile phones, Internet and information technology speeds up this development within mobile commerce (Dahlberg & Öörni, 2007).

One of the first commercial mobile payment solutions was first launched in Finland in 1997 (Dahlberg, Mallat & Öörni, 2003). Both Dahlberg et al. (2003) as well as Chen (2008) argue that there are several factors partly connected to TAM and IDT that determine the acceptance of mobile payments. The one to have the strongest influence was compatibility. Compatibility is referred to which extent mobile payment is matched to a user’s life style. Further explained, the more compatible the new innovation is the less the behavior of the customer’s life style needs to be changed. If the new solution is compatible it will enhance the user life style and shopping experience when using the mobile payments method. New payment methods using mobile devices should be very well integrated into a customer’s shopping process without requiring difficult steps, additional devices or certain skills and also, it should be fun to use. Chen (2008) also detected transaction convenience as an important factor. This is not very surprising since the point of using mobile payment as a transaction method is for it to be convenient and make the transaction less complicated and also to reduce the number of payment devices. If mobile payments are going to be accepted by a lot of people the method needs to carry a lot of benefits that increases the speed and convenience compared to traditional payment options otherwise the method will be overlooked. What also is an important factor is that the market and its customers accept and use the system. All stakeholders within the system are dependent on each other (van der Heijden, 2002). For example, if the system is going to be used, both merchants and their customers need to have adopted and use the system otherwise the new service or innovation will fail.

Perceived risks were also found to affect adoption negatively. Users are not comfortable with unfamiliar new technology and therefore they are also uncertain to use mobile payment methods. Therefor Chen (2008) argues that early reductions in risks connected to the mobile payment application should be top priority especially during the introduction period of the new technology otherwise it can be difficult even for future and later mobile payment
applications to be adopted. Security is also something that highly effects the adoption. There are several issues related to security. The risk of getting your identity stolen or that your personal account gets hacked is proven to be major concerns. Chen refers to Suh and Han (2003) stating that their four pillars of information security should be closely considered. They are authentication, confidentiality, non-repudiation, and data integrity. These pillars are also connected to the feelings of security towards mobile payments and in the quantitative study by Chen he shows that 52.7% of the respondents felt insecure when using mobile payments and this overall insecurity can be linked further in connection to the four pillars by Suh and Han (2003).

Although mobile payment methods are supposed to be more flexible, easy and convenient, it is hard to go around the fact that traditional payment methods also are easy, flexible and convenient. As van der Heijden (2002) claims it is easy, fast and there are no additional cost added to the purchase. Therefore mobile payments are up for a challenging task. In order to compete with traditional payment methods and the acceptance from customers and merchants it needs to be everything that traditional methods are and more, and definitely free from additional costs. Van der Heijden (2002) as noted also put merchants’ acceptance in consideration. They of course want to reduce transaction costs both for themselves and their customers and obviously it is the cheapest for everyone if the only payment method were in cash. A lot of merchants do not own big businesses and can have financial difficulties, therefore they may not like the idea of paying for additional services. From the merchants acceptance viewpoint it was the ease-of-use issue that also was relevant. Since some customers sometimes want to use mobile payment, merchants got confused how to do with it. Even if they had initial training provided by the payment system distributor, it was easy to forget since the payment method was not frequently used. This lead to anxiety from the customers side when feeling that the shop attendant do not exactly know how to take care of the purchase (Van der Heijden, 2002). It becomes a negative spiral, the merchants do not feel comfortable in managing purchases where the customer wants to pay with his/her mobile phone since it isn’t something that they do frequently, and the customer gets insecure paying with their mobile phones since the merchants seem doubtful to be able to take care of the transaction.

Mallat (2006) have found out that people think that mobile payments are best suited for digital purchases or as a complement to small cash payments that do not cost a lot of money. The study of Mallat is based upon the Innovation Diffusion Theory and beside compatibility as a factor for influencing users she also mentions the factor Complexity. Complexity and problems in functionality are factors that have affected low adoption of user acceptance in mobile payments. The functionalities are not always related to technical aspects but also design aspects such as keypads, transmission speed and capacity of the battery, and these issues are mentioned to affect the user’s feelings towards mobile payment services. As earlier stated by Heijden (2002), Mallat (2006) also mention costs to be an important factor for customers in their decision of adopting a mobile payment service. For a product to be purchased by mobile payment and not any other traditional payment method it must be either equally priced or cheaper and again, no additional costs. But Mallat (2006) has also identified a lot of things that customers think are advantages as well with this type of
payment method. The most reoccurring ones that were mentioned in her study was that mobile payments allow purchases to be made at any time of the day or night and was not limited to a certain location. Because of this, customers thought it was very useful since the hazard of queuing and the need for personal presence in order to buy something wasn’t necessary any more.

Besides mentioned factors there are also other forces that are believed to have an impact on the mobile payment market and this can for example be technology and standards, legislations, already established purchase and payment habits or the current infrastructure of the present society where the study are being held. This can also be called contingency factors that will influence the performance of the innovation but cannot be controlled by the innovation itself. Contingency theories can therefore also be used in order to spot the environmental factors that will have an effect on the mobile payment market. Additional contingency factors include cultural-, social- and economic factors combined with regulations, jurisdiction and standardization factors because of the fact that the mobile payment industry is one of the most regulated industries in our society. Contingency theories are well suited in order to study the phenomenon of mobile payments because of the fact that depending on which market that is being studied the results will be different due to different infrastructure, regulations, laws and also habits of citizens depending on which county that the study are being conducted in (Dahlberg et. al, 2007).

The previous chapter of related research has given an overview of the research that has been made concerning the factors affecting acceptance, adoption and the diffusion of mobile payment methods. This information will contribute to the aim for this paper, which has been to understand users subjective experiences, their emotions and thoughts connected to the introduction of the new mobile payment method of WyWallet but also mobile payment as a payment method in general. However, after reviewing related research of mobile payments, more research needs to be done that are targeted towards analyzing specific events such as the impact that WyWallet have had on the society when it becomes a mandatory paying method for citizens in a certain society. Such findings might give future projects within implementation of mobile payment systems in societies a brighter future of succeeding in user adoption with less complications and negative consequences.

To summarize this section of related research there are several factors that occur to be of importance in terms of mobile payment solutions and its users. Below a table is displayed where these factors are merged together under three main categories – Acceptance, Adoption and Diffusion. The factors may not exclusively belong to a certain category and can therefore overlap into one another. The meaning of the table is to give an explicit and clear overview of the different findings of factors affecting mobile payment solutions within existing research.
Table 1: Overview of factors within existing research.

