

NHH



# Digital Receipt Services

*An Analysis from a Consumer Perspective*

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This thesis was written as a part of the Master of Science in Economics and Business Administration at NHH. Please note that neither the institution nor the examiners are responsible – through the approval of this thesis – for the theories and methods used, or results and conclusions drawn in this work.

## Abstract

- The objective of this research is: to understand consumers' use of receipt today and how they perceive digital receipt services (DRS).
- The purpose is to explore the underlying barriers for adoption, acceptance and use of this type of service among consumers.
- To reach the objective stated above, twenty-six interviews were conducted, asking about consumers' experience with the current solution with paper receipts, their experience with technology and how they perceive DRS.
- Questions from the interviews are deduced from theories about technology adoption mainly from Technology Acceptance Model and Diffusion of Innovations, with additional concepts found in previous research.
- Based on the responses in the interviews four different groups were identified; The Technical Non-Controller (TNC), The Technical Controller (TC), The Non-Technical Controller (NTC) and The Non-Technical Non-Controller (NTNC).
- The results show that there are relatively few people who save all their paper receipts today. In this study, there were only five participants that saved all their receipts. The rest of the participants only kept receipts that they perceived as "important" or "expensive".
- All participants used computer and mobile phone on a regular basis. However, the interest for technology and technological innovations differed among them.
- The result also showed that the attitude towards DRS in general is positive. Twenty-four of the participants perceived DRS as a potential future distribution chain for receipts. Still, only five of those interviewed said they were willing to try the service as the infrastructure is today.
- Based on the interviews, the main barriers for adoption seem to be the perceived usefulness, ease of use, subjective norm and security regarding DRS. Past experience and perceived behavioral control were also found to have a great influence.

## Acknowledgements

This independent study was written as part of my Master of Science in Economics and Business Administration at NHH. The thesis is a mandatory part of the master degree and counts for 30 study credits within my main profile of Marketing and Brand management.

The personal motivation behind the topic of this thesis is my interest for innovation and technology. During my studies at NHH, my interest for Innovation grew, and I wanted to develop my theoretical knowledge within the subject. As a user of Digipost, I heard about digital receipts services. When I examined it more closely, I discovered that this service had existed for a while. Hence, I became curious for why it had not been adopted in a larger degree.

Working with this thesis has been an interesting, demanding and challenging journey, and I have gained valuable experience during the process. By selecting a topic that is highly interesting to me, it has been easy to motivate myself in the many hours of work that lies behind any thesis.

I am very grateful to everyone who has contributed to this thesis. First, I would like to thank my supervisor, Professor Sigurd V. Troye for his questioning and guidance. I would also like to thank Maria Prestmo, who gave great support during a difficult and challenging time in the writing process. Additionally, I would like to give a special thanks to all those who put valuable time in order to participate in this study. Without the information provided by the twenty-six potential consumers, Mr. Martin Bekkelund from Digipost and Mr. Ingmar Petterson from Kvittar this thesis would not have been possible to perform. I'm also very grateful for all the support and advice I have received from friends and family. You are the best!

Kristiansund, June, 2014

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## **Abbreviations**

C-TAM-TPB – Combined TAM and TPB

DR – Digital Receipt

DRS – Digital Receipt Service

MM – Motivational Model

MPCU – Model of PC Utilization

NTC – Non-Technical Controller

NTNC – Non-Technical Non-Controller

TAM – Technology Acceptance Model

TC – Technical Controller

TNC – Technical Non-Controller

TPB – Theory of Planned Behavior

TRA – Theory of Reasoned Action

TT – Theory of Trying

# 1. INTRODUCTION

*The aim of this chapter is to give a brief introduction to the underlying background and problem formulation as well as present the objective, research question and limitations of this master thesis.*

## 1.1 Background

In the last twenty years the use of information technology has transformed many business processes like marketing and operations (Meuter et al., 2005). With the explosion of the Internet firms have incorporated various technology tools, changing the way they conceive, develop and deliver their businesses (Meuter et al., 2005). This increasing role of technology in service related businesses provide significant benefits for both firm and consumer (Meuter et al., 2005).

However, the technology has been shown to raise consumer concerns about privacy, confidentiality and security (Bitner et al., 2000). Potential financial benefits of incorporating technology into the service can not be realized unless consumers accept and utilize new technological advances. McKinsey & Company reports that all though one firm was able to save 40 million dollars by moving their billing and service calls to the web, nevertheless they suffered a 16 million dollar loss, as a result, of lower consumer use (McKinsey & Company, in Meuter et al., 2005).

Due to the findings made by McKinsey & Company firms are increasingly aware of the fact that there are barriers to overcome in order to make the consumer adopt the new systems (Meuter et al., 2005). Earlier research has shown that one of the main barriers is to get the consumer to use the new service option for the first time (Bendapudi and Leone, 2003).

Printed paper-receipts have been the standing proofs of transaction for decades (Ausen, Nguyen and Thomas, n.d.). Recently, new ideas and solutions have been developed, and a few companies are now offering digital receipts as an alternative to the printed paper-receipt.

The idea of digital receipts is not new, retailers first considered digital receipts in the late 1990's, but the dot-com crash at the beginning of 2000 halted most efforts (Clifford, 2007). It was not until Apple introduced the concept of digital receipts in their retail stores in 2005



that the service was revived. After the introduction in Apple, more retailers in the US followed the trend including Sears, Anthropologie, Whole Foods, Old Navy, Gap, and Urban Outfitters (Florence, 2013). However, the service is not limited to retailing and other industries have also realized the potential of digital receipts. For example, Wells Fargo, an American bank, offers their consumers the choice of paper ATM receipt or getting a digital equal sent to their online banking inbox or email account (Messick, 2012). As the use of smartphones increase in the US, more stores and banks are offering digital receipts rather than a printed version. According to a recent survey made by Epsilon, an American marketing services firm, 35% of all retailers now offer digital receipts as an alternative to the paper receipt (Frawley, 2012).

In the Nordic countries, the use of DRS has been limited. One of the pioneers was the Danish company Ekvittering that started their business in 2007 and opened their business in the following year (ekvittering, n.d). In May 2012 Posten in Norway, together with the technology company dSAFE, developed a DRS that made it possible for consumers to store their shopping receipts online (Njarga, 2012). In November 2012 dSAFE became rewarded with the prestigious “Telenor Digital Winner Prize” (Amelie, 2012). Other examples of companies offering the service in Sweden since 2008 are Kvittar, Kvittoononline and Sparakvittot. In April 2012, the Swedish Office of Taxation decided to approve digital receipts as proof of purchase. Previously, the regulations stated that a consumer must have a paper receipt in hand (Kassalagen, 2012). This change in regulations opened up doors for these operating companies. In April 2013, the Swedish receipt service Spara Kvittot got nominated among the top 33 of Sweden’s hottest technological companies (Forne, 2013).

DRS provide benefits for both consumers and firms. Consumers can keep track of their receipts in an accessible, user-friendly and non-wasteful way, and in addition, it makes it easier to find receipts in situations of return or insurance claim (Njarga, 2012; Clifford, 2007). For retailers, there are several economic and environmental benefits. According to an investigation made by the company allEtronic, retailers in U.S. alone consume 640,000 tons of receipt paper per year, requiring 9.6 million trees for their manufacture (Celerant, 2012). Taking it to a Nordic perspective, Sweden prints almost 1, 5 billion receipts every year. Many of them are printed with toxic ink, which usually fades within two years, making the receipt useless (Sparakvittot.se; Celerant, 2012). Beside from the economic and environmental benefits, DRS could also provide benefits like shorter transaction time and consumer relationship marketing (Wade, 2012; Clifford, 2011; Nilervall, 2012).

Despite the many benefits, replacing all paper receipts can not be done overnight. Firms are limited by the fact that new technology requires new investments. In addition, difficulties arise due to the lack of common technical standard. Furthermore, DRS also demand a certain level of consumer participation. Besides behavioral change, the consumer must also provide sensitive personal information like email address, mobile number, or credit card number that could create a risk for the consumer. If the consumer does not perceive the service as secure or useful, the chance for the service to gain acceptance will be low (Meuter et al., 2005).

The change from paper recipes into DRS transforms the distribution chain of purchase information. When shifting a distribution chain it is natural to base it on consumers' preferences. A distribution chain will only be viable over time if consumers feel that it provides a form of value (Supphellen et al., 2014). Therefore, consumers' preferences are a crucial element of DRS's long-term profitability and survival.

## 1.2 Objective and purpose

The objective of this research is: to understand consumers' use of receipts today and how they perceive digital receipt services.

The purpose of this thesis is to explore the underlying barriers for adoption, acceptance and use of this type of service among consumers.

## 1.3 Research Questions

To reach the objective of the thesis the following research questions were proposed:

**R1:** What digital receipt services are available today in the Swedish and Norwegian market?

The answer to the first research question will provide basic knowledge of the industry, essential for the rest of the research.

**R2:** To what extent are consumers saving their paper receipts today?

The answer to research question two will provide knowledge about the current use of paper receipts. Past research has shown that past behavior, in this case saving the receipt, have a considerable large impact on intentions and adoption of new technology (Wessels and

Drennan, 2010). Current perception of paper receipts could also have an effect on perceived usefulness.

**R3:** How do consumers perceive digital receipt services?

**R4:** What are the main barriers for adoption?

The main aim for the research questions three and four is to understand how consumers perceive digital receipts and what the key factors for adoption are.

## 1.4 Context

The context of this thesis will be the Norwegian and Swedish market. The reason behind this context is that this service is quite new in both markets. Moreover, the Swedish and Norwegian consumers are very similar when it comes to Internet usage and smartphone penetration (Google, 2012). The services offered are also similar regarding their set-up, but with some important differences discussed in Chapter 2.

The focus for this thesis will be the two companies Digipost and Kvittar. Digipost is the dominating company in Norway providing DRS. The Swedish market consists of several small companies. Most of them are similar regarding the service they provide, even if they have different target positions. For this thesis, the focus will be on Kvittar, a company targeting business-related expenses in Sweden.

## 1.5 Limitations

The first limitation of this thesis is made on the approach. There are three main approaches to investigate DRS, consumers, merchants and the network. The objective for this thesis is to understand how consumers perceive DRS. Therefore, the limit is set to the consumer perspective and thereby excluding the merchant and network.

The second limitation relates to the service set-up. There are different types of DRS. One is the service offered in stores through consumer loyalty cards or direct email service. Receipts provided by email is a very common service offered by transport companies, for example, the Norwegian airport train Flytoget. A second type of DRS is based on an external company offering a digital receipt platform. This type of service requires that the consumer actively

logging into their account to receive their receipt, and they can not receive their receipt directly into their regular email. This thesis will be limited to the latter service. This exclusion is based on the fact that this type of DRS is new to the market, making it more interesting in an adoption perspective.

## 1.6 Thesis Structure

The thesis contains the following chapters:

Chapter 1: Introduction	<ul style="list-style-type: none"><li>•The aim of this chapter is to give a brief introduction to the underlying background and problem formulation as well as present the objective, research question and limitations of the master thesis.</li></ul>
Chapter 2: The Industry	<ul style="list-style-type: none"><li>•The purpose of this chapter is to present a summarized description of the different types of DRS and a deeper description of the two case companies; Digipost and Kvittar in order to create a context for the remaining of the thesis.</li></ul>
Chapter 3: The Payment Landscape	<ul style="list-style-type: none"><li>•As proof of transaction receipts are linked to payment and payment methods. The purpose of this chapter is to present a summarized description of the payment landscape in the markets presented in this research.</li></ul>
Chapter 4: Theory and Literature Review	<ul style="list-style-type: none"><li>•The purpose of this chapter is to present the theoretical framework and provide the reader with some of the most relevant insights provided by previously published work.</li></ul>
Chapter 5: Methodology	<ul style="list-style-type: none"><li>•The purpose of this chapter is to present the methodology and methods used for this thesis. The chapter will begin with presenting the design, strategy and methods used for data collection and data analysis. This is followed by a discussion regarding the quality of the research.</li></ul>
Chapter 6: Netnographic Pre-Study	<ul style="list-style-type: none"><li>•The purpose of this chapter is to present a review of media attention followed by the findings from the netnographic pre-study of comments posted in media and social media.</li></ul>
Chapter 7: Results	<ul style="list-style-type: none"><li>•The purpose of this chapter is to present the results from the Interviews. The result is presented according to grouping and theoretical reference.</li></ul>
Chapter 8: Discussion	<ul style="list-style-type: none"><li>•This chapter discusses the findings from all previous chapters in order to answer the objective stated in this thesis.</li></ul>
Chapter 9: Conclusions	<ul style="list-style-type: none"><li>•The purpose of this chapter is present the conclusions that has been drawn from this thesis and to answer the initially stated research question. Furthermore, the chapter will finish by presenting managerial implications, limitations, contributions and suggesting future research.</li></ul>

## 2. THE INDUSTRY

*The purpose of this chapter is to present a summarized description of the different types of DRS and a deeper description of the two case companies; Digipost and Kvittar in order to create a context for the remaining of the thesis.*

### 2.1 Digital Receipts

What differentiates the digital receipt from the traditional paper receipt is the way it is distributed. Traditionally, consumers are used to pay for a product or service with cash or card to a person or a machine. This transaction results in automatically- printed paper receipt as proof of transaction. This traditional distribution chain is illustrated in figure 1 below:



*Figure 1: Digital Receipts*

### 2.2 Different Forms of Digital Receipts

Today, different companies offer an alternative to the physical paper receipt. Based on an analysis of the available companies offering DRS in Sweden and Norway, three different distribution systems for DRS have been found.

When shopping online, such as airline and event tickets, people usually get their receipt in digital form as an email. Today several physical stores and service companies offer receipts by email as well. Examples of companies offering receipts on email are Flytoget, Europark, Elgiganten and Apple Store. This is the simplest form of digital receipts illustrated in figure 2 below:



*Figure 2: Digital Receipts on email*

This figure illustrates the process flow where the consumer registers their email at the store of purchase. Registration is usually done at the cash register at the time of purchase or at the registration session for consumer loyalty card. When the products have been registered, and the transaction have been completed an email is sent to the consumer's email account. The consumer can thereafter collect the receipt by logging into their email account.

A more advanced model for collecting receipts, than the one described above, is when an external company provides the receipt as illustrated in figure 3 below.



*Figure 3: DRS With Focus on Private Expenses*

As illustrated in figure 3, a middleman then distributes the purchase information to the consumer. In order to use this service, both store and consumer needs to be registered. This registration usually needs to be done prior to the purchase. In the registration process, the consumer provides the DRS with information about ID number or phone number. The information required depending on the system of that particular DRS. When a product or service is registered at the cashier, the consumer provides the clerk with confirmation information to their DRS account. The providing of information can be done both before and after the transaction depending on the system of the DRS. A similar type of DRS is when the consumer registers their credit card to identify themselves. This DRS provides the receipt to the consumer automatically when the consumer is using their registered credit card in stores connected to the system. After a few seconds, when the receipt has been sent, the consumer can access the receipt from the server of that particular DRS provider. In order for DRS to work the store also needs to be registered at that particular DRS provider. Today few stores are registered. Therefore, in order to make the service more useful, most DRS providers offer the possibility for the consumer to take photo or scan the paper receipt and upload it to their DRS account. This possibility creates an opportunity for the consumer to save their receipts digitally, even if the store is not registered for that service.

A third type of DRS is the ones targeting businesses, illustrated in figure 4 below.

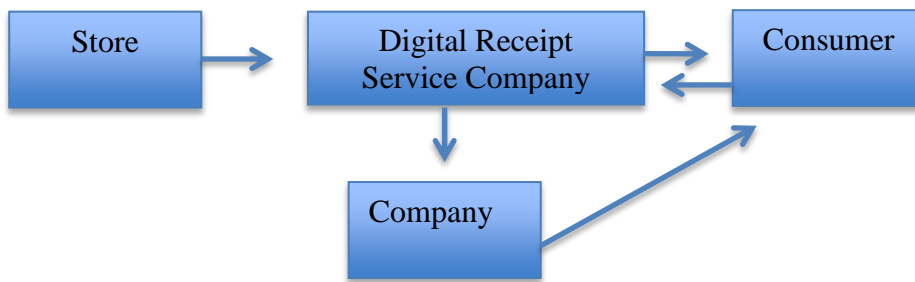


Figure 4: DRS With Focus on Business Related Expenses

This type of DRS has a similar distribution system as the DRS described above. The difference is that they are also offering additional services, which are beneficial for companies or people with a high degree of business related expenses. This type of DRS is a four-part distribution chain where the store, consumer and the employer are all registered at the external DRS provider. This additional service makes it possible for the consumer to register, report and save business related receipts for accounting. Examples of such companies are Tificate, Kvittar Expenses, Visma Expense and Skovik.

When searching on the Internet for companies offering DRS it becomes clear that this is an industry in change. New digital receipt companies are opening up for business, and other ones close down, like Kvittoonline that started in 2008 and ended in February 2013 (Solidinfo, n.d.)

## 2.3 Norway

In Norway, it is just a few DRS providers operating at this time. In this analysis only two companies offering DRS have been found, Posten Norge AS with their service Digipost (Digipost 2, n.d.) and Tificate (Tificate, n.d.). Tificate is a Norwegian company focusing on business related receipts. The Danish company Ekvittering has expressed interest in the Norwegian market (Picard, 2009) but no proof for establishment has been found. This market structure with few providers indicates a none-competitive market with one large dominating company. To get a greater insight into the service, an interview has been made with Mr. Martin Bekkelund, product director for Digipost.

### *Posten Norge AS and Digipost*

Posten Norge AS is a Nordic mail and logistics group that develops and delivers solutions within postal services, communications and logistics with the Nordic region as their market (Posten Norge, n.d.).

In spring 2011, Posten Norge AS launched their digital service called Digipost. Digipost is a digital mailbox, corresponding to the physical mailbox, which can be used for secure digital communication between individuals and private and public entities. In Digipost all mail gets sent digitally, based on the street addresses. Paychecks, contract documents, insurance papers, invoices, statements, PIN codes, formal applications, certificates and diplomas are examples of shipments that can be sent by Digipost. Unlike email, the service meets all security requirements for registration and access, and the user of Digipost needs to identify with BankID or Buypass in order to login to their account (Digipost 2, n.d.).

### *Digital Receipt Service in Digipost*

In May 2012, Posten Norge AS launched their digital receipt service together with the company dSAFE (Njarga, 2012). This initiative for collaboration was taken after Digipost first came in contact with dSAFE, a company that had the technical product, but not the possibility to offer it to the end consumer. According to Mr. Bekkelund, this was a natural development of the service already offered in Digipost. In the collaboration between the two companies dSAFE is responsible for the technical development and sales. Digipost is responsible for marketing and the technical integration. Some of the operations are also made in collaboration.

To be able to obtain digital receipts in Digipost, the consumer needs to be a registered user. The consumer also needs to register their credit card number to their specific Digipost account. When the consumer pays for the product or service with that specific credit card and the information from the bank terminal is correlated with the cash register system, a paper receipt can be generated or sent digitally to the consumer's Digipost account. In order to obtain the receipt digitally into the Digipost account, the consumer needs to verify their credit card after the first purchase. All receipts will then go automatically and immediately from store into the consumer's Digipost account. However, it only works if the store is registered and the consumer uses the same registered credit card. If a receipt is needed after purchase, it is possible to search for it based on the amount, shop or date (Digipost 1, n.d.).

According to Mr. Bekkelund, there are currently over 500 000 stores connected to this service. Digipost have managed to sign a contract with chains like; Tilbords, Bunnpris, XXL, Euronics, Byggmakker, Expert, Posten and G-Max (digipost.no). Mr. Bekkelund states that the stores that sign up for the service usually expect something in return. To satisfy this demand Digipost offers additional value added services to the stores. Digipost is



mainly targeting stores offering more expensive products since this is the type of products that the consumers usually save their receipts on.

Digipost has a large target group, targeting people over 15 years old, living in Norway. Mr. Bekkelund states that he has no precise idea of the characteristics of a typical Digipost user but that the responses they receive are usually from people with a technology interest. In total, there are now over 250 000 users registered at Digipost, but how many of those that are using the DRS is a question Mr. Bekkelund prefers not to answer. However, Mr. Bekkelund answers that the response has been very positive, and he also states that it is probably the service offered by Digipost that has obtained the best response.

According to Mr. Bekkelund, the main advantage with digital receipts expressed by their users is the simplicity. The main concern, on the other hand, is information security. When a transaction is made, Digipost receives transaction data that they combine with technical data. The main concern for their users is how this information is being used. Mr. Bekkelund says that Digipost never resells data that can identify a person or credit card. In Digipost, the consumer is always the owner of the information. They decide if they want to keep it, download it or delete it.

The service offered by Digipost is free for the consumer and the stores. However, stores that are registered have the opportunity to buy value added services such as sales statistics. Today it is not possible for stores to send advertising to their consumers. According to Mr. Bekkelund they have been a bit conservative in this regard, but he also adds that it might be possible in the future. Currently, it is only possible for the stores to send a short message on the backside of the receipt to encourage feedback on the purchase.

The main advantage for Posten relative to other companies with similar services is a strong brand and financial strength. Many people in Norway are familiar with the brand Posten. The financial strength makes it possible to keep investing into the service for a long time “this is not a short time investment, this is an investment that is part of a long-term strategy,” says Mr. Bekkelund.

## 2.4 Sweden

In Sweden, the market is a bit more competitive than the Norwegian market. There are more active companies and the differences between the companies are not as significant. The companies found active today are Visma Expense, Skovik, Spara Kvittot, Kvittar and ekvitto. The focus for this thesis is Kvittar, a company targeting businesses. An interview with Mr. Ingmar Petterson, the CEO of Kvittar, has been made in order to get a better insight into the service.

### *Kvittar*

Kvittar was the first company to offer digital receipts in Sweden. The idea was born in 2009. Today, Kvittar is a company with five employees at the head office in Malmö, Sweden. The company is mainly focusing on making it easier to collect receipts and report business related expenses. However, the service is also available for individuals interested to save and sort private receipts (Kvittar, n.d.).

### *Digital Receipt Service in Kvittar*

The prototype of Kvittar was created in 2009, and the company was established in 2010. The idea was to develop a channel for purchase related information and reduce the paper usage.

