The Era of Artificial Intelligence in Swedish Banking

Exploring Customer Attitudes Towards AI as a Substitute to Brick and Mortar Offices

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AUTHORS: Isabel B Stacey, Philip Svenningsson, Anton Thoresson
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Abstract

Background: The wave of Artificial Intelligence (AI) is marching on, replacing jobs and traditional services, and is predicted to be one of the biggest marketing trends in the close future. Four of the major Swedish banks have started to implement AI as a customer service channel. Simultaneously, the Swedish banking industry is experiencing an all-time low in customer satisfaction, where one of the main reasons is the diminishing number of local branches.

Purpose: The purpose of this thesis is to explore the attitudes that customers have towards AI in customer service, as a substitute to local brick and mortar offices within the Swedish banking industry, as well as uncover any significant factors that could influence these attitudes.

Method: This is a qualitative study of exploratory nature where five focus groups have been used to collect empirical data. A total sample of 26 participants, ranging from 20-55 years old, have partaken in the focus groups.

Conclusion: Findings show that there mainly exists a negative attitude towards AI as a substitute to brick-and-mortar offices, but positive attitudes towards it as a complement. Factors that influence the attitudes were found to be Convenience, Perceived Usefulness, Perceived Ease of Use, Trust, Risk and Social influence. Awareness and Prior Technological Experience were found to not have great influence on customer attitudes.
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Isabel Bergström Stacey Philip Svenningsson Anton Thoresson
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1. Introduction

This section discusses the background information and problem formulation. The topic of AI within the Swedish banking sector is presented, the gap within previous literature is identified, followed by the purpose and the two research questions.

1.1 Background

In 1990, Bill Gates said: “Banking is necessary; banks are not” (Filkorn, 2016), and today, his statement is more relevant than ever, as branches are closing down and game-changing technologies are transforming the way people bank.

A little over 20 years ago was the first time a Nordic bank introduced the concept of internet-banking, revolutionizing the way consumers interact with their financial institutions (Mackhé, 2018). It enabled customers to electronically perform multiple banking services whenever, and wherever, thus internet banking has had a critical role with regard to the reduction of operational costs (Chen, Hsiao, & Hwang, 2012). This is particularly relevant to the Swedish banking industry, as some of the most considerable financial firms are replacing their traditional banking operations with human-computer interactions, using their non-robotic employees for more complex tasks (Hoikkala & Magnusson, 2017). Traditional banking is often acknowledged to be the services administered in the physical branches of each bank (Skvarciany & Jurevičienė, 2017), but things are changing.

As bank-services move from physical branches to web-based ones, the utilization of artificial intelligence (AI) makes it possible to still provide a personal touch in the interaction, as companies leave the long-established security of the brick and mortar branches (Sivaramakrishnan, Wan, & Tang, 2007). E-customer service activities, chatbots, and virtual assistants have enabled transactions and services never before possible, along with an always available, “when-you-want-it” form of contact between customer and company (Pavlou, Lie, & Dimoka, 2007). In addition to this, artificially intelligent chatbots and assistants can create a computerized communication platform, using a language that is natural to consumers (Griol, Carbò, & Molina, 2013), further shortening the response time, along with creating convenience and efficiency. The use of artificially intelligent human-computer interactions relates to an advancement in technology called conversational commerce, which can be defined as the
“offering of convenience, personalization, and assisting decision-making processes” (Van Euwen, 2017). As Newman (2016) claims, chatbots have the power to transform how consumers interact and communicate with businesses, by ultimately replacing the most common interfaces currently used on computers and mobile devices. This makes AI one of the biggest marketing and management trends predicted in 2018 (Tasner, 2018).

As reported by the Swedish Bankers Association, Sweden's leading banks have reduced their local branches by 30% in the last decade, and as a result, customer satisfaction has dropped to a 20-year low (Hoikkala & Magnusson, 2017). The Swedish Quality Index (Svenskt Kvalitetsindex) has, together with the Stockholm School of Economics, researched the Swedish bank industry since 1989 and since then, customer satisfaction has significantly decreased at only two points in time, being 1993 and 2016. During this investigation, almost 8000 people were interviewed, and it was concluded that the primary reason for this decline is the absence of local branches (Svenskt Kvalitetsindex, 2016). In a response to this drop, Sweden’s largest banks see the transformation of a personal interaction into a virtual customer service experience as a possible solution, laying the groundwork for AI within banking (Hoikkala & Magnusson, 2017). Be that as it may, other studies argue differently, stating that the personal vicinity and physical presence of the local branch is what lays the foundation for strong customer relationships (Svenskt Kvalitetsindex, 2016).

In addition, prior research is limited due to the novelty of the subject, and not much information on the acceptance of AI by customers within the banking sector can be found. Hence, it is of interest to know whether or not customers of these services find AI to be a substitute for brick and mortar offices, and which challenges can be associated with the adoption of this technology, as a solution to the decline in customer satisfaction.

1.2 Artificial Intelligence (AI)

Artificial intelligence is a creation of intelligent machines that possess human-like behaviour and reactions. The core concept of AI relates to the embodying of various human behavioural traits, such as deepened knowledge, reasoning, problem solving, learning and planning, within computer programming (McCarthy, 2007). Furthermore, the concept of AI also includes programs like chatbots and virtual assistants, which pass the Turing test by being able to simulate behaviour as a conversational partner, equivalent to that of a human (Turing, 1950).
Chatbots are built upon recurrent neural networks that generate texts, which can be trained end-to-end, meaning that they can comprehend, analyse, and ultimately provide a suitable answer (Fei & Petrina, 2013). Thus, the technology concerning chatbots has changed from solely answering simple pre-programmed questions to being able to perform more advanced conversations and services (Vieria & Segal, 2017). AI based virtual assistants and chatbots are considered the optimal employee, as they can work and respond quickly around the clock, at low costs (Haaramo, 2018). Contact centres are therefore becoming serviced by chatbots, with the purpose of making business processes automatized (Borisov, 2017). For the sake of clarification, chatbots and virtual assistants will be denoted as AI throughout this thesis.

AI within the bank sector is able to interact with, help, and guide customers through bank errands (Hoikkala & Magnusson, 2017), much like the current customer service channels, but automated (Leffler, 2017). In the close future, large actors such as Nordea hope that AI can help customers not only open new bank accounts and cancel credit cards, but also provide investment suggestions (Lazzaro, 2017).

In 2017, Pegasystems, a leader in customer engagement software, conducted a global study where they surveyed 6000 adults. According to the study, few companies understand what customers really think about AI. Data revealed that customers have mixed feelings toward companies using AI to interact with them; 35 percent felt comfortable, 28 percent felt uncomfortable, and 37 percent answered ‘neither’ (Pegasystems, 2017). Moreover, over 70 percent of all consumers answered that they have some kind of fear of AI, and a majority of the participants answered that they do not believe AI can deliver the same level of customer service as a human. However, the same majority believed that AI has future potential to deliver the same level of customer service if the technology advances, although the survey concluded that, today, people prefer to talk to a real human (Pegasystems, 2017). The survey also asked the participants how they would feel if a bank used AI in customer service, where 20 percent answered that they would feel comfortable with that. It can be concluded that consumers believe that AI will eventually be useful, but it will take time, as humans are still considered superior in customer service, compared to AI systems (Pegasystems, 2017).
1.3 Problem Discussion

As mentioned, Swedish banks are closing down local branches, and instead introducing AI systems in hopes that it will compensate for the local absence (Hoikkala & Magnusson, 2017). With regard to this information, perhaps the most important question is how, and if, customers will embrace this change. Hence, this paper will focus on customer attitudes towards artificially intelligent solutions within banking, applied in customer service, as a substitute to brick and mortar offices. With the decrease of local branches in Sweden, the appurtenant diminishing customer satisfaction (Svenskt Kvalitetsindex, 2016), and consumer’s insecurity towards AI (Pegasystems, 2017), one could argue that research on this subject is relevant. Also, in the context of the banking industry, Loveman (1998), along with Gelade and Young (2005), found that higher customer satisfaction has a positive relationship to both customer base growth, and revenue. Moreover, there is an obvious difference in the service level customers desire, and the actual standard they currently receive; a service gap that leading Swedish banks hope to fill and improve with the implementation of AI (Hoikkala & Magnusson, 2017).

The current implementation of AI, in the form of chatbots and virtual assistants in the Swedish banking sector, spawns a new field of research into customer attitude towards AI as a form of customer service. Despite the potential of this new technology, there are always barriers to overcome. Change and innovation is not always immediately embraced by customers, and resistance is in many cases seen as a normal response to a change in customer practices and habits (Ram, 1987). Customer resistance is therefore one of the main reasons as to why change might not be fully received (Garcia, Bardhi, & Friedrich, 2007). In order to reduce the possible risk of failure for services or products, potential factors or determinants of customer resistance have to be identified (Ram, 1987).

Existing research tends to investigate customer attitudes in regard to already established online banking services, where scholars have studied factors concerning attitude formation, adoption, and acceptance. However, it seems that the implementation of AI into banking services is an understudied field, and one could argue that a research gap exists. Therefore, this thesis aims to bridge the gap between customer service in the banking industry and the adoption of AI. Hopefully, this study will provide new knowledge on the factors that influence customer attitudes with regard to the further digitalisation of customer service in the Swedish banking sector. This could potentially not only fill a gap within the literature, but also benefit Swedish
banks. Hence, due to the novelty of the subject, one could argue that an exploratory study would be of relevance.

1.4 Purpose and Research Questions

The purpose of this thesis is to explore customer attitudes towards AI in customer service, as a substitute to local brick and mortar offices within the Swedish banking industry, as well as to uncover any significant factors that could influence these attitudes.

Based on this purpose, the following research questions are asked:

**RQ1:** What attitudes do customers have towards AI as a new form of customer service within Swedish banks, substituting brick and mortar offices?

**RQ2:** What factors influence the attitudes that customers have towards AI as a new form of customer service within Swedish banks, substituting brick and mortar offices?
2. Frame of Reference

*In this section, the theories and literature that this research is based upon are presented. Existing academic literature and research covering online banking and the Technology Acceptance Model are presented, leading to a presentation of the authors own conceptual theoretical framework.*

2.1 Bank Communication Channel: digital channels vs. brick and mortar offices

As banks transition from brick and mortar offices to digital online platforms, the channel of communication between a customer and the bank staff changes considerably as face-to-face communication slowly disappears. When exploring customer’s attitudes towards AI as a substitute to brick and mortar offices, the implications of interacting face-to-face versus online are of relevance. During the last two decades, banks have invested heavily in online banking services (Hunt & Menon, 2006; Tran & Corner, 2016). However, in the eyes of customers, the bank’s unique selling proposition remains to be face-to-face banking (Hunt & Menon, 2006). Research explains that customers still consider face-to-face communication to be the most reliable source of banking-related information (Tran & Corner, 2016; Durkin, McCartan-Quinn, O’Donnell & Howcroft, 2003). Durkin et al. (2003) further explain that customers prefer face-to-face communication for services that are more complex. Customers will continue to consider face-to-face communication to be the channel that provides the highest quality and reliability, until an online channel can provide communication and information of equal quality (Durkin et al., 2003). This indicates that as long as face-to-face communication exists and is perceived as the channel with the highest quality and reliability, customers will be hesitant to fully adapt to online banking channels (Durkin et al., 2003).

On the other hand, scholars explain that online channels are more efficient than brick and mortar offices in providing relevant and appropriate information to customers when assisting during the evaluation process (Laroche, Yang, McDougall & Bergeron, 2005). However, the overall risk is more significant in the online channel, compared to brick and mortar (Laroche et al., 2005), and together with risk, trust has been identified as an additional weakness in online channels (Suh & Han, 2002).
2.2 Technology Acceptance Model (TAM)

One of the most commonly used models when studying attitudes and acceptance towards information technology systems is the Technology Acceptance Model (TAM) (Davis, Bagozzi & Warshaw, 1989; Gefen & Straub, 2000; Al-Gahtani, 2001; Shaikh & Karjaluoto, 2015). Adding to this, TAM is also the most utilised theoretical framework within the subject of customer attitudes and acceptance towards digital banking services (Waite & Harrison, 2015). Shaikh and Karjaluoto (2015) constructed a literature review on attitudes and the adoption of mobile banking, where they established that 23 out of 55 studies, in other words 42 percent, used TAM as their theoretical framework. Hence, it can be concluded that it is a suitable model for this thesis.

