

Comparison of Consumer and Service Provider Perception of E-Invoicing

Gaofeng Yuan

Bachelor's Thesis
Programme in International
Business
2013



Degree Programme in International Business

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| <p>Author or authors</p> <p>Gaofeng Yuan</p> | <p>GloBBA 2011</p> |
| <p>Title of report</p> <p>Comparison of Consumer and Service Provider Perception of E-Invoicing</p> | <p>Number of pages and appendices</p> <p>49 + 5</p> |
| <p>Teacher(s) or supervisor(s)</p> <p>Heli Kortesalmi</p> | |
| <p>The constant low adoption rate of e-invoicing in the B2C area has raised questions and concerns from some researchers lately. The purpose of this thesis is to determine the reasons behind the low adoption rate by gaining an understanding of consumer perceptions and experiences about e-invoicing. The thesis focuses on consumers as potential adopters in Finland. This study aims to understand how much consumers know and what they think about e-invoicing. The research also tries to find out how well service providers know their customers.</p> <p>Available literature related to the topic is scarce. For this reason, the qualitative research method was chosen as the research methodology for this research. Face-to-face interviews were used for gathering primary data.</p> <p>The results revealed that consumers on the one hand have rather limited knowledge and have uncertainties towards e-invoicing. On the other hand, consumers have positive feelings in general and possibly start to use e-invoicing later. The results also showed that service providers do not fully understand their customers. There are some common beliefs between consumers and service providers, but there are also disagreements on certain issues.</p> | |
| <p>Keywords</p> <p>E-invoicing, diffusion of innovations, attributes of innovations, rate of adoption, consumer perception</p> | |

Table of Contents

| | | |
|-------|--------------------------------------------------------------|----|
| 1 | Introduction | 1 |
| 1.1 | Research objective..... | 2 |
| 1.2 | Research problem and scope | 2 |
| 1.3 | Thesis structure | 4 |
| 1.4 | Commissioning Programme | 5 |
| 1.5 | Key concepts..... | 6 |
| 2 | E- invoicing..... | 7 |
| 2.1 | Development of e-invoicing..... | 7 |
| 2.1.1 | Definition | 7 |
| 2.1.2 | Brief history..... | 7 |
| 2.1.3 | Current stage | 8 |
| 2.1.4 | Different types | 8 |
| 2.2 | Benefits and drawbacks of e-invoicing for both parties | 9 |
| 2.3 | Current situation of e-invoicing in Finland | 12 |
| 2.4 | Current situation of e-invoicing in Sweden | 16 |
| 3 | Diffusion of Innovations | 17 |
| 3.1 | Diffusion | 17 |
| 3.2 | Attributes of Innovations and the Rate of Adoption..... | 18 |
| 3.2.1 | Relative advantage | 19 |
| 3.2.2 | Compatibility..... | 20 |
| 3.2.3 | Complexity | 21 |
| 3.2.4 | Trialability..... | 21 |
| 3.2.5 | Observability | 21 |
| 3.3 | Consumer Influence and the Diffusion of Innovations | 22 |
| 3.4 | Applications of Theories | 23 |
| 4 | Empirical research..... | 25 |
| 4.1 | Research method..... | 25 |
| 4.2 | Type of interview | 25 |
| 4.3 | Selection of interviewees | 28 |
| 4.4 | Interview questions | 29 |
| 4.5 | Data analysis..... | 29 |

| | | |
|-------|---------------------------------------------------------------------------------|----|
| 5 | The results | 32 |
| 5.1 | General knowledge towards e-invoicing | 32 |
| 5.2 | General attitude towards e-invoicing..... | 34 |
| 5.2.1 | Relative Advantage | 34 |
| 5.2.2 | Compatibility and Complexity | 36 |
| 5.2.3 | Trialability and Observability | 37 |
| 5.3 | Social Environment and Communication Channels | 37 |
| 5.4 | Expectations and Future aspects..... | 38 |
| 6 | Discussion | 39 |
| 6.1 | Main findings | 39 |
| 6.2 | Validity and reliability | 41 |
| 6.3 | Recommendations to service providers | 42 |
| 6.4 | Applicability and comparison to country Sweden | 44 |
| 6.5 | Limitations and ideas for future research | 45 |
| 6.6 | Author's professional development from the research process | 45 |
| | References | 47 |
| | Appendices..... | 50 |
| | Appendix 1a. Interview Questions for Consumer Representative Group..... | 50 |
| | Appendix 1b. Interview Questions for Service provider Representative Group..... | 51 |
| | Appendix 2. Overlay matrix of investigative questions | 53 |
| | Appendix 3. Thesis timetable | 54 |

1 Introduction

E-invoicing is a new addition to the system of invoicing. On the surface, e-invoice is just a simple electronic version replacement of a paper-based invoice. However, this technical change may drive the payment transaction revolution throughout the entire business world. E-invoicing is introduced in the anticipation of its undisputable potential benefits for both providers and users. Cost savings, quality of reconciliation and flexibility of integration are recognized as the top three actual benefits and these benefits are the driving forces for promoting e-invoicing (Cofta 2011, 3).

In practice, e-invoicing has been gradually adopted in different business areas. However, the adoption rate in different business areas is not even: the adoption rate in B2B and public sector has much faster pace compared with the B2C area. Estimated 20-30% of invoices were e-invoices in the B2B area in 2007 in Finland (Penttinen 2007). The reasons behind it can be explained that businesses are driven by the significant economic benefits and public sectors are mostly motivated by the country's mandatory legislations.

E-invoicing represents the future trend of invoicing method. In theory, modern technology very often evolves much faster than social systems in which it operates. That means typical users are often a few steps behind technologists which leads to lost opportunities of enjoying the benefits of some new technology features (Cofta 2011, 3). The e-invoicing adoption rate in the B2C sector just reflects this theory: Finland as an pioneer country of inventing and applying new technology features, with highest internet coverage rate, best educated population in average as consumer group, IT oriented economy and culture, high environmental conscious society, Finnish consumers are supposed to have high readiness and acceptance level for e-invoicing. However, it's somewhat troublesome to know that in reality, according to Federation of Finnish Financial Services, the e-invoicing acceptance level in Finland for individual consumers by the moment is below 10 percent.

The current acceptance level of e-invoicing in B2C area gives the interest and idea to the author to discover the explanations behind. Thus, this research is aiming to determine the reasons behind the low adoption rate of e-invoicing from consumers' perspective.

At the end of the research, the applicability and comparison to country Sweden will be discussed briefly from social environment perspective to strengthen the international aspect of this thesis.

1.1 Research objective

The author is aware the recent discussions of e-invoicing emphasizes on B2B area since business is driven by the considerable potential economic benefits of applying e-invoicing. The problem is that without consumers' wide adoption as end users, the significant potential benefits of e-invoicing cannot be materialized eventually. Thus, consumers' low acceptance level and slow adoption rate of e-invoicing have become an interesting phenomenon to study in order to promote the acceptance level and speed up the adoption rate of e-invoicing in the B2C area. It appears so many consumers still fight against the change from adopting e-invoicing which gives the author motivation to discover the reasons behind.

This research is aiming to investigate and compare the consumers and service providers' perception of e-invoicing. The theory concepts, research method and research process are illustrated in this report. Further on, based on the findings from the empirical research, conclusions and recommendations of future strategy are made to improve consumers' acceptance level of e-invoicing.

1.2 Research problem and scope

The main research problem is to investigate what consumers and service providers are thinking about e-invoicing. The answers for the main research problem will be found through the following investigative questions (IQs):

IQ1: What knowledge do consumers have towards e-invoicing and how do service providers perceive it?

IQ2: What attitude do consumers have towards e-invoicing in general and how do service providers perceive it?

IQ3: How could consumer behavior influence the adoption rate of e-invoicing and how do service providers perceive it?

IQ4: How do consumers and service providers see the future of e-invoicing?

This thesis combines different theoretical sources and an empirical research structured in qualitative research method to provide a detailed holistic view of the consumer current attitude towards e-invoicing in Finland. This research focuses on examining the subjective opinions of consumers and service providers in B2C area, which leaves out B2B related field. In addition, this thesis does not cover other invoicing methods in the markets.

1.3 Thesis structure

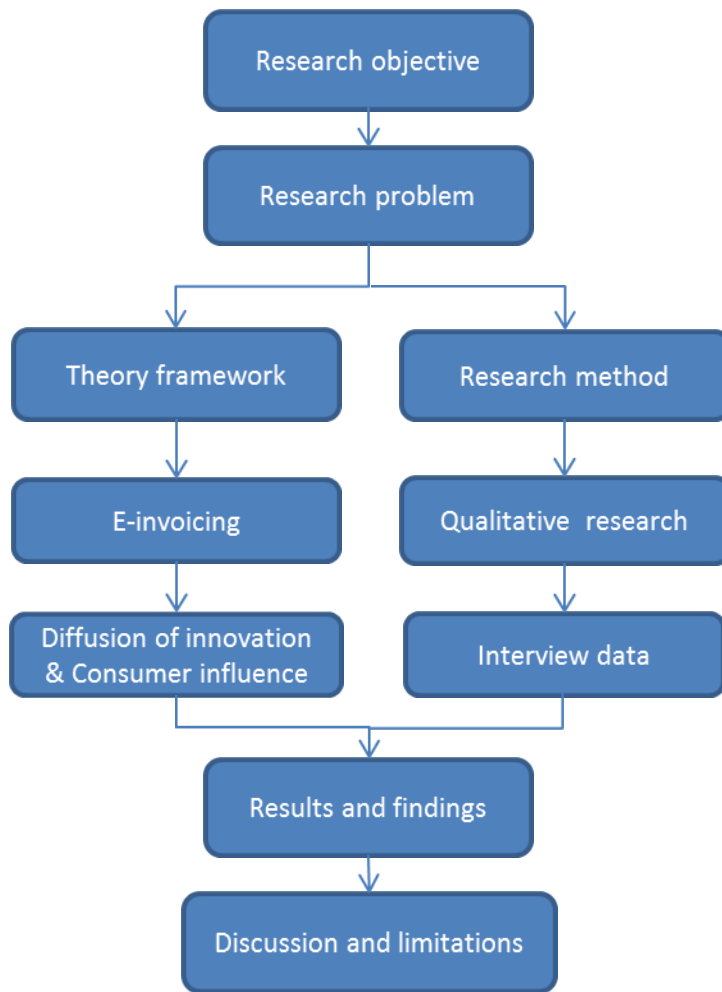


Figure 1. Summary of the thesis structure

Figure 1 shows the structure of this research, the research problem is defined based on the research objective. The theory framework consists two parts: the first part is the general information of e-invoicing which provides needed knowledge to readers to understand the topic. In the second part of the theory, Diffusion of Innovations theory by Everett M. Rogers is chosen as the background theory for adoption rate of new innovations combined with Consumer Behavior by Leon G Schiffman, Leslie Lazar Kanuk & Havard Hansen is used for explaining the impact of social environment and communication channels on consumer perception which further influence the adoption rate of an innovation. More detailed explanation of theory selection will be provided in chapter 3.4.