<table>
<thead>
<tr>
<th>Acceptance</th>
<th>Adoption</th>
<th>Diffusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived ease of use</td>
<td>Costs</td>
<td>Trilability</td>
</tr>
<tr>
<td>Consumer Acceptance</td>
<td>Transaction convenience</td>
<td>Relative advantage</td>
</tr>
<tr>
<td>Merchant acceptance</td>
<td>Perceived risks</td>
<td>Observability</td>
</tr>
<tr>
<td>Complexity</td>
<td>Security</td>
<td>Technology and standards</td>
</tr>
<tr>
<td>Perceived usefulness</td>
<td></td>
<td>Contingency factors</td>
</tr>
<tr>
<td>Compatibility</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The next chapter will present the method that has been used in order to reach the finished results starting with a description of the research context (3.1, 3.2) followed by the case study design (3.3) and the data collection (3.4). Lastly the analysis process of the data will be explained (3.5) continued by final words reflecting on limitations with chosen approach (3.6).

3 Method

This chapter will describe the method that was used when analysing the gathered data. It will start with a short description of what service WyWallet is, the media attention it has been receiving consisting of problems of implementation and acceptance from its users and customers, and why this was interesting to investigate. This was important to mention since this is a major reason to why this phenomenon were chosen as research topic for this paper. This section will also explain the characteristics of the chosen case study design followed by a motivation in relationship to research question and research phenomenon. After this it will be explained how the data collection were conducted and what kind of data that were gathered. Lastly a short description of how the data has been analysed is described.

3.1 Research context

WyWallet is a mobile wallet that you can use in order to pay or transfer money with using your mobile phone. The company started their proceedings on the 31st of October 2011 as a result of collaboration between Sweden´s biggest telephone operators Telia, Tele2, Telenor and Tre. Together they are in charge of mobile payments and offer 97% of all Swedish people the ability to transfer money by mobile phones. On the webpage of WyWallet they state that they exist because of the reason that both they and their customers are performing more and more things with mobile phones. They also state that they want to provide their customers with the ability to use their mobile phones to transfer and receive money in a smooth way. Further arguments for their existence is that they want to develop mobile payments that are fast and easy to use without compromising security, and because of their previous knowledge, they understand the mobile behaviour and the technical requirements that is needed in order to meet their customers present needs. They are making sure to follow all the strict laws and regulations so that their customers can feel secure when using their mobile phones as wallets (www.WyWallet.se, 2013-05-09).
3.2 Media attention

WyWallet has been receiving media attention since it was launched. It concerns information about the application, what it is, why it exists and how it is supposed to be used. At a Swedish newspaper website one can read that Telecom carriers created WyWallet in connection to the new payment service act that was about to come into force the 1st of February the year of 2013. This new law came about because a new EU directive that has the purpose to prevent money laundering and terrorist financing. This changes led to the fact that people now need to register themselves with personal data and credit card number at WyWallet in order to make a purchase with their mobile phone (dn.se, 2013-05-09). Even in America, The Wall Street Journal has pointed their attention to the new service. On their blog they say that text message-based payments are the major payment method in Sweden with a figure of 1,5 billion Swedish crowns and that the four major telecom operators have teamed up and created WyWallet (Wall street Journal, read 2013-05-09).

But WyWallet is not the only service that has been developed or is being developed in Sweden. Dn.se (read 2013-05-09) write on their homepage that SEB, Swedbank, Handelsbanken, Länsförsäkringar and Danske Bank and the major banks in Sweden are also cooperating and have developed a service called Swish which allow people that have downloaded their application and uses a Bank-ID to transfer money between each other. At the same time Swedbank have started testing out a system for mobile payments in stores under the name Bart that uses QR-codes to confirm purchases but later they are also planning on using NFC-technology (near field communication). These technologies mean that the customer holds his/her phone against a terminal in the shop and have a special code to confirm the payment. The amount is then withdrawn from the customers’ bankcard. This result in that the applications created by the banks such as Swish and Bart are going to compete on the same market as WyWallet and against each other for the acceptance from customers.

The journey of WyWallet has not been problem free. When WyWallet was implemented on the market as the only forum through which money could be transferred by, there has been a lot of negative criticism from its customers. Customers include everyone affected by the application and the new law. Merchants all over Sweden have lost their income noticeably. Some of them are reported to have lost 70% of their clients. But it is not only merchants that are suffering from the consequences of the new payment service law. Even charity organizations are suffering big losses. The Swedish fundraising organization Röda Korset lost 92% of their donation income in February 2013 compared to the same month previous year of 2012 and this can directly be connected to the time when the law of EU where put in to force and WyWallet became the payment application that was forced to be used (dn.se, 2013-05-09). Merchants are also doubtful to the new technology. In interviews that the Swedish newspaper Aftonbladet has conducted, merchants claim to have demands if they are going to introduce and use the new technology. For example they say that it must be preferably faster or contribute with added value for customers’ control of their accounts - Bengt Nilervall – responsible for payments in Swedish commerce (Aftonbladet.se, 2013-05-09).

Further criticism can be read when opening App Store in iTunes. When downloading the application in App Store one can view the comments and reviews about the app and they are
mostly negative. There are comments such as; “Keep away from this application”, “The worst application ever made”, “Never seen an application that operates this badly, at all. It should not exist for downloading”, “Re-do it and do it right”, “I will never pay with my mobile phone again”, “This application is garbage. I give it one star out of five, and even that is too much”.

### 3.3 Case study design

Since the aim for this research paper was to gather valuable information and achieve a deeper understanding of how users think and feel towards mobile payments, qualitative method was the most suitable and fruitful method to work with. A lot of research made within the area of mobile payments is quantitative and for this paper it was important to dig deeper into the feelings of mobile payment customers. Qualitative methods have focus on words and not numbers and seek to reach understanding on a deep level. When using qualitative methods you want to understand the social reality based on how the participants of a certain environment interpret the reality (Bryman, 2008). The main steps a researcher goes through when using qualitative methods are; 1) general research questions, 2) choices of relevant settings and persons to be examined, 3) collection of data, 4) interpretation of data, 5) conceptual and theoretical work, 6) results and conclusions (Bryman 2008). Qualitative research method was suitable also because it is not a consistent phenomenon but consists of several different variants and this gave possibilities for this paper to be extensive on a qualitative level. Within qualitative research it is also common that the researcher construct and apply his/her own interpretation of a qualitative method (Patel & Davidsson, 2003). This gives the researcher open possibilities in terms of managing and collecting the material and thereafter analyse it. For this paper a two-stage approach has been used. Firstly it was desirable to get an initial overview of customer’s feelings, thoughts and experiences of mobile payment methods. To gain data a focus group with six participants was held. From the material and information taken from the focus group, certain themes could be identified concerning mobile payments. These themes worked as a base for the interview guide that was created for the in-depth interviews. The chosen approach of dividing the data collection into two different steps was relevant because it provided an overview of what customers felt were the most important aspects of mobile payments and its dimensions.