To obtain digital receipts in Kvittar, the consumer and the store needs to be registered users in the system of Kvittar. When the products are registered and before the consumer pays for the products, the consumer provides the cashier with their ID number or phone number. When the transaction is made the system automatically send the receipt to the consumer's Kvittar account. It is not possible to receive a digital receipt if the store is not registered into the system of Kvittar. In those occasions, consumers can upload receipts themselves by a smartphone or computer. In addition, Kvittar offers a payable extended service that is called Kvittar Expenses. This service makes it possible to create reports that can be used in accounting.

Kvittar's product is a software that is integrated with the cash register system. There are about 70 different cash register operators, with about 10 larger ones. A close cooperation with the operators is, therefore, essential and one of Kvittars main challenge, says Mr. Petterson.

Kvittar mainly targeting companies with heavy receipt handling, and individuals with major business outlays. According to Mr. Petterson, this is a typical situation where the receipt has a superior value for the consumer. As an individual, you have a warranty, replacement value or similar, but business consumers have accounting requirements in addition. They need to handle their receipts whether they want to or not.

The main advantage, with this service according to Mr. Petterson is that it is more sustainable than the traditional way of handling receipts. Digital receipts make it possible for the consumer to receive more information. It also provides the consumer with the possibility to handle the receipt more efficient. The consumer will not lose the receipt, and it is easy to keep track over own consumption. The most mentioned concerns among the users of Kvittar are related to laws and rules, Mr. Petterson says. A concern that was mentioned a lot before was whether a copy of the receipt is sufficient proof for warranty. Another concern often mentioned is cloud saving. However, Mr. Petterson does not perceive this as a major concern. He says that many people use cloud services today and feel safe about this. Mr. Petterson perceives more negative feelings related to practical considerations of the service. People in general believe that this service is a great idea if it would be available in every store. However, since DRS are not commonly available many consumers do not see the point of using it, according to Mr. Petterson.

Mr. Petterson describes the typical user as a travelling businessman who has considerable representation duties. Mr. Petterson can not tell how many users they have today. However, he believes the interest among the target group is fairly high today. On the other hand, the interest from the stores is still quite low. Mr. Petterson also declares that it is hard to make any generalizations about the response for DRS among stores because of their various values. For some stores it is about how to create more sales, while for others it is about to create loyalty. Some might value a position as innovative or environmental friendly. On a general level, Mr. Petterson perceives the response to be greater from larger operators.

Today, the stores can only provide information about opening hours and addresses to their consumers. According to Mr. Petterson they are now testing out new ways of providing information from the store to the consumer, but this is not live yet. However, it is not possible for the stores to advertise within Kvittar. Petterson says that they think advertising could have a negative effect. Therefore, advertising and messages will only be provided on

the consumer's own initiative. Mr. Petterson also states that no information about the consumer is given to the stores.

According to Mr. Petterson, the main competitor for their business is the regular paper receipts. According to him, it is an advantage that there are several actors on the market. The companies that offer digital receipts must collaborate in order to develop a market for digital receipts. Mr. Petterson believes that the main challenge for Kvittar, in order to get more people to use the service, is to provide superior value for the entire value chain. A digital receipt as a direct substitute to the physical receipt requires a change in infrastructure. In Sweden, no provider has been able to create a system built on credit cards so far. The reason, according to Mr. Petterson, is the regulation change in the 90's that changed the way credit cards were connected to the cash registration systems. Today, the systems are part of two different worlds and the information connecting them is limited. Therefore, it is not possible to use credit cards to get more information than the information available in the bank transaction today. Consequently, in order to make people use the service it needs to be a superior value that makes it attractive for people to change their behavior and use a few seconds more in the transaction process. Mr. Petterson likewise states that he thinks the market needs to mature, and there is a need to integrate the service so it is so simple that a grandma can use it.

In the future, Kvittar would like to change the system present today. According to Mr. Petterson, consumers only use paper receipts out of habit and there are no barriers for getting the receipt in an app or any other way. In the future, Kvittar will keep focusing on business consumers as their target market, adding more services, make the process easier for the individual consumer, creating more collaboration with other companies and go wider in business than before.

## 2.5 Summary

By looking at the two markets and the companies available, it becomes clear that there are some notable differences. In Norway, the market for digital receipts is less competitive because of the small amounts of operating DRS companies. The Norwegian market is dominated by Digipost, a service provided by a company that is well established in the society with high grade of recognition in the market and economic power. In contrast,

Sweden has several small operating companies with less financial resources. These several Swedish firms differentiates themselves through different target market and niches

A summary of similarities and differences between the two companies can be found in table below.

	Kvittar	Digipost
Main consumers	Companies	Individuals
System	Based on ID number and phone number	Credit card based
Consumer effort compared to regular receipt	Consumers have to inform the cashier that they would like the receipt electronically and provide the cashier with ID number or phone number.	No extra effort required in purchase situation, but credit card information needs to be registered in advance.
Amount of stores	10 (individual stores)	500 000 (retail chains)
Main advantages expressed by consumers	They are able to make better use of the receipts, keep track and generate reports.	Receipt goes automatically into their accounts
Main concern	Laws and rules for accounting. Whether or not a copy of the receipt is counting as enough proof for warranty and cloud saving concerns.	How the information is used and the concerns of information resell.

*Table 1: Summary of DRS provided by Kvittar / Digipost*

### 3. THE PAYMENT LANDSCAPE

*As a proof of transaction, receipts are linked to payment and payment methods. The purpose of this chapter is to present a summarized description of the payments landscape in the markets presented in this research.*

Receipts are proof of a transaction, which in most cases includes money. Therefore, the payment pattern in the market is of central importance for the diffusion of DRS.

Since checks are not used anymore in Sweden and Norway, there are now two payment choices available, cards and cash. A high level of card usage thus tends to go hand in hand with a low level of cash usage, and vice versa (Nyberg, 2011).

In Sweden, the use of cards has increased rapidly the last years. In 2009, the average Swede made 182 card payments but less than 30 cash withdrawals. (Nyberg, 2011). In terms of number of payments and the total value of a transaction, cards are the most used payment method. Between 1998 and 2011, the number of card payments increased nine fold. Over the same period, the value of these transactions has increased more than fivefold. The debit card is the dominating card and accounted for over 80 percent of the total card transactions (Sveriges Riksbank, 2013).

In Norway, the use of cards has increased as well. In 2012, 1.63 billion card transactions were carried out in Norway, an increase of eight percent from 2011. This amount is equivalent to 323 transactions per capita. The consumption of card use in Norway is high compared with other countries (Norges bank, 2012) as seen in figure 5:

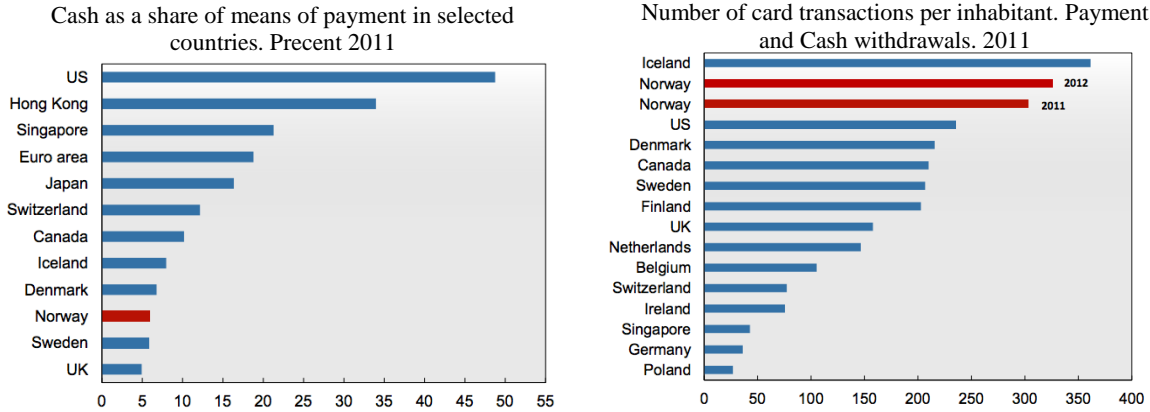


Figure 5: Use of Cash and Card as Payment Method (Norges Bank, 2012)

## 4. THEORY AND LITERATURE REVIEW

*The purpose of this chapter is to present the theoretical framework and provide the reader with some of the most relevant insights provided by previously published work. First this chapter gives an overview of theories explaining consumer adoption. Followed by a literature review in financial service research.*

### 4.1 Theories on Adoption of Technology

In order to understand the mental process and the external factors behind consumers' attitude and intention to adopt DRS, it is essential to understand the theory behind it. Even if the theory related to this particular service is limited, the research on consumer intention and adoption in technology is extensive, and several models have been developed, many of them as extensions of earlier models (Venkatesh et al., 2003). This chapter will give a brief presentation of the main theories and concepts found in research related to technology acceptance and adoption. The databases that were used were JSTOR, Emerald Business, Business Source Complete and Science Direct. The main concepts used in search process were: service innovation, adoption, consumer attitude, technology and mobile application.

Venkatesh et al. (2003) provide a good model in order to understand the basic concept of many available theories. The model can be seen in figure 6 below. They have reviewed the user acceptance literature and empirically compared eight models in order to formulate a combined model that integrates elements across all the eight models. The compared models are Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Motivational Model (MM), Theory of Planned Behavior (TPB), Combined TAM and TPB (C-TAM-TPB), Model of PC Utilization (MPCU). Venkatesh et al. (2003) found that the basic concepts underlying user acceptance models were "intention to use" and "actual use" as illustrated in figure 6.

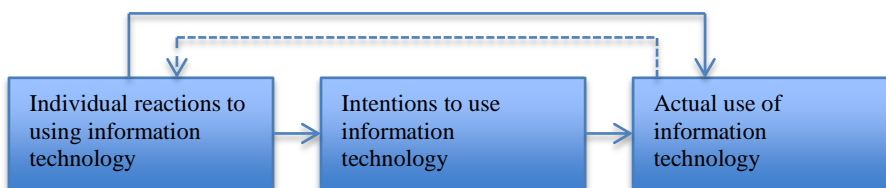


Figure 6: Basic Concept Underlying User Acceptance Models (Venkatesh et al., 2003)

Intention to use is a concept that describes what people propose to do (Hoyer and Macinnis, 2010). Actual use is another concept for behavior and describes what people really do (Hoyer and Macinnis, 2010).

Intention as a predictor of our actual use has been well established in the literature (Ajzen, 1991, Akturan and Tezcan, 2012, Venkatesh et al., 2003). What factors are influencing the intention have, therefore, become valuable knowledge and the subject of many studies.

Individual reaction is a collecting concept that refers to those influencing factors (Venkatesh et al., 2003). Equivalent to intention and behavior that can be found in all presented theories, the sources of individual response differ between the theories.

As mentioned earlier there are numerous models that describe consumers' behavioral intentions. Venkatesh et al. (2003), uses a few of them. The focus for this thesis will be the models mostly used in technology acceptance and adoption research named:

- Theory of reasoned action (Fishbein and Ajzen, 1975)
- Theory of planned behavior (Ajzen, 1991)
- Theory of trying (Bagozzi and Warshaw, 1990)
- Technology acceptance model (Davis, 1989)
- Diffusion of innovation theory (Rogers, 2003)

A short description of motivation, ability, opportunity and distribution chains will also be provided.

## 4.2 Theory of Reasoned Action

Theory of reasoned action (TRA) is one of the earliest models that many of the latter ones are built on. This model is based on social psychology, introduced by Fishbein in 1967 and later improved by Fishbein and Ajzen (1975). TRA offers an explanation of how, when and why attitudes predict behavior. This theory is considered to be one of the most fundamental and influential theories of human behavior (Venkatesh et al., 2003) and it is both widely used and successfully applied in various disciplines (Sheppard et al., 1988, Venkatesh et al., 2003).



According to TRA, the intention for a specific behavior can predict, explain or influence the actual use. The intention, in turn, is influenced by the attitude towards behavior and the subjective norms (Fishbein and Ajzen, 1975, Sheppard et al., 1988).

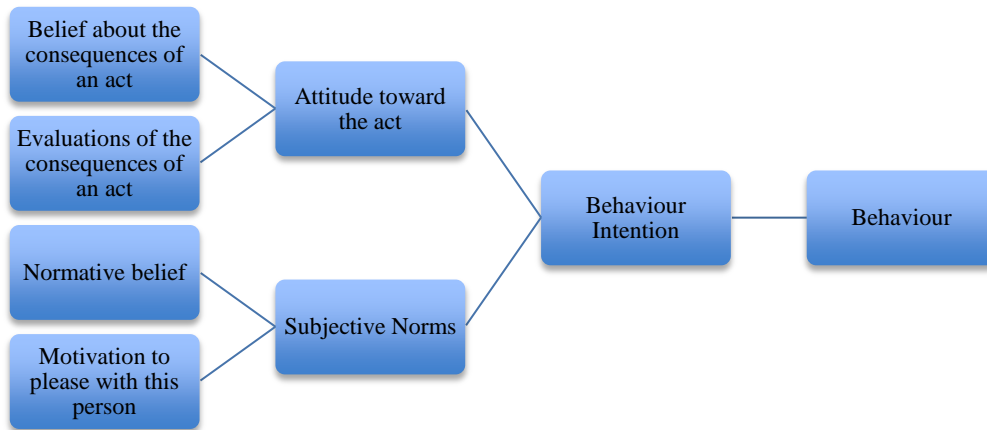


Figure 7: Theory of Reasoned Action (Hoyer and Macinnes, 2010)

In this theory, the attitude towards the act defines how people feel about doing something. The attitude, in turn, is determined by the consumer's beliefs towards the following consequences and the evaluation of these (Hoyer and Macinnes, 2010). The subjective norms in TRA are defined as "how others feel about our doing something" (Hoyer and Macinnes, 2010 p.128) and explaining the social influences that a person's behavior is exposed to. The subjective norms are determined by the consumer's normative beliefs or what the consumer thinks someone else wants him or her to do and the motivation to please this person (Hoyer and Macinnes, 2010). Hence, in TRA performing a particular behavior is not only determined by personal attitudes but also influenced by other people's opinions about the behavior.

TRA suggests that using DRS is a result of the intention to do so. The intention is in turn influenced by the consumers' attitude towards DRS and the perceived subjective norms. So, if a consumer believes the consequences of using DRS is positive in some way, having environmental or time benefits for example, and the consumer evaluation of those benefits are high the attitude towards DRS will be positive. If this positive attitude is combined with a perceived subjective norm that other people are positive towards DRS, the intention to use DRS will be high.

One weakness with TRA is that it only predicts behavior in situations where the consumer has fully control over his own behavior, for example, when buying a car or searching for a job. TRA cannot predict the result from behaviors, for example, when owning a car or receiving a job offer. Therefore, the conditions of this model cannot be met if there are actions that to some extent are determined by factors beyond the individual control like skills, resources or special knowledge (Sheppard et al., 1988).

### 4.3 Theory of Planned Behavior

Based on TRA, Ajzen (1991) developed the theory of planned behavior (TPB) seen in figure 8. This model was created as an extension to TRA trying to account for conditions where individuals do not have complete control over their behavior. When using DRS, there are parts that are determined by factors beyond individual control. The use of the service also requires skills, resources or special knowledge. For example, to use DRS the consumer needs to have a computer and preferably a smartphone and be comfortable using it in order to upload, collect, save and receive receipts.

Along with TPB, Ajzen (1991) introduced the concept of perceived behavioral control. He describes perceived behavioral control as “the perceived ease or difficulty of performing the behavior” (Ajzen, 1991 p.188). This concept was later modified to fit the context of Information Systems research (IS) to “perceptions of internal and external constraints on behavior” (Taylor and Todd, 1995 pp. 149).

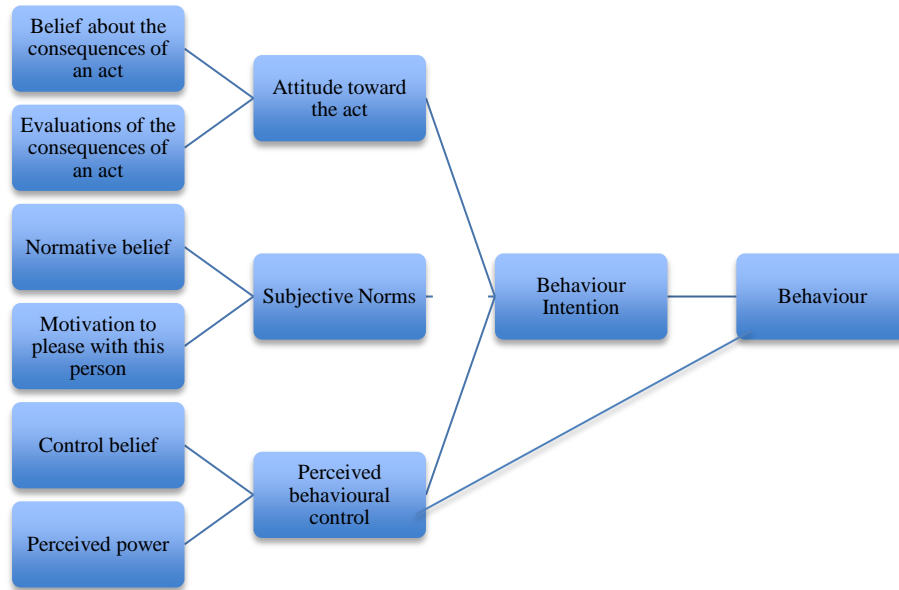


Figure 8: Theory of Planned Behavior (Ajzen, 1991)

In contradiction to TRA, TPB proposes that behavior can be influenced by other factors than the personal intention to perform the behavior and the subjective norms. Examples of other factors could be time, money, skills and cooperation of others (Taylor and Todd, 1995). The extent to which one possesses time, money and skills will determine intention to undertake a particular behavior. For instance: a consumer will be more likely to ask for digital receipt in the store if he or she has a positive attitude toward using the service and a perceived control over the process.

According to TPB, the perceived behavioral control is further decomposed into control belief and perceived power. The control belief might be based on past experience with the behavior, secondhand information from friends, or other factors that increase or reduce the perceived difficulty of performing the behavior. The more resources and opportunities individuals believe they possess the greater perceived control over the behavior. Perceived power is the power of a particular control factor to simplify or hinder the performance of the behavior (Ajzen, 1991). In his study, Ajzen (1991) shows that attitudes, subjective norms, and perceived behavioral control are all positively related to the intentions about the behavior.

A quantitative integration and review of 185 independent studies published up to the end of 1997 showed that the TPB accounted for 27% of the variance in behavior and 39% of the variance in intention (Armitage and Conner, 2001). The result of this study provides support

for the TPB as a predictor of intentions and behavior. TPB has also been successfully applied to the understanding of individual acceptance and usage of many different technological services (Sommer, 2011, Venkatesh et al., 2003). However, a gap exists between intention and behavior and many researchers have concluded that some elements are missing in the model. One commonly suggested element is past behavior. This concept has been associated with both the intention and future behavior and seems to have several forms for example experience with behavior, frequency of behavior, and habits (Sommer, 2011).

## 4.4 Theory of Trying

Based on TPB, Bagozzi and Warshaw (1990) developed Theory of Trying (TT) seen in figure 9. TT was specifically designed to explain how people strive to maintain demanding behavior or achieve goals. According to TT, behavior is affected by internal and external barriers (Xie et al., 2008), which in turn make predictions of the outcome problematic to predict (Bagozzi and Warshaw, 1990). In situations like these, people are thought to approach the decision-making from the viewpoint of attempting to achieve a behavioral goal (Xie et al., 2008).

In the service delivery and use of DRS the consumers are involved in several steps, delivering the service themselves. They are required to login and search for the receipt instead of getting it delivered in hand, having to trust their capability of digital usage and the digital system of delivering. The process is, therefore, vulnerable to failure and requires effort towards a behavioral goal. According to TT, the consumer is, therefore, likely to form thoughts and evaluations of success, failure and striving (Bagozzi and Warshaw., 1990).

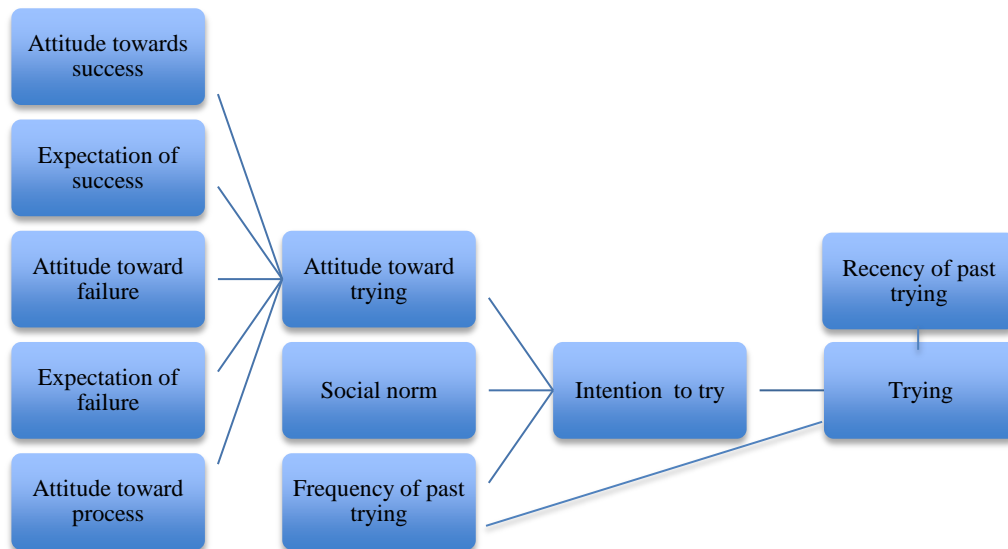


Figure 9: Theory of Trying (Bagozzi and Warshaw, 1990)

TT posits that trying can be predicted from record of past trying, recency of past trying and the intention to try, similar to TPB by Ajzen (1991). According to this theory, there is a greater likelihood of trying again if the consumer has tried similar services before (Bagozzi and Warshaw, 1990). In the case of DRS, record of past trying could be the extent of past trying of other digital services such as Internet banking. Also recency will effect trying. The more recent the consumers last attempt to use same or similar service, the greater the likelihood is that the consumer will try again (Bagozzi and Warshaw, 1990). In a DRS setting, this could mean that if a consumer recently used mobile banking, this consumer would be more willing to try DRS.