TAM suggests that a customer’s decision to use a technology system is determined by perceived usefulness (\(PU\)) and perceived ease of use (\(PEOU\)) which forms attitudes toward use (\(A\)) and behavioural intention (\(BI\)) (Davis et. al., 1989). Since the primary objective of this thesis is to determine customer attitudes, and the factors that influence customer attitudes towards AI in banking, the focus will be PU and PEOU influencing A, and not on BI or actual usage.

2.2.1 Perceived Usefulness (PU)

The concept of PU refers to whether or not an individual believes that the use of a certain technological system will enhance their performance (Davis, 1989). This implies that an individual will consider a technological system useful if it increases performance by, for instance, saving time, cutting costs, and other similar benefits (Aldás-Manzano, Lassala-Navarré, Ruiz-Mafé & Sanz-Blas, 2009). This thesis wishes to study whether PU is a significant factor of customers’ attitudes towards AI as a substitute to brick and mortar offices.

2.2.2 Perceived Ease of Use (PEOU)

The concept of PEOU refers to whether or not an individual believes that the use of a certain technological system will be free of effort (Davis, 1989). Scholars have found substantial evidence the PEOU affects customers’ intention to use digital channels for banking services (Aldás-Manzano et al., 2009; Davis et al., 1989; Pikkarainen, 2015). In this certain scenario, PEOU implies that, in order for bank customers to find AI to be superior compared to a physical visit to a brick and mortar office, the AI channel must be easy to understand and use. This thesis
wishes to study whether PEOU is a significant factor in relation to customers’ attitudes towards AI as a substitute to brick and mortar offices.

![Proposed Conceptual Model](image)

*Elements of the model that will be of importance in this thesis*

**Figure 1 - Proposed Conceptual Model**

The original TAM-model (extended by including external factors to fit the context of this thesis) (Davis, Bagozzi & Warshaw, 1989, p.985).

### 2.2.3 Extension of TAM

Waite and Harrison (2015) covered 10 years of literature within online banking in a study which analysed the usage and implementation of TAM, and its impact within the academic field. The authors claim that, today, TAM alone is rather too simple to use as a way of approaching attitudes and acceptance of new technologies. They suggest that TAM should include additional factors in future research, in order to fit today’s society better. A great amount of authors acknowledges the same conclusions as Waite and Harrison (2015) regarding their research, which emphasises the flexibility of TAM and how additional external factors can be included in the original model in order to add more value and support (Aldás-Manzano et al., 2009; Al-Somali, Gholami & Clegg, 2009; Karjaluoto, Mattila & Pento, 2002; Alsajjan & Dennis, 2006; Chang & Lu, 2004; Shaikh & Karjaluoto, 2015). Scholars have successfully included *demographics* (Al-Somali et al., 2009; Karjaluoto et al., 2002), *awareness* (Al-Somali et al., 2009; Aldás-Manzano et al., 2009; Alsajjan & Dennis, 2006), *social influence* (Al-Somali et al., 2009; Mills, Tennant, Mansingh & Rao-Graham, 2013), *convenience* (Yoon & Kim, 2007; Nui Polatoglu & Ekin, 2011), *risk* (Aldás-Manzano et al., 2009; Laukkannen, Sinkonnen, &
trust (Aldás-Manzano et al., 2009; Alsajjan & Dennis, 2006) and prior technological experience (Karjaluoto et al., 2002; Laukkannen, 2016) as external factors.

Previous research has primarily studied online- and mobile banking in general, and not so much AI within banking. However, a similarity can be seen between the two, as both phenomena are technological bank services that complement traditional customer service. Most references mentioned in the upcoming review of literature are based upon the grounds of online banking services, and should be considered relevant to the technological advances of AI within the same industry. Therefore, the authors of this thesis see all information in the literature review to be relevant for the sake of the current study. The factors of demographics, awareness, social influence, convenience, risk, trust, and prior technological experience are added to TAM as external factors in this research in order to better fulfil the purpose of this thesis. The following paragraphs will explain and discuss each factor, and will clarify why they are essential for this thesis.

2.3 Attitude towards change

When making predictions of consumer attitudes towards new technology, one must understand the definition of attitude itself. The characterisation of attitude, according to Fishbein and Ajzen (1975), is an individual's positive or negative feelings regarding their performance or behaviour, and the attitude, in turn, is influenced by their assumption of the consequences of this behaviour. In addition, the authors also state that the behavioural intention of an individual to carry out a certain action or performance, is a product of attitude and the subjective norms of the person (Fishbein & Ajzen, 1975). Subsequently, a person’s attitude is of great importance when it comes to the influence on their behaviour to perform a certain action, such as computer- or service usage, which is positively linked to attitude (Al-Gahtani & King, 1999). Hence, when determining customer acceptance of a certain service, such as AI within the Swedish banking industry, attitude is an important element to consider. Moreover, it is therefore, in this thesis, essential to examine the various factors and variables that influence and shape user attitudes.

2.3.1 Demographic Characteristics: Age

Several authors have included demographic characteristics as an important determinant of attitudes towards the adoption of new technology (Al-Somali et al., 2009; Harris, Cox, Musgrove & Ernstberger, 2016; Chung, Park, Wang, Fulk & McLaughlin, 2010; Karjaluoto et
Multiple studies have investigated, and found, that there exists a negative relationship between the likelihood of adopting a new technology and a higher user age (Chung et al., 2010; Harris et al., 2016; Lam & Lee, 2006). Harris et al. (2016) conclude that younger generations are more interested in, and have a more positive attitude towards new technologies than older users, who tend to prefer face-to-face communication with their bank. Karjaluoto et al. (2002) concluded that the typical user of online banking is a relatively young, and educated person, with high income. This is also supported by Al-Somali et al. (2009), who in their research on acceptance of online banking in Saudi Arabia discuss demographic factors such as age, gender, education, and income as significant factors of acceptance with regard to new technology and online banking.

It can be concluded that several authors have included demographic factors such as age, gender, education and income as important aspects in regards to acceptance of new technology. The age demographic, which this thesis limit itself to, is therefore a variable that is of relevance to include as a factor affecting customer attitudes towards AI services in the Swedish banking industry.

2.3.2 Awareness

In the context of customers adopting and starting to use a technology, it is argued that information and an awareness is of importance (Zhou, Lu & Wang, 2010; Gichuki & Mulu-Mutuku, 2018). The adoption process starts with knowledge about a specific technology, which later generates into the customer either rejecting it, or starting to use it (Davis, 1989). Awareness has by several scholars therefore been identified as one of the major significant factors regarding the usage of new technology in general, and specifically within online banking (Al-Somali et al., 2009; Beckett & Howcroft, 2000; Sathye, 1999; Pikkarainen, 2015). Making customers aware of a service or product, and its existence, within the banking industry is the first step in the purchase process model, and thus also in regards to customers potentially adopting the service (Honka, Hortacsu & Vitorino, 2015). It is therefore important that customers are aware of services offered by the bank, since it cannot be expected that the services are known and have been identified by potential users (Sathye, 1999).

Customers being aware of the artificially intelligent solutions that Swedish banks have adopted can be linked to PEOU, as a higher amount of information and awareness increases the PEOU
Continuing, awareness can also be linked to PU, since a deeper customer understanding of the service, in terms of benefits, can result in greater usage (Pikkarainen, 2015).

### 2.3.3 Social Influence

Social influence is the promoting force from close, or influential, groups and individuals, concerning whether someone should or should not use a specific product or service (Mills et al., 2013). Well established literature suggests that social influence often have an impact on consumer attitudes and behaviour (Fishbein & Ajzen, 1975; Kotler, Armstrong, Saunders & Wong, 1999) as well as technology adoption (Lu, Yao & Yu, 2005). The impact of social influence can be linked to TAM, as it has been proven to be an important extension of the model (Shaikh & Karjaluoto, 2015) and may affect the individual’s view regarding both PU and PEOU (Al-Somali et al., 2009; Mills et al., 2013; Shaikh & Karjaluoto, 2015). It has also been proven that there exists a relationship between social influence and customer awareness (Al-Somali et al., 2009; Davis, 1989; Mills et al., 2013). Shaikh and Karjaluoto (2015) express that social influence is one out of eight important variables concerning the attitude towards, and the adoption of, online banking.

### 2.3.4 Convenience

The two main determinants as to whether or not a service is convenient, are time and effort saving (Berry, Seiders, & Grewel, 2002). In addition, Brown (1990) has earlier suggested that there are five dimensions of convenience; time, place, acquisition, use, and execution. However, to this study, only time, place, and execution are relevant, as acquisition is not always significant when it comes to technology use, and use will be excluded to avoid disorientation with PEOU (Yoon & Kim, 2007). Additionally, in this study, time is referred to as the degree of an individual's perception that they can use AI services, in order to carry out an action at a time that is convenient for them. Place refers to the degree to which the individual feels they can use AI services to carry out the action in a place that is convenient to them. Execution concerns if and how the individual perceives AI services to be of convenience to them in the execution of their desired action (Yoon & Kim, 2007).

Individuals now have the option to bank over the internet, at almost any internet equipped location, which likely makes convenience a factor to consider when studying consumer
acceptance of internet bank services (Yoon & Kim, 2007; Nui Polatoglu & Ekin, 2001). According to Yoon and Kim (2007), convenience should be given due consideration as a key influence of consumer acceptance and use of information technology, as they argue there is a significant connection between the variable, and PU within TAM. Furthermore, convenience has been found to not only have a direct effect on PU, but also on PEOU (Yoon & Kim, 2007).

2.3.5 Risk

An additional factor that influences consumer acceptance and usage of online services within banking is risk (Aldás-Manzano et al., 2009; Howcroft, Hamilton & Hewer, 2007; Mills et al., 2013). Multiple studies (Jarvenpaa & Todd, 1997; Liao & Cheung, 2002; Park & Jun, 2004; Pavlou 2003; Ruyter, Wetzels & Kleijnen, 2001) see risk as one of the most considerable obstructions of computer- or internet related services. The attitudes connected to risk are negative, as it is primarily associated with uncertainty and the unfavourable consequences in relation to the actions of the individual (Bauer, 1960). In online banking literature, risk refers to the perceived risk of suffering a greater loss using a digital channel rather than visiting a brick and mortar office (Aldás-Manzano et al., 2009). According to Chang and Lu (2004), risk perception influences consumer behavioural strategies when it comes to service use, ergo, a lower sense of risk makes it more likely for a person to use a novel service. Additionally, in relation to banking services, security and privacy are seen as the most predominant risks for customers (Harris et al., 2016).

2.3.6 Trust

Several authors have argued that trust plays a more important role in the online environment than in brick and mortar offices (Harris & Goode, 2004; Reichheld & Schefter, 2000; Alsajjan & Dennis, 2006). It is a variable that has been used by several authors to investigate customers’ behaviour regarding the adoption of online banking (Zaman, Khawaja & Waqar, 2013; Al-Somali., et al 2009; Mukherjee & Nath, 2003). The term trust can be defined as one party having the confidence and a belief that the other party will show reliability, integrity, and act in goodwill (Morgan & Hunt, 1994). In most cases, the trust from a customer towards a supplier is based on previous experiences, despite the fact that it is not guaranteed that the supplier will act as in previous interactions (Gefen, 2000). For the relationship between a bank and its customers, trust is important due to the perceived uncertainty and risk associated with delicate personal information being transferred through online channels, instead of being communicated
face-to-face (Suh & Han, 2002). Mukherjee and Nath (2003) also discuss the importance of trust within banking, in connection to the sensitive and potential harmful information that is being communicated, by exploring if communication between a bank and its customer is positively related to trust. Lee, Kang and McKnight (2007) further investigate trust within the banking sector, and conclude that customer trust towards a bank and its offline operations also influence the attitude and perception towards a bank’s online channels. The authors conclude that customers’ perception of trust, in regard to offline banking with factors such as structural assurance, customer satisfaction and flow, can be transferred to their online channels by providing similar customer service. Furthermore, trust is also included as a factor because of the relationship with risk discovered by Aldás-Manzano et al (2009), in terms of trust being an important factor when reducing customers’ perceived risk in the usage of online banking services.