In the empirical part, because of the exploratory characteristic of this research, qualitative research method is applied for primary data collection through interviews with two different groups of interviewees. In addition, based the information collected from the primary data, a discussion is provided as outcome of the data analysis at the end of the thesis.

1.4 Commissioning Programme

This research is part of the Real-Time Economy Programme project, specialised in field of e-invoicing related studies. The nature of the programme is international which determines the international aspect of this research.

Real-Time Economy programme aims at researching the business environment where all the business transactions are in digital or electronic format. Compared with traditional business environment, enormous benefits can be created from both productivity and environment perspectives to different stake holders in real-time economy (Real-Time Economy Programme 2012).

The research initiatives of the programme are aimed to:

- Understand factors and stages in the development of real-time economy
- Develop models for business and partnership towards real-time economy
- Create guidelines and policies for digitalization and automation in business processes to improve competitiveness for business (Real-Time Economy Programme 2012)

Study related in the field of e-invoicing as the automated electronic method of business payment transaction is a very important element of the programme. Previous research has been done in this field for the programme including the value creation mechanisms of operators and current state of e-invoicing (Real-Time Economy Programme 2012).

1.5 Key concepts

E-invoicing is “the exchange of the invoice document between a supplier and a buyer in an integrated electronic format.” (GXS 2012) E-invoicing is “an electronic version of an established commercial invoicing protocol.” (Cofta 2011, 1)

Diffusion of innovations is “the process by which an innovation is communicated through certain channels over time among the members of a social system.” (Rogers 2005, 35)

Attributes of innovations: Five perceived attributes are identified of an innovation: relative advantage, compatibility, complexity, trialability, and observability which are crucial reasons when explain the rate of adoption of an innovation (Rogers 2005, 221).

Adoption process: It focuses on the stages through which an individual consumer forms a decision of either accepting or rejecting towards using a new product or service (Schiffman, Kanuk & Hansen 2008, 44).

Consumer perception: It studies how consumers form opinions about companies and the products they offer through the purchasing process (Blank 2013).

2 E- invoicing

This chapter presents the first part theoretical background and the use of them in this research. A few recent studies carried by Federation of Finish Financial Services and a qualitative study to identify factors that influence Finnish consumers to change their payment behavior by Bank of Finland are applied for providing the general information of e-invoicing.

In order to gain a correct understanding about e-invoicing, some basic knowledge of e-invoicing such as development, benefits and drawbacks and other general information of e-invoicing are introduced in the following paragraphs before other theoretical background in this research.

2.1 Development of e-invoicing

First, the development of e-invoicing is discussed very briefly by introducing definition, brief history, current stage and different types of e-invoices.

2.1.1 Definition

Electronic invoicing (e-Invoicing) is “the exchange of the invoice document between a supplier and a buyer in an integrated electronic format.” (GXS 2012) Generally, compared with traditional paper-based invoicing, e-invoicing, as electronic format of payment transaction method is recognized by increased automation, decreased costs and human error as well as environmental impacts (GXS 2012).

2.1.2 Brief history

E-invoicing is not a recent invention. The earliest form of e-invoice originated from the 1970's and was known as Electronic Data Exchange by the time. After that, e-

invoicing has been further developed and now at the stage whereas nearly all business may adopt it to improve payment transaction operations.

2.1.3 Current stage

At the earlier stages of e-invoicing development process, the main issue was the high costs of implementing such a technology for organizations. However nowadays, thanks to the development of internet and information technology, cost is no longer an issue to adapt e-invoicing system for both large organizations and SMES. Finland is one of the European countries recently has made e-invoicing mandatory for public sectors (GXS 2012).

2.1.4 Different types

Different types of invoice automation under the term of “e-invoicing” often cause confusion. Optical Character Recognition via scanning and PDF via email sometimes are referred to be e-invoicing, are actually not “true” e-invoicing since both of these methods don’t provide full integration of the invoicing process (GXS 2012).

An e-invoice must have structured invoice data issued in Electronic Data Interchange or XML formats and use standard Internet-based web forms. On the other hand, invoices without structured data issued in PDF or Word formats, paper invoices scanned or sent via fax are not considered as “true” e-invoices either (GXS 2012).

Eerika Keinonen writes in her research that an e-invoice is not recognized a payment instrument by itself, but combined with online banking the two are considered as a payment instrument. In another word, online banking is a requirement for the B2C e-invoicing. E-invoicing is a new method of delivering an invoice directly to an online bank to the payer through payment application which is able to process the invoice details automatically such as the receiver’s name, the account number, the reference number and the amount due etc (Keinonen 2007).

Keinonen continues in the research that in the B2C e-invoicing, consumers receive e-invoices through personal bank accounts and view them via the web services. Consumers make separate decisions to accept the payment. E-invoices are graphically presented on the computer screen as similar to paper version invoices to consumers (Keinonen 2007).

Keinonen also mentions that in Finland, services providers and banks are responsible for installation, maintenance, monitoring and backups of e-invoicing network connections as well as format conversions needed for e-invoicing which allow consumers to select the most suitable method of sending or receiving e-invoices (Keinonen, 2007).

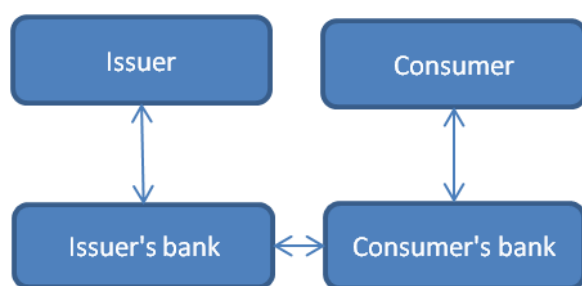


Figure 2. Four corner model of e-invoicing (Federation of Finish Financial Services 2012)

Figure 2 shows the basic transaction process of e-invoicing. In B2C area, instead of delivering e-invoices directly to users, issuers and users send and receive e-invoices via their own banks.

2.2 Benefits and drawbacks of e-invoicing for both parties

Over the past decade, e-invoicing has undergone a transformation from a niche to a mainstream necessity for business thanks to the enormous benefits e-invoicing bring to both issuers and receivers (Pay Simple 2011).

The main actual benefits of e-invoicing for consumers can be summarized as:

- **Convenience:** E- invoicing gives consumers the freedom to choose when, where, and how they pay their bills.
- **Control the finances:** Consumers can digitally monitor their banking activities with e-invoicing.
- **Email reminders:** Easier to avoid late payments and fees by receiving reminders near the due date.
- **Payment choices:** Consumers want more payment options that fit their financial needs the best. (Pay Simple 2011)

Meanwhile, for business owners, the advantages of e-invoicing can be generalized as:

- **Cost reduction:** The recent research published by the Federation of Finish Financial Services shows that by switching to e-invoices, resources and time can be saved in processing inbound invoices which lead to cost savings up to 80% for business. (Federation of Finish Financial Services 2012)

Other sources might suggest slightly different figures as below,

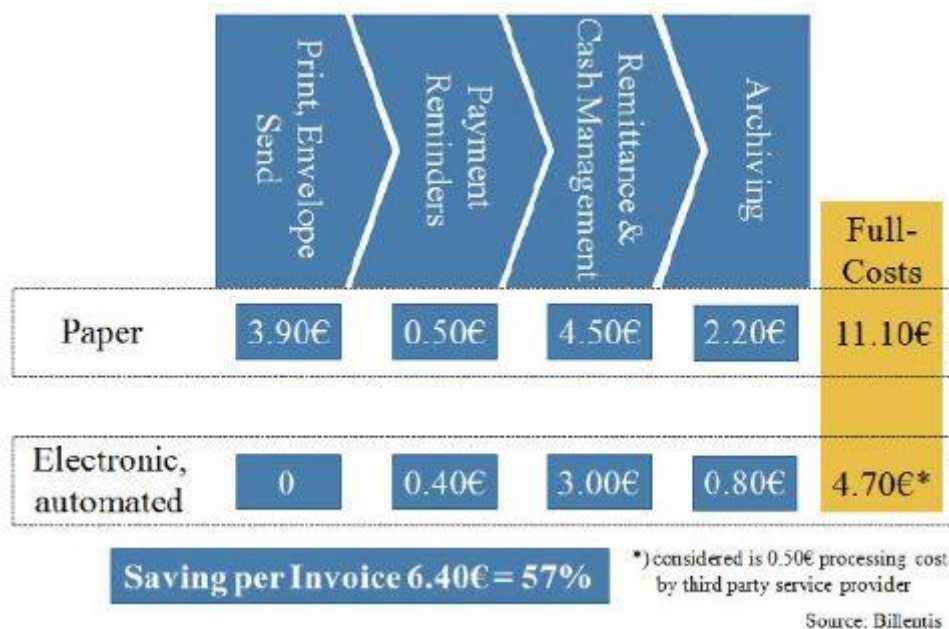


Figure 3. Cost deduction of e-invoice compared with paper-based invoice by 1 item (Billentis 2011)

The above figure shows the cost comparison between issuing one e-invoice and one paper-based invoice. The estimated saving per invoice is 57% (Finextra 2012) .

- **Instant and secure delivery of invoices:** With e-invoicing, invoices can be delivered directly to customers email inbox.
- **Less time spent processing invoices:** E-invoicing allows issuers to distribute multiple invoices at one time.
- **Ease storage:** Electronic version of invoices and automatic reminders are easier for issuers and receivers to store as references. (PaySimple 2011)

The research shows that on top of economical benefits, e-invoices are four times more environmental friendly than paper invoices. Whereas processing traditional paper based invoices, approximately 60% of the emissions are generated by labor and 40% caused by paper, envelopes, printing, franking and distribution. With e-invoices, the labor ration can be minimized to only 1%. Thus, the carbon footprint of an e-invoice is considerably smaller than a paper invoice. And the greenhouse gases generated by an e-invoice are approximately 150 grams which is reduced by three times compared 450 grams by a paper invoice (Federation of Finish Financial Services 2012).