Like other attitude/intention models, for example, TRA and TPB, TT posits that the intention to behave will have a great impact on the actual behavior. If the consumer plans to use the DRS the greater the likelihood that he or she actually does it. The intention to try can be predicted from attitude towards trying and the social norm towards trying. In a DRS setting, this could mean that the more favorable the attitude is regarding trying the DRS, the greater the likelihood of actual trying. If there is a social pressure to try the service, this will also affect the intention to do so.

TT distinguishes between three components an individual can hold an attitude towards: trying and succeeding, trying and failing and the process of striving. The first two components describe the possible outcomes and the last one refers to a reaction to the resources needed to achieve a goal (Xie et al., 2008). If the consumer has an expectation of

success and feels good about this expectation, there is a greater likelihood that he or she will have a favorable attitude toward trying. However, if the consumer believes that this service will not help achieve any goals, and feels bad about trying and failing, the more unfavorable the attitude will be towards the service. The attitude towards the process of trying is also important. If the consumer has a positive attitude towards the process of trying, he or she will also have a greater attitude towards trying.

This model could have important implications for this research. Bagozzi and Warshaw (1990) found that recency affected behaviors and not intentions, but frequency affected both. The goal for this thesis to take a closer look at attitudes and adoption of DRS, in this context recency and frequency will be highly related. In this thesis, the concept of past behavior is used instead. Past behavior is a concept measured by frequency and recency earlier used by Xie et al. (2008). Further modifications made by Xie et al. (2008) that could be applicable in this thesis are the removal of expectations of success/failure and the introduction of self-efficacy. The reason for this is that the succeeding/failure in TT are an estimate of one's likelihood of succeeding or failing after one anticipates initiating trying. Self-efficacy, on the other hand, refers to judgments of how well one can fulfill courses of action necessary to deal with potential situations (Xie et al., 2008) therefore more suitable for this research.

## 4.5 Technology Acceptance Model

The Technology acceptance model (TAM), seen in figure 10, originally developed by Davis (1989) studies the individual intention of adopting new technologies. TAM is a strong and well-known model in the information system literature, but less used in marketing (Gefen et al., 2003; McKechnie et al., 2006). The model was specifically developed to predict consumer acceptance of computer technology within the workplace. However, the model has also been considered suitable as a theoretical basis for understanding the use, behavior and acceptance of new internet-based technologies (Gefen et al., 2003). This model has the advantage of being well grounded in social psychology theory, based on the theory of reasoned action (TRA). It is a simplification of how functionality and interface characteristics relate to adoption (Davis, 1989; McKechnie et al., 2006).

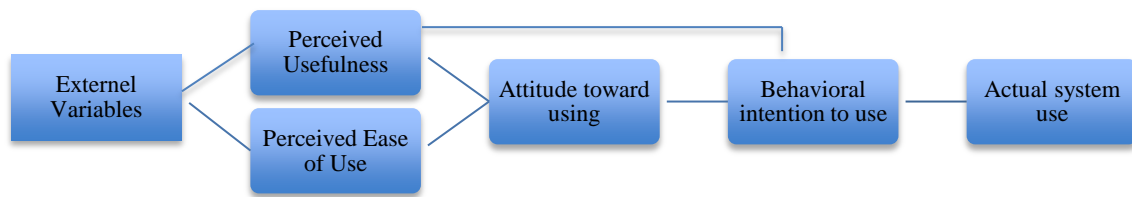


Figure 10: Theory of Reasoned Action (Vankatesh and Davis, 1996)

As seen in the figure 10, TAM suggests that the individual attitude regarding adoption of information technology is influenced by two variables; perceived usefulness and perceived ease of use. Davis (1989) defines the constructs as:

**Perceived Usefulness:** “the degree to which a person believes that using a particular system would enhance his or her job performance” (Davis, 1989, page 320).

**Perceived ease of use:** "the degree to which a person believes that using a particular system would be free of effort." (Davis, 1989, page 320).

Together, perceived usefulness and perceived ease of use predict the attitude towards the system, defined as the consumer’s evaluation of the desirability to use the system (Akturan and Tezcan, 2012). The attitude in turn is the key determinant of behavior intention to use, which finally determines the actual behavior (Davis, 1989; McKechnie et al., 2006). This model also takes into account external variables such as individual differences or situational constraints, but these are mediated by the two key concepts. In later work perceived usefulness was also found to influence actual use unrelated to attitude, when the use of the system offered direct benefits to the consumer (Davis et al., 1989; McKechnie et al., 2006).

In a DRS setting, TAM suggests that if the consumer perceives digital receipts useful, for example helping them to collect, sort and report their expenses, and they also perceives the system easy to use, the consumer will have a positive attitude towards DRS. This attitude will, in turn, have a positive effect on the intentions and the actual use of service.

Research has suggested that TAM normally explain about 40 percent of the variance in usage situations and behavior (Venkatesh and Davis, 2000). As a result, the TAM model has

become the most widely applied model in research on user acceptance of technology (Ma and Liu, 2004). Several researchers discovered that TAM explains a significant part of the variance in usage intentions and behavior. In many situations, TAM explains more variance than TRA and TPB. These results underline the TAM model as a well-established, robust and powerful model for predicting user acceptance (Venkatesh and Davis, 2000). However, one of the main criticisms is that self-reported data is used instead of actual use data. As many researchers have pointed out, self-reported data is a subjective measure and are, therefore, unreliable in measurement of actual use (Chuttur, 2009). The theory has also been criticized because of its deterministic approach on the decision to adopt or reject a novel theory (Koenig-Lewis et al., 2010). As concept usefulness is also somewhat imprecise and does not address problems that could arise if the implementation is not successful, for example that all receipts disappear or cannot be retrieved.

## 4.6 Diffusion of Innovation Theory

Innovation is a complex construct, and innovation adoption and diffusion has been studied from many different perspectives at different levels (Meuter et al., 2005). The diffusion of innovation theory can be traced back to Schumpeter, who created innovation theory at the beginning of 20th century (Li and Sui, 2011). Diffusion of Innovations seeks to explain how innovations are taken up in the population (Rogers, 2003). The diffusion of innovation is described by Roger (2003) as “a process by which an innovation is communicated through certain time and specific channels among the members of a social system.” Innovation is an object, idea or practice that is perceived as new by an individual. The communication channels, such as media, represents the means by which messages about the innovation is diffused. Time is an important concept in the diffusion process and is presented in the theory of innovation-diffusion process, innovativeness and in the innovation rate of adoption. The social system represents a specific system where the innovation has a chance to diffuse for example Norway, Sweden or NHH.

### 4.6.1 Innovation Characteristics

Researchers have found different innovation characteristics to predict adoption behaviors (Damanpour and Schneider, 2008, Meuter et al., 2005). This thesis will focus on the innovation characteristics suggested by Roger (2003) . Rogers (2003) theory of the perceived



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diffusion innovation suggests that the innovation adoption rate is affected by five innovation characteristics: compatibility, relative advantage, complexity, trialability and observability.

**Compatibility:** Compatibility is the degree to which an innovation is perceived as consistent with past experiences, values and needs of potential adopters. If the innovation is compatible with the potential adopters existing values, norms and practices it is more likely to be adopted (Rogers, 2003). If there is an unclear fit between the DRS and the social and cultural value of the consumer, it will stand a hard time surviving the diffusion process. However, if there is a good fit between the values of the consumer and the DRS, there is a better chance that digital receipts will gain acceptance in the market. According to Rogers (2003), there is also a higher chance that the innovation gets a higher diffusion rate if it is compatible with previously adopted ideas or innovations. For example, if the consumer already uses different applications on their smartphone, it is a higher chance that he or she will use DRS. The reason is that it allows the potential adopters to understand the innovation, which will decrease the uncertainties that the innovation might bring (Rogers, 2003). The need for the innovation can be actual or emotional, but the potential adopters have to perceive a need for the innovation in order to adopt it. However, the potential adopters might not know that need until they have gain knowledge of the idea (Rogers, 2003). This concept has several similarities to the concept of perceived usefulness used in the TAM theory (Davis, 1989).

**Relative advantage:** The relative advantage represents the degree to which an innovation is perceived as better than the idea it replaces. It can be measured in economic terms, social prestige, convenience or satisfaction. It is the nature of the innovation that will determine what is advantageous to the adopters. It can for example be an innovation that has a reasonable price, that allows the adopter to save money or it can be an innovation that gives the adopter a higher social status. If the innovation is perceived as advantageous in some way, it is more likely that the innovation will be adopted (Rogers, 2003). DRS replace the regular paper receipts. Depending on how the consumer perceives paper receipts, there could be a relative advantage for the consumer to receive the receipt digitally. Paper receipts do not cost anything for the consumer, so getting the receipt digitally will not have a price advantage for the consumer. On the other hand it might bring a relative advantage of social status for example.

**Complexity:** The degree to which an innovation is perceived as being hard to understand and use. If the innovation requires new knowledge and skills it can be hard to adopt (Rogers,

2003). If the DRS is perceived as difficult to understand and use, the consumer will not adopt the service. In that case, the paper receipt will be seen as the better alternative. There are some similarities between digital financial services and DRS that might have a positive effect on the perceived complexity. However, there are also many differences that might require some new knowledge before use.

**Trialability:** The degree to which an innovation can be tried. If it is possible to try the innovation, there will be less uncertainty for the consumer (Rogers, 2003). The DRS is free for the consumer, and there are no requirements for how much the consumer needs to use it. Therefore, the service can be seen as having a high degree of trial ability. On the other hand, the goals of using the service, for example to get an overview over the economy, might not be met if the service is only tried.

**Observability:** The degree to which the result of an innovation is visible to others. If the innovation is visible to others it will stimulate peer discussion, which increases the knowledge, and lower the uncertainty for other adopters (Rogers, 2003). The DRS is a service delivered online, at an account registered on a specific consumer. The result is, therefore, not visible to others if not shown by the consumer.

The previous innovation characteristics have been used in several studies (Koenig-Lewis et al., 2010). However, a number of studies have shown that only relative advantage, complexity and compatibility have a significant effect on the adoption of innovative products (Koenig-Lewis et al., 2010).

#### **4.6.2 The Innovation-Decision Process**

Mass media channels are the most efficient in creating initial knowledge of innovations. Nevertheless, the interpersonal channels are more effective in forming and changing attitudes towards innovation. Most people evaluate the idea, not on the basis of expert knowledge and research, but based on their assessments on the subjective evaluations of friends and family (Rogers, 2003). For example, people may hear about DRS services in media, but they might not form an attitude about the service until friends and family have given their feedback on the service. Diffusion is a social process where people are talking each other and spread an idea. In an innovation-decision process a potential adopter goes through five stages (Rogers, 2003).

**The knowledge stage:** This is the stage when the potential adopter comes in contact with the innovation and gain knowledge about the idea for the first time. There are three types of knowledge: 1) awareness, 2) how-to, and 3) principles. The awareness gives the potential adopter the knowledge that the innovation exists and this might motivate the adopter to seek further knowledge, for example knowledge of the existence of DRS. Know-how relates to how the innovation works and what is required to use the innovation, for example how to get a DRS account and receive receipts. Principles consist of knowledge and understanding of why and how the idea works (Rogers, 2003).

**The persuasion stage:** This is the stage where the potential adopter forms an attitude towards the innovation and it can be either positive or negative. In this stage, the cognitive knowledge is transformed to a feeling and an attitude is formed. The potential adopter starts at this stage to actively seek information about the innovation. Innovation attributes such as relative advantage, compatibility and complexity are especially important in this stage and are believed to determine the attitude (Rogers, 2003). For example, if the consumer feels that DRS has a relative advantage compared to paper receipts and DRS is compatible with their current behavior there is a greater chance that they get a positive attitude towards the service.

**The decision stage:** In this stage the potential adopter decides whether or not to adopt an innovation. The attribute of triability is especially important at this stage since adoption has a higher likelihood if the individual has had a chance to try it out or see someone else try it out before (Rogers, 2003). In a DRS setting, this could mean that if the consumers are able to try DRS before actual use, this could have a positive effect on adoption.

**The implementation stage:** This is the stage where the adopter makes use of the innovation. At this stage, the individual might need to make some changes in their behavior when using the innovation in practice (Rogers, 2003). To be able to use the DRS there are some changes that the consumer needs to do in their behavior, particularly when DRS account is not registered on a credit card.

**The confirmation stage:** In this stage the individual starts to seek information in order to find support for the decision, whatever use the innovation or not, and to satisfy the need for confirmation that the decision was right (Rogers, 2003). This can be done by for example searching for other people's opinions about DRS on social websites like Facebook.

### 4.6.3 The Individuals' Innovativeness

The adoption of innovations depends on the individual innovativeness. The individual innovativeness is the degree to which an individual is relatively early in adopting innovations compare to others (Rogers, 2003). For example, if a consumer has a high degree of innovativeness there is a greater chance that this particular consumer will adopt DRS in contrast to a consumer with low degree of innovativeness. There are five stages of innovativeness as seen in figure 11: Innovators, Early adopters, Early majority, Late majority and Laggards (Rogers, 2003).

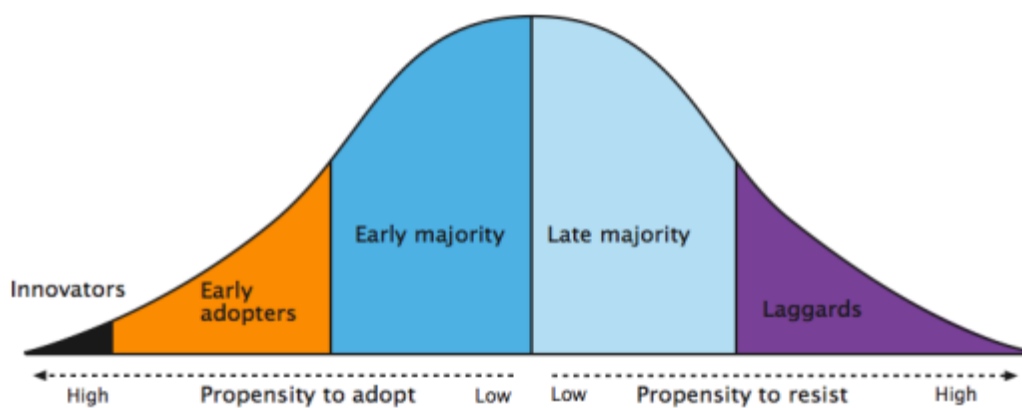


Figure 11: The Five Stages of Innovativeness (Robinson, 2009)

According to Rogers (2003) the center of the diffusion process consists of the modeling and imitation by potential adopters of other people that has adopted an innovation earlier. Conversely, this is not true for the innovators and the early adopters (Rogers, 2003).

Innovators who are enthusiastic about new technology want to be the first to try a new high-tech product even if there are a few bugs or inefficiencies (Hoyer and Macinnes, 2010). For example, an innovator would like to try DRS even if it could be problems in the service delivery.

Early adopters are visionaries and admire innovations, not so much for its features as for its abilities to create revolutionary breakthrough in how things are done (Hoyer and Macinnes, 2010). This group will therefore adopt an innovation as soon as the benefit becomes clear. When the early adopters have adopted an innovation they start to discuss it and spread the idea of the innovation to the rest of the population (Rogers, 2003).

The early majority seeks for innovations that offer predictable improvements to existing ideas. This group does not like risks; they care about the company reputation and reliability and they are interested in how well the innovation will fit with their current lifestyle (Hoyer and Macinnes, 2010). The early majority are sensitive to the thoughts and feelings of the early adopters. If the innovation gets a positive response from the early adopters, the innovation is more likely to be adopted by the early majority (Rogers, 2003). The early majority is the consumer that waits and sees how other people feel about DRS before they adopt the service.

The last two groups are the late majority and the laggards. These consumers are more conservative, and their decisions are established much on tradition. They like product and service packages that are easy to use, and they fear high-tech products and new ideas (Hoyer and Macinnes, 2010). DRS is a technological based service that is new to the market, and it replaces a product that has been used for many years. Based on this, the late majority and laggards might be a bit skeptical about this service.

An important implication of adopter groups is that if an innovation is to spread through the whole market it must appeal to all groups. Some researchers have criticized the five-category scheme for its assumption that it applies to all types of innovations. The critics contend that the way individuals are categorized will vary with the type of innovation. Hence, the curve will get different shapes, and the number of people falling in different categories will vary accordingly (Hoyer and Macinnes, 2010).

## 4.7 Motivation, Ability and Opportunity

Consumer behavior varies with the amount of effort that consumers put into their consumption. According to consumer behavior theory, there are three critical factors that affect this effort: motivation, ability and opportunity (Hoyer and Macinnes, 2010).

### *Motivation*

Motivation is defined as “an inner state of arousal that provides energy needed to achieve a goal” (Hoyer and Macinnes, 2010, pp.45). Motivation creates willingness to expend time and energy to engage in the goal oriented behaviors and it also affect how people process information and make decisions. Motivation is influenced by personal relevance, perceived risk and consistency with attitudes.

Personal relevance is the extent to which it has a direct bearing on and significant implications on life. For a product or service to be relevant, it needs to be consistent with self-concept, values, needs and goals. The self-concept is described as a mental view of who we are, how we view ourselves and how we think others view us. Values are defined as our beliefs about what is right, important or good. Consumers also find things personally relevant when they have a bearing on activated needs (Hoyer and Macinnes, 2010). In a DRS setting, this means that if the consumer feels that he or she has a need for digital receipts, DRS will also feel more relevant to him or her. A need can be defined as “an internal state of tension caused by disequilibrium from ideal/desired physical or psychological state” (Hoyer and Macinnes, 2010, pp.50). There are different types of needs and different ways of categorizing them. One famous model of needs is Maslow’s Hierarchy of needs that suggests that needs could be categorized into a basic hierarchy. Goals are also important determinants of personal relevance and motivation. They are outcomes that we would like to achieve and how we feel about something depends on whether or not it is consistent with our goals (Hoyer and Macinnes, 2010). Goals by using DRS could be, for example, to make expenses reports, keep track of expenses or become more environmental friendly.

Perceived risk is the extent to which the consumer is uncertain about the consequences of an action. This perceived risk is high if the outcome is more likely to be negative than positive. Perceived risk can be associated with any product or service, but tend to be higher when 1) little information is available, 2) the offer is new, 3) the price is high, 4) the offering is technological complex, 5) the brands differ substantially, 6) the consumer have little confidence or experience in the evaluation of the product or 7) when the opinions of others are important (Hoyer and Macinnes, 2010). There are different types of risk, for example, financial risk, performance risk, social risk, privacy risk and security risk. However, from a consumer point of view it could be difficult to assess and differentiate the various risks dimensions meaningfully, especially if they have little experience with the product or service from before (Koenig-Lewis, et al., 2010). DRS is a new service, and little information is available. The price is low, so there is no financial risk, however, it could be considered technological complex and consumers have little experience to evaluate the service. Therefore, it could be a high-perceived risk associated with the service. Studies have showed that perceptions of risk vary across and within cultural groups. For example, younger consumers take more risks than older consumers (Hoyer and Macinnes, 2010).

A last factor affecting motivation is the extent to which new information is consistent with previous knowledge or attitude. When a message is moderately inconsistent with previous knowledge or attitude, people tend to be more motivated to process the message because such message is perceived as moderately threatening or uncomfortable. On the other hand, consumers are less motivated if the message is highly inconsistent with prior attitudes (Hoyer and Macinnes, 2010).

### *Ability*

Motivation may not result in action if the consumer does not have the ability or competence to process the information or making the decision. Ability can be defined as the extent to which degree the consumer has the resources needed to make an outcome happen. Factors that influence our ability to process information and make decisions are knowledge, experience, cognitive style, complexity of information, intelligence, education, age and money (Hoyer and Macinnes, 2010).

Consumer's product and service knowledge varies. Consumers can gain knowledge about a product or service through advertising, sales interactions, information provided by friends or media, previous decision-making, product/service usage or memory. The interaction with these different factors clearly affects how consumers make decisions and process information (Hoyer and Macinnes, 2010). A consumer that has previous knowledge about DRS might, therefore, be more positive to the service.

Consumers also differ in cognitive style; their preferences of how information should be presented. Some prefer verbal information, and others visual information (Hoyer and Macinnes, 2010).

Complexity of information also affects consumer's ability to process information and make decisions. When information becomes more complex people's ability to process it decreases. Studies indicate that consumers find technical and quantitative information more difficult to handle, than nontechnical and qualitative data (Hoyer and Macinnes, 2010). DRS is a technological based service and could therefore be seen as complex.

Intelligence, education and age have also been related to the ability to process information and make decisions. For example, consumers that are more intelligent and have more education can process information easier than someone less educated (Hoyer and Macinnes,

2010). This means that people with higher education might be able to process information about DRS easier.

A lack of money also affects the ability to make a decision. If the consumer does not have the money needed to engage in the behavior they are constrained in their ability (Hoyer and Macinnes, 2010). To use DRS the consumer need computer or smartphone access, this requires financial resources.

### *Opportunity*

Consumer's opportunity to engage is the final factor affecting if motivation will result in action. Even if motivation and ability are high, someone might not take the action because of lack of time, distraction or other factors that affect the ability to act (Hoyer and Macinnes, 2010). So if a consumer has the motivation and ability to use DRS, the consumer may not, because of the lack of opportunity.

Time is one of the factors that might affect consumer's opportunity since the consumer under time pressure will engage in limited information processing. Another factor could be distraction. Distraction refers to any aspect of a situation that diverts consumer's attention. Amount, repetition and control over information can also affect consumer's opportunity to process a message. If the consumer is repeatedly exposed to information, he or she can more easily process it because they then have more chances to think about it and remember the information (Hoyer and Macinnes, 2010).

## 4.8 Distribution chain

A distribution chain, also known as value chain, can be described as a set of interdependent organizations or businesses involved in making a product or service available, from producer to end consumer (Kotler et al., 2012).

The function of the value chain is to contribute with cost- efficient activities and simplify the purchase process (Coughlan et al., 2006). However, if the chain consists of several actors the ones far back could have limited or no contact with consumers resulting in loss of valuable information (Supphellen et al., 2014).

According to Bucklin (1966), it is important to understand consumer preferences when designing the value chain. The reason is that the value chain will only be viable over time if



consumers feel that it provides a form of value. This value is created if the actors of the chain provide activities that result in cost- efficiency and/ or better service. There are five service performance areas where actors can create this value: unit size, availability, waiting time, variation in production and information (Supphellen et al., 2014).