### 2.3.7 Prior Technological Experience (PTE)

Literature suggests that prior experience of technologies, and especially of computers, impacts consumers’ attitudes towards technological systems (Igbaria, Guimaraes & Davis, 1995; Karjaluoto et al., 2002; Laukkanen, 2016). Karjaluoto et al. (2002) show in their research that PTE is a significant factor that influences attitudes toward online banking solutions. Continuing, Au and Enderwick (2000) suggest that the higher amount of experience and knowledge an individual has about technology, the greater their understanding will be of a new technology. This implies that an individual with an extensive degree of PTE will appreciate the added value brought by new technologies more than an individual with a lesser degree of PTE (Karjaluoto et al., 2002). Furthermore, a consumer with good computer knowledge is more likely to participate in an active online banking usage. This means that they will most likely be using more than one online banking service at a time, as well being more willing to test new services (Karjaluoto et al., 2002).

It can be concluded that PTE has a relationship to both PU and PEOU, and affects them positively or negatively respectively, depending on their degree of PTE (Karjaluoto et al., 2002; Laukkanen, 2016). Scholars also prove that PTE has a connection to risk, where an individual with little PTE has a higher perceived risk towards a technological service than an individual with great PTE (Laukkanen et al., 2007).
2.3.8 Our Synthesized Conceptual Framework

As previously mentioned, prior research has expressed the flexibility of TAM and the possibility of extension in order to suit the purpose of the research (Aldás-Manzano et al., 2009; Al-Somali et al., 2009; Karjaluoto et al., 2002; Alsajjan & Dennis, 2006; Chang & Lu, 2004; Shaikh & Karjaluoto, 2015). Given the nature and purpose of this thesis, the age demographics, awareness, social influence, convenience, risk, trust, and prior technological experience will be included to extend TAM. This, together with a collection of data, aims to explore the attitudes customers have towards AI as a substitute to brick and mortar offices, as well as what factors influence their attitudes. The age demographic is included, as it has been found to be a significant underlying factor to attitude formation towards technology (Al-Somali et al., 2009; Karjaluoto et al., 2002). Furthermore, it has been found that awareness has a direct impact on both PU and PEOU (Al-Somali et al., 2009; Pikkarainen, 2015; Sathye, 1999), hence it is an important factor to include. It has been argued that social influence is an important extension of TAM as it is said to affect an individual’s view of both PU, PEOU (Al-Somali et al., 2009; Mills et al., 2013; Shaikh & Karjaluoto, 2015) as well as awareness (Al-Somali et al., 2009; Davis, 1989; Mills et al., 2013). Convenience is also included as it has been proven to be an important factor, affecting both PU and PEOU (Yoon & Kim, 2007; Nui Polatoglu & Ekin, 2001). As AI is an around-the-clock service, and brick and mortar offices are not, it may be a significant factor affecting the attitude that customers have. It can be argued that it is necessary to include risk, as it has been shown to have a significant influence on technology and online banking services (Aldás-Manzano et al., 2009; Laukkanen, Sinkkonen, & Laukkanen, 2007). With its direct effect on the choice between a digital communication channel and a brick and mortar office (Al-Somali et al., 2009; Suh & Han, 2002), and with the relation to risk (Aldás-Manzano et al., 2009), trust is also included in this thesis as a factor potentially affecting customers’ attitudes. Lastly, it has been noted that prior technological experience (PTE) has a relationship to both PU, PEOU, as well as risk, in the formation of an attitude (Karjaljuko et al., 2002; Laukkanen, 2016) and is therefore a significant factor to add.

The following figure illustrates an extended TAM that is used for this thesis and identifies the relationships found in the literature review.
Figure 2 - Conceptual Model: A Modified and Extended Version of TAM with Proposed Relationships

The arrows symbolise the relationships identified in previous literature:

- Demographics: (Al-Somali et al., 2009; Karjaluoto et al., 2002).
- Awareness → PU and PEOU → A: (Al-Somali et al., 2009; Pikkarainen, 2015; Sathy, 1999).
- Social influence → PU and PEOU → A: (Al-Somali et al., 2009; Mills et al., 2013; Shaikh & Karjaluoto, 2015).
- Social influence → Awareness: (Al-Somali et al., 2009; Davis, 1989; Mills et al., 2013).
- Convenience → PU and PEOU → A: (Yoon & Kim, 2007; Nui Polatoglu & Ekin, 2001).
- Prior technological experience (PTE) → PU and PEOU → A: (Karajaluoto et al., 2002; Laukkanen, 2016).
- Prior technological experience (PTE) → Risk: (Karajaluoto et al., 2002; Laukkanen, 2016).
- Trust → A: (Al-Somali et al., 2009; Suh & Han, 2002).
- Trust → Risk: (Aldás-Manzano et al., 2009).
3. Method

This section identifies the research philosophy, purpose and approach chosen for this thesis. Additionally, the collection of data is presented together with how the data was analysed and why the data can be considered credible and trustworthy.

3.1 Research Philosophy

The first step upon starting one’s research is to identify the research philosophy, which relates to the development, nature and extraction of knowledge with the purpose of selecting the appropriate philosophy to the research purpose (Saunders, Lewis & Thornhill, 2012). Specifying the research philosophy facilitates the process of gathering relevant information by avoiding unrelated and unnecessary facts, to instead help the authors of this thesis correctly analyse and make use of the data (Saunders et al., 2012). The term research philosophy can be divided into four different categories; realism, pragmatism, interpretivism and positivism, which are all philosophies that, depending on one’s research purpose, approach the research question in different ways (Saunders et al., 2012).

It can be argued that the most appropriate and relevant research philosophy for this thesis is the interpretivist framework, which is a philosophical view focusing on the differences between humans in society (Saunders et al., 2012). It is a subjective approach, where the study, data, and results have to be interpreted from customer’s personal experiences, attitudes and perceptions (Saunders et al., 2012). This also makes it an explorative philosophy, aiming to understand differences in human behaviour without controlling the situation through experiments (Dudovskiy, 2016). As this thesis aims to explore customers’ attitudes towards AI within banking, it can be argued that interpretivism is the most suitable approach due to the complexity of AI technology and the potential differences in customers’ attitudes. Furthermore, this thesis aims to answer the research questions using focus group, which is a method that fits well together with interpretivism since it is argued that theories and knowledge are created through observations and interpretations of social phenomena (Dudovskiy, 2016). Additionally, since focus groups are used, this thesis aims to both explore and understand customers’ attitudes and underlying factors, through discussions showing differences in customers’ opinions and thoughts. According to the interpretivism approach, the world exists based on subjectivity constructed by individuals, and it is therefore important to explore and understand the focus group’s social constructionism (Dudovskiy, 2016).
However, when using an interpretivist research philosophy, the results are formed by a specific amount of individuals and their subjective attitudes and opinions. It can therefore be argued that it is hard to generalize the results, potentially making the findings less reliable, since it has only been gathered from a certain amount of individuals. However, if the studies are done correctly and executed in great depth, the results can be considered reliable, valuable, and honest (Dudovskiy, 2016).

3.2 Research Purpose

The purpose of this thesis is to explore the attitudes that customers have towards AI in customer service, as a substitute to local brick and mortar offices within the Swedish bank industry, as well as identifying any significant factors that could influence these attitudes. This thesis therefore aims to use an exploratory approach, rather than descriptive or explanatory, since this thesis will investigate a fairly new field where it wishes to find new insights and to gain an understanding (Saunders et al., 2012). Furthermore, due to the limited research conducted on this specific topic, exploratory research is suitable due to the authors having to be adaptive to change, and be flexible, when trying to answer the research questions. The exploratory approach is less concerned with gathering statistical data, and instead focuses on investigating, understanding, and interpreting the data collected to clarify and give a deeper understanding of the research questions (Saunders et al., 2012).

With regard to the purpose of this study, this thesis does not aim to take an explanatory approach (Saunders et al., 2012), due to the novelty of both the subject, and the relationship between customer attitude and AI in banking. In addition, nor is a descriptive approach appropriate for this thesis, due to it focusing on the description of a situation or issue in greater depth to collect further information about a specific topic (Saunders et al., 2012; Smith & Osborn, 2003). Therefore, this thesis solely aims to use an exploratory approach by trying to find new insights, an understanding, and clarification regarding the topic, which could support and encourage further research (Saunders et al., 2012; Smith & Osborn, 2003). However, it is important to mention that the exploratory study formed through the conducted focus groups, generate qualitative findings which are open for interpretation. This can result in a possible bias, and in like manner, the findings can be argued to not represent the greater population and can therefore not be generalised to all. Additionally, exploratory studies mainly aim to explore the stated
research questions, and more often than not, there can be no specific and conclusive solutions presented (Malhotra & Birks, 2007).

3.3 Research Approach

There are two major types of research; deductive and inductive (Alvesson & Sköldberg, 2009; Saunders et al., 2012). The deductive approach is most commonly used in quantitative research to construct and test a hypothesis and a theory. Collis and Hussey (2013) explain the deductive approach as the foremost research method in natural sciences in which laws present the basis of reason. Since the nature of this thesis is exploratory, investigating a social phenomenon, one can argue that the deductive approach is not the most suitable.

The inductive approach is often considered to be the opposite of deductive, and is in contrast, most commonly used in qualitative research (Saunders et al., 2012). Qualitative data is collected in order to describe a phenomenon, as well as to get a broad understanding of the investigated concept that later is interpreted and analysed to form a theory. More often than not, the process of an inductive approach begins with the gathering of data, in order to obtain a broader understanding of the chosen topic. This data is then analysed in order to create a suitable theory (Saunders et al., 2012). By using the inductive approach one often discovers new relationships or theories unintentionally, in contrast to the deductive approach, where the possibilities are stated beforehand (Saunders et al., 2012). As this thesis explores customer attitudes towards AI as a substitute to brick and mortar offices by aiming to use an interpretivist study, without a hypothesis in advance, one can argue that it is more in line with an inductive approach. The inductive approach allows for the possibility to identify new themes and relationships, which is favourable for this thesis. The data is investigated through the lens of the conceptual framework, which forms an analysis that results in a formulation of a theory, aligning with the inductive approach (Saunders et al., 2012).

3.4 Literature Search

A literature review was carried out in order to find what has previously been researched within the field. As AI within banking is a new area of research, not much literature on the specific subject was found. The literature search was therefore focused on articles within online banking, as it was considered to be the most similar field of research. When collecting peer-reviewed articles, Scopus was the preferred database, where articles from International Journal
of Bank Marketing were most commonly referenced. The main keywords used in the literature search were: ‘Online/Internet/Mobile banking’, ‘Technology acceptance model’ and ‘Online/Internet/Mobile banking adoption’. Articles with a high number of citations were considered and favoured, in order to increase the credibility of the data. Recent articles were also preferred. However, as online banking is not a recent phenomenon, most articles are some years old.

3.5 Data Collection

A primary data collection consists of data that is collected first hand for a specific purpose (Saunders et al., 2012; Sekaran & Bougie, 2016). The primary data is later used in order to create a comprehensive analysis for the purpose. As this thesis is of exploratory nature, Saunders et al. (2012) suggest three principal ways of collecting suitable data; through a literature search, by interviewing experts in the subject, or by conducting focus groups. As the aim of this thesis is to explore customer attitudes towards a new phenomenon, focus groups are a suitable method for collecting empirical data (Collis & Hussey, 2014). By conducting focus groups, it is possible to get a deeper understanding of participants’ attitudes and feelings towards the chosen topic (Collis & Hussey, 2014), making it a favourable method for this thesis.

3.5.1 Focus Groups

A focus group is a method where a number of individuals are encouraged to discuss their attitudes, feelings, and reactions about a phenomenon, situation, concept, product or service together, under the guidance of a group leader (Collis & Hussey, 2014). These discussions are conducted several times, with various participants, in order for the researchers to identify, and analyse trends and patterns (Saunders et al., 2012). The researchers, often referred to as moderators, also play an important role in the focus group. Moderators help the group to stay within the boundaries of the topic, and encourage discussion, while simultaneously refraining from leading the group towards bias or specific opinions (Saunders et al., 2012). Furthermore, a focus group enables the researchers to observe the attitudes of several participants at once, which is both a time- and money saving method (Daymon & Holloway, 2011). A focus group encourages an atmosphere where participants can challenge their own thoughts and views on the subject, resulting in a deeper discussion (Daymon & Holloway, 2011; Saunders et al., 2014). In a focus group, the researchers should not only have the individual’s values and beliefs as the main interest, but also the discussion of the group as a whole (Saunders et al., 2012). It is also
important to observe emotions, tensions, body language, and other nonverbal expressions in order to get a comprehensive understanding of the dialogue (Collis & Hussey, 2014). In addition, previous research has found that the optimal amount of participants in a focus group ranges from four to eight individuals (Daymon & Holloway, 2011).