While the benefits of e-invoicing are disputable, some risks and disadvantages should not be ignored either. From consumers' point of view, the disadvantages of e-invoicing may include:

- **No paper bill:** Consumers may sometimes need physical bills in certain situations. For instance, for bookkeeping purpose, sometimes hard copies of invoices are required.
- **Website security:** For small issuers, if the website is not secure, then consumers are exposed to the risk of giving personal information to Internet hackers.
- **Password security:** Secure password are often mandatory which means a password is at least 10 characters long, with the combination of numbers and letters. While secure, often difficult for consumers to remember. (Cofta 2011, 5)

From issuers' perspective, with the massive dependence on information technology, e-invoicing is particularly vulnerable to various technology related incidents, thus increase the overall risk (Cofta 2011, 4). Besides the technology risk, some change of characteristics of risks may also involve in the process, several factors may contribute to the change, such as:

- Automation removes traditional checkpoints.
- Users and administrators lull into false sense of security.
- Vulnerabilities may scale up. (Cofta 2011, 5)

2.3 Current situation of e-invoicing in Finland

The promotion of e-invoicing has been on the agenda in Finland for over a decade. Compared to the B2C, the B2B e-invoicing has been adopted at a decent rate, especially in medium and large organizations. Whereas the current e-invoicing adoption rate for B2C is estimated to be less than 10 percent according to Federation of Finish Financial Services (Federation of Finish Financial Services 2012).

A recent study shows that about 90 percent of Finnish consumers pay bills via online banking, which means that at least the theoretical readiness to receive and adopt e-invoicing directly via online banks is high. However, only 33 percent Finnish consumers receive e-invoices by the moment, and among these consumers, only less than one third have adopted e-invoicing. The outcome of this study is considered bothersome, since Finland is assumed as a leading country when it comes to the adoption of new IT related innovations, but apparently lagging on e-invoicing (Federation of Finish Financial Services 2012).

The following figures from researches conducted by Federation of Finish Financial Services illustrate the outcome of the recent study about e-invoicing adoption rate in Finland:

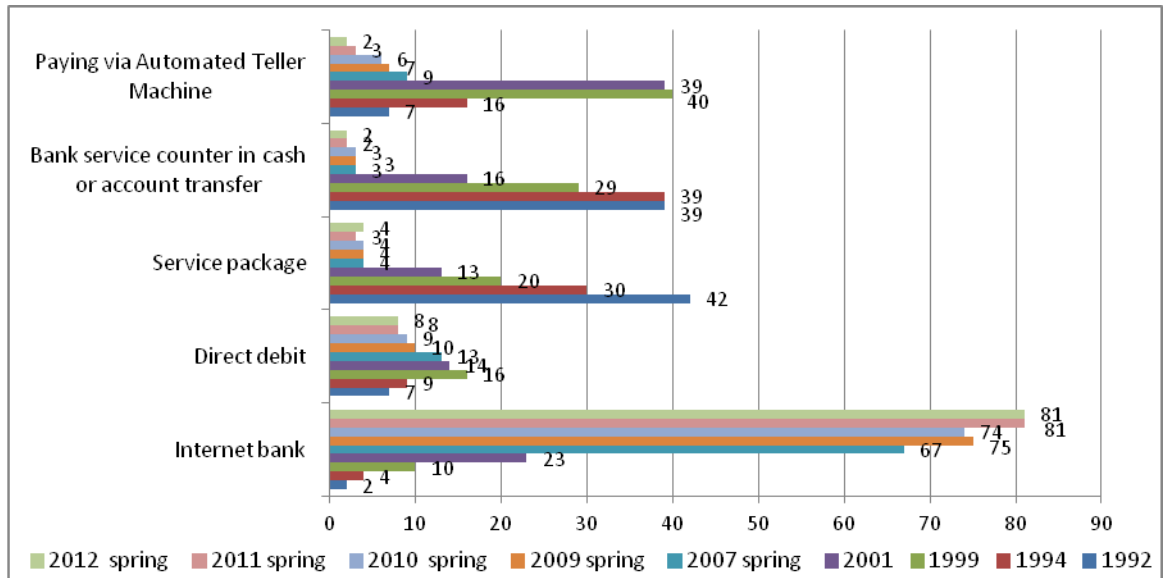


Figure 4. Percentage of different payment transaction methods used by respondents in Finland (Federation of Finish Financial Services 2012)

Figure 4 illustrates among the payment transaction methods available in Finnish market from 1992 to 2012, the change of different alternatives chosen by respondents cross the time. This research mostly concentrates on e-invoicing, online banking as the necessary facilitator for e-invoicing, appears that it has been widely adopted by Finnish consumers currently.

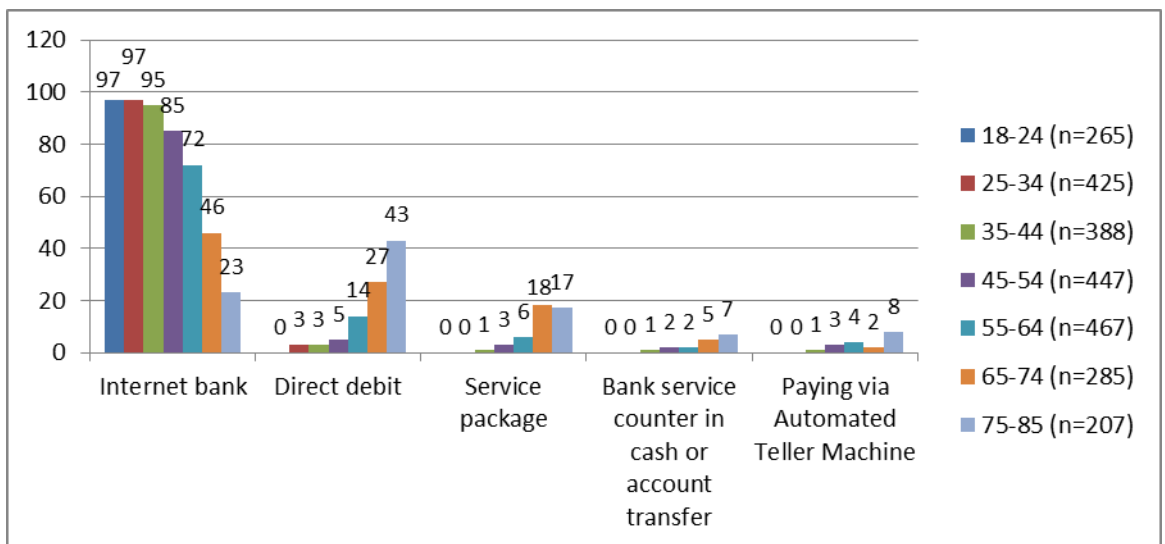


Figure 5. Percentage of different payment transaction methods used by respondents in Finland based on age groups (Federation of Finish Financial Services 2012)

Online banking is more popular among younger population. As it shows in figure 5, respondents from age 18 to 44, nearly all have chosen to pay their bills via online banking as their first choice of payment transaction method.

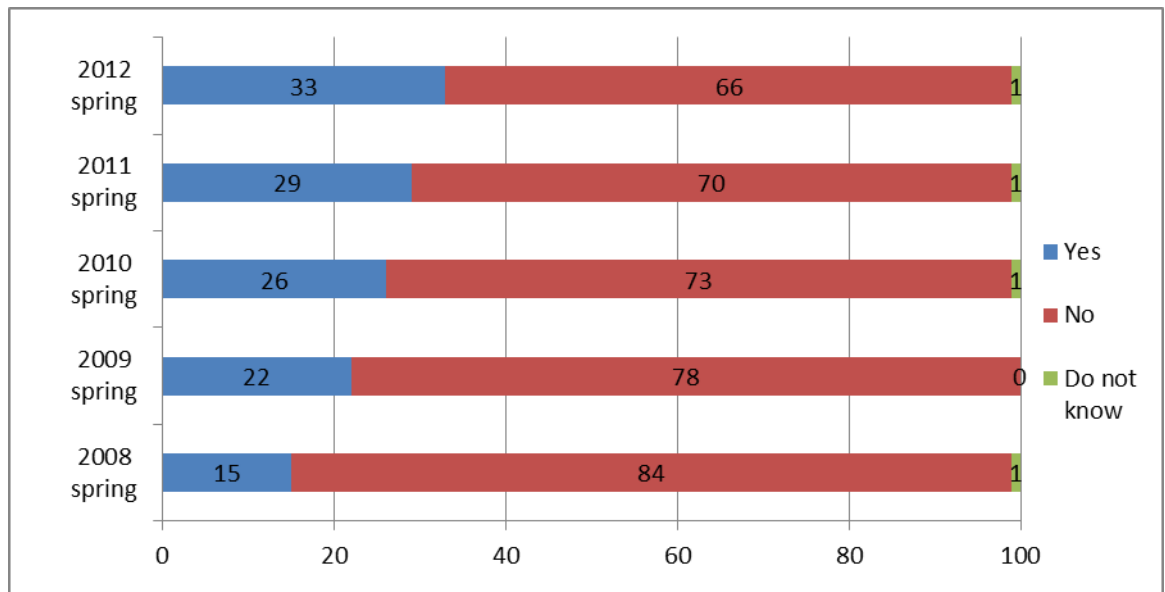


Figure 6. Percentage of respondents in Finland having access to e-invoicing via online banking (Federation of Finnish Financial Services 2012)

Figure 6 explains the growth rate of having access to e-invoicing for Finnish consumers in recent years. The result shows that from 2008 to 2012, within 4 years, the rate of available e-invoicing access has increased from 15% to 33%.