When designing the value chain one must take into account three important dimensions: 1) the length of the chain, 2) the width of the chain and 3) the integration inside the chain. With these building blocks, it is possible to design a value chain in order to reach the selected consumer segment and their need in service performance (Supphellen et al., 2014).

The length of the chain describes the amount of actors between producer and end consumer. The shortest possible length is when a producer sells directly to a consumer without a middleman. With a short value chain, the producer has great control over marketing and sale and in many occasions the producer tries to avoid too many middlemen in the value chain. However, the services still have to be delivered, and the question is in what situations it is more efficient for the producer or consumer to deliver the service instead of a middleman. The main advantage of using a middleman is that one assigns a service function to a specialist and the producer can concentrate and develop within their main area of business. This can create positive synergies between the companies. The length of the value chain varies between industry-to-industry and market-to-market, and there is no clear guidance on what is best (Supphellen et al., 2014).

The width of the value chain is about in which and how many channels a producer wishes to offer their product or service. The width of the value chain has an impact on the producer's ability to influence the other actors in the value chain, thereby obtaining control of marketing and sales. The more intense value chain, and the more channels and outlets that are used, the harder it is for the producer to influence how the other services are performed (Coughlan et al., 2006). However, a large number of channels create an opportunity to reach a larger market. The preferred width of the value chain depends on the type of product it is and the company's brand strategy (Hines, 2006).

Integration in the value chain describes the relationship between the companies within the value chain. Inside a value chain, all companies are interdependent. This means that they cannot act in isolation from each other and have to co-ordinate and collaborate (Hines, 2006). When it comes to the integration of the value chain, distinction is often made between

four different forms of value chains that represent different degrees of integration. These are 1) a market-based value chain 2) administrated value chain 3) contract-based value chain 4) corporate- integrated value chain. Market-based value chain is characterized by a loose cohesion between the companies without a long-term perspective or specific form of collaboration. In a market-based value chain companies buy and sell from each other based on supply and demand in the market. So companies can go in and out whenever they want, and there is no common strategy or leadership. The other three are characterized by cooperation, agreement and ownership. These partnerships have a long-term perspective on a uniform value chain with some form of leadership. Administrated value chains are characterized by voluntary cooperation between independent enterprises. Companies in contract-based value chains, on the other hand, are linked with formal agreements. The most integrated chain is corporate-integrated chain where companies are under common ownership (Supphellen et al., 2014)

## 4.9 Previous Research

For this thesis, no previous research about intention and adoption of DRS has been found. However, there are conceptual similarities between digital receipts and digital financial services, for example, in order to access Digipost you need to login with your Bank ID. Today, the credit card transaction statement also provides limited information about expenses on computer and mobile phone, similar to a digital receipt service. Therefore, it could be reasonable to assume that there are some similarities in intention and adoption between the services.

Several studies have examined the adoption of financial technologies and services, suggesting that TAM and innovation diffusion theory are relevant for explaining digital financial service adoption and use. It has also been suggested that TAM and innovation diffusion theory are complement to each other. Relative advantage is closely related to the construct of perceived usefulness, while complexity refers to the perceived ease of use in the TAM model (Moore and Benbasat, 1991, Koenig-Lewis et al., 2010). The concept compatibility from innovation diffusion theory is an important concept and has been integrated into several different studies originally based on TAM. Several studies have showed that compatibility will lead to higher perceived ease of use as less effort is required. Additionally, innovative and more experienced consumers will recognize the value of the

innovation more easily (Koenig-Lewis et al., 2010). Most of the research found about mobile and Internet banking adoption are based on either one of the theories, but use concepts from both models. Other concepts commonly used are perceived risk, trust and credibility. These concepts are common barriers in the consumer purchase process and well cited in consumer behavior theory. A summary of past research is provided in the following table.

Author:	Focus and theoretical framework:	Result:
Wang et al. (2003)	Research to identify the factors that determine acceptance of Internet banking by the consumers. An extended TAM model with the concept perceived credibility.	The results supported the extended TAM in predicting the intention of consumers to adopt Internet banking. In their study they also demonstrated a significant effect of computer self-efficacy on behavioral intention through perceived ease of use, perceived usefulness, and perceived credibility.
Gerrard et al. (2006)	Qualitative study with purpose to find why some people did not use Internet banking.	The study showed that people were mainly concerned about security issues and privacy and therefore chose not to use internet banking. The second most frequently mentioned reason was the lack of perceived need. Other less frequently mentioned factors were lack of knowledge of the service, inertia, inaccessibility, lacking the human touch, pricing and IT fatigue.
Laforet and Li (2005)	Aims to investigate consumers' mobile banking adoption through an integration of the technology acceptance model (TAM) with work on perceived benefits and perceived risks.	The main barriers to online banking were found to be the perception of risks, computer and technological skills and the chine culture of cash usage. The barriers to mobile banking adoption were found to be mainly to be lack of awareness and understanding of the benefits provided by mobile banking.
Wessels and Drennan (2010)	Aim to identify and test the key motivators and inhibitors for consumer acceptance of mobile phone banking. Concepts used were; ease of use, usefulness, cost, risk, compatibility with their lifestyle, and need for interaction.	Perceived usefulness, perceived risk, cost and compatibility were found to affect consumer acceptance of M-banking. The results also supported a mediation model, whereby attitude transfers the effects of the consumers' perceptions to their intention to use M-banking.
Koenig-Lewis et al. (2010)	Investigation of barriers for adopting mobile banking services. TAM and the concepts of compatibility, trust, credibility, perceived risk and cost on behavioral intention were used.	The results indicated that compatibility, perceived usefulness, and risk was significant predictors for the adoption of m-banking services. Compatibility did not only have a strong direct effect but was identified as an important antecedent for perceived ease of use, perceived usefulness and credibility. Trust and credibility had a crucial role in reducing overall perceived risk of mobile banking.
Cruz et al (2010)	Investigation of perceived barriers of mobile banking adoption of a Brazilian bank.	The perception of cost, risk, low perceived relative advantage and complexity were revealed to be the main reasons behind the unwillingness to use the service.
Akturan and Tezcan (2012)	Investigation of consumers' mobile banking adoption using TAM in addition to the concepts of perceived benefits and perceived risk.	Perceived usefulness, perceived social risk, perceived performance risk and perceived benefit was found to have a direct effect on the attitudes towards mobile banking. They did not find a direct relationship between perceived usefulness and intention to use, perceived ease of use and attitude, financial risk, time risk, security/privacy risk and attitude.
Brown et al. (2003)	Studied factors that influenced adoption of mobile banking on the basis of innovation diffusion theory, past experience, banking needs, perceived risk, self-efficacy and facilitating conditions.	Factors identified to affect adoption of mobile banking were relative advantage, trialability, and consumer banking needs. Perceived risk was found to have a major negative influence.
Lee et al. (2003)	Qualitative study to examine the role of innovative attributes and consumers perceived risk for understanding adoption of mobile banking.	Result show that the innovation attributes is related to adoption. They also found that attributes and consumers' risk perceptions are connected. The risk dimension model was found to be a good explanation why consumers did not use mobile banking. The result also showed that consumer's previous experience influences the consumer's positive or negative evaluations of service.

Table 2: Summary of Previous Research

## 5. METHODOLOGY

*The purpose of this chapter is to present the methodology and methods used for this thesis. This chapter will begin with presenting the design, strategy and methods used for data collection and data analysis. Followed by a discussion regarding the quality of the research.*

### 5.1 Research Design

Research design defines the general plan on how the research question will be answered (Saunders et al., 2009). A research design is chosen in order to appropriately answer or clarify the research questions in the best possible way (Bryman and Bell, 2003).

#### *Purpose of Research*

The purpose of this research is to explore the use of paper receipts today and the underlying factors explaining adoption, acceptance and use of DRS among consumers. DRS is new service, and no previous research has been found. For this research, exploratory research design has been chosen. According to Saunders et al. (2009) when the problem researched is new and complex, an exploratory study could be a valuable mean to seek new insight. Compared to descriptive and explanatory research, exploratory research has the advantage of not requiring the same need for earlier knowledge and it is more flexible and adaptive to change (Saunders et al., 2009).

#### *Research Approach*

For this research, an inductive approach has been chosen. According to Saunders et al. (2009), there are two different approaches to theory: deductive and inductive approach. When deductive approach is chosen, existing theory is used to develop a testable hypothesis. Deductive approach has the advantages of being a highly structured approach that can be quicker to complete, possible to generalize to a larger population and has the application of control to ensure validity. However, the deductive approach requires some existing theory that makes it possible to operationalize concepts, in a way, that enables facts to be measured quantitative. In the inductive approach, the data are collected, and theory is developed, as a result, of the data analysis. Inductive approach has the advantages of gaining an understanding of the meanings human attach to events and give a close understanding of the

context of the research. The inductive approach is also more flexible in structure and permits changes of research emphasis as the research progresses (Saunders et al., 2009). The inductive approach is useful when there is little existing literature on the topic and when the nature of the topic requires a close understanding of setting or meaning of individuals (Saunders et al., 2009). However, the inductive approach is unstructured, and this makes it more time consuming. In this approach, the researcher is also a part of the research process, making it difficult to generalize to larger population (Saunders et al., 2009).

According to Saunders et al. (2009), when the topic is new and when there is little existing literature, it may be more appropriate to work inductively. The purpose of this research and the limited available research make the inductive approach the most appropriate. This approach means that this study moves from specific observations to broader generalizations and theoretical connections (Saunders et al., 2009). However, theory and past research in digital financial services have been used to develop an understanding of the dynamics.

## 5.2 Research Strategy

According to Saunders et al. (2009) there are several types of research strategy, which are presented as: survey, case study, grounded theory, experiment, archival research, and ethnography.

In this study, case study is retained as the main research strategy. A case study can be defined as a study that “examines phenomenon in its natural setting, employing multiple methods of data collection to gather information from one or a few entities” (Benbasat et al., 1987, pp. 369). The boundaries of the phenomena in the case are not clear at the beginning of the research, and no manipulation or experimental control is used (Benbasat et al., 1987). Case studies are a type of exploratory research that involves investigation of one or a few past problem situations that are considered similar to the researcher’s current situation (Hair et al., 2006). This strategy is especially useful when the purpose and objective of the research are to gain a rich understanding of the process and context of the research. Case study strategy also have a good ability to answer questions that starting with why, what and how, even if the questions of what and how tend to be more the concern of the survey strategy (Saunders et al., 2009). Since this research has an exploratory approach, and the main research question of this study starts with how, with what, and the purpose is to explore a new area, case study was found to be most appropriate strategy for this study.

If case strategy is employed in research, it will require detailed examination of the data of interest (Hair et al., 2006). This data can be founded from a salesperson, consumer, store, market area etc. (Benbasat et al., 1987). In order to improve the quality of this research, multiple cases have been included. The multiple cases strategy makes it possible to establish whether the findings of the first case occur in other cases (Saunders et al., 2009). In case studies, multiple data collection methods are typically used. Preferably, data from two or more sources are used to support the research finding (Benbasat et al., 1987). The data used could include for example interviews, observations, documentary analysis etc., (Saunders et al., 2009). In this case, three different sources have been used: Internet discussions on news articles, interviews with potential consumers and interviews with service providers.

### 5.3 Sample

According to Saunders et al. (2009), the choice of sampling depends on research objective and research questions. The objective and research questions of this study require information with rich data. Hence, non-probability sampling has been used as sampling method of this study. The available sampling techniques can be divided into two types; probability sampling and non-probability sampling. With probability sampling, there is an equal chance for all cases to be selected from the population. Non-probability sampling means that the probability of each case that being selected is not known, and it is impossible to answer research questions that require statistical interfaces about the population (Saunders et al., 2009). Non-probability sampling is useful when information-rich data is needed to explore the research questions and gain theoretical insights. It is also a useful sampling method when resources are limited or when it is impossible to specify a sampling frame (Saunders et al., 2009).

For this study, twenty-six people were interviewed from a heterogeneous population. When collecting qualitative data from interviews, the validity, understanding and insights collected from the data will be more affected by the collection and analysis skills of the researcher than the sample size selected. However, according to some guidelines a suitable sample size for a heterogeneous population should be between twenty-five to thirty interviews (Saunders et al., 2009). At the point of the twenty-sixth interview saturation was reached.

The sampling technique used for this research was purposive sampling with a maximum variation sampling strategy. According to Saunders et al. (2009), purposive sampling enables

the researcher to select the best suited cases to answer the research questions and is, therefore, a common sampling technique in case study research (Saunders et al., 2009). The maximum variation sampling strategy used in this study enabled a collection of data that describe and explain the key themes and uniqueness. To be able to ensure variation within the sample, the diverse characteristics were identified prior selection of sample according to suggestions by Patton (2002) in Saunders et al. (2009). The sample was divided into six groups based on country of living, sex, age and occupation category. The first grouping was based on country of living where thirteen individuals were chosen from each country. The selection defined that a total of thirteen women and thirteen men would be selected. The age groups were classified into two groups: young adults, consisting of people younger than thirty-five years old, and adults, consisting of people over the age of thirty-six. To get a mix of students, employees and retirees, a maximum quotation was also set for each category.

## 5.4 Data Collection

To meet the objective and to answer the research questions for this study, a combination of secondary and primary qualitative data have been collected. Secondary data are data that already been collected for some purpose and could include both raw material and published summaries. Primary data are new data that are collected by the researcher (Saunders et al., 2009).

The purpose of the first step of data collection in this thesis was to get an understanding of the current market for DRS in Sweden and Norway. This step was obtained by gathering documentary secondary data in written form, such as newspaper and press releases. At the moment, the digital receipt service market is unstable. It is also a quite new service in both markets, companies come and go, and many different stakeholders are involved. Hence, careful consideration was made to always collect data that were up to date, with source criticism in mind. During the data collection, it became clear that the secondary data were not sufficient to understand the market fully. Therefore, interviews with company representatives became necessary. These interviews were also used to check whether the companies' impressions of their consumers accurately reflected their consumers' perceptions and attitudes. The interviews were semi-structured and lasted between thirty to forty minutes.



The second step applied was a netnographic study. Netnographic study is ethnographic research online, a relatively new concept developed to give guidelines for research in digital social worlds (Kozinets, 2010). The choice to conduct this type of study was mainly due to the fact that no past research had been done in the area. Since this service is digitally based it seemed relevant to start searching for consumer opinions in the digital world. In order to get a better insight into consumers' attitudes before the collection of primary interview data a netnographic study were made. The data given in this study were later used in the discussion to evaluate and compare with the results from the interviews.

Based on the objective and the exploratory approach of this research, interviews were seen as the most appropriate data collection method. An interview is a focused discussion between two or more people and can be helpful to gather valid and reliable data for the research question. According to Saunders et al. (2009) interviews are the most advantageous approach to attempt when there are several questions to be answered and when they are either complex or open-ended.

## 5.5 Conducting the Netnographic Pre-Study

Netnography was selected as a pre-study method for this research. Netnography is an online ethnographic approach used for analyzing the behavior of individuals on the Internet. The word "netnography" is a concept created by Kozinets (2010) and comes from "Inter[net]" and "eth[nography]" and is developed from the concept of online ethnography. As a research method, "netnography" can be faster, easier, and less expensive than ethnography. It could also be more naturalistic and unobtrusive than focus groups or interviews (Kozinets, 2010).

There are different degrees of researcher interaction in netnographic studies (Kozinets, 2010). In this research, a purely observational role was taken, meaning that a non-participant observation method has been used (Saunders et al., 2009). This means that the researcher has not taken part in the activities of the group. The main reason for this is the limited time given for this pre-study and the limited degree of access.

An analysis of the Internet articles posted about digital receipts was made. The result showed that there were a limited amount of articles posted on the Internet in Norway and Sweden. In the US the service has been available for a longer time. Therefore, articles in the US were also analyzed. After the initial scan of the articles, the most relevant articles were chosen as

the source for this analysis. For this study four news articles were chosen from Sweden, four from Norway and one from the US. To get more insight on comments about the service, the Facebook page of Spara Kvittot, Kvittar and Digipost were also analyzed. Further information can be found in Appendix D.

In order to avoid information overload, efforts were made to continually categorize and sort the collected data, similar to a structured observation method (Saunders et al., 2009). The iterative approach was adopted along with the standard inductive data analytic process, which consists of; coding, noting, abstracting and comparing, checking and refinement, generalizing and theorizing (Kozinets, 2010).

## 5.6 Conducting the Interviews

For this research, a semi-structural form of an interview has been used. Interviews can be highly formalized and structured, or they may be informal and unstructured conversations (Saunders et al., 2009). Structured interviews use questionnaires based on predetermined and identical set of questions. In practice, this means that the researcher read the question and then records the response on a standardized schedule, usually with pre-coded answers. Unstructured interviews are informal interviews often used in exploratory research. In this type of interviews, there is no predetermined list of questions, and the interviewee is given the opportunity to talk freely (Saunders et al., 2009). In semi-structured interviews, the researcher has a list of themes and questions to be covered, even if they may vary from interview to interview. The order of the questions may also vary depending on the flow of the conversation (Saunders et al., 2009). The semi-structural interview technique was chosen because this research has an explorative approach and for this approach unstructured or semi-structured interviews are the best-suited ones (Saunders et al., 2009). In this study, semi-structured interviews were considered preferable since past research in adoption of technological services in finance have given some indications on what concepts may affect adoption of this service. To be able to see if there were some connections between the respondents some themes and questions were standardized for all interviews. Standardized questions also made it easier to present the results and discuss possible relationships.

With an exploratory purpose and inductive approach an ongoing analysis of the data and development of a conceptual framework is recommended in order to guide the work during

the collection of data (Saunders et al., 2009). The data have, therefore, been analyzed on an ongoing basis, and questions have been developed during the data collection.

The interviews were conducted one-to-one. The majority of the interviews were conducted face-to-face in areas around Bergen and Stockholm because of convenience and for economic reasons. Seven out of the twenty-six interviews were conducted by telephone to be able to collect data from other geographical places. The interviews lasted between twelve and forty-five minutes, but the majority lasted for sixteen minutes. All the interviews were audio-recorded with the program iRecorder with the interviewee's permission. The advantages of recording the interviews are that it allows the interviewer to concentrate on questioning and listening, it allows direct quotes to be used and it is also given an accurate and unbiased record. One disadvantage is that it requires time to transcribe, it may also adversely affect the relationship between interviewee and interviewer and inhibit some of the responses of the interviewee (Saunders et al., 2009).

### *Interview Design*

Before every interview, the participant was informed about the research. They were given information about the reason for the interview, the objective and purpose of the research. A short description of the DRS was also given during the interview. The description was general, and no company specific description was given.

The interview questions were divided into five categories based on the nature of the question; background, payment methods and receipt usage, experience and feelings regarding technology, experience and feelings regarding digital receipts and view on advertising and other messages.

**Background-** the interview started with standardized questions about personal characteristics such as age, sex, occupation and country of living. This information was later used to control for heterogeneity among the participants and to assess whether it was any connection between the personal information and the answers gathered from the interviews.

**Payment methods and receipt usage-** there are some factors that are affected by preferred payment method. To be able to get the receipt directly to the Digipost box you need to pay with a registered credit card. The netnographic pre-study showed that some people do not see the usefulness of this service because they paid with credit card and could, therefore,

keep track of their expenses on their bank transcript. Hence, the knowledge of the most frequently used payment method could have an impact on the perceived usefulness of DRS.

According to diffusion of innovation theory (Rogers, 2003) compatibility of the innovation affects the adoption of innovation services. Therefore, questions about current use of receipts were also asked. Theory of trying (Bagozzi and Warshaw, 1990) also indicates that the attitude towards trying a service is affected by the perception of the process. Consequently, questions regarding feelings about the process of saving receipts were also a part of this category.

**Experience and feelings regarding technology** – The questions in this category were developed to collect information about the consumer's current usage of digital devices like mobile phone and computer and how comfortable they are using these products. Questions regarding current usage of Internet and self-service technology, like Internet based financial services, are also a part of this category. Rogers (2003) argued that consumers would have a higher adoption if the new technology were compatible with their lifestyle or similar in usage to past innovations. According to the theory of trying, there is a greater likelihood of trying again if the consumer has tried similar services before (Bagozzi and Warshaw 1990). The answers could also relate to the perceived behavioral control proposed by Ajzen (1991) in theory of planned behavior.

**Digital receipt service-** this category of research questions containing questions regarding the digital receipt service. How they perceive the service based on a couple of concepts that has been found to affect adoption of technology in past research.

- Firstly, questions were asked regarding usage and current knowledge of the service to establish the framework for the interview.
- Secondly, there were questions regarding the interviewee's perception of DRS. Depending on the interviewee's response, follow-up questions regarding need, usefulness, relative advantage and ease of use were also asked. Questions in this category will be related to the technology acceptance model (Davis, 1989). Also, Roger's (2003) notion of complexity and relative advantage could be addressed in the interview.

- Thirdly, the questions regarding intentions, concerns and condition for trying were asked. Depending on the interviewee's response, follow-up questions were asked around subjective norm, cost, trust and risks. According to TRA, TPB, TT the subjective norm could affect the attitude and intention to use the service (Fishbein and Ajzen, 1975, Ajzen, 1991, Bagozzi and Warshaw, 1990). Past research in technology acceptance has showed that the cost, trust and perceived risk could affect the acceptance and adoption of new technology (Riquelme and Rios, 2010, Koenig-Lewis et al., 2010, Cruz et al., 2010).

**Information and advertising-** Finally, questions related to information and advertising were asked. The Interviews with Mr. Bekkelund and Mr. Petterson indicated that personalized messages and advertising could be the future within the service. To check how this could affect the opinions about the service, questions regarding regular messages and commercial messages were asked at the end of the interview.

## 5.7 Data management and analysis

For this study, a multiple methods data collection was selected. When using a case study strategy the analysis of data depends heavily on the researcher. However, using multiple methods data collection offers the opportunity for triangulation and leads to greater support to the conclusions of the researcher (Benbasat et al., 1987). The methods used in this study were netnographic pre-study and interviews with both potential consumers and the companies offering the service.