### 3.4 Data collection

The data that has been gathered for this paper has been by holding a workshop consisting of six members and also four in-depth semi-structured interviews. The focus group consisted of equal number of males and females in the same age group of 24-28 years of age. Workshops or group interviews are aimed towards emphasizing and discussing a certain theme and deeply analyse it together (Bryman, 2008). The respondents chosen for the interviews and focus group were all familiar and comfortable with mobile payment methods. Since WyWallet has been struggling with the acceptance by its customers it was considered to be most interesting and fruitful to collect data from already accustomed users of mobile phones and applications, hence the majority of respondents within both the focus group and in-depth interviews are students whom can be considered to be the most frequent users of such
applications. The reason for this criteria was that people with much experience within the area of mobile payments, should be able to understand WyWallet and its different features without much errors and if not, the problems within the application are made more visible. The idea of the workshop was for the members to download the application WyWallet together on their mobile phones and then have them discuss the process from first getting the application and thereafter use it in order to by a parking ticket. This was important since it was desirable to replicate the process customers to WyWallet have been experiencing when using the application. By observing discussions and feelings that the members of the group experienced, it could thereafter be connected to the feelings of other customers using WyWallet. Additional information concerning WyWallet such as digital news articles and reviews on app store where used for the purpose of gathering background information.

The information received from the focus group resulted in a number of themes that were extracted and that embodied relevant topics to be discussed and reflected upon for the subsequent in-depth interviews. The primary source of information within the data that was collected was taken from the in-depth interviews since this information was most informative in terms of providing personal and explicit information about feelings and attitudes towards mobile payment services. Having the focus group was the secondary source of qualitative data, but not to be less important. It was the focus group that provided important information about what topics that was valuable in order to gain further and more in-depth information for the interviews. The thirdly important source of data came from conducting document studies on the Internet. Studying online-newspapers provided information about negative and positive criticism that WyWallet have been receiving in the media and this gave an additional dimension of information to this research paper. In order to be able to inform the reader of this research paper as well as the participants of both the focus group and interviews about WyWallet, homepages of the different telecom operators that provide the service were read and studied.

All topics discussed during the focus group and the in-depth interviews were digitally recorded. The participants were closely and thoroughly informed about their right to be anonymous and that they, at any time, could withdraw themselves from the group session and their participation in the study. The group session and the interviews were then transcribed in order to be able to highlight and not miss important and valuable information, and also to make it possible to extract and quote the statements of the participants. The focus group session was not transcribed word by word since it was problematic with so many participants, but key statements and also tone of voice could be captured with words. It was desirable to gather as much opinions and inputs as possible. Therefor there are different participants in the in-depth interviews contra the focus group. The participants of the in-depth interviews are coded with A, B, C or D. The participants of the focus group are coded with G1 – G6.
Table 2: Overview of persons interviewed with in-depth interviews

<table>
<thead>
<tr>
<th>Interview person</th>
<th>Occupation</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Student</td>
<td>58 minutes</td>
</tr>
<tr>
<td>B</td>
<td>Student</td>
<td>45 minutes</td>
</tr>
<tr>
<td>C</td>
<td>Assistant nurse</td>
<td>50 minutes</td>
</tr>
<tr>
<td>D</td>
<td>Industrial worker</td>
<td>30 minutes</td>
</tr>
</tbody>
</table>

Table 3: Overview of participants in the focus group

<table>
<thead>
<tr>
<th>Participants</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person G1: Female</td>
<td>1 hour and 30 minutes</td>
</tr>
<tr>
<td>Person G2: Female</td>
<td></td>
</tr>
<tr>
<td>Person G3: Female</td>
<td></td>
</tr>
<tr>
<td>Person G4: Male</td>
<td></td>
</tr>
<tr>
<td>Person G5: Male</td>
<td></td>
</tr>
<tr>
<td>Person G6: Male</td>
<td></td>
</tr>
</tbody>
</table>

3.5 Data analysis

The analysis of the material has partly been theory informed and partly been conducted by using a grounded approach. In order to link the findings from this research paper with previous research, the three categories (Table 1) with underlying factors identified were used. Beside the theory informed tools, a grounded approach has been used for the reason to keep an open mind in the search for additional factors or determinants for usage of mobile payment services. Grounded theory is, for this paper, not used to the letter but many of the principles that form the basis of the method has been used. The step of coding the material gave the opportunity to label, distinguish and compile the data into different categories or themes (Bryman, 2008). Open coding and information taken from already existing theories concerning user acceptance, adoption and diffusion of new technology has been used in order to organize the data and facilitate the analysis.

The labels were put next to possible indicators of concepts that could be derived from the recorded and transcribed interviews. These labels were thereafter gathered and grouped into four themes that constituted as the basis for the analysis and understanding of the research question. The identified themes from the empirical data are not explicitly connected to the three categories presented in table 1. The idea is to present discovered factors that can be added to already existing research within the context of this paper's research question. In that way this paper can extend and enrich the knowledge within user acceptance, adoption and diffusion of new technologies. The study and categorization of related research have helped in the process of knowing what indicators to look out for. By breaking down the gathered material with the labeling and categorizations, the result could then be mapped towards related research in order to spot confirmation of already established factors but foremost, search for additional factors. The identified themes are shown below. As for table 1 the factors may not exclusively belong to a certain theme and can therefore overlap into one another. The meaning of the table below is to show an explicit and clear overview of the
identified themes and how they can be related to previous research within the area of concern.