Compared with interviews, Saunders et al. (2012) explain that the insights that surface during a focus group discussion might not appear in a stand-alone interview, since the participants are not able to discuss ideas with others. Moreover, a focus group discussion gives the participants an opportunity to help each other develop new understandings, as well as reminding them about thoughts that otherwise might have been forgotten (Saunders et al., 2012).

When conducting focus groups there are certain risks that the researchers should be aware of. Firstly, one should be aware that some participants may dominate the discussion, which could hinder others from participating. Secondly, some participants may have significantly stronger attitudes or values that could potentially influence others thoughts (Daymon & Holloway, 2011). A third risk worth considering is that a participant might feel that their own opinion differs from the others, and that this participant would therefore be afraid to speak out. The moderators play a significant role here, and should operate the focus group with the aforementioned risks in mind (Daymon & Holloway, 2011).

The authors of this thesis applied focus groups due to the strengths of having multiple individuals interact and discuss with one another, which provided general thoughts, norms, and behaviours. Focus groups take advantage of the group dynamics and the thoughts and beliefs that are generated through a group conversation (Halkier, 2010). The following sections will describe how the focus groups for this thesis were conducted, along with how the data was analysed in a credible manner.

### 3.5.2 Sampling

The focus groups were held during the first two weeks of April at various locations in Sweden, the majority of them at Jönköping University. In order for each participant to feel encouraged and to feel as if they could speak freely and confidently regarding the subject, all participants were ensured anonymity. Each participant was also made distinct from each other by the use of abbreviations such as M1, F1, etc., meaning *male* and *female*. These abbreviations were used
to make sure there can be no apparent connection between the reader and the participants of each focus group, once again ensuring complete anonymity.

Table 1 - Focus Group Specifications and Participants

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The sampling method used in this study was non-probability sampling. Non-probability sampling suggests a range of techniques in order to select samples that are suitable for the judgement of the chosen study area (Saunders et al., 2012). In addition to this, Saunders et al. (2012) also recommend a non-probability sample to be the most convenient and fitting technique for an exploratory study, as it would supply a large amount of information to explore, without statistical conclusions, in order to obtain theoretical insights. It is also worth mentioning that there exist multiple sampling approaches within non-probability sampling, and that this thesis used a purposive approach. The purposive approach is most applicable, in the sense that this study selected participants based on specific characteristics (Saunders et al., 2012). For availability and accessibility reasons, it is also reasonable to incorporate convenience sampling into the sampling approach, in order to select samples that are conveniently available and within proximity of the researchers (Saunders et al., 2012). The participants were selected based on two specific conditions. The first was that the ages must range from somewhere between 20
and 60 years, as the thesis wishes to examine whether age plays any significant role in the shaping of attitudes. After this, the participants were divided up into groups based on generational differences, resulting in Generation Y and younger (born 1977-1995) in one group, and Generation X or older (1965-1976) in another. The second condition was that the participant must be customers at a Swedish bank, since the purpose of this thesis is to investigate the Swedish banking sector. In order to avoid biased results (Saunders et al., 2012), there was no condition or limitation regarding origin. This was possible while still using convenience sampling, as the students of Jönköping University are of various backgrounds and origin, and the older sample generation (Gen. X or older) were selected from various places in Sweden.

The intention of this chosen sampling collection was to conduct six focus groups with six members in each group. However, the participation rate was not as ample as one could hope from the beginning. Due to this, a more convenient and efficient sample method was needed, thus a Facebook group was created in order to easily invite and gather potential participants. The invited people had the possibility to sign up for time slots that suited them and after this, it was possible to create a sufficient number of focus groups, and five were able to be conducted. In each group, the amount of participants ranged from four to six participants. In total, there were 26 people taking part. Of these, 14 were identified as male, and 12 as female.

3.5.3 Questionnaire

The participants were, in the beginning of the focus groups, offered coffee, snacks, and some time to familiarise and talk to each other. Thus trying to create a friendly and comfortable environment, which the moderators believed was going to be important for the discussion and final results. After the participants had gotten familiar with one another, the moderators handed out a questionnaire (see Appendix 2), which took about five minutes to fill out. The purpose of the questionnaire was to get an understanding and a general knowledge regarding each individual participant. The questionnaire included questions concerning age, degree of education, income, which bank the participant is a customer at, how many times a year they are in contact with their bank, and which way of contacting the bank they prefer.

After the more general questions, the participants were asked to rank each one of the eight predetermined factors included in the thesis. The eight factors (PU, PEOU, risk, trust, convenience, social influence, awareness, and PTE) were by each participant ranked on a scale
from one to eight, from most to least important factor when selecting customer service channel to use when contacting one’s bank. 1 was regarded as the most important factor, while 8 was regarded as the least important. The participants had the possibility to rank factors as equally important, however, none of them did. The first focus group worked as a pilot testing for the questionnaire. The authors realised that each factor needed some further verbal explanation from the moderator in order for the participants to fully understand each factor. For the following focus groups, these verbal explanations were added, and a new questionnaire was later conducted with the pilot focus group. The information gathered from the last part of the questionnaire will be used as guidelines for this thesis, and will together with the focus group discussions help the authors identify and discuss the various factors.

3.5.4 Focus Group Discussion

After the initial stage, where the participants got familiar with one another and filled out the questionnaire, the second part of the session began. The focus groups had three moderators, two leading the discussion, and one mainly taking notes in order to also take the nonverbal expressions into account. Furthermore, to complement the notes taken by one of the moderators, the focus groups were, after the participant’s approval, recorded. The recordings enabled the authors to fully transcribe all of the dialogues, resulting in a lower risk of any opinions or thoughts being left out. The focus groups started with a presentation of the thesis background, and information on the topic that was going to be discussed. Due to the novelty and complexity of the topic, the participants were given a comprehensive explanation of relevant aspects, such as AI technology and how it is used within the bank industry. Examples of how AI technology is used was not only given verbally, but also by showing a scenario and a conversation with Aida, a virtual assistant at one of Sweden’s leading banks (SEB). Aida is a virtual assistant, based on artificial intelligence, that can help customers with issues and questions regarding different matters, two examples being freezing credit cards, and giving simple investment advice. The example shown by the moderator was a question of how to install the online payment application ‘Swish’, where Aida step by step explained how to get the application. The participants were encouraged to ask questions during the entire introduction, as well as throughout the discussion, if something was unclear or needed further explanation.

After this information, the participants were asked to explain and discuss their general attitude toward AI as a substitute to brick and mortar offices. This gave the moderators an understanding
of the participant’s immediate feelings, emotions, and thoughts. After this initial discussion, semi-structured questions were used to guide the focus groups, which also allowed the moderators to add questions depending on the discussion (Collis & Hussey, 2014). Based on the conceptual framework of the thesis, predefined questions were formed on the basis of the predetermined factors (PU, PEOU, awareness, social influence, convenience, risk, trust, and PTE). The questions were open-ended in order to examine the participants’ feelings and attitudes, and how the factors affect their attitudes. The interview guideline with the pre-set questions can be found in Appendix 4.

After the participants had discussed the different factors, the moderators asked if there was anything the participants wished to add, as well as if they all believed that they had the opportunity to express what they wanted.

### 3.6 Data Analysis

To accurately understand the data collected from qualitative research, Saunders et al. (2012) specified guidelines where a highly formalised approach is used, and the collected data is categorised. The ideas regarding the categorisation of data is described as the process of sorting sections from a chunk of data of a general phenomenon, and labelling it accordingly (Spiggle, 1994). Malhotra and Birks (2007) further explain that the procedure of categorisation in qualitative research can be structured according to codes that are based on the theoretical framework.

As Malhotra and Birks (2007) suggest, the collected data was analysed using a directed content analysis. By using a directed content analysis, the researchers had the ability to develop initial categories of coding based on existing theory (Hsieh & Shannon, 2005). As the pre-set questions used in the focus groups were categorised by the predetermined categories based on the conceptual framework (PU, PEOU, awareness, social influence, convenience, risk, trust and PTE), the directed content analysis approach was suitable. In a directed content analysis, a categorisation matrix can be developed where the collected data is coded according to the different categories (Elo & Kyngas, 2008). The steps of the data analysis were as follows: first, all audio recordings were transcribed so that the data was easily accessible. The transcribed material was then read by all three authors in order to get a better understanding of the material. The authors identified key points individually, and thereafter compared the results and
interpretations, creating an investigative triangulation (Williamson, 2002). Secondly, the data was hand-coded by the authors and sorted into the predetermined categories. However, attention was also paid towards new and emerging aspects, in an attempt to provide additional findings of interest.

An analysis of qualitative data involves interpretation, which means that it can be subjective (Seers, 2012). However, the procedure of the analysis followed the principle of systematic, sequential, verifiable, and continuous analysis (Rabiee, 2004), in order to reduce the potential bias and subjectivity of the authors.

### 3.7 Credibility and Quality of Research

As mentioned, qualitative research can be criticised to be a subjective approach, due to it potentially being researcher biased (Cope, 2014; Creswell, 2014). However, the five criteria developed by Lincoln and Guba (1985), namely authenticity, dependability, transferability, confirmability and credibility, can help measure and enhance the trustworthiness of the research, and ensure a degree of objectivity.

When opinions and thoughts from the participants are interpreted and presented in a truthful and honest way, the research can be regarded as credible (Cope, 2014). This is regarded by Shenton (2004) and Suter (2012) as the most crucial factor when it comes to trustworthiness, and was in this thesis ensured by using investigative triangulation. A technique where multiple sources are being used to create a deeper understanding when collecting and analysing the data (Suter, 2012). As previously mentioned, the collected data was studied independently by the three authors of this thesis to limit the influence on each other’s opinions. Later, the independent findings were put together and compiled through discussions and comparisons of each researcher’s individual key findings, arguably making the research credible through the usage of triangulation.

Furthermore, dependability is referred to as the probability of the researchers and the reader of the thesis drawing equal or similar conclusions, based on the readers’ level of ease to understand and interpret the content. Making the level of trustworthiness high, if the study finds similar findings and results when reproduced (Shenton, 2004). Again, the use of investigative triangulation further strengthens the dependability of this thesis. This way, the findings have
individually been studied and compared by all three authors and collectively sorted into categories, in order to ensure dependability.

Confirmability stresses the importance of objectivity by presenting the data with a minimized risk of it being biased, thus emphasizing neutrality and avoidance of researcher partiality. However, since the content, analysis and interpretations are made by the researchers there is, due to the human factor, a risk that the results have been influenced (Cope, 2014). On the other hand, human bias can be argued to always be a factor, and the triangulation technique mentioned above, can be seen as a way to minimise the risk of the authors potentially influencing the results.

The degree to which the results from a qualitative research can be transferred or applied to other research, situations, or contexts, refers to its transferability (Ryan, Coughlan & Cronin, 2007). One can argue that, if this study were replicated by others, the findings would not necessarily be identical. However, this thesis describes the full course of action of the research throughout, in order to fulfil the principle of transferability. This way, the reader will be provided with enough information to conduct similar research. As this thesis explores customers’ attitude towards AI within customer service, the authors of this thesis believe the study is transferable to other banking industries, as well as to other industries using AI in customer service.

Authenticity, which by Cope (2014) is explained as the display of intangible and nonverbal statements, such as emotions and expressions from the participants, was by this thesis provided from the notes that were taken during all five focus groups.
4. Findings

In this section, the empirical findings collected through the conducted focus groups and the questionnaire are presented. Quotes from focus group participants are provided in each section.

4.1 Questionnaire Findings

The questionnaire handed out in the beginning of the focus groups (see Appendix 2) was to collect individual background information on each participant, as well as to explore what factors were seen as more, versus less, important when selecting which customer service channel to use. The majority of the total 26 focus group participants were between the ages of 20-25, a few between 25-30, while the older generation was represented by eight participants who were between the ages 40-55. All of the participants, except one, answered that they were a customer at one of the four major Swedish banks (Nordea, Swedbank, SEB, Handelsbanken), where the participants on average contact their bank 1.6 times a year (see Appendix 5). Furthermore, the questionnaire showed that when being in contact with one’s bank, the most preferred way is by human interaction (telephone and brick and mortar offices) (see Appendix 6).

When looking at the factors ranked by the participants, based on the choice of which channel to use when contacting one’s bank, it can be seen that convenience, followed by PEOU and PU, were considered to be the most important factors. While PTE, followed by awareness and social influence, were the least important (see Appendix 7).