The data management and analysis of the netnographic pre-study have been described earlier and, therefore, this chapter focuses on the data management and analysis of the interviews. As mentioned before, the interviews were recorded with iRecorder and subsequently transcribed into text with the use of ExpressScribe. In order to ensure full understanding of the interviews and avoid build-up of audio-recordings, transcription was made as soon as possible after the interviews. To ensure that the transcripts are correct, researchers can send a copy of the transcript to the participant for final checking (Saunders et al., 2009). In this study, the interviewees have not been offered to check the transcriptions. The reason for this is that the questions asked in the interview are formed to get an insight into the initial

feelings. Offering the participants the opportunity to do a final check could, therefore, not only be time consuming but could have also affected the quality of the data.

The transcripts were then analyzed with an inductive approach. Meaning that the data were explored to see which themes and issues to follow up and concentrate on (Saunders et al., 2009). According to Saunders et al. (2009), there is no standard procedure for analyzing qualitative data. However, Saunders et al. (2009) suggest three main types of processes; summarizing of meanings, categorization of meanings and structuring of meanings using narrative. For this thesis, a categorization process has been used. This involves two activities; developing categories and subsequently attaching these to meaningful chunks of data (Saunders et al., 2009). The categories used in this thesis derived from the data collected and helped organize the data for further analysis. Categories that are developed initially are likely to be essentially descriptive (Saunders et al., 2009). Subcategories were, therefore, used to facilitate a more inductive approach to the analysis and interpretation to the data. Units of data were then categorized with an index approach using Excel. Interviews were analyzed one by one and summarized, in order to check that all valuable information was used.

## 5.8 Ethical considerations

Research ethics is about being morally responsible in the way we behave, formulate and clarify our research topic, design our research, gain access, collect data, process and store our data, analyze our data and write up our research findings (Saunders et al., 2009).

Four procedures for ethical netnography have been identified by Kozinets (2010). The first procedure deals with identifying and explaining, and emphasizes the importance of fully revealing of the researcher's presence and intentions to members of the community. The second procedure is to ask for permission from the community gatekeeper. Kozinets (2010) argue that this is more important in communities that are closed or require registration to view. The articles and discussions used in this study were open to public. Therefore, the people commenting and website administrators were not asked for permission before use. The third procedure is gaining informed consent. In human subjects research, gaining consent from research participants is required. However, human subjects research only occurs when the researcher is interacting with the community. Hence, this was not required in this research process. The last procedure is citing and anonymizing or crediting research

participants. Online pseudonyms and real names should be treating similarly as they often equally traceable. Direct quotes can also easily be traced back to the consumer. The information used in this thesis can be considered less sensitive, and the sites used to collect information could also qualify as low-risk sites. Therefore, it would not be harmful to use direct quotes.

To avoid ethical concerns in the interviews, the respondents were informed about the nature of this research. Before every interview, the procedures for interviews were explained. Confidentiality is an important concern and can be important in gaining access (Saunders et al., 2009). Confidentiality was promised and granted. Participation was voluntary, and the interviewee had the choice of answering the interview questions or not.

## 5.9 Credibility

There are two important criteria in which business research can be evaluated; reliability and validity (Saunders et al., 2009, Bryman and Bell, 2003). Whether or not these criteria can be used in qualitative research is a subject under debate, and many researchers believe that qualitative research should be evaluated based on other criteria (Bryman and Bell, 2003). However, in this study both concepts are applied in the evaluation of the research.

### *Reliability*

Reliability concerns the question whether findings of the study would be the same if the study would be conducted again, or if it is affected by random and temporary conditions (Bryman and Bell, 2003). Reliability is important for a quantitative study, but is harder to produce in a qualitative study (Bryman and Bell, 2003). In this research a non-standardized research method has been used, this means that the research reflects reality at the time data were collected and, therefore, the research is not repeatable. According to Saunders et al. (2009), there are four different threats to reliability.

The first one is subject or participant error. Participant error may occur when researching subjects are studied in situations that are inconsistent with their normal behavior, leading to different responses (Saunders et al., 2009). This error is difficult to control for, in the netnographic pre-study. When studying people online there is always a threat of studying people that are not a “normal” consumer. Therefore, the result of the pre-study should be seen in relation to the results of the interview. To avoid this error the interviews in this

research have been conducted during different times of the day and on both weekdays and weekends. The interviews were conducted in natural environments for the interviewees, usually at their workplace or home.

The second threat is subject or participant bias. Participant bias may occur when researching subjects are giving incorrect responses and may cause misleading results (Saunders et al., 2009). This threat is similar to the first one and is difficult to control for in a netnographic pre-study. Research has found that the relative anonymity aspect of Internet postings encourages self-expression (Bargh and McKenna, 2004), which is desirable seen from the threat of subject and participant bias. It has also been found in research that anonymity expands our freedom of expression and keeps us from evaluating the impact and social value of our words (Papacharissi, 2002), which could affect the application of the results to the “real world.” To avoid subject or participant bias in the interviews the participants have been given anonymity, and this anonymity has also been clarified to the participants of the study before every interview.

The third threat to reliability is observer error; observer error is systematic errors made by observers (Saunders et al., 2009). In this research semi-structured interviews, have been used. Semi-structured interviews could provide the research with observer error depending on how the questions were asked. This is due to the fact that a tone, comment or a non-verbal behavioral move could affect the response of the interviewee. When conducting the interviews, care was taken to try, in the degree possible, to ask the questions in a similar manner and order. Before conducting the interview on the main respondent group, questions were tested on two representative respondents to improve structure and layout. Open questions were asked, and the order of the questions depended in some degree on the participant’s answers, which could have caused observer error.

The final error highlighted by Saunders et al. (2009) is observer bias. When using observational methods the researcher has to be aware of the possibility of bias as a nature of the method (Bryman and Bell, 2003). During the research, attempt for objectivity has been taken in the recording and analysis of data. A hybrid approach has been used, meaning that established theoretical constructs and theories have been used to help make sense of the findings (Saunders et al., 2009). Assumptions have, therefore, been made about the appropriateness of the theory, and the chosen theory will shape the conclusions of the research (Saunders et al., 2009).



## *Validity*

Validity refers to the degree to which a research study measures what it intends to measure. There are different types of validity, but the two main types of validity that is usually referred to in research is internal and external validity (Bryman and Bell, 2003).

Internal validity can be defined as the “extent to which findings can be attributed to interventions rather than any flaws in your research design” (Saunders et al., 2009, pp. 593). Identified threats to validity are history, testing instrumentation, mortality, maturation and ambiguity about causal relationships (Saunders et al., 2009). The objective of this research is to understand consumers’ use of receipts today and how they perceive DRS. How they use their receipts today and their perception of digital receipts might be affected by the past. In the interview, questions were asked in order to identify if that is the case, but the questions only ask for the history of receipt and digital usage, and other factors like economic instability could have an effect on the participants’ answers. When conducting qualitative research, it is important to document the data collection in order to establish the validity effectively. The data collection allows others to examine and check the validity of the research process (Hair et al., 2007). Therefore, during the interviews, all the answers and opinions of respondents have been saved in audio record format. This process made it possible to go back when analyzing the data to make sure that the opinions of the respondent were analyzed correctly. The interviews have also been transcribed and saved in written format as well. The transcripts and audio records will be saved until the end of 2015 to make it possible to go back and establish the validity of the research.

The interviews were conducted in the mother tongue of the interviewee as it is easier for the respondents to express themselves in their mother tongue. The mother tongue of the interviewer is Swedish. Therefore, careful consideration were taken when asking respondents with Norwegian mother tongue to make sure that there was a complete understanding between the interviewer and the interviewee. The transcriptions were made in a combination of Swedish and Norwegian and careful considerations were also taken at this stage not derive another meaning when transcribed. The analysis was then made in English with the same carefulness.

External validity is the “extent to which the research results from a particular study are generalizable to all relevant contexts” (Saunders et al., 2009, pp. 592). External validity relates to the design of the research and may be of particular concern if conducting case

study research in one organization or a small number of organizations. In this case, the purpose is not to produce a theory that is generalizable to all populations, but to provide a base for further studies within the subject.

## 6. NETNOGRAPHIC PRE-STUDY

*The purpose of this chapter is to present a review of media attention followed by the findings from the netnographic pre-study of comments posted in media and social media.*

### 6.1 News and Comments on the Internet

The DRS is quite new, and the academic research is limited. The media attention around this service has so far been low in Sweden and Norway. The companies offering the DRS provide most of the information available, and only a few newspapers have been writing about this service. The attention in Norwegian media is limited to a few technological web-based newspapers. Most of the news articles published in Swedish newspapers are published in conjunction with the Swedish tax agency approval of digital receipts, as a substitute for the paper receipt in spring 2012.

In order to get an idea of people's perception of the service, a netnographic pre-study were used. For this netnographic pre-study a few articles were chosen together with the social platforms of Digipost, dSAFE, Kvittar and Spara Kvittot.

Since this service is new in these markets and the news articles, and comments are few one article from the US were also used. In the US, this service has existed much longer, providing the analysis a perspective from consumers that are more familiar with the service.

### 6.2 Norway

One of the main concerns for the consumers in Norway seems to be the usefulness of DRS. People seems to think that this is an unnecessary service. According to them, consumers do not need receipts, and they argue for bank statement as an equivalent substitute. The signature of Skatny comment at Dinside.no:

“If you pay by card you do not need a receipt. A print from your bank is enough. I have done that several times. If the store arguing, just ask them to start browsing in their system, they must account for every penny that comes into play”.

Others do not agree with him and highlight the positive consequences of saving the receipt. The signature of Frieil responds on the comment made by the signature of Skatnys:

“What if you resell what you bought? Then the purchaser usually wants a receipt proving that you are not criminal. Therefore, getting the receipt is the best anyway. There are also relevant data that you do not necessarily get from a bank statement. Looking forward to this development. “

Other concerns mentioned are the fact that a third party provides the service. Some consumers feel that it should be an easier way of getting the receipt, without having to log on to Digipost. Suggestions mentioned in the comments are a direct email or a service connected to their bank account. To conclude, the main reason for this concern seems to be the effort needed in the process of logon to one more account. Another concern is the fact that the information is provided by a third party. A third party, that could have economic interest in having that information.

A few people also express a positive perception of this service, but feel that it is not relevant when only a few stores are connected. As the signature of Anton Ellis writes:

“It had been nice if it worked. For me it appears to be limited where you can use it and a lot of hassle connected to it. It is very limited with only Bunnpris, Expert, XXL and BM. Get Rema, Rimi, Coop stores, Narvesen, MIX, Dressman, Cubus, H & M. Then we could talk about it ....”

## 6.3 Sweden

The comments posted in social media in Sweden indicate a positive attitude towards DRS. Main concern appears to be the effort needed in order to save the receipt. In Sweden there are just a few stores that have signed up for the service today. Some of the current consumers commenting that they have lost their interest because of limited motivation to take a photo or scan the receipt in order to save it digitally.

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The comments in Swedish newspapers are more negative. The few positive opinions were mainly about the control factor. As the signature EIDoko writes in IDG:

“As a statistical geek, I would really appreciate to keep track of my purchases. I want to see what products I have bought, how often and where there is money to be saved”.

This control factor was also one of the main concerns. The Swedish potential consumer appears to have a great concern for hackers and little trust in companies' intention. As the signature of Henkepenke writes in IDG:

“What a gold mine for companies that manage receipts. They know then what, where and for how much each person buys. Talk about being able to sell targeted advertising to people after that. How does that work with the PUL and integrity?”

Another concern is the possibility to control the receipt after purchase. As the signature of Kolla writes in Östran:

“How can I check that the purchase has the right prices? I always check my receipt after purchase. If I went home and find a mistake I must return to the store. How is the error cleared up then?”

People are also commenting that, according to accounting laws, the original paper receipt needs to be saved for 10 years. As a business owner, this means that you need to save it in paper anyhow.

## 6.4 United States

Even if the usefulness is questioned, and concerns are expressed, people in the US appear to be more positive. The most developed DRS systems in the US are the email system where stores send receipts directly into consumer's mailboxes. The consequence of this is that the potential adopter worries about junk mail.

Several people are commenting on the positive aspect of keeping the receipts for a long time, not affected by carelessness, sunlight or house fires. The signature William expresses his thoughts like this:

“I remember after Hurricane Ike, when I lost several possessions, my insurance company was down my throat for receipts for everything from my luggage to my refrigerator. If I had been as dedicated to digital receipts then as I was now, I'd simply email them a copy from my cloud storage and be done. Instead I got hassled, harried and hung out to dry trying to prove what I paid for possessions up to ten years earlier. Seems like a lot to gain in exchange for a few extra email advertisements.”

Other positive aspects of the service expressed by the American consumers are the convenience and the possibility to track expenses. Expensify is an American DRS provider. As the signature of ViNo comment in New York Times:

“Expensify is the Nirvana of Expense Reports! I use Expensify to track personal projects. After our Bathroom Remodeling, I could figure out exactly how much I spent - even after taking into account returns. This would be a nightmare with paper receipts. People get over it - Paper receipts are over - just like Newspapers, Magazines and perhaps even books - for better or worse.”

The concerns regarding this type of service seems to be the same as for the Swedish and Norwegian potential consumers; hackers. Americans also express concerns for not being able to check for mistakes when inside the store. A concern that was not found among the comments in Sweden and Norway, but among the American comments was the sentimental reason. The signature Linda writes:

“While I don't keep all receipts, I do keep those for major purchases for years, either for warranty or sentimental reasons. And it usually triggers a memory or two. An experience that rarely occurs when coming across an old computer file.”

## 6.5 Discussion and summary

The comments give an impression of both positive and negative opinions with greater weight on the negative. The discussions among the Norwegians indicate that people are feeling that the service is not useful. Another concern seems to be the ease of use. According to TAM perceived usefulness and ease of use are the two main factors effecting technological acceptance (Davis, 1989). The result from the comments in Norwegian papers and social media could be an indication of low intention to adopt DRS.

In Swedish newspapers and social media, the comments were mostly negative. The main concern seems to be the risk of hackers and the providers' intention. When people feel that there is a risk associated with the service, their motivation for use might be affected (Hoyer and Macinnes). This could indicate that the concept of risk might be one of the main barriers for adoption.

The comments found in the US papers shows that people in US have some of the same concerns as the Swedish and Norwegian people. They believe that it is a great idea, but worries about spam, hackers and less ability to control the purchase afterwards. The fact that one of the main concerns is junk mail could indicate that more advanced DRS system with an external provider could be a better alternative.

A summary of advantages and disadvantages found in the netnographic study is provided in the table below:

Advantages	Disadvantages and main concerns
Gives more information than bank statement	Perceived usefulness when having bank statement
Able to control and keep track of your expenses	Need for account at third party
Not affected by sunlight, house fires or carelessness	Limited stores connected to service
Convenience	Extra effort related to service
	Concerns related to "hacking"
	Reselling of information
	Problems to control receipt after purchase
	Junk mail

Table 3: Summary of Pre-Study

## 7. RESULTS

*The purpose of this chapter is to present the results from the Interviews. The result is presented according to grouping and theoretical reference.*

### 7.1 Participants Characteristics

In total there were twenty-six individuals participating in this study, thirteen from each country. The age of the participants varied between twenty-one and sixty-three, and there were an equal number of men and women. The participants had all different occupation and educational background. The full characteristics of the participants can be found in Appendix C.

### 7.2 Grouping

In this thesis respondents have been categorized into groups based on their current use of paper receipts and their attitude towards technology. Based on the answers from the respondents, four groups have been identified. These four groups are illustrated in figure 12.

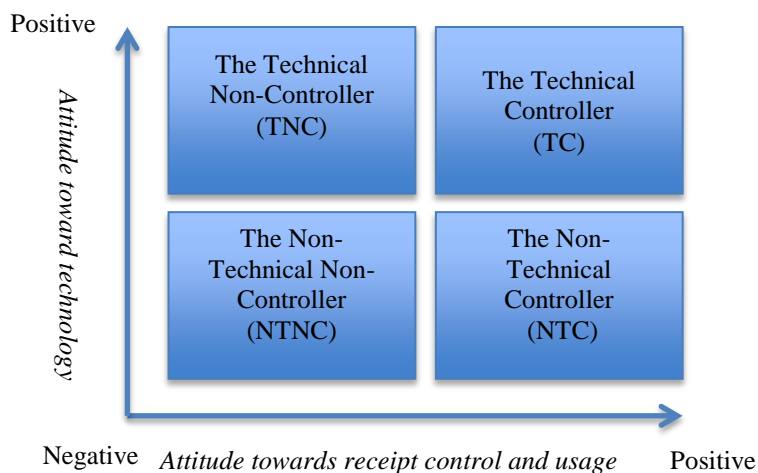


Figure 12: Grouping

**The Technical Non-Controller (TNC)**- This group consists of individuals with no interests for receipts, but a positive attitude towards technology.

**The Technical Controller (TC)**- This group consists of individuals with an interest for both receipts and technology.



**The Non-Technical Controller (NTC)**- This group consists of individuals with an interest for receipts, but limited interest for technology.

**The Non-Technical Non-Controller (NTNC)**- This group has neither interest for receipts or technology.

### 7.3 The Technical Non-Controller (TNC)

As mentioned, the Technical Non-Controller is an individual with no interest for receipts, but with an interest for technology and technological changes. The characteristics of the participants can be found in Table 4:

Sex	Age	Occupation	Country
Man	63 Years	Retired IT technician	Sweden
Man	25 Years	Student	Sweden
Man	26 Years	Nurse	Norway
Man	25 Years	Student	Sweden
Woman	23 Years	Student	Sweden
Woman	26 Years	Student	Norway
Woman	24 Years	Café assistant	Norway

Table 4: TNC Characteristics

#### *Knowledge Stage*

The initial knowledge about DRS among the participants varied, but the previous knowledge was only limited to the existence of the service. Only two participants had heard about the service before and none of them had used DRS before the interview. However, three participants mentioned their Internet bank as a substitute.

#### *Compatibility and Past Experience*

None of the participants in this group save all their receipts. They only save the receipts that they perceive as “important” or “expensive” and do not feel any need for controlling after purchase. When asked why, the participants said that they perceived saving as a high effort process and, therefore, limited the process to receipts with a perceived purpose. For them “important” or “expensive” receipts have a purpose and can be used for warranty, swap of product or proof. A receipt on consumables, on the other hand, is perceived as useless. One participant in this group said:

“I believe it is a habit. It is an effort to save all receipts; you need to have the space for it. In case I would save my receipts I do not think I would use them anyway. I should make a budget, but I don’t because I believe it to be an effort “

All participants in this group have a large degree of past experience with electronic products and digital services. The preferred payment method among all the participants is card. The only time when credit or debit card is not used is when it is not possible for some reason.

They all have a smartphone and use computer and mobile phone regularly. The feelings associated with technology are positive among the TNC. One respondent with great experience with technology and mobile application said:

“Everything becomes easier and easier. When flying you hardly need to check in anymore, you get a text message and check in by responding yes. You always have your mobile phone with you and with new technology (referring to mobile payment) you don’t need to bring your wallet anymore “

All the participants in this group use Internet banking and four of them also use mobile banking. The perception of this type of banking services is positive among the participants. One participant said:

“Going into the bank office is a huge project. Standing in a huge line makes me more irritable. Just let me walk up to any computer, it goes much faster “

Technology is important for this group, and they are open for technological changes. Two of the participants said that it might be difficult at first when things change but that the changes are usually for the better. They also perceive themselves as fast adopters to change compared to others.

### *Perceived Usefulness and Relative Advantage*

The perceived usefulness of DRS is limited among the participants in this group. When the participants were asked what they thought about this type of service, all seven of them

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expressed a limited need for this type of service. The limited need was explained as a result of limited interest for economic control and receipts. One of the participants said:

“I think that I don’t really need it because I feel I have some control, enough money at the end of the month. “

This feeling is shared among all the people in this TNC group. One participant also claimed that he might feel the need for the service if more economic control were needed in his life. However, he did not perceive the need for economic control to be large enough to consider the extra effort needed in the process of saving all the receipts. Another participant said that she did not want to have more control over her expenses. For her, knowing how much she is spending could be a cause of anxiety. She thought it was enough to know that there was still money left at the end of the month.

Even if the participants in this group express a limited need for the service, all of them could see relative advantages compared to paper receipts. The relative advantages mentioned, were the simplicity of automatically getting the receipts into their electronic devices and the fact that you never lose them.

### *Complexity, Ease of Use and Perceived Behavior Control*

None of the participants in this group perceive DRS as complex or difficult to learn. They believe in their competence, based on their previous experience with similar services. Since, they do not save their receipts today there is no effort associated with their current behavior. If they start to use DRS, there are some changes in the behavior that requires higher effort. Therefore, the use of DRS is perceived as a high effort process for this group. However, four participants believed that the service would be easy to use if the receipt were given automatically.

### *Belief and Evaluations of Consequences*

Participants in this group have a negative attitude against action, and none of them would use the service as it is supplied today. This opinion is expressed despite the fact that they perceive the consequences to be mainly positive. When asked about perceived consequences of use, six participants of this group said that they believed that the use of service could lead to better economic control. However, five participants also mentioned that there could be some negative consequences associated with the use of electronic receipts. The negative

consequences mentioned in the interviews included the possible risk of commercial distribution of information and monitoring of purchase. Nevertheless, the evaluation of these potential drawbacks was substantially low among most of the participants, except from one. He said:

“When storing receipts online there is always a risk that they could be exploited commercially. Because then it's suddenly a database that's a gold mine for those who want to do market research. How many have bought Kalles caviar (Swedish food product) last week? I think this is a clear danger and even if the supplier might say that they will not use it for commercial purposes today.”

As the risk of commercial use being one of the main concerns, the trust of the company that provides the service becomes more important. Five out of seven participants in this group said that the credibility of the provider is important. Companies that were perceived as credible were big companies and preferable state-owned.

### *Subjective and Social Norm*

All the participants in this group like the idea of DRS and believe that this type of service is the future. However, according to the participants, the service need to be more developed and have a great infrastructure in order for that to happen. Currently, this group feels no social pressure to start using this service. Six of them, however, said that the more developed this service gets, the greater the possibility that they also start using this service.

### *Attitude and Intention Towards Trying*

The attitude towards DRS is in general positive among the participants in this group. All participants except from one perceive the service in a positive manner. They said that they perceive the service as a great idea, and they were also positive to a future with only digital receipts available. The only one that perceives the service in a negative manner said that the existing service is too vulnerable for the associated risks. However, with another type of system this service could have great advantages.