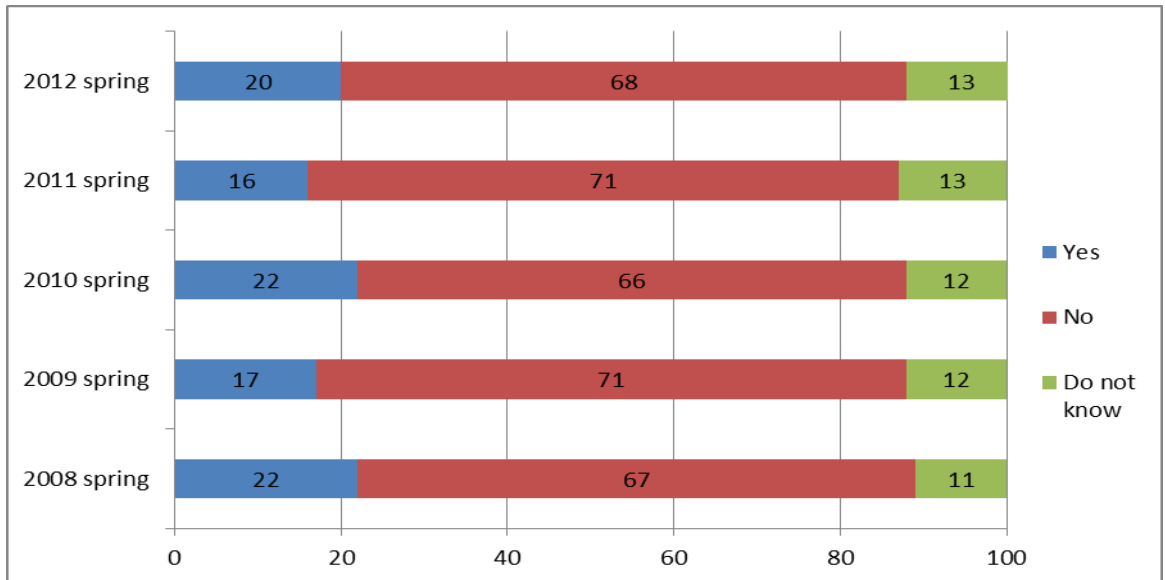


Figure 7. Percentage of respondents in Finland not having access to e-invoicing via online banking (Federation of Finish Financial Services 2012)

Figure 7 shows the percentage of respondents claiming not having access to e-invoicing in recent years, the result has no dramatic changes from 2008 to 2012.

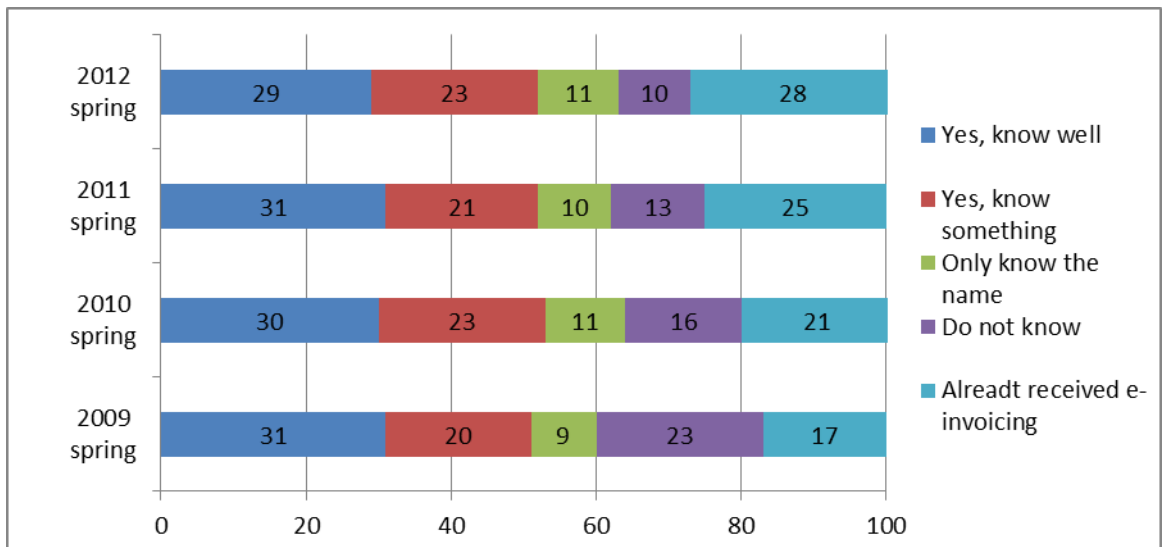


Figure 8. Percentage of respondents in Finland having knowledge towards e-invoicing (Federation of Finish Financial Services 2012)

Figure 8 explains the knowledge level of Finnish consumers towards e-invoicing. About half of the respondents think they have certain degree knowledge of e-invoicing. From 2009 to 2012, there is no rapid change in this aspect.

The above listed information shows Finnish consumers' payment habits sorted by different criteria. Even though online banking as a condition for applying e-invoicing has been already widely adopted, the adoption rate of e-invoicing hasn't been growing accordingly. It's interesting to find out why e-invoicing hasn't been accepted by Finnish consumers widely after such a long period of time.

2.4 Current situation of e-invoicing in Sweden

Sweden as the closest neighbor country of Finland in Scandinavian, for a long period of time, shared a similar adoption rate of e-invoicing as in Finland. Until 2010, the B2C adoption rate in Sweden was 11 percent whereas the figure was 10 percent in Finland. However, this figure in Sweden boosted to 17 percent in 2011 and 19 percent in 2012 according to the research conducted in Swedish Bankers' Association. In another word, the adoption rate almost doubled in 2 years in Sweden. And the same organization estimated 70 % of Swedish consumers connected to online banking would receive e-invoices in 2015 (e-invoicing platform 2012).

The reason of the recent rapid growing adoption rate has raised some interesting arguments. The press says the environment is the winner, since most e-invoicing advertising slogans such as "Adopt e-invoicing, go green" or "Accept e-invoicing, together we can save a tree" use environmental claim to gain attention from Swedish consumers. But many people feel the environmental claim is just bogus. Businesses shouldn't use environment to justify cost-cutting which might give an incredible impression to consumers (e-invoicing platform 2011).

3 Diffusion of Innovations

This chapter discusses the second part theory of this research. Based on the information listed above, it appears that e-invoicing as a payment transaction method innovation, spreads in Finnish market at a relatively slow rate. In order to study this phenomenon, in the second part of the theory, Everett M. Rogers' Diffusion of Innovations theory is used for studying rate of adoption of an innovation and Leon g. Schiffman, Leslie Lazar Kanuk & Havad Hansen's Consumer Behaviour is applied to analyze the impacts of social environment and communication channels on consumer perception.

Everett M. Rogers' Diffusion of Innovations theory examines diffusion process and adoption rate of an innovation by studying the characteristics of the innovation. The five attributes are conceptualized by diffusion scholars to analyze the characteristics of the innovation, thus are the most relevant part for this research.

3.1 Diffusion

To get a new idea adopted is usually difficult even it has obvious advantages. Often it takes many years for innovations to get widely adopted after they are invented. For this reason, many individuals and organizations constantly seek for means to speed up the rate of diffusion of innovations (Rogers 2005, 1).

Many technologists assume advantageous innovations will be rapidly recognized and widely adopted by potential adopters, thus the innovations will diffuse in a high paced rate. In fact, the reality often suggests the opposite: the rate of diffusion of innovations is very often disappointingly slow, at least much slower than the expected rate by the inventors and technologists who created and promoted the innovations to potential adaptors (Rogers 2005, 7). In order to understand this phenomenon, the definitions of diffusion and innovation diffusion process are discussed below:

Diffusion is “the process by which an innovation is communicated through certain channels over time among the members of a social system”. The spread of messages which are perceived as new ideas through a special type of communication channel is considered as diffusion of ideas (Rogers 2005, 7).

The innovation-diffusion process

The innovation-diffusion process is the process through which after receiving the first knowledge of an innovation, potential adopters begin to form an attitude or some kind of evaluation towards the innovation and based on that to make a decision of adoption or rejection, which further leads to implementation of the innovation and conformation of the decision. In this process, potential adopters make a set of choices during the time, and through which to evaluate and decide whether or not to adopt the innovation into the practice (Rogers 2005, 168).

The essential behavior of the innovation-diffusion process is to deal with the perceived uncertainty of a new idea and decide whether or not to replace the existing alternative with the new one. The distinctive character of innovation decision making process compared with other types decision making process is the newness and the perceived uncertainty related to the newness of an innovation (Rogers 2005, 169). The diffusion process includes four conceptualized elements: an innovation, communication channels, time and a social system. Diffusion of an innovation can be described as a process of a new idea spread among the members of a social system through certain communication channels over a period of time (Rogers 2005, 36).

3.2 Attributes of Innovations and the Rate of Adoption

As introduced briefly earlier in this chapter, five perceived attributes are identified of an innovation: relative advantage, compatibility, complexity, trialability, and observability which are more crucial reasons when explain the rate of adoption of an innovation.

Some researches show that most variances in adoption rate of an innovation can be explained from 49 to 87 percent by the five attributes (Rogers 2005, 221).

The five attributes will be explained in details in the following paragraphs:

3.2.1 Relative advantage

Relative advantage refers to at what degree a new idea is considered as being more advantageous compared to the existing practice which is supposed to be replaced. Relative advantage is often measured by economic profit, social status or in some other ways. Usually the nature of an innovation determines the type of relative advantage, whereas often the characteristics of potential adopters have impact sub dimensions of relative advantages (Rogers 2005, 229).

During the innovation decision making process, potential adopters tend to search for information about the relative advantage in order to decrease the uncertainty level of the innovation and to find out at what degree the new idea is more superior compared with the previous existing one. Therefore, relative advantage is often a crucial content of an innovation. The information exchange of an innovation' relative advantage plays the essential role of the innovation diffusion process (Rogers 2005, 233).

Diffusion scholars argue that the rate of adoption is determined by relative advantage at a very large scale. Relative advantage is often calculated by the ratio of the potential benefits and the costs of adoption in practice. Sub dimensions of relative advantage typically measured by economic profit, cost and time saving, raising comfort and instant reward. Past researches suggest that in general, the relative advantage perceived by the potential adopters has a positive relationship with the rate of adoption. In other word, compared with the existing practice, the higher level of relative advantage would usually lead to higher adoption rate (Rogers 2005, 233).

Incentives have a typical function of raising the level of relative advantage of an innovation. Incentives often expressed in either direct or indirect financial payments provided to adopters serving as an intention of encouraging the desirable behavioral change which leads to the adoption of an innovation (Rogers 2005, 237).

3.2.2 Compatibility

Compatibility means the level of similarity or consistence of an innovation compared with the existing idea in term of values, experiences and needs perceived by the potential adopters. Higher level of compatibility to the existing idea means lower level of uncertainty to the adopters. Compatibility gives adopters a sense of familiarity to the new idea (Rogers 2005, 240).

Compatibility of an innovation can be expressed in forms of values and beliefs. Comparability in form of cultural values and beliefs has a crucial effect on adoption rate of an innovation in some cases. Different values and beliefs from different cultures sometimes may block or seriously slow down the adoption rate. For instance, an innovation is originally designed in one culture later has difficulties to spread to a different culture (Rogers 2005, 241).