<table>
<thead>
<tr>
<th>Expectations on WyWallet</th>
<th>Trust towards application provider</th>
<th>Attitude towards mobile payments</th>
<th>Technical aspects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived ease of use</td>
<td>Costs</td>
<td>Consumer acceptance</td>
<td>Transaction convenience</td>
</tr>
<tr>
<td>Complexity</td>
<td>Perceived risks</td>
<td>Merchant acceptance</td>
<td>Trilability</td>
</tr>
<tr>
<td>Perceived usefulness</td>
<td>Observability</td>
<td>Security</td>
<td>Technology and standards</td>
</tr>
<tr>
<td>Compatibility</td>
<td></td>
<td>Contingency factors</td>
<td></td>
</tr>
<tr>
<td>Transaction convenience</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 4: Overview of the four identified themes within the empirical data and how previous research can be related to them*

### 3.5 Limitations with chosen approach

The quality concerning reliability and validity in qualitative research are in some ways different from quantitative research. In quantitative studies the validity of the study is connected to the importance of studying the correct phenomenon that can be reinforced by the correct theories, the right instruments and the accuracy of measurements. When conducting qualitative studies the ambition is to discover a certain phenomenon and then try to interpret and understand the meaning of it into a certain context. So, the meaning of adding validity and reliability within qualitative research is rather a matter of concern throughout the whole research process than having all of the steps correctly conducted. It is not either solely related to the gathering of data, the validity is supposed to be present throughout the whole research process (Patel & Davidsson, 2003). In this research paper validity and reliability has been aimed for at all stages. Nevertheless, when conducting a qualitative research paper it can be hard to come around the fact that the results made by the researcher have been affected by his/her own interpretation of the reality. Transcription of the audio-recorded group session and the in-depth interviews are one way of managing the gathered data with validity and reliability in mind but even then, the researcher can interpret things in the “wrong” way that will be displayed as research results and conclusions. The fact that ten persons have been interviewed for this paper is not ideal in terms of the possibility to generalize the results to a bigger population. However, generalization is often problematic when using qualitative methods (Patel & Davidsson, 2003) and the reason for this research paper has not been to be able to generalize the results, but to gain understanding of a current phenomenon that the citizens of Sweden are facing. However, the citizens that have been interviewed for this paper are all well aware of and are very knowledgeable within mobile technology and this will of course have an impact on the finished results. Another thing that can be highly criticized is the fact that the application launched by WyWallet is fairly new and the experiences of the interviewees are not that extensive at the point when this research
paper was written. If this paper had been written at a later stage the results might have
turned out differently. WyWallet would have been used and tested during a longer period of
time which might had led the application providers to change features according to what the
customers complained about or missed within the application. Nevertheless, the aim for this
paper has been to reach an understanding and also to analyse the initialization of the mobile
application WyWallet and why it has been problematic.

4 Results

This section will present the findings of the gathered material from the in-depth interviews as
well as the focus group. As explained previously a theory informed approach as well as a
grounded perspective has been used in order to organize the material into common themes of
interest. Based on the analytical efforts four themes emerged: Expectations on WyWallet
(4.1), Trust towards application provider (4.2), Attitudes towards mobile payments (4.3) and
Technical aspects (4.4).

4.1 Expectations on WyWallet

Something that has been a prominent factor during both the group session and the in-depth
interviews are the expectations on technology and usability of technology. We are now living
in a time were the society and its inhabitants are using technology as a part of their everyday
lives. We expect the technology to help us do simple things even simpler but also complicated
things more convenient. Mobile phones, its functions and different applications are a part of
this current reality that we are living in. These expectations towards mobile applications
became visible during the collection of material for this research paper. At first the
participants were told the background of WyWallet, who they were, why they exist and what
kind of services they provided. When the participants of the group session where asked to
download WyWallet the discussions and brainstorming could start. Since there could be
some participants that where not familiar with WyWallet and the aim for the group
session was to analyse and listen to the participants, no negative media attention or any other
information where briefed with them. A lot of expectations arose when they heard that
WyWallet had been created by collaboration between Sweden´s biggest telecom operators
and all of them were enthusiastic to explore the new mobile application.

“It really sounds awesome... I hope it works good” – G3

“I really like the idea of mobile payments. It works fast and usually only takes a
minute” – G1

But the expectations soon became disappointments. A lot of the disappointments where
directed towards the first impression when the application where downloaded and personal
information where about to be filled in to get started with the application. The registration
needed personal information such as first name and surname along with personal numbers,
credit card information and home address. Additional concerns they had were how long it took to download the application and also how difficult is was to navigate.

“It all worked quite well when downloading the application but why do they need so much personal information? ...It is really complicated and not just that, the application works so slowly” – G4

“Of course you have to learn the application when its new but this is just too complicated and time consuming...what if I were about to park my car in a hurry and have to fill in all of this. It wouldn’t work” – G1

“OK if I were sitting at home quietly in my sofa doing all of this but in any other situation than that I would be stressed out” – G5

All participants thought the application were too time consuming and complicated. They were also talking about the possibility that not everyone have access to wireless networks at all times and that would make the application operate even more slowly than it already does. Some of the participants had not heard about the application before and therefor were very surprised to hear that this is the service through which all mobile payment is forced to go through. Also discussed where the absence of explicit information within the application. They were expecting information menus both directly when the application was downloaded but also along the way through registration. Since this is a new application that are controlling money transferring it was also discussed that the application would benefit from having some kind of tutorial with pictures or text that could demonstrate how to make a purchase. Only two persons attending to the group session had downloaded WyWallet before the group session took place and they had not completed the registration. The reason for the uncompleted registration where the same reasons that came up during the downloading and registration conversations – it took too long and was too complicated which lead them to re-park their car at another parking lot where they could pay with coins.

“We encountered the application when we were about to park our car but since a lot of the information was important to get right it felt as if it was too complicated and took too long time to do in hurry. We have not used it since” – G4 and G5

To summarize, the first impression of WyWallet was not appreciated among the group participants. It took a lot more time than anyone expected and was also complicated. The expectations where positive to begin with but ended on the negative side. A lot of the expectations where based on the information concerning the providers of the application combined with the purpose of the application. Since the biggest telecom operators in Sweden created WyWallet and the majority of the group participants use and are satisfied with the same operators the expectations were high. But the expectations were also based on previous experiences with text message purchases and how fast and easy they were before. Additional factors are also based on other well-functioning mobile applications. Every participant in the
group have a smartphone and are used to manage mobile applications and when WyWallet did not fulfill their expectations of being a well-functioning application they became unsatisfied and negative.

4.2 Trust towards application developer

The fact that WyWallet is provided by mobile operators seems to have a large impact on the interviewees' trust. Since telecom operators always are competing against each other with offerings more cheap than the other the interviewees felt insecure of the provider's intentions, and if they really have their customers satisfaction as top priority. The respondents discussed that they constantly feel fooled by mobile operators and that the only thing that operators are interested in is to win you over as a costumer and then cheat you on your money with hidden expenses and fees. Another factor affecting is that some of the interviewees had not heard of WyWallet and therefor felt a bit surprised when they all of a sudden had to download an application in order to do something that had been easy and simple before.