All participants in the TNC group said that they would not like to try the service as it is today, but they would consider doing so in the future. This opinion is based on a perception that the current system is not yet properly developed. This group does not value receipts and

the feeling of control in the degree necessary to change their behavior. For them, this service is not attractive until the infrastructure is well developed and tested.

### *Information and Advertising*

As mentioned previously, a great concern for this group is the potential risk of commercial use of information. When it comes to information from the store and DRS provider directed to the consumer, the general opinion is different. Four out of seven said that personally targeted messages from the store, provided through the DRS, were acceptable. However, the attitude towards advertising is more negative, and only two of the participants said that personal advertising was tolerable. The attitude towards personalized discounts, on the other hand, is less negative. Five participants in this group said that customized discount vouchers based on previous purchases would not have any negative effects on their use of the service.

## 7.4 The Technical Controller (TC)

The Technical Controller can be identified by their interest for receipts and technology. All participants in this group share an interest for economic control and perceive themselves as a quick adopter to new technology. The characteristics of this group can be found in Table 5:

Sex	Age	Occupation	Country
Man	55 Years	Pilot	Norway
Man	29 Years	Economist	Norway
Man	26 Years	Photographer	Norway
Man	21 Years	Student	Norway
Woman	27 Years	Student	Norway
Woman	25 Years	Waiter	Sweden

Table 5: TC Characteristics

### *Knowledge Stage*

Similar to the previous group the initial knowledge among the participants varied. In this group, it was only one participant who had knowledge about the service before the interview. However, the knowledge was only limited to the existence of the service. Three were familiar with similar systems like email receipts, but none of the participants in TC had used DRS before the interview. Internet bank was mentioned as a substitute by three of the participants.

### *Compatibility and Past Experience*

The participants of this group have an interest for receipts and economic control. All of them always check their receipts for mistakes before leaving the store. However, only one participant save all his receipts, the others save only the ones perceived as “important.” “Important” receipts are defined as receipts on clothes and technical purchases that can be used in cases of warranty and exchange policy. Two participants were also mentioning receipts related to business expenses. All of the participants in TC have a personal system for the process of saving receipts. Still, none of them like their current system and they believe that another receipt system could make the process of saving and checking easier. Four participants that do not save all their receipts today have a desire to do so, but feel that the current systems available requires a higher level of effort than the perceived value. One participant said:

“I usually try to save my receipts especially in my job as a photographer where I need to save my receipts in order to reduce tax. However, I’m not so good with saving private receipts. I’m not the most structured person, but it is something I would like to change. I believe I could save a lot of money by becoming more aware of my expenses”

Similar to the TNC group the participants in this group have a large degree of past experience with electronic products and digital services. All six participants in this group prefer to pay by card. The only time they are not using their card is when the service is not provided, or when the total sum of purchase is low.

All participants in TC use computer and mobile phone frequently both at work and in private. All of them also use Internet bank regularly, and three of them also use mobile banking. For this group, the feelings associated with the use of technology and technological changes are positive. One participant explained his feelings to technology like this:

“ Technology is very important for me, I use technology to organize my life and keep track of news and social platforms. Its a big part of my life.”

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### *Perceived Usefulness and Relative Advantage*

The perceived usefulness of DRS is high among this group. All participants of this group, except from one, expressed a need for this type of service and could see the advantages of receiving their receipts digitally. One participant said:

“I have seen a need for this type of service before and I have thought that I would really like to have receipts on my phone“

The participant, who did not see a clear need and relative advantage, liked the idea. However, he believed that he did not have enough receipts to make digital receipts useful. He also said that he would like to have the really important receipts both in paper and digitally.

The relative advantage is also relatively clear among participants in this group. Five out of six expressed a perceived advantage that DRS could save them time and space, compared to the current system they use today.

### *Complexity, Ease of Use and Perceived Behavior Control*

None of the participants in this group perceives the service of DRS as complex, hard to learn or use. They believe in their competence, based on previous experience with similar services. For them, technology is something positive and easy to use. The participants in this group already have a system that they use for controlling their receipts, and they believe that DRS could make it easier for them to receive the same control. Nevertheless, they all agree that the system needs to be easier to use than the system they have today.

### *Belief and Evaluations of Consequences*

The belief and evaluations of consequences are mainly positive within this group. The most mentioned positive consequence is the perceived economic control. Four participants expressed a hope to get a greater overview over their expenses and in that way becoming more economically aware. Other advantages mentioned were the environmental advantages, space saving and the simplicity of having it all on one place. One participant explained the advantages like this:

“You don’t have to save and archive all your receipts. It’s easy to lose receipts and the ink disappears after just a few years. So if you have a thing, that has a 5 year warranty, the receipt is blank after 2 years already”

When it comes to potential problems and risks associated with the service, all except from one said that they could see potential problems associated with the use of DRS. Problems mentioned were commercial use of information, technical problems, hacking, virus and spam. However, this was not a major concern for this group, and the potential advantages were higher than the potential problems and risks.

### *Subjective and Social Norm*

The participants of this group like the idea of DRS. When the participants were asked what they believed was the main reason for the low adoption rate of DRS today, four of them said that they thought it was due to lack of knowledge about the service. According to them, the spread of DRS will happen by itself, but that it requires some marketing to increase awareness of service existence.

This group is not dependent on the subjective norm in order to adopt this service. For them, it is more important that the service is perceived as a better solution than the previous one. If the DRS is perceived as a better solution than the paper receipt, this group has no problem taking the lead in the diffusion process.

### *Attitude and Intention Towards Trying*

The attitude towards DRS in the TC group is very positive. All participants express a positive attitude towards a future with only digital receipts available. They believe that DRS could be the future, if the system is more effective and user friendly than the current system. However, two of the participants said that they would like to have the most important ones both in paper and digitally, at least in the beginning.

Almost all the participants in this group said that they would like to try this service today. Only one participant said that he would not like to try this service today because his current mobile phone did not support it.



### *Information and Advertising*

Just as with the previous group the commercial use of information is one of the main concerns. However, when it comes to information from the store and DRS provider to the consumer, the opinions differ. All except from one said that personally targeted messages provided through the service were acceptable. Still though, personal targeting advertising was not as acceptable, and five of the participants said that this type of information could have a negative effect on their use of the service. Discount vouchers, on the other hand, did not have a negative effect on the use of the service, according to the participants.

## 7.5 The Non-Technical Controller (NTC)

This group can be identified by their interest for receipts and their limited interest for technology. The participants in this group use computer and mobile phone, but in contradistinction to the participants, part of the previous groups, this group has a negative attitude towards technology and technology changes. The characteristics of the participants in this group can be found in Table 6:

Sex	Age	Occupation	Country
Man	53 Years	Sales Manager	Sweden
Man	63 Years	Retired Engineer	Sweden
Woman	57 Years	Finance accountant	Sweden
Woman	55 Years	Scientist	Norway
Woman	60 Years	Operative purchaser	Sweden
Woman	53 Years	Hospital Secretary	Norway
Woman	53 Years	Nurse	Sweden
Woman	53 Years	Strawberry farmer	Sweden

Table 6: NTC Characteristics

### *Knowledge Stage*

In this group, none of the participants had heard about DRS before the interview. When they were given a brief description of the service, three of the participants mentioned the Internet bank as a substitute and two of the participants mentioned receipts provided by email.

### *Compatibility and Past Experience*

As mentioned earlier, participants in this group have a great interest for receipts and economic control. Four of the participants of this group collect and save all of their receipts,

including grocery receipts. The other participants only save “important” or “expensive” receipts, but in contradiction to a Non-Controller, always check their receipts before leaving the store or throwing them away. Receipts are important for the participants of this group, and all of them have a system for saving, sorting and checking their receipts. The reason that they save all or some of their receipts is, in addition to the warranty and exchange, also memories and a desire to keep track of all purchases. Four of them explain positive feelings associated to the saving process. The others do not like the process, but they think the system works great and feel that the result is worth the effort.

The preferred payment method among most people in this group is card. Only one participant prefers cash as payment method. However, five people said that they always use cash when doing small purchases under the sum of 100 NOK/ SEK.

The technical experience among this group is varied. All of them use mobile phone and computer frequently, but they perceive themselves as no experts, and they are negative to technological changes. Four of the participants even described negative feelings associated with the usage of mobile phone and computer. One participant said that she had no interest for technology and felt uncomfortable using technological services. Lack of control in the process was described as the reason for this uncomfortable feeling. The lack of control in the process was also explained by other participants of this group as a reason for why they did not like technological changes.

### *Perceived Usefulness and Relative Advantage*

Similar to the first group the usefulness of DRS is perceived low within this group. The reason for this is that the participants do not feel any need for this type of service. All of the respondents are satisfied with the current system available and do not see any benefits by changing the distribution chain for receipts. When one participant was asked what he thought about a DRS he said:

“In the beginning it is the same as with everything else, you do not think it will work. The system I have today's complicated but it works and I have decent control over my expenses”.

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Three of them also explain a lack of trust towards the system. As a consequence of limited trust, they would prefer to have the receipt in paper as well, even if they got it digitally. When one participant was asked if she could see any need for this type of service she said:

“It can certainly be good for someone who knows a lot about data and other technology and using it all the time, but I don’t have any need for that kind of service. I want receipts in paper format”

Six participants could see potential advantages with DRS, however, the advantage were not enough to make them use it.

### *Complexity, Ease of Use and Perceived Behavior Control*

All the participants in this group perceive DRS as complex and hard to learn. This perception is based on previous experience with similar systems. Three of the respondents expressed concerns related to the first time of use. For them, the first time is related with negative feelings and fear of making mistakes. These feelings make them uncomfortable and unwilling to try new technological services. One participant in this group expressed his thoughts about new technological services like this:

“It will always be resistance at first. It's differs among generations, some are fast to adopt while others are slow. I think the most common is that in my generation and older all these kinds of innovations are pretty frustrating at first. They are frustrating because they change the system that you know from before”

Six of the participants also said that they believed a digital based receipts service would be difficult to use. A concern mentioned by several participants is a worry for not being able to check for mistakes made by the store. One participant expressed her perception of use like this:

“I do not know how fast it goes into the phone but I think I would have problems to check the receipt directly in the store. With my bad eyesight I find it easier to see it on a paper receipt than in a phone”

Four participants also believe that receipts automatically transferred to the account could cause problems in administration and create a need for deleting unwanted ones. This concern is based on experience with email advertising. Six of the respondents in this group also mentioned that their company required original receipts when they as employees claiming money for business related expenses. This means that they, as employees, need to save the paper receipt anyway.

### *Belief and Evaluations of Consequences*

The belief and evaluations of consequences are mainly positive within this group. Most participants, six of them, perceive the service as safe and do not see any potential risks associated with the use of DRS. Two participants mentioned the risk of losing the receipt, but they said that this could also happen with the paper version. Two of them believed that the use of the service could help people to keep control over their expenses. One participant said:

“...as mentioned before I believe digital receipts could be an easier way. With digital receipts you might be able to gather all of your receipts in a manageable way. Then you might get a better view of your own expenses and get surprised how much you use your card. I think there are a lot of people who don’t know how much expenses they have. I can see it when I’m in the store; people rarely take their receipts”.

### *Subjective and Social Norm*

The subjective norm is important for the participants in this group. In order for this group to adopt DRS, they need to see others use it and almost be forced to use it. All of them believe the service has a future. However, the service needs to be more developed and set as a standard. One participant said when asked if she could image herself trying this service:

“Yes, but not today, I must see others use it before I start to use it. But if people around me started to use it I would probably try it.”

### *Attitude and Intention Towards Trying*

The NTC has a general negative attitude towards DRS. Only two participants expressed a positive attitude towards DRS. All participants except from one in this group said that they believed that younger people have a generally more positive attitude towards the service.

Seven of the participants in the NTC group did not see any reasons to try the service today. Two of the participants said that they might try the service in the future, and one said that she might try it if she was forced to. They all expressed negative feelings towards a future with only digital receipts and no paper. One participant said:

“I think we need to have paper receipts, they are so easily accessible”

This expression is shared by most people in this group and explains the general feeling.

### *Information and Advertising*

This group seems to be less concerned for commercial use of information than the previous groups. When it comes to information provided by the store or DRS provider to the consumer, the opinions differ between the participants. Five participants did not mind personal messages while three of the participants expressed negative feelings associated to this type of messages. The participants that were positive to personal messages did not care if the message is related to advertising. All participants except from one expressed positive feelings associated with personalized discount vouchers.

## 7.6 The Non-Technical Non-Controller (NTNC)

The participants, part of this group have neither interest for receipts or technology. They do not save their receipts or check them for mistakes, and they do not like technological changes. The characteristics of the participants can be found in Table 7:

Sex	Age	Occupation	Country
Man	38 Years	Operative Purchaser	Norway
Man	44 Years	Logistic Specialist	Norway
Man	29 Years	University lecturer	Sweden
Woman	27 Years	Waiter	Sweden
Woman	26 Years	Student	Sweden

Table 7: NTNC Characteristics

### *Knowledge Stage*

Similar to the previous groups described the initial knowledge among the participants varied. Three of the participants had heard about the service before. However, the previous knowledge was only limited to the existence of the service, and none of the participants had used DRS before. One of them mentioned Internet bank as a substitute.

### *Compatibility and Past Experience*

As mentioned before, this group has no interest for receipts or technology. Similar to the participants in the TNC group, participants in this group do not care so much where the money goes, as long as there is some money left at the end of the month. Three of them said that they saved receipts that they know are important, for example receipts with warranty, but they do not like the process and do not have a specific system for the saving process.

All participants in this group use technology regularly in work and private. However, they do not like technological changes and avoid using technology as far as possible. When one participant is asked how she feels when technology changes, she answers with one word “irritation.” Another participant said:

“I do not like changes in technology, I'm very conservative. It takes time before I change and accept new ideas. I don't want the development to be fast, then you first learn one thing and then it changes. In those cases I become very conservative and think that it was better before”.

The preferred payment method is the same for this group as the previous groups described. All participants in this group prefer to use the card and only use cash if they happen to have any, or if it is not possible to use the card.

### *Perceived Usefulness and Relative Advantage*

As with the two previous groups TNC and NTC, the usefulness of DRS is perceived low within this group. The low perceived usefulness is a result of cultural and behavioral norm of not saving their receipt and a negative and insecure attitude towards technology. When asked if they can see any need for the service all of them answered no. One participant explained his feelings like this:

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“No not really, I do not collect the receipts so I see no need for it. Because I do not save my receipts it would not make my life simpler”

This service creates no value for this group, since they are not saving their receipts and have no desire to do so either. This service only adds extra work in registration, downloading and time. One participant said:

“I think it works well as it is now. In worst case, if I misplace a receipt that I need, I just print a statement from my bank account.”

This feeling is shared among several participants in this group. Three of them said that they did not see a reason for making the receipt digital when the current system with paper works just fine.

The participants in this group use technology and like it in some settings, but are very skeptical and would like to use it in a less degree than they do today. Still, the participants could see some advantages using electronic receipts instead of paper. Three of the participants said that if everything is automatic, so you do not have to do anything, then, this might be a good idea. Another participant said:

“Well maybe if you go away and your receipt is at home then it could be problematic. If you have them on your phone you have them with you all the time that can be good.”

### *Complexity, Ease of Use and Perceived Behavior Control*

In this group, the DRS is perceived as a complex and difficult service to learn and use. This perception is based on previous experience with similar systems like mobile banking. Two of the participants in this group also expressed a less behavior control when it comes to technical products. One participant said:

“If you need to scan the receipt yourself it is too much work, I would never do it. But if it happened automatically it could be good. However it feels a little bit scary, what if you lose your phone? It feels like there is a larger chance for me to lose my mobile than lose my box of receipts at home”

Their existing system for handling receipts, where they do not collect receipts and do not care if they lose them, is a simple process with little effort needed. As a result, a new system will always add complexity and extra work.

### *Belief and Evaluations of Consequences*

In contradiction to the previous groups, the belief and evaluations of consequences are mainly negative within this group. All participants in this group believe that using the service will give them extra work. They also believe there are risks associated with the use of the service. Risks mentioned in the interviews were for example hacking and miss-use of information. In addition, passwords seem to be a great issue for this group. All the participants of this group mentioning passwords and the difficulties associated causing consequences for use. One participant says:

“One risk is if someone hacks the system and abuses it. Another one is if you forget the password and then maybe you stop using it that could be a bit negative. It could also be the charm of novelty. That it is found after a while that the paper receipt was the better one anyway.”

### *Subjective and Social Norm*

The participants, part of NTNC is uncertain about DRS. As a result, the subjective norm becomes important for the adoption of the service. They want to see others use it, and they want to know that it works before they start to use the service. If the advantages and disadvantages are not clear, the participants in this group will never start using the service. When asked what they believed other people thought about the service, all of them said that they thought it might be more interesting for people that already collected receipts and like the structured life. One participant explained his feelings like this:

“It is probably a good service for people that wants to save receipts and it is probably a great idea, but I think it will take long before people trust the system and know that it works”



### *Attitude and Intention Towards Trying*

Just as in the previous group, NTC, the attitude towards the service is quite negative. They all believe that there could be a future for DRS, but they do not see any need to start using the service themselves.

The participants in this group do not have any intention to try the service today. They don't see any need for it and say that they prefer paper receipts. When asked what would make them use the service, one participant said:

“If the store stopped issuing paper receipts, then I would start with that.”

This quotation represents the answers from all the participants of this group. In order to make the people of this group start using DRS, it needs to be the only option available in the stores.

### *Information and Advertising*

Just as with the previous group, NTC, participants in this group seem to be less concerned about commercial use of information than previously mentioned groups. When it comes to information provided by the store or DRS provider to consumer, the opinions differ between the participants. Two participants do not mind personal messages while three of the participants express negative feelings associated with this type of messages. All except from one are negative to personal targeted advertising. However, three of them were positive to personalized discount vouchers.

## 7.7 Summary of Results

A summary of results can be found in the following table.

	<b>The Technical Non-Controller (TNC)</b>	<b>The Technical Controller (TC)</b>	<b>The Non-Technical Controller (NTC)</b>	<b>The Non-Technical Non-Controller (NTNC)</b>
<b>Characteristics</b>	Seven participants between the age of 23 and 63. Four men and three women. Majority (six) between the age of 20 and 30.	Six participants between the age of 21 and 55. Majority (five) under 30. Four men and two women.	Eight participants between the age of 53 and 60 years. Six women, two men all over the age of 30.	Five participants between the age of 26 and 44. Two women, three men. Three under 30 and two over.
<b>Knowledge stage</b>	Varied but limited to knowledge of existence. To participants had heard about the service before.	Varied but limited to knowledge of existence. One had heard about service before.	No one had heard about service before.	Varied but limited to knowledge of existence. Three had heard about service before.
<b>Capability and past experience</b>	None of the participants save all their receipts, only “important” ones. Large degree of past experience with electronic products. All participants feel comfortable using technology.	One save all receipts, five save some. Past experience of saving receipts. Large degree of technical knowledge. All participants feel comfortable using technology.	Four save all their receipts; the rest saves “important” ones. No technical interest and limited experience.	Three save some receipts and two save no receipts. Limited interest and experience with technology.
<b>Perceived usefulness and relative advantage</b>	Perceived usefulness limited. Seven express no need for service as a result of limited interest for receipts.	High degree of perceived usefulness. Five express a need for this type of service.	Low degree of perceived usefulness. All participants like the current system and see no or little benefits of having DR.	Low degree of perceived usefulness. All participants like the current system and see no or little benefits of having DR.
<b>Complexity, ease of use and perceived behavior control</b>	None of the participants perceived the service as complex and difficult to learn. Seven perceived DRS as high effort process if not automatically.	None of the participants perceived the service as complex, difficult to learn or use. However system needs to easier to use than the system they have today.	All of the participants perceived the service as complex and difficult to learn, based on past experience with electronic services.	All of the participants perceived the service as complex, difficult to learn and use based on past experience with electronic services.
<b>Belief and evaluations of consequences</b>	Positive belief and evaluations of consequences. Main concern was related to reselling of information.	Positive belief and evaluations of consequences. Potential advantages higher than potential risks.	Positive belief and evaluations of consequences. Risk associated where connected to information loss.	Mainly negative belief and evaluations of consequences. Use is for this group connected to high effort process with large degree of risks.
<b>Subjective and social norm</b>	The subjective norm has great impact on this group. Six participants say that the service needs to be more developed in order for them to start use it.	The subjective norm has little impact on this group.	The subjective norm has great impact on this group. Service need to be more developed and set as standard before they start to use it.	The subjective norm has great impact on this group. They want to see others use it before they start.
<b>Attitude and intention towards trying</b>	Generally positive attitude towards DRS. None of them would like to try today but six would consider it in the future.	Generally positive attitude towards DRS. Five participants would like to try the service today.	Generally negative attitude towards DRS. All except from one did not see any reasons to try the service.	Very negative attitude towards DRS and no intention to try the service.
<b>Information and Advertising</b>	Four experiencing personal messages as acceptable. However, only two thinks that advertising is ok. Five are positive to discounts.	Five experiencing personal messages as acceptable. One thinks advertising is ok. Six are positive to discounts.	Five experiencing personal messages and advertising as acceptable. Seven are positive to discounts.	Two experiencing personal messages as acceptable. One thinks advertising is ok. Three are positive to discounts

Table 8: Summary of Results

## 8. DISCUSSION

*This chapter discusses the findings from all previous chapters in order to answer the objective stated in this thesis.*

From the literature, several factors, attributes and concepts have been identified and argued to have a significant impact on technological innovations prospects of being successfully adopted and diffused on the market. The findings regarding DRS have afterwards been analyzed to determine how well the DRS currently perform relative to these factors, attributes and concepts. A discussion regarding its performance relative each factor is given below, followed by a discussion about DRS as a channel for information and advertising and the optimal distribution chain for DRS.

### 8.1 Participant Characteristics

Intelligence, education and age have been related to the ability to process information and make decisions. According to Hoyer and Macinnes (2010), people with more education can process information easier than someone less educated. Studies have also shown that technical information is more difficult to handle than other information (Hoyer and Macinnes, 2010). Hence, people with less education could find technical products and services more complicated than others. In this study, no indication for that has been found. However, when looking at the characteristics of the participants younger people seem to have a more positive attitude towards DRS. This difference in attitude may be due to the risks associated with the use of technology products and services. According to Hoyer and Macinnes, (2010) younger people are more willing to take risks than older people. It could also be a result of compatibility and past experience (Rogers, 2003). That younger people, for example, have a lifestyle and experience that is compatible with the new technology service. This issue will be further discussed later in this chapter.