4.2 General Attitude

After the participants had received some background information, and seen examples of AI in banking, they were asked about their spontaneous responses and attitudes towards AI as a substitute to brick and mortar offices. The overall attitudes towards the service itself were mainly positive, where beneficial factors such as convenience, simplicity, and availability were mentioned and discussed.
M5: “It sounds like a good service, I would without a doubt use it. I don’t appreciate going to the bank to talk and stand in a line. I prefer to send an email or maybe just quickly call, so AI would be perfect for me.”

F6: “I have never felt that I have been in need of a physical office, and I think that a lot can be solved through the telephone and AI. What you displayed to us is called a chatbot, and I think it will be more and more popular. I don’t have the need for a physical meeting.”

However, although the attitudes were generally positive towards AI itself, the degree of complexity of the task was a major factor determining the attitude and willingness to use, or not to use the service. With more complex tasks such as loan applications and investments, face-to-face communication and being able to negotiate and discuss with a human, is the preferred customer service channel. This will be further elaborated in paragraph “4.3 Perceived Usefulness (PU)”. Although the majority of participants were somewhat positive towards using the service for simpler tasks, M13 and M14 did not see any specific benefits with the service. Instead, they want the banks to operate and function as they have done in the past.

M13: “You don’t want to talk to a machine. You want to talk to a human.”

M14: “Banks have become machines, that’s it. Like a computer. There’s no personal service whatsoever.”

The majority did not believe that it could work as a substitute to brick and mortar offices, meaning that the personal meetings are still too important. They did however consider it a good complement to the existing customer service channels.

M10: “Today, I’d rather walk to the local office and ask for help since I am used to that. I feel more comfortable with that than AI and I can’t be the only one thinking like this. Hence, I only see it as a complement.”
F9: “No I don’t see it as a substitute. Personal service is too important. I do however consider it a good complement.”

Four of the younger participants in focus group three, F6, F7, F8 and M8, were the only ones that did consider it as a potential substitute to the brick and mortar offices. They meant that AI, together with the online bank and mobile application, could be the future of banking.

M8: “Together with the online bank, the app, and all other online services, I can see it as a substitute to the local office. But I don’t believe AI by itself could work as a substitute to everything.”

4.3 Perceived Usefulness (PU)

During the focus groups it was investigated whether the participants saw any usefulness in using AI itself and also in using AI instead of visiting a brick and mortar office. Not only did the discussion include whether the participants see it as useful or not, but also why they did or did not. Overall, a large majority of the participants perceived AI as a useful service, where convenience was one of the major factors emphasising PU. This will be further elaborated in paragraph “4.7 Convenience”.

One of the most compelling observations in regards to PU was the difference in simple versus complex tasks. The majority of participants emphasised a feeling that AI has a higher usefulness when it comes to simple tasks, such as ordering a new credit card, opening a savings account or downloading bank related applications such as ‘Swish’. The participants emphasised perceived benefits such as time saving, flexibility, and availability, which they valued highly in regards to simpler tasks. For instance, F2, M4, M5, F4, F8, and F12 all mentioned that they often feel frustrated when they have to stand in line to receive help, both on the telephone and at a brick and mortar office. The participants implied that not having to stand in line was a significant benefit with AI, making them feel that it is a useful customer service channel. However, when participants were asked about using AI for more complex tasks, and tasks that involve a larger amount of money, such as private counselling, taking a loan or receiving an investment proposal, the majority would rather use a traditional customer service channel.
M1: “Using AI for simple tasks, such as opening a savings account, would be perfect.”

F7: “I think that when it comes to simpler tasks, such as downloading Swish or if you need assistance with something simple, I would much rather use AI. But if it concerns more complex tasks and more money, then I’d rather talk to a real person.”

M11: “I think that it will never work with tasks where you need counselling, then you want to talk to a real person.”

Overall, there was no major difference depending on age differences in regards to PU. However, there were two participants from one of the older focus groups, M13 and M14, that did not perceive any significant usefulness with AI at all, meaning that what AI could help them with is probably the same as you can find by yourself on Google. Also, another older participant, F10, expressed a low PU, meaning that there are too many tasks that AI cannot do and described an example of when her wallet was stolen.

M14: “If you have a simple bank related question you could just google it, you don’t need specific help from the bank.”

F10: “There are a lot of tasks AI can’t help you with and that’s why I don’t perceive it to be very useful. One time my wallet with cash, credit cards and ID was stolen, and I was in a hurry and in need of cash. So I went to my local brick and mortar office to ask if they could help me withdraw cash, but as my ID was stolen I could not identify myself. Luckily one of the bank personnel was an acquaintance of mine and could vouch for me. With AI, this would never have worked out.”

Something that emerged from the discussions regarding complex tasks was that the participants often want to have the power to negotiate. Many participants thought that they had no negotiation power when using AI, and therefore perceive brick and mortar offices as superior for tasks when negotiation possibilities are involved.
F10: “The negotiation possibilities disappear; I don’t think I can negotiate with AI.”

M1: “When negotiations are involved I don’t want to talk to a computer, because then you can’t play on the personal elements of a meeting at all.”

4.4 Perceived Ease of Use (PEOU)

When investigating the participants PEOU they were asked about how they perceive the current AI services, such as SEBs virtual assistant ‘Aida’, and also what their PEOU was in regards to both the system design, as well as the process of using AI. It was also asked how the participant’s PEOU of AI was in comparison to visiting a brick and mortar office, or making a phone call.

Most of the participants considered the current AI services easy to use and well designed in general. The participants explained that it visually looked like other chats that they had experienced, and therefore felt that there were no complications when using the bank’s AI services. When the participants were asked about the system design, the answers were quite straightforward, and they perceived it as simple.

F7 and F8: “It feels and looks simple. Just like other online chats.”

However, when the participants were asked in more detail about PEOU, in regards to the process, some of the participants answered that they did not perceive it as effortless. M4 stressed that it can be difficult to explain a problem in a good way when using text. F1, together with F2 expressed that, when there are a lot of steps to follow, they prefer to receive assistance from a real person.

M4: “I see difficulties in explaining to AI what exactly my problem is.”

F1 and F2: “Following technical steps can be difficult, if there are a lot of steps I rather make a phone call. Maybe I am lazy, but steps confuse me and I rather have someone assist me.”
The older participants expressed even more difficulties in regard to the process, saying that the replies could be vague and not explanatory enough, making it difficult to understand how to proceed.

M11: “I didn’t think it was very simple. When one of the replies was that I was supposed to open my personal online bank and fill in the correct information, it did not explain where in my online bank. And I didn’t see it in front of me, which made it even more difficult.”

F10: “I totally agree. And what type of information? The reply was too vague and unclear. It should have included an informative picture for example.”

When the participants were asked about their PEOU of AI, in comparison to visiting a brick and mortar office or making a phone call, both positive and negative aspects were expressed. Some responded that using AI can be more effortless than other alternatives, as you do not need to physically visit the bank and that you receive help instantly from the right person.

M6: “When you want help, you want to talk to the right person immediately. Often, you are being sent around between different departments until you finally get to the right person (...) this process is quicker with AI.”

On the contrary, some participants made almost opposing statements. It was said that if it takes too much time, or if you have to send a lot of messages with the AI service, it is more free of effort to simply make a phone call, or visit a brick and mortar office.

M5: “It’s annoying if you need to send 20-30 text messages. I want to send 3-4 and receive immediate response. If it’s too complicated I don’t want to use AI.”

F9: “The AI service needs to be simple. I don’t want to sit there for 20-30 minutes and end up having to contact the bank in another way. If it’s that much effort, I don’t want to use it.”
4.5 Awareness

During the beginning of the focus groups, the participants were asked if they were familiar with what AI is, and that it has been implemented by banks. All of the participants had an idea of what the technology is, and that it is used within customer service. M1, F1, F6, and M14 had prior experience from previously using similar services. However, only M1, M9, and F6 were aware that the service is existent in Swedish banks, thus none of the participants had experience of using any of the banks AI services.

M1: “I have heard about chatbots’ and seen that it exists in some places on the internet, even at banks, which I have never tried.”

M9: “I am kind of aware, but not that it can be used that well already.”

When the participants were asked if awareness, in the form of information, was an important factor for them to use the service, the general attitude was that it had some effect. M3 expressed that more information gives you more ground to stand upon, which will increase the likelihood of usage. M8 and M9 also discussed the importance of bank’s making customers aware of the service existence, as well as the importance of promoting it correctly.

M9: “It feels like I would have trusted AI more if I had some information about it compared to if I would have found it myself.”

M8: “You want the feeling that the bank has put resources into the service, in the phase of them offering it.”

How the information is delivered was also something being discussed as F5 and M8 pointed out that they were not responsive to the banks telling them, or trying to convince them to start using it. Instead the banks should deliver simple, easy to read, and genuine information.

F5: “I do not think that I would have used the service just because someone at the bank told me to use it.”
4.6 Social Influence

Questions were asked as to get an idea on the effect social influence has on the consumer, and whether or not it is a relevant aspect to consider. According to a majority of the participants, it was considered an important aspect, and was mentioned to be more important than other channels of information. F2 mentioned that it was vital for her that someone had tested it prior to her, and that word-of-mouth information was important for her to trust the service.

F2: “It’s needed that someone you know has tried it before, then I might dare to use it myself and would maybe use it more often. But I don’t think that I would be the first to log on and use it. I would rather wait and try it after someone else has.”

Other participants mentioned that social influence felt more genuine than information from the bank, and that this confirmation made them feel more secure in their decision to follow up and use it after an acquaintance.

F4: “It feels more secure. You know that the person has used it, and doesn’t get paid to say something about the service. It’s a friend that just simply confirms something.”

A younger participant acknowledged that social influence could be an age-related factor, and that due to his inexperience of using bank-services, social influence is seen as more important.

M4: “It could be a bit of an age-thing. I haven’t been in contact with the bank that much, and haven’t really needed to yet, so I would probably have checked with my parents first as they have more experience.”

The older participants were split in their opinions. M11 mentioned that social influence did in fact have an impact, whilst F12 and F11 said it did not.

M11: “Yes, if there are a few people and they all start saying good things about it, then it will definitely affect me.”
F12: “It doesn’t really affect me at all to be honest, it’s more about what I feel about it myself”.

4.7 Convenience

In terms of being able to proceed with a bank errand without difficulty, and at a time and place that is appropriate for the individual, convenience was important for the majority of the participants. It was mentioned early on by most of the younger participants as a direct perceived benefit of AI. When group one was asked about the importance of convenience, all individuals agreed that it was a very valuable and relevant factor. M1, M2, M3, M4, F1, and F2 agreed upon this, all making similar statements.

F1 and F2: “For me, convenience is very important.”

The speed, flexibility, and accessibility of it was mentioned by multiple participants as important factors. The convenience of AI as a customer service channel was specifically mentioned as a positive aspect in connection with simpler bank errands.

F7: “Being able to receive help when you want is important. Most of the time you need to call, go online, book an appointment, there are so many steps. With AI, the whole process is shortened.”

M5, F4 mentioned what convenience means to them, and how this should be applied to the AI technology in order to make it appeal to users.

M5: You should be able to get a quick answer, and your issue is fixed within 5 minutes. In that sense, convenience is very important.”

F4: “It must be quicker than needing to go to the brick and mortar office and queue. The rapidity is important.”

When the older participants were asked if AI would be an alternative for them if they were in need of help after closing hours of a local brick and mortar office, the majority said it was not.
F12: “If I need a quick answer, I wouldn’t want to chat or text, I prefer to call their customer service because the call centre is open until 10 in the evening.”

An exception for the older participants was focus group four, where convenience was seen as slightly more positive, but still, it did not outshine the importance of brick and mortar offices.

M11: “I think convenience is beneficial, you have time to do other things, and when you want. At the same time, it’s a shame, what will happen to the local brick and mortar office?”

4.8 Risk

When risk was brought up, all participants were asked if they perceive any risks in correlation with AI, along with if and how this perceived risk affected their attitude. All groups answered that there was some kind of risk involved with AI as a form of customer service. Most discussed was the risk of misunderstandings and confusion. Two of the older participants mentioned the risks of misunderstanding between verbal and written communication.

M14: “Misunderstandings, frustration, dissatisfaction, the whole thing. You just talk to a machine, who perhaps has no idea of what you’re trying to say.”