Compatibility can be measured not only with cultural values and beliefs but also with previously existing ideas. The degree of compatibility also has a positive relationship with the rate of adoption. For potential adaptors, previous existing ideas can be used as tools to evaluate the new idea and give perceived values to it. Potential adopters cannot access a new idea without certain degree of compatibility. Previously existing ideas serve as predictors for adaptors to interpret and evaluate the new idea hence lower the uncertainty level of the new idea (Rogers 2005, 243).

Compatibility of an innovation sometimes indicates how well a new idea meets adopters' needs. In some cases, potential adopters don't recognize they have certain needs until their needs are fulfilled by the outcomes of an innovation. Generally, an innovation with better ability to serve its adopters' need also has faster adoption rate (Rogers 2005, 246).

As a summary, since any new idea is interpreted and evaluated on the basis of previous existing ones, the level of compatibility of an innovation is perceived has a positive relationship with the adoption rate of the innovation (Rogers 2005, 249).

3.2.3 Complexity

Complexity indicates how easy or difficult for adopters to interpret or use the innovation in comparison of previously adopted ideas. Complicity of an innovation perceived by adopters has a negative relationship with the rate of adoption. Higher degree of complicity of an innovation usually leads to slower rate of adoption (Rogers 2005, 257).

3.2.4 Trialability

Trialability refers how easy or difficult an innovation can be tested by the potential adopters on a limited scale. Innovations share a characteristic of being testable generally have higher rate of adoption than those are not. The trial of the new idea provides opportunities for potential adopters to understand and access how the new idea functions in practice and further interpret the innovation which helps to lower the uncertainty level of the innovation.

Innovations with easy experimental trials for its adopters usually have faster adoption rate. Thereby, redesigning of an innovation is often part of the content of the trial in order to customize it to fit more closely to individual adopters' own conditions. As a summary, the trialability of an innovation perceived by the adopters has a positive relationship to the rate of adoption (Rogers 2005, 258).

3.2.5 Observability

Observability of an innovation means to what degree an innovation is easy for potential adopters to observe the outcomes of an innovation. Some innovations are easier to demonstrate to adopters than others. Observability also can help adopters to understand and evaluate the innovation and lower the uncertainty level of the innovation. Hence, a conclusion can be drawn that the observability of an innovation has a positive relationship with the rate of innovation (Rogers 2005, 258).

So far, different attributes of innovation process have been explained mostly from a point of view of the nature of innovations. The crucial importance of perceptions of human behavior should also be pinpointed, since the rate of adoption is determined by the adopters' perceptions of the attributes of an innovation, not the attributes as classified objectively by experts (Rogers 2005, 233). Thus, in order to understand consumer perception, theory of human influence is added below:

3.3 Consumer Influence and the Diffusion of Innovations

Consumer perception may be influenced by factors like social environment and communication channels. In this research, the impacts of social environment and communication channels are selected to study consumer behavior change which further leads to effects on adoption rate of an innovation. In order to better understand the theory, the adoption process in which consumer behavior pattern is illustrated first. In addition, communication channels and social environment are also introduced.

Communication Channels

The adoption rate through a market depends to a great extent on communication between the marketer and consumers, as well as communication among consumers (Schiffman et al. 2008, 441).

The Social Environment

The diffusion process of a new product or service often occurs in a social environment in which the members live in. The characteristics of a social environment which formed by its special value, beliefs or norms might have an impact on the adoption of a new product or service. Generally speaking, members from a modern social environment tend to have relatively higher acceptance level towards new innovations of products or services. In contrast, new ideas are more likely to get rejected in a conservative social environment (Schiffman et al. 2008, 442).

The following criteria describe a modern social system' characteristics:

- Changes are considered positive in general
- Advanced economy and well educated population
- Education and science are respected
- The base of social relationship is more rational, less emotional
- Outreach oriented perspective which allows the member communication with outside, hence have opportunities to import new ideas into the social system
- Members of the society play multiple roles in their lives (Schiffman ed al. 2008, 442)

3.4 Applications of Theories

In this study, the theory background is applied to form questions for the interviews of the empirical part of the research and to analyze the data collected from the interviews.

For theory of diffusion of innovation, five attributes of innovation will be emphasized for forming questions to analyze the effect of characteristics of e-invoicing as an innovation on its rate of it adoption. Consumer Influence on Diffusion of Innovation theory will be applied to formulate questions for studying the impact of communication channels and social environment on consumers' behavior change in the empirical part of the research.

The reason for combing diffusion theory and consumer behavior theory is because the author thinks these two theories are closely connected and support each other. To study the adoption rate of e-invoicing, two elements are examined in this research: e-invoicing as the innovation and consumer perception, since the adoption rate is not only determined by the nature of the innovation but also depends on the users' perception. Diffusion of Innovations mostly discusses how the nature of an innovation determines the adoption rate; Consumer Influence explains how social environment and communication channels can influence consumer perception.

Everett M. Rogers' Diffusion of Innovations and Leon g. Schiffman, Leslie Lazar Kanuk & Havad Hansen's Consumer Behaviour are globally recognised literature in the fields which further strengthen the international aspect of this research.

4 Empirical research

As discussed in chapter 2.4 that after years of effort of promoting e-invoicing, majority of Finnish consumers are still reluctant to change their payment habits, and very limited research has been conducted so far to study consumers' attitude thoroughly enough to provide convincing explanations behind. It seems businesses are ready to make the change, but consumers are not.

4.1 Research method

Qualitative research has characteristics of investigating perceptions and understanding phenomena (Freaut 2012). This research is about to investigate the consumers' perception and try to understand their experiences and behavior which brings many exploratory elements to the research, since not many reliable academic studies and researches have been undertaken yet. The author hence chose qualitative research as the empirical research methodology for this thesis.

Salkind (2006, 201) continues that qualitative research is for study human behavior science by using techniques for instance interviews. Face-to-face interviews give researchers opportunities to understand respondents by creating discussions (Hollensen 2007, 162). In this research, it's vital to collect deep, detailed and rich information regarding consumers' options and experiences as the source of primary data. And this kind information hardly can be gathered by other means. Therefore, face-to-face in depth interview approach is selected for this research accordingly.

4.2 Type of interview

M. Sauners, P. Lewis & A. Thornhill (2012, 378) suggest that the interview type should serve the purpose of the research. In this research, as it has been discussed at the beginning of the chapter, since very little previous study has been undertaken in the same field, some exploratory elements are included. In addition, the author intended to

understand the attitudes and opinions of interviewees towards e-invoicing. Hence, face-to-face interview is chosen since the advantages of this type of interview better fits the situation when rich, deep and detailed information is significant for the research and need to be collected from the interview.

Trost (2005, 112) points out that interviews can be taken in forms of high- or low structured and high- or low- standardized. The interviews completed for this research are high- structured and low-standardized same time. High-structured means same questions are asked in all the interviews. Low-standardized refers interviews are not held in exactly same situation. With the high-structured form, the author would like to find answers to the research question. And with the low-standardized form, the author planned to organize separate interviews with every chosen participant which means all the interviews were held in slightly different situation.

Rubin & Rubin (2005, 21) suggests that a researcher also has to decide what research instrument is appropriate for data collection. In naturalist research, researchers themselves work as data-gathering instrument. Hence it requires good listening, observing, and understanding skills. In this research, there are no pre-determined assumptions setting to make uniform sense out of the answers. The author intended to collect information from deep understanding of respondents' description of their experiences regarding e-invoicing. Thus, the author thought naturalist research instrument would be more suitable to work as the primary data gathering instrument during the interviews.

All the potential participants were informed to the topic by email and phone calls in a possibly detailed way to raise the interest as first step. With the positive response from the participants after the first contact, the author sent an interview question list (appendix 1) to all of them immediately via email to gather feedback on if these people had interest to further carry on the actual interviews. The interviewees also could familiarize the discussion content and prepare for the interviews to make the interviews move more smoothly. After some of the respondents confirmed their willingness to participate the interview, the author and the final participants negotiated details regard-

ing time and places for meeting etc. The interview questions were divided and structured into a few themes based the literature part and investigative questions.

The interviews were carried out during February and March 2013 through face-to-face interviews according to the plan. All 6 chosen respondents participated the interviews to guarantee their equal opportunity to take part in the research process. It is important for researchers to lead the interviews with clarified goals (Trost 2005, 90). During the interviews, the author tried to control the discussion to make sure the conversations move around the topic most of the time to get the needed information. However, occasionally, respondents added some extra information which was not directly related to the topic, and that was not rejected directly either. The author allowed this kind of small discussion to exist in the interview but try to use back-up questions to make sure the conversation stay on the right track. During the interviews, the author intended to create a relaxing and friendly atmosphere to make the interviewees feel they were free to talk which possibly led to release more useful information. The author mostly played the role of a good listener to ensure the respondents that their opinions were respected. The author tried to lead and control the whole discussion without addressing pressure, judgment or domination to the participants.

Brunt (1997, 27) recommends the time for one interview shouldn't last more than one hour. The author succeeded to complete each interviews within one hour. The duration of the interviews for this research was 40 to 60 minutes. In this research, the interview questions were carefully prepared and examined them before the interviews to make sure that these questions make sense for the respondents.

Among more than 20 invited potential respondents, 6 of them finally participated in the research. The reasons for rest of them rejected the invitation could be lack of interest to the topic or difficult time management. Due to the limited financial resources of this project, there was no reward offered to the respondents as incentives for participating the research.

4.3 Selection of interviewees

(Pratt, 2006) recommends that appropriate criteria should be designed for the representative sampling. In this research, interviewees are separated into two groups: consumer representative group and service provider representative group. Limitations like age, education level and income level are set for consumer representatives and profession and working experiences for expert interview participants.

For consumer representative sampling, the age limit is from 18 to 45, education level is bachelor degree or above, and the income level is middle class. The reason for setting these particular selection criteria is that the author believes the population from age 18 to 45, with good educational background and stable income forms the main stream of existing or potential users of e-invoicing in Finnish market. Thereby, it's more meaningful to focus on this group rather than others due to the main objective of this research.

For service provider representative sampling, the selection criteria is mostly about profession, working experiences, positions and particular working tasks due to the author intended to get expert opinions from e-invoicing issuers' perspective. In order to avoid the risk of the chosen participant is not the right person with needed information, the author only approved the people who were directly responsible for providing e-invoicing services to customers in their workplaces.