### 8.2 Knowledge Stage

Most interviewees in this study had no pre-knowledge of DRS. Only six participants out of twenty-six had heard about this type of service before the interview. According to Rogers (2003) there are five steps involved when adopting an innovation. The results in this study

indicate that the innovation-decision process is in its earliest stage: the knowledge stage. That is the step where a potential adopter comes in contact with the innovation and receives knowledge about the service for the first time (Rogers, 2003). This means that the participants had not yet reached the persuasion stage at the time of the interviews. As a result, the answers are based on a first impression of the service.

### 8.3 Compatibility and Past Experience

The diffusion theory highlights the importance of compatibility, and this is further confirmed in previous research on mobile banking adoption (Wessels and Drennan, 2010, Koenig-Lewis et al., 2010). The diffusion theory argues about different types of compatibilities; the first is the compatibility with social and cultural norms. It is possible to argue that the largest cultural step has already been taken. Just a few years ago people used their mobile phone just for calling and text messages. Today people use it in a much greater degree and not only for calling and text messages but also for email, banking, exercise tracking, weather forecast, calendar, etc.

When it comes to receipts, little has changed since these were introduced as proof of transaction. The results of this study confirm that people are used to receive their receipt in paper and feel comfortable with this. As many as fourteen participants said that they liked the paper system available today. However, in the last couple of years there has been a change in payment from paper and coins to credit card and mobile payment. This study indicates the same cultural change. All of the participants, except from one preferred credit card as payment method. This cultural change in payment method could be laying the foundation for digitization of receipts. By using credit card instead of cash, the distribution chain for money has changed, so why not change the distribution chain for receipts?

It is also important that the innovation is compatible with the individual's lifestyle, behavior and previous innovations (Rogers, 2003). All participants in this study except from one had a smartphone; this means that the general adopter does not need to radically change behavior and buy a new phone. This result also indicates that they have the resources needed in order to adopt. However, the interviews also signified that people in general do not save their receipts today. In the interviews, only five participants saved all their receipts and the rest only saved receipts that they perceived as "important" or "expensive". The people that saved most of their receipts were people that had an interest for economic control and a limited

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interest for technology, as people part of the NTC group. The reason might be that they want to have control over their economy, but feel uncomfortable using their Internet bank. It is relatively clear that transcripts provided by the Internet bank are seen as a substitute for receipts for many of the participants, especially for the participants with a technological interest. The possibility of using the bank transcript as a substitute was also used as an argument for not using DRS in the netnographic pre-study. The fact that most people are not saving their receipts indicates a limited compatibility between the innovation and the current behavior of the consumer. This could also indicate a limited need for this type of service. Still, four of the participants in the TC said that they wished they had more control over their expenses.

Past behavior is also a concept proven to influence behavior and intentions (Bagozzi and Warshaw, 1990, Xie et al., 2008). Because none of the participants had tried DRS before, past behavior could be past usage of mobile applications and mobile banking. The result showed that all participants except from one had experience from using smartphone, even if the interest for doing so differed between the groups. The past experience implicates that the participants are familiar with the use of different mobile applications with different interface and functions, making the learning curve less steep for DRS. However, the interviews also showed that the degree of past experience differed between the participants and that participants in the TC and the TNC groups had a higher degree of perceived behavioral control, as a result, of past experience with similar services and devices.

When these facts are put together, the idea to download an application in order to get the receipt digitally appears to be compatible with the lifestyle of some people in of the study. However, none-experienced mobile users and people that usually not saving their receipts has a steeper learning curve and will need a change in lifestyle before adoption.

## 8.4 Perceived Usefulness and Relative Advantage

One participant asked: “why should I change to DRS when the current system with paper receipts works just fine?” This question represents the perceived usefulness of the service (Davis, 1989). The question is very justified from a diffusion perspective that says that the innovation must have a relative advantage against their forerunner (Rogers, 2003). Most participants, twenty-two out of twenty-six, could see several advantages with DRS. However, the advantages were not large enough to exceed the previous solution and only

five participants perceived DRS as a service that could make it easier to save receipts. So how will DRS attract adopters? One way is to add extra features with the service, in order to gain relative advantage against paper receipts and make the service more useful. This is something that Kvittar has done. Kvittar has done this by connecting consumer and employer to make it easier to report business-related expenses. By doing that, Kvittar has added features to their DRS that exceed the possibilities for the previous solution. Although, seven participants also said that digital receipts were not a possible solution since their employer requires a paper original. Accounting laws and company policies are, therefore, essential in the implementation of DRS. Other extra features that could be introduced are personalized discount vouchers based on previous shopping behavior. However, even if personalized discount vouchers have become more common the last years the opinions of these are separated, and an introduction of vouchers need to be in line with the consumers' preferences. This will be discussed in the last part of this chapter.

As mentioned previously, it also becomes clear both in the interviews and in the netnographic pre-study that people generally not saving their receipts and bank transcripts are perceived as an equal substitute. Twenty-one out of twenty-six participants said that they did not see the point of saving all their receipts. Six of them said that if they needed a proof of transaction, they could just print it from their Internet Bank. This result indicates a low perceived usefulness of DRS, and a need for clear communication of differences between the services.

Overall the results show the participants like the idea of DRS and see several advantages with the system. However, the relative advantage compared to previous solutions is not clear, and the capability between DRS and the participants current lifestyle is limited and, therefore, the perceived usefulness becomes low.

## 8.5 Complexity, Ease of Use and Perceived Behavioral Control

Past research indicates that perceived complexity influence the diffusion of the innovation. The more complex an innovation is, the harder it is to adopt (Rogers, 2003). In the interviews thirteen participants perceived DRS as a complex service that could be difficult to learn. These participants were all part of the NTC and NTNC groups, and this feeling was based on previous experience with similar services. This perceived complexity creates a

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need for more knowledge in order to enable them to adopt this service to its fullest. This barrier for adoption makes the paper receipt seem like an easier solution.

Ease of use is another concept mentioned in TAM (Davis, 1989). This concept is similar to the concept of complexity and describes the “degree to which a person believes that using a particular system would be free of effort” (Davis, 1989, page 320). In the interviews, the word “user friendly” was mentioned several times. For the participants in this study, it seems to be very important that the DRS is user friendly and requires no extra effort. For TC, it seems to be a requirement for adoption while for the TNC it could be a reason to start saving receipts. For NTC, the perceived complexity of technology is too large for them to see the possibilities for a system free of effort. NTNC has no interest in technology or receipts and, therefore, no clear opinion about this aspect.

Ease of use and perceived complexity could also be connected to the participants perceived behavior control. Perceived behavior control is a concept described in TPB as one out of three concepts affecting intentions to behave (Ajzen, 1991). This control belief might be based on past experience with the behavior, second hand information or any other factor increasing or decreasing perceived difficulty of performing the behavior. It becomes clear that the technological interested participants that are part of the TC and TNC group have a greater perceived behavior control. This perceived behavior control is according to the participants based on past experience with similar systems, for example Internet and mobile banking. In the interviews, it is also possible to see that participants that is, part of TC, are more positive towards trying the service.

The result indicates that DRS are experienced as a complex service for participants with little interest and experience with technological services, caused by a low perceived behavior control. This low perceived behavior control affects the ease of use and creates a sense of service that requires a high effort. The interviews also indicate that the design of a “user friendly” service is important both for those with an initial interest for receipts and for those which do not have further interest for receipts.

## 8.6 Belief and Evaluation of Consequences

The participants in this study have a general positive belief and evaluation of the consequences of use. The only participants with a negative evaluation of the consequences

are the participants, part of the NTNC group. The positive consequences mentioned in the interviews were better overview over their economy and an easier process. Other consequences mentioned were the environmental advantages and space saving.

The pre-study indicated a much more negative perception and evaluation of the consequences. The most reported negative consequence both in pre-study and the interviews were unquestionably the information security. Privacy and security of information appears to be an important issue among the potential adopters. The issue seems although to be the same, no matter if the participant has an interest for technology or not. However, the evaluations of those consequences differ. For the participants with an interest for technology, as with the participants, part of TC and TNC, the negative consequences are in general few, and the perceived positive consequences are valued higher. While people with no technical interest but with an interest for receipts, evaluated negative consequences higher than the positive. This evaluation was made despite a positive belief about the consequences. According to TRA and TPB, this belief and evaluation of consequences will affect people's attitude towards the act (Hoyer and Macinnes, 2010).

As a result of commercial use of information being one of the main negative consequences perceived by the participants, the trust in the provider becomes important. The interviews show that companies that are perceived as trustworthy are large, well-established companies, often with governmental affiliation. This result indicates that Digipost, which is delivered by Posten Norge, a company with strong brand and great familiarity, could have a competitive advantage.

## 8.7 Subjective and Social Norm

The most common answers to the question "will you use DRS in the future?" was "yes, but I want to see that it works first." This statement shows the importance of social influences and observability that is a large part of the diffusion theory. In order to cross the barrier from their usual and, in their opinion, safe alternative to a new alternative they need confirmation from near peers. This problem has also been highlighted in previous studies on adoption of mobile payment (Yang et al., 2011). This result shows the importance of early adopters in the diffusion process. The interviews indicated that social influences were very important for most of the participants. The participants less affected by social influence appear to be people with an interest for technology and receipts, such as the participants, part of TC. For



them, it is more important that the service is perceived as a better solution than the previous one. This makes TC participants great as “early adopters” and target group in the introduction of the service.

## 8.8 Attitude and Intention Towards Trying

According to Rogers (2003), the adoption of innovation depends on the individual innovativeness. Based on the interviews, the participants most likely to adopt this innovation first, appear to be the ones interested in technology and receipts, like the participants that are part of the TC group. This group is the early adopters, they are enthusiastic about new technology and have a need and desire for more control over their economy. Still, they are not enthusiastic enough to be innovators, but as soon as the benefits become clear this group will have no problems adopting the service. In the adoption process, it is essential that this group has a positive experience as this will help the diffusion of the innovation to the rest of the population. Based on the interviews, the TNC might be classified as the early majority (Hoyer and Macinnes, 2010). The attitude towards DRS was generally positive among these participants. Nonetheless, they were also clear about the fact that the service needed to be more spread and developed in order to become more beneficial. In order to encourage participants in this group to adopt the service, the managers need to communicate in a way that fits their current lifestyle. The participants that are part of the last two groups, the NTC and NTNC, are the late majority and laggards (Hoyer and Macinnes, 2010). They are more conservative, and their decisions are generated much on tradition. They have their system for saving receipts and do not see any benefits from changing that system.

When respondents were asked if they would like to try this service today, only the participants from the TC group responded yes. The rest of the participants were more negative. The TNC participants said that they did not see any reasons to use the service today, because of their limited interest for receipts. However, many of them would consider it in the future. The NTC participants said that they did not see any reasons why they should use it, they felt that there is a great system already. The NTNC participants had no intention to try the service, as a result of their limited interest for receipts and technology. According to them, the only reason for them to use DRS would be if someone actually forced them to do it. According to TT by Bagozzi and Warshaw (1990), intentions to try are affected by frequency and recency of past trying, social norms and attitudes toward trying. So, the fact

that the participants in this study with most technology experience also had the most positive attitude towards trying the service supports this theory.

## 8.9 Information and Advertising

The interviews with Mr. Bekkelund and Mr. Petterson show that currently it is possible for stores to send messages in connection with the receipt. However, this kind of messages is small and placed on the backside of the receipt were giving information about opening hours could be an example. These messages are presently, not formulated to be perceived as advertising. Both company representatives express carefulness with this type of messages and have so far not desired this kind of information. However, according to Mr. Bekkelund and Mr. Petterson, longer messages with advertising purposes may become a possibility in the future if the consumers perceive this as acceptable. Having this possible change as a background, the participants were also asked what they thought about different type of messages and how they would affect the perception of the service. The result showed that sixteen out of twenty-six thought that personally targeted messages like product recall is a great combination with DRS. However, only nine participants consider advertising messages as acceptable in relation to DRS and seventeen of the participants said that this could have negative effects on their use of the service. On the other hand, twenty-one participants in this study considered personalized discount vouchers based on previous purchase as a positive addition to the service. This result indicates the importance of usefulness and economic benefit for the consumer in the advertising design of the service.

## 8.10 Distribution of Receipts

When designing a value chain one must take into account three important dimensions (Supphellen et al., 2014). These are the length, the width and the integration of the value chain. By changing the distribution chain from paper to digital, the value chain becomes longer. The consumer does not receive the receipt directly from the store, instead they need to login into another account in order to receive it. The result of the interviews shows that presently the majority of the participants wish to have the distribution chain designed as it is today. According to Supphellen et al. (2014), distribution chain will only be viable over time if consumers feel that it provides a form of value. The participants in this study sees a potential value of having their receipts in digital form, but currently, that value is not enough

to compensate for the work required. To counter this, it is important to communicate the usefulness of the value while working on developing the service and infrastructure to make it easier to use.

The width of the value chain is about which and how many channels the product or service is distributed in (Coughlan et al., 2006). DRS are just like many other similar services such as credit card payment dependent on the width of service opportunities. The greater width it is, the better the service is. This was also clear in the interviews, where only five would be willing to try out the service as it is presented today. The remaining participants were not interested to try the service now. However, they said that they are willing to try it in the future if the DRS will become more widespread, more stores were connected or if they were forced to.

Integration in the value chain describes the relationship between the companies inside the chain (Hines, 2006). So far, the distribution chain of receipts has not been depending on any relationships. The stores have provided the receipt directly to the consumer. When an external DRS is added to the distribution chain, the relationship within the chain becomes more important. This is particularly true in Sweden, where Kvittar's product is a type of software connected to the cash register system, a system provided by over 70 operators in the market. This is also important in order to increase the reliability of the service, since commercial use of information being one of the main concerns among the participants.

In the interview Mr. Petterson, the CEO of Kvittar, said that the main competitors are not other DRS providers, it is the traditional paper receipts. Mr. Petterson argued that it is important for different DRS providers to collaborate in order to change the infrastructure of receipts. This result demonstrates the importance of a close relationship even with actors outside their own value chain to be able to grow within in the market.

## 9. CONCLUSIONS

*The purpose of this chapter is to present the conclusions that have been drawn from this thesis and to answer the initially stated research question. Furthermore, this chapter will also incorporate a presentation of the managerial implications, limitations, contributions and suggestions for future research.*

The objective of this research is to understand consumers' use of receipts today and how the consumer perceives digital receipt services. In order to achieve this objective, twenty-six interviews were made with potential consumers. These interviews were then analyzed in order to identify factors/attributes that affect adoption and diffusion of DRS.

The industrial analysis illustrates a market with different forms of DRS. Everything from the simplest model with a receipt directly to the consumer's email account to a more advanced distribution chain with multiple parties. Even if several models were illustrated in this chapter, the focus for this thesis is the models with two or more parties.

The interviews with the two company representatives from Digipost and Kvittar illustrated two fairly different markets. In Norway, one large and well-known company dominates the market. In Swedish, on the other hand, the market consists of several small players with different market positions and target consumers. As a result of different laws and regulations for distribution of transaction information, the service system is structured in different ways. In Norway, the payment with credit card will automatically provide the consumer with a digital receipt of the transaction in their Digipost account. In Sweden, the consumer needs to provide the cashier with ID or phone number before the transaction is completed in order to achieve their receipt in digital form, making the process more time consuming than the Norwegian process. Currently, only a few stores in Sweden provide this service. While in Norway the number of stores providing the service starting to become relatively many. The difference between the markets can partly be explained by the cooperation with large business chains in Norway. The amount of active consumers of DRS is difficult to say, and the company representatives prefer to keep this information for themselves. However, it is relatively clear that there are currently few active consumers. This low degree of adoption demonstrates the need for further investigation of consumers' perception of DRS and the barriers for adoption.

The literature review showed that few studies have been done in this particular area. Though, several studies have been made on similar issues, for example on mobile banking. Previously published work on mobile banking argues that the TAM model and the diffusion of innovation theory are the most relevant theories for research related to adoption and diffusion of technological innovations. Other concepts commonly used in previous studies were risk, trust and creditability.

The netnographic pre-study concluded that DRS are mentioned both in a positive and negative manner. The comments particularly showed a main concern related to service usefulness, ease of use and information security. When comparing the comments made in Sweden and Norway with the ones posted in US, the US ones are much more positive. The development of DRS have come much further in the U.S. market compared to the Swedish and Norwegian market, and the comments could be an indication that the service needs to be more integrated within these countries in order to achieve the same acceptance.

When analyzing to what extent consumers are saving their paper receipts today, it turns out that there are relatively few who save their receipts. Only five participants out of twenty-six kept all their receipts. The rest only saved receipts they perceived as “important” or “expensive”. The most important findings regarding the participants’ current use of receipts can be summarized as follows:

- For the five participants that are saving all their receipts the main reason seems to be checking for mistakes and to have control over their economy. Some participants also mentioned payback for business related expenses as a reason. The participant characteristics indicate that it is mainly people over the age of fifty who see the benefit of saving their receipts.
- The main reason for not keeping their receipts seems to be the lack of perceived usefulness and the effort needed in order to sort and save these. The interviews also show that there are more people who wished they saved all their receipts than the ones that actually doing it. The reason seems to be that they want to get more economic control but that the perceived effort of saving all receipts is too big.

The attitude towards DRS is mainly positive among the participants and twenty-four out of twenty-six participants perceive DRS as a potential future distribution chain for receipts. The only participants with a negative attitude towards DRS are the ones with no interest for

receipts or technology. Despite the positive attitude, only five participants said they were willing to try the service as it is presented today. When analyzing the interviews, several potential barriers for adoption were identified that could explain the difference between action and attitude. The most important findings can be summarized as follow:

- First, for most participants in this study, the perceived usefulness was very low. The only participants that perceived the usefulness as high were the ones with an interest for technology and receipts. This result could be an indication that compatibility with individuals' lifestyle and behavior is important for adoption of DRS.
- Second, a great concern for adoption is the relative advantage. The participants in this study could see various advantages. However, the advantages were not perceived as relatively better to the previous solution of paper receipts. This result creates a challenge in communication and service development. However, digital receipts give the opportunity to add more features and additional services not achievable with today's paper receipts.
- Third, another challenge appears to be ease of use. According to the participants in this study, it is important that the DRS is user friendly and requires no extra effort compared to the existing system with paper receipts. The solutions available today require effort from the consumers in registration time and little time at each purchase occasion. This effort in time could be a barrier in the diffusion process that needs to be solved or compensated for in relative advantages.
- Forth, a large proportion of the respondents, regardless of prior knowledge of technology, were also concerned about the information security. The concern for commercial use of information was clear both in the interviews and in the netnographic pre-study.
- Fifth, another important aspect is the number of consumers and registered stores. The interviews indicated that the subjective norm and social pressure has a great impact on adoption. DRS are also a service that increases in value with the amount of consumers and registered stores. It is, therefore, important to create interest among early adopters, in this case people that already save their receipts and have an interest for technology.

To sum up, it appears that the overall perception towards DRS is positive. However, there are some challenges to overcome. The attitude towards the service is positive, but the

attitude is not enough for adoption. According to the theory, a positive attitude towards the service needs to be complemented with a perceived behavior control, perceived usefulness, perceived ease of use, etc. The result of this thesis confirms the results from previous research made on mobile banking and highlights the challenges with perceived usefulness, ease of use, subjective norm and security regarding DRS.

## 9.1 Managerial Implications

The results from this paper are offering several implications for the managers in their intention to increase DRS adoption.

First, the result of the interviews shows the importance of compatibility with lifestyle in the adoption process. Past experience and perceived behavioral control were also found to have a great influence. Hence, people with past behavior of saving receipts and interest for technology seem to be the people that will adopt the service first. Marketing efforts should, therefore, primarily be focusing on this group of people. When interest is created in this group, it is important to encourage them to share their experiences. This study showed namely that the subjective norm has a great impact for several potential adopters.

Second, the result has also showed that the relative advantage of using DRS is unclear among many of the participants. Thus, in their marketing campaign, the marketing managers have to emphasize how the service differentiates from previous solutions. Other ways to add relative advantage, is to add more functions into the service. However, these must be consistent with the consumers' needs and lifestyle. One option is to have a customized design, that each individual can decide what features they want to have on their account or profile.

## 9.2 Limitations and Contributions of the Research

In this thesis, an attempt has been made to understand consumer's perspective on digital receipts services. Because of limited knowledge within the area a qualitative study was conducted. However, throughout the work it has become clear that the qualitative method were insufficient to draw any definite conclusions. The main reason for this is the large number of aspects that affect the prospects of adoption and the limitations of participants in a

qualitative study. However, the qualitative study gave some indications on what aspects to focus on in further research.

Due to the time limit of this thesis and the complexity of investigating an innovation not known by the interviewee, the qualitative method had to be significantly simplified, and several assumptions and delimitations had to be made. As a result, the validity of the results presented in this thesis is considered to be rather low. However, with the help of these methods it was possible to create a basic understanding of what aspects could have an effect on the diffusion process.

Hence, due to the low validity of the results, the findings in this thesis should be perceived as indications for further research of the most important aspects regarding adoption and diffusion of DRS within the Norwegian and Swedish markets. Accordingly, the findings could be used as guidance for further studies with the aim to improve the adoption and diffusion of DRS. Furthermore, this case study pose as an example of what can be made in order to identify strengths and weaknesses of the innovation that potentially could affect its prospects of future adoption and diffusion on the market.

### 9.3 Further Research

There are multiple areas of interest for further research, the consumers are one perspective of the market while merchants are the other. Consumers will not be willing to adopt DRS instruments if not enough merchants accept it. At the same time, no merchants will invest in new DRS if not enough consumers are adopting the service. Thus, there are many possible research areas available from both the merchant and consumer perspective.

Second, the findings indicate that it is essential to understand the lifestyle and current behavior of the consumers. Hence, it is suggested that future research should be devoted to an increased understanding of the potential adopters' lifestyle and current collection and use of paper receipts and how to ensure that the DRS is compatible with these behaviors. For example, since it has been found that the relative advantage of DRS is perceived as low it is suggested that further research is devoted to understanding what activities that create relative advantage and how to integrate those activities into the service.