“All of a sudden I stood there and were forced to download an application in order to by a simple parking ticket. I had never heard of WyWallet before and now they wanted my money. It could might as well been a scam. I had not heard anything about it neither on the TV nor on the radio. They could really have managed or promoted this much better before it was put into force” – Respondent E

Further response from the respondents was that they would rather trust the banks with their money and cannot see why it is in any other way. A big reason for that is because of the fact that WyWallet give you two choices of managing the payment. You either get sent a paper invoice to your mailbox or you can insert money on your WyWallet account from your bank account. The respondents feel like this is unnecessary and want their money to be withdrawn directly from their bank account. And also, if you as a customer choose to be sent an invoice it will cost you an invoice fee. Also charged for is when you as a user of WyWallet choose to transfer money between your bank account and your user account. This is only a small fee that is charged in proportions to how much money that is being transferred but this also has an impact on the interviewees' trust. One of them gave the example of the fee you are charged with when buying groceries at the Supermarket.

“I have my Internet bank connected to a well-functioning and simple app and use it to do a lot of things. Why cannot buying a bus ticket or a car ticket be managed by an app connected to my bank account so that the money is withdrawn from there? As it is now with WyWallet you have to insert money to your account or choose to receive an invoice that cost me 19 kronor...really? This is another big issue, invoice, in the 21st century. I really feel like this is a step in the wrong direction” – G2
“If I would have the opportunity to choose between an app made by the banks or by telecom operators I would without a doubt choose the one made by the banks, I mean, that is where I have my money” – Respondent D

“All these added fees are irritating. It’s like those coins you must buy plastic bags for when grocery shopping. It only cost you 1-2 kronor but that sum adds up to be a lot more money than you think in the end” – Respondent B

To summarize it seems like WyWallet has not been getting a good response in terms of trust from the participants and interviewees. The whole process is seen as inconvenient and complicated and since the respondents already have Internet banks and the application to that service in their mobile phone, they consider it even more unnecessary. Also mentioned is that it is very out of date to be sent a paper invoice. The concern was connected to that we already are receiving a lot of invoices concerning our everyday lives such as rent, electricity, mobile phone bills and etcetera, and since this new service distributed by WyWallet is forced upon us and is not a preferred alternative, it makes the respondents even more irritated. It will lead to more invoices to manage and also, you will be charged a fee for it to be sent to you.

What can be seen to be the most preferred way of transferring money is when the money is withdrawn directly from the bank. The respondents seem to have a lot more confidence in their banks in comparison to profit making mobile telecom operators. When asked how reliable they thought WyWallet where they all agreed that it felt weird that this is an application created by mobile telecom operators and not by collaboration between banks.

4.3 Attitudes towards mobile payments

Even if WyWallet has not been receiving the best reviews the interviewees have high expectations and positive attitudes towards mobile payments. They all think that mobile payments in general are the right payment method in our time. Since a lot of people always are carrying their cell phones with them it is considered to be very convenient to also pay with them. If every payment were to be handled with mobile phones it would mean that you need at least one less item to bring with you when you go shopping. Nevertheless the respondents mentioned a current problem, that a lot of people today have smartphones or a mobile phone but there is still a lot of people belonging to an older generation. For these persons mobile payments can be a large step to take and also, a lot of them do not even have a cell phone.

To make mobile payment as a standard method for all payments instead of cash or credit cards do not the respondents feel the society is ready for yet. One problem is previously mentioned, the elder generation, but also the fact that the society in general does not feel ready for it yet even if a big part of their inhabitants are. Again, if referring back to WyWallet the respondents feel that the demand to use the application should have been taken place after it could be used everywhere where it is supposed to be used and also that the society should have prepared their citizens for it before forcing them to use it.
“We have our mobiles with us at every time and cash really is an out-dated payment method. The same goes for credit card also actually. I mean, we use our cell phones all day long to do a lot of things, why not as a payment method as well?” – Respondent A

“If it would work without errors I cannot see any problems with mobile payments. I would gladly skip credit cards and cash” – Respondent D

“As much as I trust my money to be handled correctly when I either shop with cash or card, I would trust my money with mobile payments” – Respondent C

“With a mobile application in hand that you can buy something with at any time regardless of hour of the day or place, I find very positive. I have my mobile with me everywhere and have it close at hand at all time” – Respondent E

As can be seen above mobile payments in general is considered to be good but with the premises that it operates flawlessly. Since we already do a lot of things with our mobile phones it do not seem that the respondents feel more insecure using mobile payments than any other payment method. For instance all people that are using a smartphone have an account connected to their bank account in order to buy applications in iTunes or on the Android market and that do not inhibit people in buying things. But, even if this is not a problem it does seem like the most purchases with mobile phones preferably concern small transactions and not when there is a lot of money at stake.

“Every time you buy an app in iTunes there are money taken from your bank account and that is not strange or scary. I mean...if anyone wanted to steal any money from me like a computer hacker or something, I do not think that would be hard. Even so, I feel as much comfortable buying Angry Birds in iTunes as when I go to the supermarket buying milk” – G1

“I do not want to have too much money at stake when I am doing a mobile payment. It would not feel safe to transfer thousands of crowns. If I were about to do that I will log on to my computer and do it via my Internet bank” – Respondent A

“Concerning WyWallet, if they would have handled everything in the correct way, maybe put up some commercial posters on buses and bus stops or on the TV telling their upcoming customer about how awesome their new service is, I would have been like; WOW what is this? As it is now it's more like BANG, you are now forced to use this and you do not have a choice. This disturbs me so much.” – G6

“I do not think the society is quite ready for a total transformation yet. Everything work so good already with cash and credit cards” – Respondent A
The possibility to choose a payment method has shown to be a very important thing for the respondents. They never seem to want to be forced to use a certain method. They want to make the choice for them self. They also mention that for a payment method to be convenient and easy it needs to be an option among all other options and that no other possible option is excluded. There are still people in our society that do not have, or is not comfortable handling a cell phone, and not to say the least – is not comfortable in relying on a mobile phone application with their money. Also, the respondents feel that already existing payment methods are well suited to their life style as it is and if mobile payments are going to be something they will use, it need to be as easy and convenient as current payment methods.

To summarize, the respondents feel ready for a society where payments can be made using mobile phones but they do not feel that the society in a whole is ready for it yet. There are still people among us that are not as comfortable in relying on mobile phones as the generation that has grown up with the technology and its ongoing development. Further the respondents feel that the society need to be better prepared in order to introduce new payment methods, otherwise it will not feel as comfortable and safe for people to use as traditional payment methods. Also important is that if a proper transition had been conducted it would have made customers feel more comfortable with the new technique.

4.4 Technical aspects

Technical aspects as well as the usability of the application have emerged when I talked to the group participants. Reoccurring issues such as interface, speed, functionalities and reception are brought up. The respondents demand the application to be user friendly and look attractive and appealing to use. Also important is that it need to work at all times.