According to Kavale (1996, 103), the general tendency of current interview studies is to have fewer interviews but spend more time to prepare and analyze the interviews. In another word, quality would profit the research more than quantity. The author invested much time to search and evaluate the qualification and suitability of these interview participants. The selection of interviewees was done by researching on internet, other social media such Face book and social network. The author contacted 20 people via e-mail and phone calls. Eventually, 6 of them agreed to participant the interview. 4 of the participants without previous experiences of using e-invoicing formed the consumer representative group. The author expected these interviewees could provide useful

information as potential adopters of e-invoicing. The rest 2 of them formed e-invoicing service provider group. The author expected to get up-dated professional opinions from them.

When researchers conduct qualitative research, interviewees' demand of confidentiality should be respected (Trost 2005, 40). In this research, interviewees didn't question particular confidentiality related issues. However, they expressed the wish of not revealing their names and other personal information in this paper. Especially, for the service provider group respondents, in order to avoid any possible sensitive commercial information leak, according to the request of the interview participants, the names, workplaces, and other personal information are not revealed in this research.

4.4 Interview questions

In this research, the interview questions (appendix 1) were formed from the investigative questions and structured by theory framework of this research. The theme 2 interview questions were designed to answer to IQ1 and formed from first part of the theory - general information of e-invoicing as introduced in chapter 2. The results are discussed in Chapter 5.1 The theme 3 interview questions were designed to answer to IQ2 and formed from the second part of the theory – Diffusion of Innovations and five attributes: advantage, compatibility, complexity, trialability, and observability. The results are discussed in chapter 5.2. The theme 4 interview questions were designed to answer IQ 3 and formed from the second part of the theory- the impact of social environment and communication channels on consumer's perception. The results are discussed in chapter 5.3. The theme 5 interview questions were designed to answer to IQ4 and formed from both two parts of the theory and the results are discussed in chapter 5.4.

4.5 Data analysis

According to Rubin & Rubin (2005, 201-202), data analysis is the process in which raw information collected from interviews gets translated into evidence-based interpreta-

tions. By classifying, comparing and combing the raw material from interviews, researchers summarize and extract the meaning or reveal certain patterns into a coherent description. Data analysis actually occurs throughout interviews, not only after interviews which means each interview content should be examined before next one to find out what still need to investigate.

After each interview completed, the author examined the information from the interview to find out what had learned and what still need to find out later. Based on this analysis, the author made necessary modifications with changing some interview questions or add follow-up questions for next interview in order to get needed information. As mentioned earlier in this chapter, the interviewees were divided into two groups- consumer group and service provider group. Briefly speaking, when all the interviews were completed, the author analyzed all the interviews together to find out the common and consistent factors for each group which answer to the investigative questions. After that, the results of data analysis from two different group interviews were again compared and contrasted to pull out similarities as well as differences.

Rubin & Rubin (2005, 203) continues that first stage of data analysis includes preparing transcripts and coding data. Transcripts should be typed up immediately if the interview is not recorded. In this research, the interview data was documented by making careful written notes, but not recorded. Therefore, the transcripts were typed and stored in the computer shortly after each interview to avoid forgetting the content.

Coding involves labeling and marking concepts or themes refer to the same subject by examining all the data units (Rubin & Rubin 2005, 207). After each interview transcript prepared, the author summarized the content by making a very brief written summary beside which could help to recognize the topics. While the transcripts of all the interviews were made same way, the author marked the common or similar content of each topic by using different colors. Since the author intended to find certain pattern for the same topic, same color would remind the author similarities in content. Because the data was collected from two different interview teams, for comparison and contraction purpose, the content indicates similarities and differences were also labeled by short

written summary and different colors. Last, two tables presented two different groups were used to transfer the summary of similar content under different topics from the transcripts. By reading the summary, it was easier to make generalizations for different questions between two groups.

The most challenging part of coding was to interpret and summarize different expressions from different interviews. Even though, the author aimed at objective analysis and generalization for the data. However, the author also felt very difficult to eliminate all the subjective features totally out of the process.

5 The results

This chapter discusses how the consumers and service providers see e-invoicing, and if or how much they know how e-invoicing works in reality. The results also reveal what expectations consumers have and the benefits and concerns of e-invoicing perceived by consumers. At the end, the results talk about the future of e-invoicing from consumers' point of view. Meanwhile, the results cover the opinions from services providers' perspective about similar questions. Since the interviews and data analysis were undertaken by two different groups, what these two groups agree with each other and what they disagree also are discussed by comparing two groups' data.

According to Trost (2005, 134), direct quotations can be used to for emphasizing importance of the information. In the following discussion, direct quotations are applied to help the author to address emphasis on certain issues.

5.1 General knowledge towards e-invoicing

Based on the data collected from the interviews, consumers had heard the term but had limited knowledge regarding how e-invoicing worked in practice. And the knowledge level varied from one to another. Some respondents claimed they had only heard of the term, one respondent described as follows:

I've seen advertisements of e-invoicing from companies through mails, but I don't know what it is or how it works.

With limited knowledge, some interviewees knew e-invoicing was electronic version of invoices and it worked with online banking system. Like one interviewee explained as below:

As far as I know, e-invoicing means they send you bills electronically, and you pay them via online banking.

At this point, interviewees had realized they lack of knowledge related to e-invoicing. And they would like to get more information in the future if it's free of charge. One interviewee said:

Yes, new knowledge, new learning, why not? If it's for free...

Interviewees wish they could get more information through more visual or user-friendly methods in the future. They thought they hadn't got enough information on how e-invoicing functioned from service providers and the advertising was regarded only focus on selling the service mostly but not education or providing necessary information to users. One interviewee said:

Nobody shows me how to use it. Companies only say "use e-invoices", but don't explain how it works.

When asked in what way he preferred to have more information, he continued:

I would like to have video clips, such as YouTube... It's much easier to follow than instructions written in text.

When the question of "what kind of knowledge do you think consumers have towards e-invoicing as an expert?" was asked to service providers, interviewees thought it was natural that consumers need more knowledge and would get it somewhere as the time went by as information technology further developed in the future. One interviewee responded as below:

Consumers accept e-invoicing step by step. They are moving in a process from not accepting to accepting. They need some time to get the knowledge, and get familiar with the new payment transaction method. With time going, the new generation is more IT oriented, the new payment technology would be easier for them to use...

When asked if consumers have good access to needed information and in what way consumers prefer to receive the information from a service provider's point of view,

the interviewees thought it was difficult to make a generalization. One of the answers was described as follows:

It depends on sellers. If the seller's system is well developed, then it's possible to provide better education or more information to customers... And through what way to provide the information also depends on different customer groups. You need to categorize your customers... Different customers have different needs...

As summary of this part of discussion, both consumers and service providers agree that consumers need more information in the future.

The disagreement is that interviewees from consumer group felt that they did not have enough knowledge towards e-invoicing and they had no full access to needed information from service providers. They were expecting more information through more user-friendly channels from service providers. However, service providers considered the knowledge accumulation process as time consuming but natural somehow and expected time could heal the situation itself. Interviewees from service provider group didn't think it was definitely necessary to invest more resources or change the strategy in order to provide more information or education to consumers.

Another difference is that consumers mostly see things based on their personal needs purely while service providers think same things from technical point of view mostly because of their profession.

5.2 General attitude towards e-invoicing

5.2.1 Relative Advantage

Both consumers and service providers agreed that e-invoicing had clear advantages compared with paper invoices. The perceived top three benefits of e-invoicing were convenient, cheap and environmental friendly. One interviewee from consumer group described benefits of e-invoicing as below:

For me, the most important is convenience. I believe people would like to pay for more convenience. Means you have the freedom to pay whenever and wherever...

When another interviewee from consumer group was asked the same question, he said,

Financial and environmental benefits... I don't have to pay extra for those papers and less papers in my house. I'm lazy to take out papers...

Service providers basically mentioned the same thing in the interviews. The difference was service providers also explained the advantages from technical point of view.

When one interviewee talking about the "convenience" of e-invoicing, he said,

Easy space to pull out historical transaction records... With e-invoicing, you can easily store all the documents as future references in your computer. With paper invoices, so easy to lose them across the time...

When talking about economic benefit, while interviewees from consumer group mostly only talking about their own personal interests, interviewees from service provider group believed it was mutual benefit for both issuers and users. One interviewee from service provider group explained as follows:

E-invoicing reduces production costs... Both sellers and consumers can profit from it, it's a win-win situation...

When asked about concerns related to e-invoicing services, everybody replied that online safety issue was the biggest concern for using e-invoicing. Also the trust issue between issuers and consumers was considered very sensitive by almost all the interviewees.

On top of that, interviewees from consumer group also mentioned the concern towards the whole system and legal environment, one interviewee from consumer group said in the interview:

Reliability of the system in a sense of sending the right payments to right receivers and getting the right bills from the right issuers...

Another interviewee also mentioned:

If something happens, the argument is not usually favorable to consumers, because I don't have the control of the system...

Interviewees from service provider group also expressed some other concerns from professional point of view, such as open internet environment, information privacy protection from service providers' angle.

According to consumer group interviewees, the most popular incentive was financial reward for promoting e-invoicing. And the most expected way to receive the reward was through service fee deduction. The amount of the reward was expected from 1-2 Euros per invoice. One interviewee said,

I prefer financial motives. If the service is cheaper, and the difference is bigger than 1 Euro...

Another interviewee also mentioned in the interview:

I think more than 2 Euros for each bill would be big enough for me to seriously consider adapting e-invoicing...

Interviewees from service provider group also agreed that financial incentives were the most effective methods for promotion. But the information of economic benefits was not transparent. Even though the economic benefits were mutual for both parties, businesses were not willing to share this kind of information with consumers.

5.2.2 Compatibility and Complexity

In the interviews, respondents were asked if they thought e-invoicing easy to use compared to other invoicing method they had been using. The intention was to find answers concerning compatibility and complexity perceived by consumers and service providers in practice.

Respondents from consumer group had not been using e-invoicing so far, it was difficult for them to give proper comment due to lack of experiences as users. Meanwhile, interviewees from service provider group thought e-invoicing was supposed to be easy to use for consumers.

5.2.3 Trialability and Observability

Most interviewees from consumer group expressed interests to try e-invoicing some point in the future. They expected that the service providers would offer opportunities for instance a trial period and free responsibility charge if mistakes occurred during the trial period.

When asked if a trial period would encourage interviewees to change their payment habits, one interviewee said:

Yes, as long as no consequences for late payments during the trial period...

Interviewees from service provider group also thought a free trial period might help, but in practice, not many issuers were offering it.

5.3 Social Environment and Communication Channels

Interviewees from consumer group give very different answers when asked if social environment had impact on their payment habits. Some interviewees thought they would chose the one suit their own situation the best, social environment had little impact on this issue. The rest thought the opposite: they would consider changing if the people around them all have adopted e-invoicing. One interviewee explained as follows:

Yeah, I would probably switch also, if everybody else has done it. It's so called peer pressure...