Furthermore, the findings from the literature indicated that TAM and Innovation diffusion theory are the most used ones regarding technology innovation studies. Based on the results from the interviews a relevant model for further quantitative studies could be TAM with perceived security as an additional concept.

## References

- Ausen, C., Nguyen, P. T. and Thomas, M. (n.d.) *The Factors Behind Paper Receipt Retention Among Consumers*, The Information School University of Washington, Seattle.
- Ajzen, I. (1991). *Theory of planned behavior*. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
- Akturan, U. and Tezcan, N. (2012) *Mobile banking adoption of the youth market: Perceptions and intentions*, *Marketing Intelligence & Planning*, Vol. 30 Iss: 4, pp.444 – 459
- Amelie, M. (2012) *De gjør papirkvitteringer overflødige* [Online] *Teknisk Ukeblad Media AS*, Available at: <<http://www.tu.no/it/2012/11/16/de-gjor-papirkvitteringer-overflodige>>[Accessed 17 February 2013].
- Armitage, C. J., and Conner, M. (2001). *Efficacy of the theory of planned behaviour: A meta-analytic review*. *British Journal of Social Psychology*, 40, 471-499.
- Bagozzi, R. P. and Warshaw, P. R. (1990). *Trying to consume*. *Journal of Consumer Research*, 17(2), 127-140.
- Bendapudi, N., and Leone, R. P. (2003). *Psychological implications of consumer participation in co-production*. *Journal of Marketing*, 67(1), 14–28.
- Benbasat, I., Goldstein, D., and Mead, M. (1987) *The Case Research Strategy in Studies of Information Systems*, *MIS Quarterly* Vol. 11, pp. 369-386.
- Bitner, M. J., Stephen, W. B. and Meuter, M. (2000) *Technology infusion in service encounters*. *Journal of the Academy of Marketing Science*, Vol 28, Iss: 1, pp 138-149
- Brown, I., Cajee, Z., Davies, D., and Stroebel, S. 2003. *Cell phone banking: predictors of adoption in South Africa – an exploratory study*. *International Journal of Information Management*, 23 (5), 381–394.
- Bryman, A. and Bell, E. (2003). *Business research methods*. New York: Oxford University Press
- Bucklin, L. P. (1966). *A Theory of distribution channel structure*. Berkeley: Institute of Business and Economic Research, University of California.
- Celerant Technology Corp, (2012) *Digital Receipts: Beyond The Green Benefit* [Online] Available at: <[http://www.celerant.com/default/assets/File/Celerant\\_GreenReceipts\\_V1\(1\).pdf](http://www.celerant.com/default/assets/File/Celerant_GreenReceipts_V1(1).pdf) > [Accessed 17 February 2013].

- 
- Chuttur M.Y. (2009). *Overview of the Technology Acceptance Model: Origins, Developments and Future Directions*, Indiana University, USA . Sprouts: Working Papers on Information Systems, 9(37).
- Clifford, S. (2011) *Shopper Receipts Join Paperless* [Online] The New York Times, Available at: <[http://www.nytimes.com/2011/08/08/technology/digital-receipts-at-stores-gain-in-popularity.html?\\_r=0](http://www.nytimes.com/2011/08/08/technology/digital-receipts-at-stores-gain-in-popularity.html?_r=0)> [Accessed 17 February 2013].
- Coughlan, A. T., Anderson, E., Stern, L. W., and El-Ansary, A. I. (2006). *Marketing channels* (7th edition). Upper Saddle River: Pearson Prentice Hall.
- Cruz, P., Neto, L.N.F., Munoz-Gallego, P. and Laukkanen, T. (2010), *Mobile banking rollout in emerging markets: evidence from Brazil*, International Journal of Bank Marketing, Vol. 28 No. 5, pp. 342-71.
- Damanpour, F., and Schneider, M. (2008) *Characteristics of Innovation and Innovation Adoption in Public Organizations: Assessing the Role of Managers*, Journal of Public Administration Research and Theory
- Davis, F. (1989). *Perceived usefulness, perceived ease of use, and user acceptance of information technology*. MIS Quarterly: Management Information Systems, 13(3), 319-339.
- Digipost ,1 ( n.d.) *Lei av å ta vare på papirkvitteringer? Få elektroniske kvitteringer* [Online] Available at: <https://www.digipost.no/privat/kvitteringer/> [Accessed 17 February 2013].
- Digipost, 2 (n.d.) *Hva er Digipost?* [Online] Available at: <<https://www.digipost.no/privat/alt> > [Accessed 17 February 2013].
- Ekvittering.dk (n.d) [Online] Available at: < <https://www.ekvittering.dk/> >[Accessed 17 February 2013].
- Fishbein, M., and Ajzen, I. (1975). *Belief, attitude, intention, behavior: An introduction to theory and research*. Addison- Wesley, reading, MA.
- Florence, B., (2013) *Digital receipts: good for consumers, good for businesses*. [Online] Available at: <[http://www.thecrier.net/business/article\\_7a3ecc6e-859d-11e2-8cf0-001a4bcf887a.html](http://www.thecrier.net/business/article_7a3ecc6e-859d-11e2-8cf0-001a4bcf887a.html)> [Accessed 06 Mars 2013].
- Forne, D. (2013) *Årets tekniska lösning: Spara kvittot*, [Online] Dagens Handel, Available at: < <http://www.dagenshandel.se/nyheter/arets-tekniska-losning-spaara-kvittot/>> [Accessed 06 Mars 2013].
- Frawley, A., (2012) *The rise of digital receipts: Retailers weigh in*. [Online] Direct marketing news. Available at:< <http://www.dmnews.com/the-rise-of-digital-receipts-retailers-weigh-in/article/228105/#> >[Accessed 06 Mars 2013].
- Google, (2012) *Mobile, Tablet and Internet Usage 2012: NACE* [ Online] Think with Google, Available at:

---

<http://www.thinkwithgoogle.com/insights/library/studies/mobile-tablet-and-internet-usage-2012-NACE/>[Accessed 17 February 2013]

- Gefen D., Karahanna E. and Straub D.W. (2003) *Trust and TAM in Online Shopping: An Integrated Model*, MIS Quarterly, Vol. 27, No. 1 pp. 51-90
- Gerrard, P., Cunningham, J.B. and Devlin, J.F. (2006), *Why consumers are not using internet banking: a qualitative study*, Journal of Services Marketing, Vol. 20 No. 3, pp. 160-8.
- Hair J.F., Black W.C., Babin B.J., Anderson R.E., and Tatham R.L. (2006). *Multivariate data analysis* 6th Edition. Pearson Prentice Hall. New Jersey.
- Hair, J.F., Jr., Money, A.H., Samouel, P., and Page, M. (2007) *Research Methods for Business*, John Wiley and Sons, Ltd
- Hines, T., (2004) *Supply Chain Strategies: Customer-driven and customer-focused*, 1th Edition, Elsevier Ltd. Oxford
- Hoyer W.D. and MacInnis D.J. (2010) *Consumer behavior* (5th Edition), South-western
- Kassalagen nyheter (2012) *Skatteverket godkänner digitala kvitto* [ Online] Kassalagen.se, Available at: <<http://www.kassalagen.se/Nyheter.htm/>>[Accessed 17 February 2013]
- Koenig-Lewis, N., Palmer, A., and Moll, A. (2010) *Predicting young consumers' take up of mobile banking services*, International Journal of Bank Marketing, Vol. 28 Iss: 5, pp.410 – 432
- Kotler. P., Keller, K. L., Brady, M., Goodman, M., and Hansen, T. (2012). *Marketing management* (2nd edition). Harlow: Pearson Education.
- Kozinets, R. V. (2010). *Netnography: Doing Ethnographic Research Online*. London, Sage
- Laforet, S. and Li, X. (2005) *Consumers attitudes towards online and mobile banking in China*, International Journal of Bank Marketing, Vol. 23, No. 5, pp. 362–380.
- Lee, K.J., Ju, J.I., and Jeong, J.M. (2003) *A Payment & Receipt Business Model in U-Commerce Environment*, Proceeding ICEC '06 Proceedings of the 8th international conference on Electronic commerce: Pages 319 - 324
- Li, Y., and Sui, M. (2011) *Literature Analysis of Innovation Diffusion*, Technology and Investment, Vol. 2 No. 3, 2011, pp. 155-162. doi: 10.4236/ti.2011.23016.
- Ma, Q., and Liu, L. (2004). *The technology acceptance model: A meta analysis of empirical findings*. Journal of Organizational and End User Computing, 16(1), 59- 72.
- McKechnie, S., Winkhofer, H. and Ennew, C. (2006) *Applying the technology acceptance model to the online retailing of financial services*, International Journal of Retail & Distribution Management, Vol. 34, No. 4/5, pp. 388–410.

- 
- Messick, R., (2012) *100 Million E-Receipts Sent from Wells Fargo ATMs* [Online] Wellsfargo Available at: <[https://www.wellsfargo.com/press/2012/20120813\\_EReceipts](https://www.wellsfargo.com/press/2012/20120813_EReceipts)> [Accessed 17 February 2013].
- Meuter, M., Bitner, M., Ostrom, A. and Brown, S. (2005) *Choosing Among Alternative Service Delivery Modes: An Investigation of Consumer Trial of Self-Service Technologies*, *Journal of Marketing*, 69 61-83.
- Nilervall B. (2012) *Handeln vill gärna ha digitala kvitton* [Online] Svenskhandel.se, Available at: <<http://www.svenskhandel.se/Nyheter-och-press/Debattartiklar/2012/Handeln-vill-garna-ha-digitala-kvitton/>> [Accessed 17 February 2013].
- Njarga, B. B. (2012) *Digipost tilbyr elektroniske kvitteringer* [Online] DinSide, Available at: <<http://www.dinside.no/895377/digipost-tilbyr-elektroniske-kvitteringer>> [Accessed 17 February 2013].
- Papacharissi, Z. (2002) *The virtual sphere: The Internet as a public sphere*, *New Media Society* 2002 vol 4 (1): 9-27, Sage Publications, London, Thousand Oaks, CA
- Picard, K. (2009) *Kvitteringene blir elektroniske*, [Online] DinSide, Available at: <<http://www.dinside.no/825008/kvitteringene-blir-elektroniske>> [Accessed 17 February 2013].
- Postennorge (n.d) *Norway Post in brief*, [Online] Available at: <<http://www.postennorge.com/about-norway-post/facts>> [Accessed 17 February 2013].
- Riquelme, H., and Rios, R., (2010) *The moderating effect of gender in the adoption of mobile banking*, *International Journal of Bank Marketing*, Vol.28 No.5, pp.328-341.
- Rogers, E. M. (2003). *Diffusion of Innovations* (5th Edition). New York: Free Press.
- Saunders, M., Lewis, P., and Thornhill, A. (2009). *Research methods for business students* (5th ed.). Essex: Pearson Education.
- Sheppard, B. H., Hartwick, J., and Warshaw, P. R. (1988). *The theory of reasoned action: A meta analysis of past research with recommendations for modifications and future research*. *Journal of Consumer Research*, 15(3), 325- 343.
- Sommer, L., ( 2011) *The Theory Of Planned Behaviour And The Impact Of Past Behaviour*, *International Business & Economics Research Journal*; Jan2011, Vol. 10 Issue 1, p91-110, 20p
- SparaKvittot (n.d) *Om Sparakvittot* [Online] Available at: <<http://www.sparakvittot.se/om-sparakvittot>> [Accessed 17 February 2013].

- Supphellen, M., Thorbjørnsen, H., and Troye, S.V. (2014), *Markedsføring: Verdibasert forventningsledelse*, KAP.21; Verdikjedebeslutninger, Bergen: Fagbokforlaget, side 483 -506
- Taylor, S. and Todd P.A. (1995), *Understanding Information Technology Usage: A Test of Competing Models*, *Information Systems Research*, 6, 144-176.
- Tificate (n.d) [Online] Available at: < <https://www.tificate.com/>>[Accessed 17 February 2013].
- Venkatesh, V., and Davis, F. D. (2000). *A theoretical extension of the technology acceptance model: Four longitudinal field studies*. *Management Science*, 46(2), 186-204.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). *User acceptance of information technology: Toward a unified view*. *MIS Quarterly*, 27(3), 425- 478.
- Wade D. (2012) *The commercial appeal, Paperless receipts: Companies cautious about adopting electronic transaction records* [Online] commercialappeal. Available at: <<http://www.commercialappeal.com/news/2012/jan/31/paperless-receipts/?print=1>>[Accessed 17 February 2013].
- Wang, Y.S., Wang, Y.M., Lin, H.H., and Tang, T.I. (2003) *Determinants of user acceptance of Internet banking: an empirical study*, *International Journal of Service Industry Management*, Vol. 14 Iss: 5, pp.501 - 519
- Wessels, L. and Drennan, J. (2010) *An investigation of consumer acceptance of M-banking*, *International Journal of Bank Marketing*, Vol. 28 Iss: 7, pp.547 – 568
- Xie, C., Bagozzi, R.P., Troye, S.V. (2008). *Trying to prosume: toward a theory of consumers as co-creators of value*, *Journal of the Academy of Marketing Science*, 36.

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## APPENDIX A - Interview Guide, Company

*This is a translated version of the interview guide used in the interview with Mr. Bekkelund and Mr. Petterson at Digipost and Kvittar.*

### *Before the interview*

Inform the interview participant about:

- Purpose and objective of the essay.
- Ethical considerations

### *Background Information*

- Could you tell me a bit about yourself and your role in the company?
- Tell me a bit about the establishment of the service in your company
- Could you give a brief explanation on how your company looks like today?
- Could you give a brief explanation of the technical part for electronic receipts in your company?

### *About the Consumers*

- Could you tell me about your business main focus?
- How have you experienced the response so far among the consumers?
- How would you describe a typical consumer of this service?
- Have you seen any trends? Increased interest?
- What is your biggest challenge?
- Where does your revenue come from?

### *About the Merchants*

- How is the interest from a retailer side?
- How many registered stores do you have today?
- What are the goals/ advantages for the stores?
- Have the stores any opportunity to communicate with the client through your service? Are there any plans for this?
- What information do you share with the stores?

### *About the Service*

- What are the advantages of electronic receipts?
- What are the benefits explained by your consumers?
- What are the concerns of your consumers?
- How do you handle it?
- Who is responsible for the receipt?
- Who owns the information?
- What happens if it does not work?
- How do you perceive the consumer / merchant awareness of this type of service?
- How do you communicate this service?

### *The Future*

- Who are your competitors?
- How do you differentiate yourself from your competitors?
- What are your plans for the future?
- What is the long term goal?
- Development of service?
- What do you see as your biggest challenge?
- What is your biggest advantage in the development of this service compared to your competitors?



## APPENDIX B - Interview Guide, Potential Consumers

*This is a translated version of the interview guide used in the semi-structured interview with potential consumers.*

### *Before the interview:*

**Introduction:** Give the person a brief introduction to the interview. The reason for the interview, ask if it is ok if recorded. Inform about privacy and use of information.

**Background:** Give the person a survey where they fill in age, gender, country of residence, education and current job situation.

### *During the interview:*

#### **Payment Method:**

- What is the most common payment method you use?
- Is there any time when you use a different payment method?

#### **Receipt Handling:**

- Do you save your receipts when you buy something? Why / Why not?
- Yes: Why? How long do you keep your receipts? How do you save them?
- No: Why not? Is there any time you tend to save them?
- Have you ever lost an important receipt?

#### **Digital tools:**

- Do you have computer/ smartphone? How often do you use them?
- Do you have digital applications on your smartphone? Why/ why not?
- What are your feelings for this type of technology?
- Do you use the Internet banking? Why/ why not?
- How important are digital tools in your life?
- How do you feel when digital systems are changing?
- Are you quick to adopt new technology?
- How much influence have friends on your use of technology?

**Electronic receipt service:**

- Do you use any form of electronic saving your receipts today?
- Have you heard about DRS?
  - Check for common understanding and provide information about DRS.
- How do you perceive a service like this? Attitude, need? Why / why not?
- What do you think is the consequences of use? Positive/ negative? Advantages /disadvantages?
- Do you think you would have been easy to learn to use this service?
- Do you think it would be easy to use?
- Would you be willing to consider using /trying this type of service? Under what conditions?
- Would you be willing to just have digital receipts and no paper version?
- Do you think there is a future for this kind of type of service?
- What do you think others think of this service?
- Under what conditions do you think people would start to use this type of service? "
- The service is free but it would involve some costs for you to start using this service?
- Do you experience this service secure?
- Does it matter who provides the service?
- Have confidence that the technology works?
- Let's say you got this app and service, what is the probability that you would actually use it?
- Let's say that it would be possible for the companies to send private messages via this service to you, how do you perceive it?
- How do you perceive personally targeted advertising messages, e.g. facebook?
- How do you perceive personal targeted discount vouchers based on previous purchase?
- How do you feel about information being stored with a third party?

**After the interview**

Provide email address just in case the person would have any questions about the interview.

## APPENDIX C – Participant Characteristics

	Norway	Sweden	Total
<b>Total</b>	13	13	26
<b>Sex</b>			
Men	7	6	13
Woman	6	7	13
<b>Age</b>			
Less than 25	2	4	6
26- 35	5	3	8
36- 45	2	0	2
46- 56	3	3	6
More than 56	1	3	4
<b>Occupation</b>			
Student	3	4	7
Employed	9	6	15
Self-employed	1	1	2
Retired	0	2	2

Table 9: Participant Characteristics and demographic distribution

## APPENDIX D –Netnographic Pre-Study

The chosen articles were four news articles from Sweden. Three of them published in conjunction with the Swedish tax agency approval of electronic receipts as a substitute for paper receipt in spring 2012 (Östlund, 2012, Andersson, 2012, TT, 2012). The last one is a more recent article published in VK a local newspaper in Northern Sweden (Lundström, A., 2013).

In Norway four articles were used in this analysis, all four from the net site Din Side. Three articles published in 2011 (Picard, 2011) about electronic receipts in different settings and one article about Digipost service for electronic receipts published in 2012 (Njarga, 2012).

The US article from New York Times with the title: “Shopper Receipts Join paperless age” (Clifford, S., 2011) was also included.

To get more insight comments on the Facebook page of Spara Kvittot, Kvittar and Digipost were also analyzed.

All comments used in the analysis are sorted and stored. These will be saved until the end of 2015. Access can be made by the links provided in table below or by contacting the author of this thesis.

### Articles:

Author	Title	Link to Reference
<b>Andersson (2012)</b>	Papperskvittot är hotat	[Online] Östran < <a href="http://www.ostran.se/NYHETER/Kalmar/Papperskvittot-aer-hotat/(comment)/view">http://www.ostran.se/NYHETER/Kalmar/Papperskvittot-aer-hotat/(comment)/view</a> > [Accessed 17 February 2013]
<b>Clifford (2011)</b>	Shopper Receipts Join Paperless	[Online] The New York Times, Available at: < <a href="http://www.nytimes.com/2011/08/08/technology/digital-receipts-at-stores-gain-in-popularity.html?_r=0">http://www.nytimes.com/2011/08/08/technology/digital-receipts-at-stores-gain-in-popularity.html?_r=0</a> > [Accessed 17 February 2013]
<b>Lundström, (2013)</b>	Drömmen: att kunna lagra alla kvitton digitalt	[Online] VK < <a href="http://www.vk.se/886074/drommen-att-kunna-lagra-alla-kvitton-digitalt">http://www.vk.se/886074/drommen-att-kunna-lagra-alla-kvitton-digitalt</a> > [Accessed 17 February 2013].

<b>Njarga, (2012)</b>	Digipost tilbyr elektroniske kvitteringer	[Online] DinSide < <a href="http://www.dinside.no/895377/digipost-tilbyr-elektroniske-kvitteringer">http://www.dinside.no/895377/digipost-tilbyr-elektroniske-kvitteringer</a> > [Accessed 17 February 2013].
<b>Picard (2011)</b>	Be om digital kvittering	[Online] DinSide < <a href="http://www.dinside.no/884552/be-om-digital-kvittering">http://www.dinside.no/884552/be-om-digital-kvittering</a> >[Accessed 17 February 2013].
<b>Picard (2011)</b>	Euronics blir første butikk ut	[Online] DinSide < <a href="http://www.dinside.no/882672/euronics-blir-forste-butikk-ut">http://www.dinside.no/882672/euronics-blir-forste-butikk-ut</a> >[Accessed 17 February 2013].
<b>Picard (2011)</b>	Papirkvitteringen e kan bli erstattet	[Online] DinSide < <a href="http://www.dinside.no/871371/papirkvitteringene-kan-bli-erstattet">http://www.dinside.no/871371/papirkvitteringene-kan-bli-erstattet</a> >[Accessed 17 February 2013].
<b>TT (2012)</b>	Tummen upp för digitala Kvitton	[Online] SVD, < <a href="http://www.svd.se/naringsliv/tummen-upp-for-digitala-kvitton_7125267.svd#article-comments">http://www.svd.se/naringsliv/tummen-upp-for-digitala-kvitton_7125267.svd#article-comments</a> >[Accessed 17 February 2013].
<b>Östlund (2012)</b>	Grönt ljus för digital kvitton	[Online] Computer Sweden < <a href="http://computersweden.idg.se/2.2683/1.440825/gront-ljus-for-digitala-kvitton">http://computersweden.idg.se/2.2683/1.440825/gront-ljus-for-digitala-kvitton</a> >[Accessed 17 February 2013].

Table 10: Articles Used in Netnographic Pre-Study

**Facebook:**

Company	Link to Reference
<b>dSAFE</b>	[Online] dSAFE < <a href="https://www.facebook.com/dsafe">https://www.facebook.com/dsafe</a> > [Accessed 17 February 2013].
<b>Kvittar</b>	[Online] Kvittar < <a href="https://www.facebook.com/Kvittar?ref=br_tf">https://www.facebook.com/Kvittar?ref=br_tf</a> > [Accessed 17 February 2013].
<b>Spara kvittot</b>	[Online] Spara Kvittot < <a href="https://apps.facebook.com/sparakvittot/?fb_source=search&amp;ref=br_tf">https://apps.facebook.com/sparakvittot/?fb_source=search&amp;ref=br_tf</a> > [Accessed 17 February 2013].

Table 11: Facebook References