F12: “If you’re speaking to a person and you have a problem, you might not always need to explain it in such detail, and they might still understand what you mean. But if you have to write it down in text for a machine to understand, and explain more thoroughly and precisely, it might not work.”

Another question was raised among many of the participants in relation to issues that could arise due to misunderstandings between AI and humans. Many of the participants speculated on “who will take the blame?” if a problem should occur and discussed the matter of a scapegoat when it comes to risks, and the importance of having someone to blame for mistakes.

M1: “You want a face, and someone to blame. If there’s some kind of misunderstanding, then I want to refer to a person, not a robot. If something
happens when you use a robot, then no-one is accountable, and that isn’t good.”

M6: “If misunderstandings happen with AI, who takes the responsibility?”

Multiple participants mentioned that the personal, and physical service was very important for more complex tasks. This was connected to risk-minimisation, and the size or complexity of an errand was said to be a crucial factor in the willingness to adopt a new technology. According to most participants, smaller tasks were affiliated with lower risk, making them more willing to use AI for these.

F8: “If I needed help installing Swish for example, and something were to happen, I wouldn’t really care. But if I wanted a loan, then the risk would be higher.”

M6 commented on the risks of hacking that are associated with technology, and saw this as a large negative factor. Participants in other groups also drew attention to the risks involved with fraud and scamming, and the uncertainties associated with handing out personal information over digital platforms.

M9: “That’s what I feel is more secure with face to face. You know it isn’t fraudulent. You can’t be as sure of that with AI, if it’s hacked or not.”

F9: “I’m wondering about the security. How easy is it for the technology to be hacked? If I’m giving it my account-number or something like that, that’s something you don’t often want to do digitally.”
4.9 Trust

When exploring trust, it was important to find out what it is that creates customer trust in traditional service channels, and how it differs for AI. As described in the theoretical framework, trust has a link to risk and it was also therefore important to explore that connection. The findings show that the participants were a bit split in their opinions in regard to trust, where only one fifth expressed that they would trust AI more than a human. Thus, dividing the participants up into two groups.

The participants that found it easier to trust AI in banking pointed out that computer-generated answers are more reliable and that humans often are more wrong than computers. M2 mentioned that human factors and human mistakes makes AI more trustworthy. Also, M11 stated that humans can be fake and involve personal opinions.

M2: “I trust AI more. The risk is bigger that human factors make mistakes. AI is standardised and if something goes wrong it’s probably my own mistake.”

M11: “People can be fake. I trust AI more because it sticks to the truth. AI does not involve any personal values.”

The majority, who said they trust humans more than AI, expressed that they place more trust in something when personality attributes and human values are included, something AI lacks. For instance, M9, M10, and F7 mentioned that humans can easily create a feeling of trust and a sense of security, something they do not feel with AI.

M9: “There is something special in meeting bank personnel dressed in suits, it generates a feeling of trust. You want to see the person you put trust in.”

M10: “A computer can’t read you in the same way as a human can, and it’s therefore easier to trust a human.”
F7: “A human has body language, can change the tone of their voice and explain in different ways depending on the situation. AI can’t really do that yet.”

The majority of the older participants belong to the group that trust humans more than AI. They find it easier to trust humans as they have grown up with brick and mortar offices. It was also noticeable that some of the older participants, for example M13, had a low trust for AI since his overall trust for his bank was low.

F9: “I want a sense of security when doing bank related errands. From past experience, I feel a sense of security when visiting a brick and mortar office and talk to the personnel there.”

M13: “I have lost a lot of trust for my bank so why would I trust this new service?”

4.10 Prior Technological Experience (PTE)

The participants were asked how much of a role PTE plays when choosing a customer service channel, and if PTE is a factor that either hinders them or positively affects them in regard to AI. The majority of participants believed that their PTE was high and did not consider it a significant factor to hinder their usage of AI.

F1: “Yes, my PTE makes me feel positive towards using AI.”

M6: “All swedes are relatively technologically experienced, we know how to use computers and almost all households have access to technological devices.”

It was, however, possible to notice a difference between the two age groups even though both groups thought they had a sufficient level of PTE. The older age groups mentioned more complications in regard to PTE than the younger age groups. F9 and F10 both stressed that PTE is a factor that can hinder them the first time they use a new technology.
F9: “I am used to computers but I don’t always feel very comfortable when using new applications and functions. It takes a while to get used to it and therefore my PTE affects me and may, potentially, make me feel less positive towards AI in the beginning.”

F10: “Yes I agree with F9, when you have learnt a new function it’s a totally different thing. But my PTE can hinder me from the beginning. If I do not understand how to use AI, I would rather use a customer service channel that I am experienced with.”

Some participants pointed out that it may not be the PTE that plays the most important role, rather a sub factor from PTE, namely experience of the online world. For example, F6 compared herself to her grandmother, meaning that if you are used to doing tasks online, you will have positive attitudes to new online services. M9 added to this, and claimed that a prior online experience is the most important type of PTE.

F6: “AI will be simple if you are used to an online world and have an online attitude. Compared to my grandmother, who is used to visiting the traditional branch and not doing things online, I am probably more positive towards AI.”

M9: “Being used to doing tasks online plays a significant role. If you are experienced with the online bank you will probably find AI easy to use.”

Adding to this, both age groups mentioned that the even older people in society, 65 years and older, may find more difficulties due to a low degree of PTE. Also, the majority of all participants stated that PTE in regards to AI is a generation issue.

F10: “If I think about my soon to be 80-year-old parents, it wouldn’t be a solution for them. They wouldn’t understand how to use it and they would want to go to the brick and mortar office.”

F2: “I am quite an untechnical person, but I am still better than my parents and grandparents. I can’t see my grandparents using AI.”
4.11 Additional Factors Shaping Attitudes

Some additional factors, not included as factors in the theoretical framework, were brought up and discussed. Lack of prior banking experience was a factor that was brought up as something that has a negative effect on some of the participants’ willingness to use AI.

*M8:* “If I feel somewhat comfortable with what I am going to do, there is no problem and I would not have a problem to use AI for it. But if it’s something that I have never done before, like buying stocks for example (...), I would really prefer to meet someone face-to-face who can show me how it works.”

*M6:* “Like getting a mortgage or loan. Since I am still young and I don’t really have a clue what it is or how it’s done, I would want to be in safe hands when applying for my first mortgage and not let technology handle it.”

In addition to prior banking experience, prior AI experience was brought up and discussed by M14 and F1. They had prior positive and negative experiences, respectively.

*M14:* “I have used an Easyjet chatbot and that was alright, it went pretty well. But I don’t know if I would want to do it with the bank as well. It’s perhaps something that you wouldn’t do if you were older. But after the experience I had with Easyjet I would maybe do it, it was a pleasant experience.”

*F1:* “This is how I think it will go; I’ll start using it when it has been further developed. Previously when I have used similar technologies, I have felt that I haven’t gotten what I wanted, and as a result I have become frustrated.”

A social factor mainly brought up and discussed by focus groups three and four, that had a negative effect on their attitudes, was that AI implemented by banks can result in many employees losing their jobs.

*F6:* “Sadly, I think that many jobs will disappear. As well as the personal interaction.”
F10: “I don’t think it’s good. Perhaps I’m conservative when it comes to this. But what will all the people who work at banks do? They won’t have any jobs left.”
5. Analysis

This section analyses the empirical findings in light of the theoretical framework presented earlier in the thesis. It is stated whether the factors shape positive or negative attitudes, and relationships between the factors are discussed to gain a deeper understanding of the results.

5.1 Perceived Usefulness (PU)

The major findings when exploring the participants PU of AI was that PU appeared to vary significantly between the types of financial services, where the participants stressed the differences between simple and complex tasks. In consistency with previous literature (Aldás-Manzano et al., 2009; Davis et al., 1989; Pikkarainen, 2015), it is possible to identify that PU has an effect on customer attitudes. Looking at the questionnaire, PU was also found to be the third most important factor for customers when choosing which customer service channel to use (See Appendix 7).

An individual perceives a technological system useful if it increases his or her performance by, for instance, saving time or cutting costs (Aldás-Manzano et al., 2009). A majority of the participants pointed out that convenience was as a significant benefit of AI for simpler tasks, which is consistent with Yoon and Kim (2007), who explained that convenience has a strong effect on PU. The participants valued the benefits of convenience with regard to time and place, and that they do believe that AI can increase their performance, thus shaping positive attitudes towards the service. The findings are therefore also coherent with Durkin et al., (2003) who explain that bank customers prefer online services when there is a lack of time, and when it is more convenient compared to traditional channels.

When the participants discussed more complex tasks, such as investment proposals and applying for loans, there was more of a resistance towards AI. They explained that when more money is involved or when there is a higher risk, they would rather visit a brick and mortar office. Adding to this, some participants also expressed that when there are negotiation possibilities, they do not see any PU of AI, thus shaping a negative attitude. Durkin et al. (2003) explain that as long as customers perceive a higher quality through the traditional channels they will be resistant to switching to the new technology, and will remain resistant until an online channel can provide communication and information of equal quality. As participants saw
issues in regard to complex tasks, negotiations, and that they do not believe that AI can do “everything”, AI is not perceived as a channel that can provide the same quality and reliability as a brick and mortar office.

From some of the participants there was almost no PU of AI at all. This implies a negative attitude, as they do not fully accept the new technology, and would rather stick to the brick and mortar office. Further, this adds a relationship between PU and awareness, as these participants did not know what type of new value AI could bring them, confirming the same relationship that Pikkarainen (2015) found.

The findings show that most participants perceived AI as useful, but not for all financial services. This means that it can be considered a complement, and that PU shapes both positive as well as negative attitudes. Also, no significant relationship was found between the age demographic and PU. It is possible to argue that PU is a significant factor affecting the attitudes that customers have towards AI as a substitute to brick and mortar offices.

Figure 3 - Perceived Usefulness and its Determining Factors

(+) indicates a positive relationship and (-) indicates a negative relationship
5.2 Perceived Ease of Use (PEOU)

Multiple scholars have found evidence that PEOU affects customer attitudes towards, as well as intention to use, digital channels for banking services (Aldás-Manzano et al., 2009; Davis et al., 1989; Pikkarainen, 2015). Relating to the purpose of this thesis, PEOU implies that customers must find AI easy to understand and use (Davis, 1989), in order for them to consider it superior to brick and mortar offices. The findings are consistent with previous research as it has been found that PEOU affects customer attitudes. PEOU was also, according to the questionnaire, the second most important factor when choosing which customer service channel to use (see appendix 7).

Concerning system design, all participants perceived it as simple which indicates a positive attitude. Some participants made connections to other online chats and explained that similarities positively increased the PEOU. These findings are coherent with previous research that have identified relationships between PTE and PEOU (Karjaluoto et al., 2002; Laukkanen, 2016). The findings with respect to the system design were not surprising, as all participants had knowledge and experience of computers. It was therefore more interesting to explore the attitudes of PEOU in regards to the process of using AI.

Davis (1989) explains that if a new technology makes the process more effortless, positive attitudes will be generated. For that reason, AI needs to feel more effortless than visiting a brick and mortar office in order for customers to fully accept it. The findings show that the participants were split in their opinions of this matter. The participants that considered AI to be a more demanding channel, compared to visiting a brick and mortar office, were mainly the older participants. They spoke on the difficulties of explaining their problems in writing, following lots of steps, and that it is a hassle to send 20-30 messages. These findings show that there is a relationship between PEOU, age, and PTE. An increase in age and a low degree of PTE negatively affects PEOU as it shapes negative attitudes, which is consistent with previous research by Al-Somali et al. (2009), Karjaluoto et al. (2002) and Laukkanen (2016). On the contrary, the participants that considered AI as an effortless channel, compared to visiting a brick and mortar office, were mainly the younger participants. They implied that AI provides legitimate and instant help, and eliminates the hassle of physically visiting a brick and mortar office. These findings indicate that there is a relationship between PEOU, age, and convenience. A young age, together with the perceived benefits of convenience, positively affect PEOU,
shaping positive attitudes, which is consistent with the findings by Al-Somali et al. (2009), Karjaluoto et al. (2002) and Yoon and Kim (2007). This means that, depending on different variables, PEOU shapes both positive as well as negative attitudes. It can therefore be argued that it is a factor that affects customer attitudes towards AI as a substitute to brick and mortar offices.