Interviewees from service provider group also thought social environment was supposed to have certain degree of impact on consumer choice. One interviewee described his opinion as below:

If everybody shares information about the benefits of e-invoicing on Face book and Twitter, that's best advertisement through social media...

Internet is the most favorable communication channel according to all the interviewees. Besides internet, some interviewees from consumer group said they also would like to have personal help when needed.

Interviewees from service provider group thought different customers had different needs. They would choose the communication channel based on customer segmentation. The most common communication channels were internet, email, phone and flyers by the moment.

5.4 Expectations and Future aspects

All interviewees expected e-invoicing to be accurate, safe and stable. In addition, interviewees from consumer group also were sensitive to prices. They expected good quality services at low price level.

Interviewees from two different groups basically agreed that e-invoicing had a bright future. Interviewees from consumer group thought they might start to use it some point later in general. Even though at this moment they were still using other ways to pay their bills, they were happy to have e-invoicing as option. There were no objections against e-invoicing, only certain concerns remained.

Interviewees from service provider group were very optimistic about the future of e-invoicing. They thought e-invoicing was the future trend which could not be blocked. It was only matter of time for consumers to accept it. And consumers would eventually accept e-invoicing due to the advantages of the product.

6 Discussion

Finnish consumers have been exposed to the invoicing innovation – e-invoicing for quite a long period of time, but ordinary consumers who are considered as typical potential adopters have rather limited knowledge in general. The purpose of the research was to determine Finnish consumers' general attitude towards e-invoicing and what incentives or motives e-invoice issuers such as businesses or service providers such as banks could use for future promotion. The results provide answers to service providers the perception from consumers' aspect mostly.

But this thesis is not only limited on studying solely consumers' opinions. Instead, the research was conducted by interviewing two different group of participants-consumer representative group and service provider representative group. The intention for this research design was to gather primary data from both seller's and buyer's perspective. By comparing and contrasting the data from two different groups, the author was trying to find common factors, as well as differences. Thus, by analyzing the primary data, the author was expecting to discover on what features both expects and consumers could agree with each other and what seemed to be misunderstandings or misperceptions so far. The final conclusion is beneficial for e-invoicing service providers to better understand the gap between what consumers want and what providers are offering and helps issuers to examine or update their marketing, promoting and pricing strategy in the future.

6.1 Main findings

IQ1: What knowledge do consumers have towards e-invoicing and how do service providers perceive it?

Currently, consumers have rather limited knowledge which results in some uncertainties towards e-invoicing. Consumers wish to get more information later from service providers. But service providers think either with or without directly providing more

information, consumers would get similar kind of knowledge from the environment naturally as long as information technology keeps revolving in the society.

IQ2: What attitude do consumers have towards e-invoicing in general and how do service providers perceive it?

Both consumers and service providers agree that trust is the most crucial issue to accept e-invoicing. Consumer wouldn't buy products or services from someone they don't trust (James, 2012). Consumers wouldn't seriously consider the possibility without being convinced that service providers are creditable, technology of e-invoicing as a new technological invention is also reliable. In addition, the legal environment is mature and in favor of consumers' rights in general. Consumers need to be sure that they are fully protected and risk free from all the aspects related to e-invoicing services before they make the decision to start to use e-invoicing. Right now, service providers haven't succeeded to deliver such a message to consumers to remove all the uncertainties completely. This has to be part of the explanation why most consumers are still reluctant to adopt e-invoicing.

IQ3: How could consumer behavior influence the adoption rate of e-invoicing and how do service providers perceive it?

Communication is a powerful tool which marketers use to persuade consumers to conduct their behavior according to a desired manner (Schiffman 2008, 282). Consumers do not have enough knowledge or information to fully understand how e-invoicing functions in practice which raises uncertainties and worries for different issues. Service providers also do not have a clear image about what kind knowledge or attitude consumers have toward e-invoicing at the moment. Communication can be taken in different forms: verbal, written or visual (Schiffman 2008, 282). Consumers favor more visual communication form, whereas services providers still prefer written form. The communication methods are not effective enough to catch most consumers' attention and raise serious consideration of adopting e-invoicing at the same time.

IQ4: How do consumers and service providers see the future of e-invoicing?

Consumers and service providers agree with each other that e-invoicing has clear advantages and the future is bright. The difference is that services providers assume the adoption rate will accelerate itself in the future due to younger generation's higher acceptance level regarding digitalization in financial and accounting services. While consumers think they need to find answers for their concerns first before they move to next stage of adoption process.

According to the data collected from the interviews, service providers mostly focus on technical issues of e-invoicing, but haven't invested many resources to study consumers' expectations which need to be clearly identified in order to better fulfill them.

6.2 Validity and reliability

This research aimed at providing reliable and objective results by cautiously selecting available literature and reliable academic research reports related to the topic. Some latest information from articles in Internet was also applied in this thesis to bring updated knowledge to strengthen the validity and reliability of the theory. Interview question were formulated from the theory in this research.

As described in chapter 4.3, proper interview participant selection criteria were set to guarantee needed information would be collected from right people in interviews. Some respondents were found through the author's personal social net work. Thanks to the topic was not related any respondent's sensitive personal issue, the author believed the personal relationship wouldn't affect the reliability of the data.

During the interviews, all the questions were well explained when needed in order to reduce misunderstandings. Some questions were reframed when the author realized the original question might be difficult for the respondent to follow and back-up questions were used to help the conversation partners to fully understand each other. When the transcripts were ready, the author sent a copy to all the interviewees for feedback to

clarify possible mistakes or misunderstandings occurred in the conversation. And there was no feedback returned to the author by the time when the data analysis was completed.

However, both respondents and the author could be subjective at some points and certain misinterpretations might still exist during interviews and data analysis process.

6.3 Recommendations to service providers

E-invoicing as a payment method innovation with the distinguish characteristic of high level dependence on modern information technology, while it brings new invoicing option to users, it also brings certain degree of uncertainty (Cofta 2011). According the results of the interviews, the reality seems support the theory, both consumers and service providers believe that trust is the foundation for e-invoicing implementation. Consumers want to be certain that the services providers are reliable and the system is trustworthy as well from technical point of view. Therefore, services providers should find solutions to create a secure environment for consumers for applying the service and convince their customers that the service is safe to use. Consumers tend to trust larger organizations with good reputation and recognition, such as big banks and other well known financial service organizations rather than unknown smaller organizations. Thereby, for smaller organizations, even with the possibility of providing the service directly to customers on their own, it might be wiser to provide same service through other organizations by outsourcing the task.

In theory, any strategy may fail without a properly functioning communication system which involves different stakeholders (Johnson 2008, 574). According to the data collected for this research, consumers currently have rather limited knowledge towards e-invoicing and wish to have more information regarding security issues, responsibility division and implementation instructions. More visual and user-friendly educational tools via internet and personal communication are the most favorable communication channels according to the interviewees. The author suggests service, instead of providing brief text written instructions, service providers can try to use for instance short video clips to give clear instructions to consumers for how to apply the service proper-

ly. For other issues, organizing well planned promotion campaigns or events targeted at potential e-invoicing adapters to explain how the whole system works. It would widen consumers' knowledge and possibly increase acceptance level towards e-invoicing. Service providers should actively participant in these activities to constantly interact with consumers to sustain long term relationship and further deepen their involvement and cooperation with service providers.

Incentives have an effect of increasing the degree of relative advantage of an innovation, hence further influence the adoption rate of an innovation (Rogers 2005, 229). However, the theory doesn't specify how to measure the effectiveness of different incentive means. According the data, there is a possibility that the financial incentives which service providers are offering by the moment are not enough to attract majority consumers to change to e-invoicing. Another possibility is that the means which service providers use to offer the incentives currently is not very noticeable by charging some extra price for paper-based invoices. Based on the findings listed above, the author recommends service providers to consider raising the financial incentives and re-evaluating the incentive award methods or the advertising techniques. For instance, compared with saying "each paper-based invoice will be charged 1, 5 Euro", "by applying e-invoicing, you will save 1, 5 Euro for each invoice" would catch more attention and connect consumers' interests directly to e-invoicing.

According the information gathered from interviews, business prefer to keep the tremendous economic benefits of e-invoicing as internal information, reluctant to share this particular information with consumers and wish e-invoicing would be adopted rapidly and widely because of its other advantages. As it's discussed in previous chapter, this strategy didn't really work out in this case. Thereby, the author would like to recommend the opposite which means keep the information transparent. Meanwhile, besides offering fixed financial incentives, other option such as businesses may reward consumers by sharing the economic benefits by certain percentage. It would help consumers to better see the mutual interests between sellers and buyers which could turn to additional motives eventually.

6.4 Applicability and comparison to country Sweden

This research is conducted based on the theory of Diffusion of Innovations and Consumer Influence mostly from social environment aspect. Since the Diffusion of innovation theory mostly deals with the nature of an innovation itself which is e-invoicing in this case, no need therefore to discuss the applicability in another country from Diffusion of Innovation aspect anymore, because the nature of the same innovation wouldn't change anyway. Thus, the evaluation of applicability in country Sweden is carried out from the angle of the social environment effects on consumer behavior change.

From social environment point of view, due to the similar social and cultural background of these two countries, Sweden and Finland share at great extension of similarities in forms of values, beliefs and life experiences. Hence, the results and conclusions from this research are estimated applicable in Sweden as well theoretically. For the same reason, what works in Sweden, might be able to be used as references in Finland as well.

As it's discussed in chapter 2.5, Sweden had rather similar adoption rate of e-invoicing as in Finland until 2010. But in the recent two years, the adoption rate was almost doubled in Sweden while it remained at the same level in Finland. Whereas some people believe that the advertisements have raised consumer awareness toward environmental issues which leads to higher acceptance rate of e-invoicing, the rest argue that businesses just use environmental claim to cover the money trail and it would raise trust issue to consumers. Despite the reasons are still controversial, it is undisputable that the adoption rate of e-invoicing has been accelerated dramatically in Sweden in the recent two years. Perhaps what Finland can learn this time from the neighbor country is that intensive promotion campaign at national level by highlighting environmental benefits does help in this case. Meanwhile, in order to avoid being accused dishonest by misleading consumers with environmental concerns to cover the real motive of cutting-cost, businesses can consider sending messages to consumers by combining the economy benefits and environmental benefits together such as "Adopt e-invoicing,

add green in your life and get a kickback from our savings” (e-invoicing platform 2011).