“Often times when I am at ICA super market I do not have reception on my cell phone. Things like that will need to change” – G6

“If we are about to use our mobile phones more and more when doing purchases in stores they will almost be forced to offer WLAN for free everywhere, because as soon as you lose your reception you are not able to do anything” – G2

“What if I am about to pay with WyWallet and my battery dies... what would I do then in order to pay?” – G5

“We are sitting now using WyWallet on a wireless network and it is slow, how slow isn’t it on a regular 3G net?” – G6

“I do not like that it takes so much time when navigating in the application. When it operates like this it feels like if there is something wrong” – G3

Reception issues seem to be concerning for the participants. They discussed that if the possibility exists to do your purchases in the grocery store with your mobile phone it will need to have access to network reception at all times, preferably by wireless networks since that is the fastest and most reliable Internet connection. Another issue discussed is battery
life on cell phones. But when further discussed the participants came to the conclusion that if you know that you are going to pay with your mobile phone it comes natural that you prepare for it and have it charged. It is the same thing as when making sure to bring the wallet before shopping. The fact that the application operated slowly made one of the participants feel insecure using it since it became unsure if there was something wrong with the application.

Further it was discussed weather the design throughout the application made it appealing to use.

“Nice and clean design with not too much menus and stuff” – G2

“Something as simple as filling in my credit card number, with a good application the numeric key board comes up and not the alphabetic one. Why is this mobile application not mobile customized?” – G3

“I am thinking that it might have a design that is too simple. I think it makes it feel less serious...but I guess it is a fine line between a simple app and a too simple app” – G4

Mixed feelings emerged when discussing the design of WyWallet. Some of them were concerned about the technical aspects of the application whilst some were more concentrated on the design and cosmetic appearance. According to one of the participants the application could have been more mobile phone customized so that it operated well when navigating in it and filling in personal information. The numeric keyboard did not show when the participant was about to fill in their social security numbers, instead the alphabetic keyboard was displayed which made it problematic and inconvenient. Regarding the design of WyWallet, there were mixed opinions. It was appreciated that the design was simple whilst another participant felt it might be too simple which made the application seem unserious.

To summarize most participants felt that features needed to change in order to have WyWallet operate flawlessly at any given situation. Suggestions such as having wireless networks for free wherever the application could be used and must be used were mentioned. Also a concern was battery life but that comment were soon to be dismissed by other participants since that was a matter of preparing as whenever else you go shopping. The participants approved the design for most part but one participant felt it to be too simple and said that it made it look unserious.

5 Discussion

The aim for this research paper was to gain an understanding to my research question: Why has WyWallet been struggling with initial problems in its implementation and introduction on the Swedish market in terms of being accepted and used by its customers?

This chapter will discuss and reflect upon the results. It will be reflections connected to previous findings in related research (compiled in Table 1) and also my own considerations to what I think the results mean. This section will have the same structure as the results section where the topics are discussed under headings connected to the four emerged themes;
Expectations on WyWallet, Trust towards application provider, Attitudes towards mobile payments and Technical aspects. The heading of Technical aspects is woven together within the headings of (5.1), (5.2) and (5.3) since those can be seen as issues that are underlying within each theme.

5.1 Expectations on WyWallet

It can be assumed that expectations have a big influence on how a new application will be accepted, adopted and diffused by its users. In this case it becomes visible that expectations play a considerable role in terms of how the participants ultimately felt about WyWallet. Already mentioned is that Tre, Telenor, Telia and Tele 2 is four of Sweden’s biggest telecom operators. This can set the bar high concerning expectations of them making a reliable, well-functioning application that are user friendly and work without errors. As a customer of a new product or service, in this case WyWallet, the expectations are set high. A lot of the expectations where directed towards the first impression of the application. The participants felt that it was too complicated and time consuming. This can confirm the underlying factors that contribute to the diffusion of new technology. As the TAM model factor “perceived ease of use” highlights this is important for a user in order to accept new technology. The person using new technology such as a new application need to believe that the usage of the application is free from effort in order to use it. This was something that the participants of the group session firstly believed and hoped for but when trying it out they were not as convinced. Since we are used to do errands with our mobile phones almost every day we have the initial perception that it is a simple and fast way of taking care of things, and today we are using our mobile phones to do so much more than making phone calls with. It can be so that we expect an application made in our time and by the four biggest telecom operators to be good and well functioning and when it isn’t we get impatient and irritated. As the TAM model present it is important that the application is easier or at least equally easy to use compared to other methods otherwise it will not be used.

But how about the fact that WyWallet is an application that the citizens of Sweden are forced to use? This makes the situation more complicated and also different from other situations. Since the new law came about because of the EU directive to prevent money laundering and terrorist financing, WyWallet was created and launched. The initial purpose of the application was to meet society’s new laws and regulations. The user-friendly aspects of the new application might not have been top priority within the time frame for when the application needed to be put into practise. Considering all the research that has been made concerning user adoption, acceptance and diffusion and the fact that we are living in an era where there are high demands upon technology, even from an ordinary non-technological person’s point of view, it seems as if something has gone wrong and that the launched application might have been a result of decisions made too fast. This can relate to the arguments of Dahlberg et. al (2003) where it was found that technological issues need to be solved before mobile payment solutions becomes used in a larger scale otherwise the diffusion and adoption of new technology will be inhibited. We can also go back to the description WyWallet wrote about them selves where they state that they want to provide their customers with the ability to transfer and receive money in a smooth way and also that
they know the technological aspects with the promises that it will be fast and easy without compromising security. When comparing that statement to the gathered data from the interviews, it seems as if they have not lived up to these requirements. When the participants downloaded the application they discovered that it was not fast and it was not easy. What is also interesting is that WyWallet stated on their webpage that they understand mobile behaviour and the technical requirements that are needed in order to meet customer demands. The technical requirements of the application were not on the positive side for the participants. They expressed the quarry that WyWallet did not use numeric keyboard when it was suited to, and that gave the participants a negative impression. It again shows the importance of the factors affecting within the Innovation diffusion theory, the concepts of Complexity, Compatibility, Trialability and Observability. Complexity, Rogers (1995) explains as the extent to which the users perceive the innovation to be simple to use, but also, if it isn’t simple it will affect the acceptance. Also connected to this is what Chen (2008) refers to as transaction convenience. A mobile payment application needs to work flawlessly and decrease the amount of inconveniences. As results for this study it seems as if the goal of decreasing inconvenience is rather an increasing of inconveniences.