![Figure 4 - Perceived Ease of Use and its Determining Factors](image)

*Figure 4 - Perceived Ease of Use and its Determining Factors*

(+) indicates a positive relationship and (-) indicates a negative relationship

### 5.3 Awareness

Awareness has, by several scholars, been identified as a factor affecting the usage and adoption of new technology within online banking (Al-Somali et al., 2009; Beckett & Howcroft, 2000; Sathye, 1999; Pikkarainen, 2015). With awareness being the first step in the purchase process model (Honka et al., 2015), it is a factor that can be regarded as important in order for customers to take the first step towards trying and using AI. Research shows more awareness and information possessed by an individual will result in a greater possibility to actual usage. It was therefore found that awareness has a greater effect on actual usage, rather than an individual’s attitude towards AI customer service technology.

Only three participants were aware of banks currently offering AI solutions within customer service. According to Sathye (1999), it cannot be expected that a service is known and has been identified by customers, as banks have to make customers aware of their services themselves.
Since only three participants were aware that AI services exist, it can be seen that the banks have put little or no effort into creating awareness and informing customers about the service. Therefore, due to the lack of awareness of AI within banking, the authors were unable to identify a significant effect of awareness on attitude. Moreover, it was found in the questionnaire that awareness is the second least important factor for the participants when choosing which customer service channel to use (see Appendix 7).

Besides being the first step towards trying a service, awareness has by Aldás-Manzano et al. (2009) been linked to PEOU, and by Pikkarainen (2015) to PU, meaning that the more awareness a person possesses, the larger the positive impact on PEOU and PU. The findings show that participants who had previous experience in using other AI services showed stronger incentives to use it within banking as well. Depending on whether they had a positive or negative previous experience, it affected their attitude towards AI in banking accordingly. In this certain case, it can be argued that awareness of AI does affect customer attitudes towards AI as a substitute to brick and mortar offices. Continuing, the participants who expressed the most difficulties in regards to PEOU (M11, F10 and F9), had no previous experience using AI. Thus, further strengthening the findings of this study, and the studies made by Aldás-Manzano et al. (2009), and Pikkarainen (2015).

The findings show that awareness can affect PU and PEOU both positively and negatively. However, it does not seem to have any direct influence on participants’ attitudes towards AI as a substitute to brick and mortar offices. Instead, awareness seems to affect the participants’ intention to use AI or not, which is indirectly related to their attitudes. In addition, the authors of this thesis did find a new relationship between awareness and trust towards the service. Some participants expressed that having more information and knowledge about the service increased their trust, thus the likelihood of them using it. This implies that awareness positively affects trust, which is a relationship that has not been included prior to this study.
5.4 Social Influence

According to multiple researchers, social influence is seen as one of the key factors that influence customer attitude and adoption (Fishbein & Ajzen, 1975; Kotler et al., 1999; Lu et al., 2005). The findings are consistent with previous literature, as social influence was mentioned by most participants to have a significant impact on not only their attitude and adoption, but also on awareness, risk, and trust. Interestingly, some participants mentioned that word-of-mouth communication was an important determinant in order for them to trust a service, and that a confirmation of use and satisfaction from a friend or relative made it feel more secure. Others also claimed that recommendations from a friend were seen as a reliable source of information, and the trustworthiness of a service could therefore be confirmed. This could indicate a new relationship between social influence and risk, as well as for social influence and trust. The findings also show that age has a moderate relationship with social influence as the oldest participants (50-55 years old) mentioned that it did not affect their attitude towards AI at all.

Social influence has also been mentioned to have an impact on PU and PEOU (Al-Somali et al., 2009; Mills et al., 2013; Shaikh & Karjaluoto, 2015). This statement is validated by this study, as social influence was mentioned as a suitable medium in which usefulness and ease of
use could be communicated from one to another, making non-users more prone to try the service.

This study also confirms statements made by Al-Somali et al. (2009), Davis (1989), and Mills et al. (2013), that social influence has a meaningful impact on awareness, and could even be considered a type of awareness itself. However, in comparison to awareness, social influence was believed to be a more genuine type of information source. The findings of this study further confirm the connection between social influence, attitudes, and adoption of a new technology (Lu et al., 2005), as certain participants mentioned they were willing/not willing to test AI technology within banking if an acquaintance had a positive/negative experience, respectively. It is therefore possible to argue that social influence affects customer attitudes towards AI.

Figure 6 - Social Influence and its Determining Factors

(+) indicates a positive relationship and (-) indicates a negative relationship
5.5 Convenience

Convenience has been described as a key influence on customer attitudes, acceptance, and adoption of new technologies (Yoon & Kim, 2007; Nui Polatoglu & Ekin, 2001). For the utmost majority of the participants, convenience was seen as one of, or perhaps the, most important factors to influence them in their attitude towards using a bank’s AI service. Almost all participants of the study responded that convenience was very important to them, and in the individual questionnaires it was ranked as the factor with the topmost impact (see Appendix 7). In addition, this was the factor that almost instantly yielded a positive attitude. When asked about the benefits of AI customer service technology, convenience and time-saving was first mentioned by the participants. Furthermore, Brown’s (1990) three suggested dimensions of convenience were in accordance with what this study found. Time, place, and execution were amongst those elements most frequently mentioned in relation to convenience. In addition, speed, flexibility, and accessibility were important for many of the participants, which once again confirms the strong relationship between convenience and PU (Yoon & Kim, 2007). M1, amongst others, spoke about the instant help one could receive from AI, and how this positively differed from brick and mortar offices, thus shaping a positive attitude. Participants spoke on the significance of being able to carry out bank errands at a time and place most convenient to them, which was deemed as a positive, and even predominant, factor. This implies a relationship to PEOU which is consistent with the findings by Yoon and Kim (2007). Some of the participants further expressed the importance of receiving help when needed, and how a shortened and convenient process of service is seen as a positive factor.

Convenience seemed to be especially important for the younger generation, as older participants expressed that it was beneficial, but not necessary. Convenience in the form of AI customer service technology was a factor that added value, but in comparison to the channels that currently exist, it was not a superior feature for the older participants. This due to the fact of perceived concern regarding a loss of jobs, along with brick and mortar office withdrawals. Therefore, convenience is not necessarily a completely positive factor for all, as it can be related to the technological overtaking of traditional channels.
Figure 7 - Convenience and its Determining Factors

(+ ) indicates a positive relationship and ( - ) indicates a negative relationship

5.6 Risk

When it comes to online banking services, there are multiple studies that state the considerable effects that risk has on customer attitudes and acceptance (Aldás-Manzano et al., 2009; Howcroft et al., 2007; Mills et al., 2013). Through this study, it can be confirmed that risk is a factor affecting both the attitude and the willingness to use AI technology as a form of customer service. Participants made numerous statements revealing their concern for various risks, and in accordance with what previous literature suggests (Laroche et al., 2005), it is a negatively related factor.

Misunderstandings, mistakes, and fraud were the most frequently mentioned risk by the participants. Many of the participants mentioned the importance of a scapegoat, as they did not believe it was possible to hold technology accountable for mistakes made. This was seen as a negative factor, as it was important to have someone to blame for mistakes, or complain to, making brick-and-mortar offices superior. In addition, there were multiple questions raised on the potential hacking and fraud risks of such technology, further showing concern for technological risks in relation to security. This is coherent with the study made by Harris et al.,
(2016), stating that liabilities associated with security and privacy are seen as the most predominant risks for customers.

Additional findings suggest that there is a difference in risk perception based on the level of complexity of a task. Lower risk is associated with simpler tasks, such as guidance on how to open an account, and higher risk is associated with more complex tasks such as applying for a loan. This conforms to the study made by Durkin et al., (2003), which shows that the preference for face-to-face communication is stronger in relation to more complex tasks. In accordance, a customers perceived risk for AI customer service technology is lower for simpler tasks, resulting in a higher willingness to use the aforementioned technology. Once again, this study has shown an important relationship between risk perception and the complexity of a task. It can also be concluded that, in relation to task types, brick-and-mortar offices should not be substituted. Brick-and-mortar offices, in the eyes of the customer, are related to lower risk, and AI technology is seen as a good supplement for simpler tasks, rather than a substitute.

Figure 8 - Risk and its Determining Factors

(+ ) indicates a positive relationship and (-) indicates a negative relationship
5.7 Trust

The findings reveal that trust has a significant influence on the attitudes that customers have towards AI as a substitute to brick and mortar offices. Suh and Han (2002) explain that trust is an identified weakness in online channels, and multiple authors argue that trust plays a more important role online, in comparison to brick and mortar offices (Harris & Goode, 2004; Reichheld & Schefer, 2000; Alsajjan & Dennis, 2006). Moreover, it has also been found that, as of today, customers still believe face-to-face communication to be the most reliable source of banking related customer service (Tran & Corner, 2016; Durkin et al., 2003). This is mostly consistent with the findings, as a majority of the participants identified a greater amount of trust issues with AI, than in brick and mortar offices, thus shaping negative attitudes towards AI. Interestingly however, it was also found that about one fifth of the participants did not agree with this. Some implied that AI is a service they place more trust in, thus shaping positive attitudes, which opposes previous literature.

The participants that expressed greater trust for humans than AI, communicated that they feel a sense of security when human attributes, such as body language and tone of voice, are included in a conversation. Gefen (2000) explains that trust between a customer and a supplier is based on previous experiences, meaning that positive or negative experiences affect how customers will trust future interactions. When the participants explained that human body language and tone of voice increase the level of trust, they referred to those attributes as positive experiences. This means that they are more trusting when visiting a brick and mortar office, since it is a place related to prior positive experience. In this case, trust is negatively related to customer attitudes towards AI as a substitute to brick and mortar offices. However, the participants that expressed the opposite, meaning that they trust AI more than humans, stressed that AI does not involve any personal flaws, such as fakeness and human error. In this case, trust is positively related to customer attitudes towards AI as a substitute to brick and mortar offices.

Moreover, research also states that customer trust towards a bank and its offline operations influence the attitude and perception towards a bank’s online channels (Lee et al., 2007). It is possible to argue that this is true for some participants, such as M13 for instance, who expressed that he does not trust his bank and would therefore not trust their AI service. However, it can be identified that this must not be completely true since participants who expressed positive
experiences, related to trust, could still find it difficult to trust AI, and vice versa. This means that there might not exist a significant relationship between past experiences of trust in brick and mortar offices, and the perceived trust in AI.

With regards to the suggested relationship between trust and risk (Aldás-Manzano et al., 2009), it is arguable that a greater amount of trust decreases the perceived risk in both AI and in brick and mortar offices. For instance, participants who had low trust in AI identified more risks with the service. Also, age appeared to be a factor affecting trust. Generally, the younger participants had more trust in AI compared to the elders, even though many of the younger participants still perceived higher trust in brick and mortar offices. It is therefore possible to argue that there exists a relationship between age and trust.

Figure 9 - Trust and its Determining Factors

(+) indicates a positive relationship and (-) indicates a negative relationship
5.8 Prior Technological Experience (PTE)

According to Igbaria et al. (1995), Karjaluoto et al. (2002) and Laukkanen (2016), PTE is a factor with great impact on customer attitudes towards new technological systems. It has been found that PTE influences both PU and PEOU (Karjaluoto et al., 2002; Laukkanen, 2016), as well as risk (Laukkanen et al., 2007). Almost all participants believed their PTE to be relatively high, thus not making it a factor negatively affecting their attitude towards AI. Moreover, PTE was the lowest ranked factor in the questionnaire, meaning that the participants did not regard it as a factor with much impact in terms of choosing which customer service channel to use when contacting their bank (see Appendix 7).

However, it was still possible to identify different levels of PTE, resulting in both positive and negative attitudes. Participants with a high degree of PTE perceived both PU, as well as PEOU to be higher. Along the same lines, the two participants with lower degree of PTE found themselves uncomfortable with using new technologies, perceiving both the PU and PEOU of using AI to be lower. The difference between degrees of PTE and how it influences the relationship with PU and PEOU, was also, through the findings, identified as being slightly affected by age. The two participants with a lower degree of PTE were both part of the older portion of focus group participants. Additionally, it was discussed and concluded by many of the participants that their parents or grandparents would have a hard time using AI technology.

The findings are in line with Karjataulo et al., (2002) and Laukkanen (2016), who found that PTE both positively and negatively influences PU and PEOU. However, the authors of this thesis did not find that PTE has a direct influence on customer attitudes, due to a large majority of the participants claiming to have a sufficient degree of PTE. On the other hand, multiple participants expressed that older relatives would have issues using the service, due to them not being used to computers and the online world.