6.5 Limitations and ideas for future research

The weakness of this research was that the sample of this research was not categorized solely by specific age, gender, education background, or income level etc. Therefore, it leaves plenty of space for further study in similar topic but with more specific sampling segmentation.

In addition, since the adoption rate of an innovation is also determined by the impact of combination of all the influencing factors, not solely by the characteristics of the product, the topic could be further investigated by focusing on some specific influencing factor such as communication channels, social environments, incentives or consumers’ personality etc.

There is very limit literature or other reliable sources available as references about the same topic currently and due to the very limited access to resources, the sample size is relatively small which might be risky to generalize the outcomes to the entire population based on the small sample size. In theory, the bigger sample size, the more accurate the result is supposed to be. Therefore, at least theoretically, there is a chance that the results might vary at certain level by investigating a much larger sample. Hence, the research has clear exploring and analytical characteristics which meant to provide some basic information and references or ideas as a starting point or a platform for further investigation, but not applied as solid theory.

6.6 Author’s professional development from the research process

The author already had some information about the topic before. The topic is a relatively new area in which not much reliable information available. The author’s expert knowledge about the topic certainly deepened and widened through the research process. The author’s specialization was Finance and Accounting, the expert knowledge

about the topic gained from the research process would benefit the author for her future career and study.

There were challenges to find reliable and literature particularly related to the topic at the beginning, the thesis process helped the author to learn how to evaluate existing information and other secondary data as resources.

The author also got familiar with qualitative research method by conducting one on her own during this thesis process. The author felt the most challenging part in qualitative research was to stay objective data interpretation and data analysis. Even though the author was very careful to avoid letting her own personal opinion to substitute interviewees' perception, the conclusions from the research results was still the reflection of the author's own understanding, which was subjective at certain extension.

The most valuable experience of the research was that the author learned how important for business to listen to the customers in order to find out what customers really want. Qualitative research was an effective approach to understand customers' experiences and attitude.

The author also learned it was very important to have good time management skills for conducting research. A detailed time table could work as a reminder to ensure the entire process moving accordingly.

At the end, they author would like to thank all the participants for their contribution to the research. The author also would like to thank specially the advisors from Haaga-Helia for their support along the entire thesis process.

References

Brunt, P. 1997. Market Research in Travel and Tourism. Butterworth-Heinemann. Oxford.

Blank, C. 2013. Consumer Perception Theory. Demand Media. Huston. URL: <http://smallbusiness.chron.com/consumer-perception-theory-40176.html>. Accessed: 15 May 2013

Cofta, P. 2011. Observations on e-invoicing. URL: http://www.cofta.eu/pub/2011_Cofta_einvoicing.pdf. Accessed: 31 March 2013

E-invoicing Platform. 2011. Finnish Research shows: e-invoicing is more efficient and eco friendly. URL: [http:// eeiplatform.com/3615/finnish-research-shows-e-invoicing-is-more-efficient-and-eco-friendly/](http://eeiplatform.com/3615/finnish-research-shows-e-invoicing-is-more-efficient-and-eco-friendly/). Accessed: 5 Jan 2013

E-invoicing Platform. 2012. Swedish B2C E billing adoption sours with a staggering 29 percent in a single year. URL: <http://eeiplatform.com/7654/swedish-b2c-e-billing-adoption-sours-with-a-staggering-29-percent-in-a-single-year/> Accessed: 5 Jan 2013

E-invoicing Platform. 2011. How consumers experience the go green argument. URL: <http://eeiplatform.com/6185/how-customers-experience-the-go-green-argument/> Accessed: 5 Jan 2013

Ereaut, G. 2012. What is qualitative research? QSR International Pty Ltd. URL: <http://www.qsrinternational.com/what-is-qualitative-research.aspx>. Assessed: 7 April 2013

Finextra. 2012. The 2012 Billentis eBilling, eInvoicing Report. URL: <http://www.finextra.com/community/fullblog.aspx?blogid=6462>. Accessed: 31 Mar 2013

- GXS. 2013. E-invoice Basics. What is e-invoicing?
URL: <http://www.einvoicingbasics.co.uk/what-is-e-invoicing/> Accessed: 5 Jan 2013.
- Geoffrey, J. 2012. How to Build Customer Trust: 9 Rules. Sales and Marketing. Sales. Inc.com. URL: <http://www.inc.com/geoffrey-james/how-to-build-customer-trust-9-rules.html>. Assessed: 7 April 2013
- Hollensen, S. 2007. Global Marketing. 4. ed. Pearson Education Limited. Harlow.
- Johnson, G., Scholes, K. & Whittington, R. 2008. Exploring Corporate Strategy. 8. ed. The Financial Times Prentice Hall imprint. Harlow.
- Keinonen, E. 2007. A qualitative study to identify factors that influence Finnish consumers to change their payment behavior. BoF Online. URL: <http://www.suomenpankki.fi/pdf/145484.pdf>. Accessed: 5 Jan 2013
- Kvale, S. 1996. The qualitative research interviewing. Ad Notam Dyldendal AS. Oslo.
- Nick, P. 2006. Qualitative Research. Faculty of Education. University of Plymouth. URL: <http://www.edu.plymouth.ac.uk/resined/qualitative%20methods%202/qualrshm.htm#Sampling>. Accessed: 31 Mar 2013
- PaySimpleBlog. 2011. Electronic Invoicing, Strategy. Advantages of electronic invoicing and billing. URL: <http://paysimple.com/blog/2011/07/13/advantages-of-electronic-invoicing-and-billing/>. Accessed: 31 Mar 2013
- Penttinen, E. 2007. Electronic Invoicing Initiatives in Finland and in the European Union. –Taking the Steps towards the Real-Time Economy. Aalto University. Helsinki. URL: <http://epub.lib.aalto.fi/pdf/hseother/b95.pdf> Assessed: 16 April 2013
- Rogers, M. 2004. Diffusion of Innovations. 5. ed. The Free Press. New York.

Real-Time Economy Programme. 2012. Aalto University. Helsinki. URL:
<http://biz.aalto.fi/en/research/projects/rte/>. Accessed: 5 Jan 2013.

Rubin, H. J. & Rubin, I. S. Qualitative Interviewing. The Art of Hearing Data. 2. ed.
Sage Publications Inc. Thousand Oaks. California.

Saastaminen-luottokaytto-ja-maksutavat-2012-kuvat. 2012. Federation of Finish Financial Services. URL:
http://www.fkl.fi/materiaalipankki/julkaisut/Sivut/saastaminen_luotonkaytto.aspx.
Accessed: 5 Jan 2013

Salkind, N. J. 2006. Exploring Research. 6. ed. Pearson Education Inc. Upper Saddle River. New Jersey.

Saunders, M., Lewis, P. & Thornhill, A. Research Methods for Business Students. 6. ed. Pearson.

Schiffman, L., Kanuk, L. L. & Hansen, H. Consumer Behaviour. 2008. The Financial Times Prentice Hall imprint. Harlow.

Appendices

Appendix 1a. Interview Questions for Consumer Representative Group

Theme 1: Basic data

1. Year of Birth:
2. Gender:
3. Education:
4. Profession:

Theme 2: Payment habits and general knowledge of e-invoicing

1. How do you usually pay your bills?
2. Are you currently using online banking?
3. Do you know other options for paying your bills?
4. Do you have access to e-invoicing?
5. Do you currently use e-invoicing? Why or why not?
6. What kind of knowledge do you have about e-invoicing?

Theme 3: Perception of e-invoicing

1. Do you find e-invoicing easy to use?
2. What kind of advantages do you think e-invoicing has compared with other payment transaction methods?
3. What's your biggest concern towards e-invoicing?
4. Do you see yourself as an e-invoicing user in the future?
5. What can motivate you to start to use e-invoicing?

Theme 4: Communication channels and social environment

1. Do you think you have good knowledge about e-invoicing?
2. Where and how would you normally get information about e-invoicing?
3. Would you like to get more knowledge or information about e-invoicing?
4. What kind of communication channels do you prefer?
5. Does social environment have an impact on how you pay your bills?
6. If people around you choose e-invoicing over other payment transaction methods, do you think it has any impact on your choice as well?

Theme 5: Future aspects

1. How do you see the future of e-invoicing?
2. What kind of expectations do you have towards e-invoicing related services?
3. Do you have anything else to add?

Appendix 1b. Interview Questions for Service provider Representative Group

Theme 1: Basic data

1. Education:
2. Profession:
3. Working experiences and tasks

Theme 2: General knowledge of e-invoicing

1. What kind of knowledge do you think consumers have about e-invoicing?
2. Do you think consumers have good access to e-invoicing?

Theme 3: Perception of e-invoicing

1. Do you think e-invoicing is easy for consumers to use?

2. What kind of advantages do you think e-invoicing has compared with other payment methods?
3. What's the biggest concern do you think consumers have towards e-invoicing?
4. What can motivate consumers to start to use e-invoicing?

Theme 4: Communication channels and social environment

1. Do you think consumers have good knowledge about e-invoicing?
2. Where and how do you think consumers normally get information about e-invoicing?
3. Do you think consumers need to get more knowledge or information about e-invoicing?
4. What kind of communication channels do you think consumers prefer?
5. Do you think social environment have an impact on consumers' choice of payment transaction methods?

Theme 5: Future aspects

1. How do you see the future of e-invoicing?
2. What kind of expectations do you think consumers have towards e-invoicing related services?
3. Do you have anything else to add?

Appendix 2. Overlay matrix of investigative questions

| Investigative questions (IQ) | Relevant Theory | Interview Questions | Results |
|--------------------------------------------------------------------------------|--------------------|---------------------|---------------------|
| IQ1: At what stage do consumers have knowledge about e-invoicing? | 2.1, 2.2, 2.3, 2.4 | Theme 2 | 5.1 |
| IQ2: What attitude do consumers have towards e-invoicing in general? | 3.1, 3.2 | Theme 3 | 5.2.1, 5.2.2, 5.2.3 |
| IQ3: How consumer's behavior could influence the adoption rate of e-invoicing? | 3.3 | Theme 4 | 5.3 |
| IQ4: How do consumers and issuers see the future of e-invoicing? | 2, 3 | Theme 5 | 5.4 |

Appendix 3. Thesis timetable

2012

October Search for the commissioning program

November Planning the thesis topic

December Writing the thesis plan

2013

January Writing theory

February –March Planning and having interviews, collecting data

March-April Analyzing the data, writing results

April -May Finalizing the thesis

May-June Thesis presentation and taking maturity test