To summarize it seems like WyWallet may have entered the market without being properly prepared. Either it’s due to fact they had limited time producing the application and therefore did not have time to consider all the crucial parts of a user friendly product, or the companies behind WyWallet are relying on their loyal customers too much to be bothered when they already have granted customers due to the EU directive. Expectations play a significant role within every decision we make and the thoughts that we have. Sometimes the outcome of an event or situation fulfils our expectations. Sometimes we are taken by surprise about how things turned out and sometimes we are forced to adopt and accept certain things no matter the expectations we have which can be applied for this case study. Depending on the outcome one can imagine that the diffusion of new technology is in some way very much related to the outcome of WyWallet and its results within customer expectations.

5.2 Trust towards application provider

The attitudes towards WyWallet as being the provider of the service and not the banks are a big concern of the respondents. They do not understand why it needs to be intermediaries when transferring money when it has been run so smoothly before WyWallet entered the market. Before WyWallet, money were directly withdrawn from your bank account or charged for on your mobile phone bill. The fact that the new law wants to prevent money laundering and terrorist financing it seems as if the solution of having an outside party involved in handling the money is more safe, but since the respondents do not seem to have been fully informed of the intentions behind the decision, it becomes an immediate issue for acceptance. Even when clicking in to the home page of WyWallet you do not get this information. It might be smart if WyWallet could have some information on their home page connected to why they really exists and not only numerous of sales arguments and persuasion statement that they know what their customers’ needs are and are eager to meet those requirements with their solution. The respondents felt that their intentions are dubious and therefore also affecting their trust towards them being the application provider.
Especially so when it appears as if they do not meet those requirements. And who are not the ones to judge but the potential customers who are forced to use the application? Perceptions about new technology are connected to the diffusion of how WyWallet will be received. A lot of this can probably be connected to that people are not unaware anymore. They know how to get their hands on information and with Google taking over the world, searching for information concerning certain topics is never many clicks away. When you search for WyWallet it is not only their website that is found. A lot of negative criticism is displayed, but you can also find background explanation to why they exist. The explanation cannot be found on the WyWallet homepage but on other websites. In order to find out how customers feel about the application one can also read reviews on both App Store and the Android Market.

It would probably be beneficial for WyWallet if they could spare a section on their home page where they could explain why they exist and what authorities that is behind the law. It would probably be very assuring to their customers that WyWallet exist for the benefit of them and not because they want to earn great revenues. It would gain trust towards WyWallet. This brings attention to Rogers (1962) and the factor that he identified as observability. How technology is displayed when it is new is very much connected to initial thoughts whether this is something that you can trust and rely on or not. When Rogers reached his results within innovation diffusion theories one cannot help but to think how his theories would have played in todays information society. One can believe that the diffusion of new technology acts differently in the society we live in today. Different forums, platforms and online communities, which in turn are connected to very efficient channels of information spreading, must have resulted in a different pace of diffusion. Peoples trust towards different companies as well as their products are very much dependent on how they are displayed and rated by others.

Very concerning is the fact that since WyWallet where put on the market, charity organizations has lost up to 92% of their income via mobile donors. This becomes very alarming and as a result of such a big consequence one can make the assumption that such a bad reputation is hard to get rid of. As reported in this study there are perceptions that mobile operators are out to lure people of money, and when the current company in charge of mobile payment has stroked and affected charity organizations in a negative way the situation of WyWallet becomes an urgent problem. Chen (2008) argued, that early reductions in risks connected to the mobile payment application needs to be managed otherwise it can also have an effect on the new technology to be adopted and accepted. When finding the information about the losses charity organisations have suffered due to WyWallet, attention are also attracted to Van der Heijden (2002) and the factors he identified connected to mobile payment solutions. For example he identified costs as an important factor. He talks about cost as in physical money, which in this case for charity organisations is true, but it has also resulted in other costs that can be reflected upon. It can be seen as costs in terms of direct consequences for people and societies who may be depending on donations in order to have medication, clean water or vaccinations. How can we trust new technology and its providers if the application they have made affected such important and dependent organisations in such a negative way? The discussion about mobile payments and the environments they are implemented in (directly or indirectly as in the case of charity
organisations) needs to be raised in a more serious manner. The cause and action perspective will become more and more prominent the further the digitalization of our society goes.

The interviewees for this research paper have trust in their banks whilst the trust towards WyWallet handling their money is more on the suspicious side. So how could this problem be solved? One option could be that WyWallet maybe could have some sort of collaboration with the banks in Sweden so that it works as when you are using services such as autogiro or typing in your credit card number when doing a purchase on the Internet. In that way there could still remain some sort of barrier between the bank and the transferred money so that the EU directive still would be followed. The innovation of mobile payment method needs to be compatible (Rogers, 1995) to the users life style in order to be used because the less the user needs to change his/her life style, in this case the practice of transferring money, the more the innovation will be accepted. Members of our society are still very comfortable and safe using traditional transaction methods, so for mobile payments to get as much accepted and used as possible it needs to be everything that traditional transaction methods are and more (Heijden, 2002). As final words for this section I would like to mention the thoughts of Mallat (2006) and how she is questioning how suitable mobile payments are for physical purchases? In what way can mobile payments ease our everyday lives and our shopping habits without compromising our trust and acceptance to use it? And also why is the trust towards banks more natural than towards mobile application providers? In the end, banks are also profit-thinking foundations or incorporated companies who want to win you over just as much as application providers or mobile operators do. Also one might assume that mobile operators are more competent in making a reliable application than banks since it is more within their area of competence. It is a harsh parallel to draw but the idea here is to raise the question to what properties of a certain company, agency, firm or service provider is connected to how trustworthy they are. Is it their reputation, competence, their customer focus, years of establishment on the market or what is it?

5.3 Attitudes towards mobile payments

One of the issues concerning mobile payment methods is that we, in the society we are living in, have people that are not accustomed with cell phones. This will probably not be a problem within a near future when all citizens belong to a generation that has grown up with cell phones and its different features and qualities. What needs to be done is to make mobile payment methods as one of the standardized methods for transferring money. But if it do not manage to fulfil all requirements that customers and users have on managing money electronically via mobile phones it can never be a standardized method that are accepted. Also needed is for all merchants to accept the method. As Van der Heijden (2002) enforced by Mallat (2006) states, all stakeholders are dependent on each other in order to make mobile payment solutions to be standardized. The statements from both Van der Heijden and Mallat are much agreed with each other. Van der Heijden states that merchants need to accept the new technology but have reached the understanding that they will do so only if it do not mean additional costs (2002). As in previous section (5.2) Mallat also agree that costs is an important factor since the new technology needs to be equally priced if not cheaper than
traditional payment methods (2006) in order to be used by customers. The results of this study show an indicator to confirm these statements. But how can it be transferred from theory in to practice? It seems as if it is a dilemma. According to related research within mobile payment methods, the users want the merchants to accept and be adjusted to mobile payments in order to use it and the merchants are not keen on using it since there aren’t enough customers using it and also, they do not want additional costs. And also, if merchants want their customers to use mobile payment methods they need to be properly trained for it in order to have the process run as smoothly as it does with traditional payment methods (Van der Heijden, 2002). From the merchants point of view, one can imagine that the “perceived usefulness” and the “perceived ease of use” Davis, (1989) can be applied here as well. It can be speculated that if everybody in society, customers as well as merchants along with any other involved agency affected by mobile payment methods, are convinced and properly introduced that this is a payment method that they will benefit from. We are moving towards a society where the people that are living in it wants it more and more optimized to its maximum and if mobile payments will help them to be more efficient and make errands more effortless they will probably accept it.

Another issue is safety. Since mobile payments are not something that is entirely established, the participants of this study feel somewhat insecure in relying on the method to the fullest. The attitudes towards the method itself are mostly positive but not when they were asked if they relied on it when transferring larger amounts of money. If there were more established safety routines when making a purchase the customers would feel a lot more secure. As Suh & Han (2003) present the four pillars of information security they should be very thoroughly considered in order to make customers and users confidant and secure using a specific payment method

“I do not want to have too much money at stake when I am doing a mobile payment. It would not feel safe to transfer thousands of crowns. If I were about to do that I will log on to my computer and do it via my Internet bank” – Respondent A

“Every time you buy an app in iTunes there are money taken from your bank account and that is not strange or scary. I mean...if anyone wanted to steal any money from me like a computer hacker or something, I do not think that would be hard. Even so, I feel as much comfortable buying Angry Birds in iTunes as when I go to the supermarket buying milk” – G1

The issues that were found to be important for the respondents was that they want to be able to have a choice when choosing payment method. They do not want to be forced to choose a certain method instead of another and a large reason for that is that they are not ready for it yet. As Dahlberg et. al (2003) argue, that the use of a particular technology are going to be accepted in relationship to a person’s motivation using the technology. So the results from a system use cannot directly be related with performance itself. This is much due to the fact that current payment methods, the ones that are considered to be the traditional payment methods using credit cards and physical money, are very much compatible to people’s life
style and payment habits. The case for Sweden as it is now may be that we have citizens and merchants that may not be ready for a full transition of incorporating mobile payments in their lives as a method and which also is equally accepted as current payment methods. But it can also be due to environmental issues. It can be connected to contingency factors (Dahlberg et. al, 2007) where there are still intervening parties colliding their interests with each other in order to reach the goal of standardization, adoption and acceptance of this new technology. In that way the diffusion is somewhat inhibited.

In order to make this study, questions needed to be answered not only to questions about WyWallet but also questions concerning mobile payments in general. From this study one can make the assumption that given the respondents answers for this study there will be a lot more work done concerning safety issues in order to make them more comfortable using cell phones to make expensive purchases otherwise there will always exist the option of logging in to your Internet bank account and transfer money using an application or using credit cards which for now is the most preferable way of making purchases. This section confirms previous studies in that safety and compatibility are still issues relevant in the year of 2013. A little seem to have changed when comparing this study to previous research in attitudes towards mobile payments. Ever since the year of 2001 there has not been a mobile payment solution that has reached standardization on the market and that is still one of the key problems for why it has not been fully accepted 12 years later, and probably also one of the key reasons to why the introduction of WyWallet not has been received well by its customers.

6 Conclusions

The aim for this research was to investigate the issues of WyWallet more closely and with the help of previous research and by having a customer focus, try to reach an understanding of the factors or situations that might have been affecting people’s thoughts concerning the implementation of WyWallet in our society. In the aim of contributing with additional knowledge within mobile payment commerce this study has been targeting a present issue that the citizens are facing with WyWallet. This paper is about the implementation and acceptance of new technology and how it should be introduced to its users. The topic is still relevant and can be applied not only to WyWallet but also to all technologies that are entering the market of commerce. Nevertheless, the reader should be enlightened with the information that this paper is published three years after the application WyWallet was launched.

The conclusions for this study can be made stating that WyWallet and its developers has not been managing the introduction of their service in a beneficial way in terms of gaining trust and acceptance by its customers. Considering all research made within the area combined with previous knowledge of the companies behind the application, it does seem that the WyWallet solution to the new EU-directive have had several problems in fulfilling customer requirements. This study implies that there are still factors and environmental issues that inhibit the acceptance and adoption of mobile payment solutions. Nevertheless it can also to be considered that there may be solutions to existing problems of WyWallet that will not target another customer’s need or requirements. Same solution may not be good for
everyone. Also implied is that proper marketing and preparation would be beneficial in order for customers to include mobile payments as an accepted method for transactions. Further research is suggested in order to target the problem from the perspective of both merchants and developers of WyWallet in order to gain knowledge with a wider perspective on the current mobile payment situation. If doing so it might lead to the findings of the true problem and thereafter correct and manage it in a way that will be suited for all parties.

Further research is necessary that are more directed towards having focus on the agencies involved. It would be interesting to know why it was chosen that Tre, Tele 2, Telia and Telenor were the companies selected to develop the new service. Were they selected or did they take on the challenge for them self? Were there any consideration taken to the users when choosing telecom operators as the creator for the application? Were there any pre studies on how the society was going to welcome a payment service not made by the banks? These are questions well worth to be considered regarding WyWallet and its forced implementation in our society.

7 References


Dagens Nyheter (2013) Available at: http://www.dn.se/ekonomi/din-ekonomi/storbanksatsar-pa-mobilbetalning,
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Interview guides

Interview guide for focus group

Presentation of what subject we are going to talk about
- WyWallet
- Mobile payment
- Performance of group session

Opening questions
- Mobile payments, how they think it works etc.
- WyWallet
- Pro’s and con’s with mobile payments
- What situations best suited for mobile payments

Core questions
- First impression of the application
- Usability
- Convenience
- Safety
- Efficiency
- Suitability

Other questions
- Overlooked subjects

Interview guide for in-depth interviews

Emotions and feelings
- Concerning mobile payment methods
- In what situations do you prefer using mobile payment

Safety/ Integrity
- What makes you feel safe when using mobile payments?
- To what extent do you feel you can trust mobile payments?
- How do you feel about leaving personal information to a mobile payment application?

Expectations
- What do you expect out of mobile payments?
- What problems do you see can be solved or created with mobile payments?

Payment Process
- Where do you want your money to be withdrawn when you are making a purchase via mobile payments?
- What payment method do you feel most comfortable using?
General subjects
- Society issues
- Environmental issues
- Cultural issues
- Responsibility issues