By virtue of the findings, it is possible to argue that PTE has an insignificant influence on customers’ attitudes towards AI as a substitute to brick and mortar offices. Which to some extent contradicts the findings made by previous scholars, who found PTE to be a significant factor towards technology adoption. It could therefore be argued that PTE is a factor with little influence in today’s society, compared to some years ago, when technology was not as widely
used. Lastly, Laukkanen et al. (2007) found a connection between a person’s PTE and perceived risk. This relationship was not found in this study.

Figure 10 - Prior Technological Experience and its Determining Factors

(+) indicates a positive relationship and (-) indicates a negative relationship.

Figure 11 - Summary of Factors and their Identified Relationships

The blurred factors (Awareness and PTE) and arrow (relationship between PTE and Risk) were found to be of lesser significance. The orange arrows show the new relationships identified in this study.
6. Conclusion

This section provides the reader with a summary of the analysis, and presents answers to the two research questions presented in this study.

The purpose of this thesis was to explore the attitudes that customers have towards AI in customer service, as a substitute to local brick and mortar offices within the Swedish banking industry, as well as identifying any significant factors that influence these attitudes. The empirical data, together with help from existing literature, allowed for a deeper understanding of the chosen topic, exploration of customer attitudes, and comprehension of what the underlying factors are in the formation of attitudes.

RQ1: What attitudes do customers have towards AI as a new form of customer service within Swedish banks, substituting brick and mortar offices?

From the findings it appears that people are split in their opinions regarding this matter, as both positive and negative attitudes can be found. From the sample, it could be concluded that there is a positive view of AI services as a complement to brick and mortar offices, and a more negative attitude towards it as a substitute. All participants placed great, and positive, emphasis on the importance of the physical meetings within banking, and all its attributes, which currently cannot be replaced by AI customer service technology.

RQ2: What factors influence the attitudes that customers have towards AI as a new form of customer service within Swedish banks, substituting brick and mortar offices?

When exploring the factors influencing attitudes, it could be found that a majority of the factors derived from the conceptualised framework played important roles. The findings show that PU, PEOU, convenience, social influence, risk, and trust seem to significantly influence the attitudes, but that awareness and PTE, do not. It was also found that age appears to be an underlying factor influencing attitudes, where the relationship turned out to be negative at an older age. From the findings it was also possible to find another underlying factor, namely the degree of complexity of a bank errand. Depending on whether the task is simple or complex, the attitude towards AI was positive or negative respectively, where brick and mortar offices are of great importance in terms of complex tasks.
The convenience of AI was seen as a benefit, as bank errands could be done wherever and whenever. For that reason, it appears to be a factor with a positive relationship to both PU and PEOU, hence shaping positive attitudes. Social influence was a partly positively charged factor, where reviews from friends and family could positively affect PU and PEOU and thus, form a positive attitude. Social influence was however also shown to negatively affect attitudes, if the reviews themselves were negative. Risk and trust were also mostly negatively related to attitude, where the online context increased the risk and lowered the trust, thus, shaping negative attitudes, which once again stresses the importance of physical contact. However, some participants expressed a high amount of trust in AI, which implies that it can be a positively related factor as well. Moreover, in addition to the factors included in this thesis, it was found that prior AI experience, prior banking experience, and social factors also have an influence on people’s attitudes towards AI as a substitute to brick and mortar offices.

The findings show that awareness did not appear to affect attitudes towards AI as a substitute to brick and mortar offices directly, but rather had a significant impact on the intention to use AI. Furthermore, it also appears that PTE was not a significant factor for the participants, as they did not see any major complications of using AI, and considered themselves technically skilled. It can therefore be considered to be a factor not as significant in Sweden today, compared to what it was a few years ago.
7. Discussion

This section presents implications and limitations of the thesis. Lastly, suggestions for further research are given.

7.1 Implications

It is critical to mention that AI within the Swedish banking industry has not been thoroughly investigated in an academic setting prior to this. One can therefore argue that this thesis is, or can be, among the first within this specific field, as prior existing literature has placed more focus on the factors influencing the adoption of online banking.

7.1.1 Theoretical Implications

The results of this thesis contribute to academic literature on consumer behaviour within customer service within banking. It provides insights on how customers feel about the implementation of AI in the Swedish banking sector and if, or if not, customers identify it as a substitute to brick and mortar offices. Existing literature has done research on online banking and its attitudinal factors in general, though not so much in regard to AI. Continuing, this thesis uses an extended TAM in order to explore customer attitudes. The results of this thesis show that the extension of the model is necessary, as the empirical findings suggest that the added factors are of importance.

7.1.2 Practical and Managerial Implications

The results of this study show that customers of Swedish banks indicate an intention to use AI customer service technology as a complement for simpler tasks, such as freezing credit cards, the installation of Swish, and for simpler yes or no questions. Nevertheless, the traditional channels remain strong, and there was a distinct indication that they should not yet be substituted by AI. This would imply that banks are in a position to critically examine the purpose, and complexity of the role they wish to give AI. The findings of this research suggest that Swedish banks should not solely rely on technological systems, such as AI, for customer service. This can be suggested considering the significant importance of the physical person and their accompanying attributes, when a customer is in contact with their bank. The mental and moral qualities distinctive to an individual are considered important when asking for help or support. In the same way, the negotiation possibilities are also considered to be an essential
feature of the physical meeting. These are qualities that should not be overseen by Swedish banks.

The factors most positively influential on customer attitudes were convenience, PU, and PEOU, for AI as a complement to brick and mortar offices. It can therefore be argued that these factors are critical to consider when further implementing the technology into customer service channels, as they had the largest positive impact of all factors in this thesis. The negative factors found in this study, and that can be seen to hinder customer usage of AI within banks, are risk and trust, which ultimately need to be critically examined and considered. Therefore, it can be suggested that banks need to evaluate the error, security, and privacy aspects of AI customer service systems. An additional factor for banks to consider is social influence, which was found to have a negative, and positive, effect on attitude. This is, however, linked to the performance of the service, a person’s individual perception of it, and the prior mentioned factors. Hence, banks must ensure that the system works as flawlessly as possible, and that the user experience is positive to a high degree, as with any service. Ultimately, it is once again worth mentioning that AI should be applied as a complement to the traditional channels, in preference to it as a substitute.

7.2 Limitations

In order to understand the relevance of this thesis, it is important to present any limitations or shortcomings the authors encountered during the process. Firstly, the data was collected, interpreted, and written during a limited time period. Ultimately, this resulted in the authors having approximately four months to complete the entire thesis.

The choice of using focus groups to collect the empirical data was mainly to create a discussion due to the novelty and complexity of the subject. However, the limited time was also, to some extent, a reason as to why focus groups were conducted instead of, for example, qualitative individual interviews. A limitation of focus groups is the risk of bias. In other words, the results could be affected by participants with stronger opinions, influencing others to think and respond in a similar manner. Additionally, a focus group including a majority of participants with similar positive, or negative, attitudes can result in them dominating the discussion, meaning that participants with a different attitude might have a harder time to push their opinion forward.
The risk of skewed results was prevented by the encouragement from the moderators towards the more reserved participants, for them to speak their mind.

Furthermore, with a larger sample size than 26 participants in five different focus groups, the results could have been argued to better represent the Swedish population, as well as to be more generalizable. The study can therefore, in another setting and with more time, be re-done with a larger sample size. Also, in relation to the sample size and time restriction, it was decided to only include participants between the ages of 20 and 60, hence the study cannot account for the entire spectrum of generations that were left out.

As mentioned, this thesis can be regarded as one of the first within this specific field of study, resulting in existing academic peer-review articles in regard to AI within banking being limited. Due to this, literature on online banking was identified by the authors as useful and applicable due to the many similarities between the two services. However, although both online banking and AI in terms of customer service within banking can be regarded as new technological progresses within the same industry, they are not entirely identical nor fully comparable.

### 7.3 Further Research

Based on the learnings and contributions of this thesis, the authors have suggestions for further research. Firstly, it was possible to identify some attitudinal differences in regard to age when executing the focus groups. Many of the participants implied that even older generations (60 years old and over) may have stronger attitudes and more complications with using AI. Therefore, one suggestion for further research is to study Baby Boomers (60 or over) and their attitude towards AI as a substitute to brick and mortar offices, as the results in this thesis indicate that there may be a larger difference in that generation.

A second suggestion for further research is to utilize the entire TAM and investigate whether or not customers would use AI, and what the influencing factors are. This thesis only investigates the attitudes of AI as the system is not yet fully implemented by banks. However, when the system is fully implemented, and customers have had the possibility to use it, the authors of this thesis suggest further research on actual usage with the help of TAM.
One last suggestion for further research is to go beyond the findings in this thesis and investigate if, and how, AI affects customer satisfaction. As mentioned in the beginning of this thesis, studies show that customer satisfaction has dropped to an all-time low for Swedish banks due to a decrease in local brick and mortar offices. In consolidation with this, banks hope that the implementation of AI can increase the customer satisfaction. When AI has been more developed within Swedish banks, and customers have had the possibility to use it, a suggestion could be that one conducts a study on how customer satisfaction is affected by AI.
References


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### Appendix 1: Questionnaire - Swedish

**Enkät för Fokusgrupp nummer ____**

För att kunna nyttja informationen från denna fokusgrupp så bra som möjligt behöver vi lite bakgrundsinformation. Markera alternativen som bäst stämmer överens på dig.

___________________________________________________________________________

<table>
<thead>
<tr>
<th>Datum</th>
<th>_________________________________</th>
</tr>
</thead>
</table>

#### Kön

- Kvinna _____
- Man _____
- Annat _____

#### Ålder

- 20-25 _____
- 25-30 _____
- 30-35 _____
- 35-40 _____
- 40-45 _____
- 45-50 _____
- 50-55 _____
- 55-60 _____

#### Nivå på utbildning

- Gymnasieexamen _____
- Kandidatexamen _____
- Masterexamen _____
- Högre examen _____

#### Inkomst (uppskattningsvis, inkl. CSN)

- 0 - 80 000 _____
- 81 000 - 290 000 _____
- 291 000 - 500 000 _____
- Mer än 500 000 _____

#### Vilken bank är du kund hos?

- Swedbank _____
- Nordea _____
- SEB _____
- Handelsbanken _____
- Annan (i så fall vilken?) __________

#### Hur många gånger per år har du i genomsnitt kontakt med din bank (ej app)?

- 0 _____
- 1 _____
- 2 _____
- 3 _____
Hur kontaktar du vanligtvis din bank när du har ett enklare ärende som du behöver hjälp med, eller vill ha information från din bank?

Fysiskt besök
Telefon
Online (t.ex. chatt)
Email

När du väljer hur du ska kontakta din bank, hur mycket har följande faktorer en påverkan på ditt val av kundtjänst-kanal? Placera i ordning från 1-8, där 1 är den faktor med störst påverkan och 8 den med minst. Ni är tillåtna att placera faktorer som lika viktiga.

Avvägbarhet/Funktionalitet
Avväganvänlighet/Enkelhet
Riskfritt
Pålitlighet (tillit)
Bekvämlighet (tex. Att du kan utföra det vid en tid som passar dig bäst)
Rekommendationer från vänner/familj/samhället
Befintlig information om kanalen
Din teknik- och datavana

All information från denna undersökning kommer att spelas in och användas i denna uppsats. Jag ___________________________ godkänner att all information från denna fokusgrupp får dokumenteras och användas i vetenskapligt syfte för denna uppsats.
Appendix 2: Questionnaire – English

Questionnaire for Focus Group number ____

To be able to use the information from this focus group in the best way possible, we need some background information. Fill in the alternatives that fit you best.

Date ______________________________

Gender
Female _____
Male _____
Other _____

Age
20-25 _____
25-30 _____
30-35 _____
35-40 _____
40-45 _____
45-50 _____
50-55 _____
55-60 _____

Education Level
High School _____
Bachelor _____
Master _____
Higher level of studies _____

Yearly income (rough estimate in SEK)
0 - 80 000 _____
81 000 - 290 000 _____
291 000 - 500 000 _____
More than 500 000 _____

At which bank are you a customer?
Swedbank _____
Nordea _____
SEB _____
Handelsbanken _____
Other (in this case, state which bank) __________

How many times per year do you, on average, contact your bank (not via. App)?
0 _____
1 _____
2 _____
3 _____
4 _____
More than 5 _____

**How do you, in most cases, prefer to contact your bank if you need help with a simpler bank errand, or if you just need information?**

- Physical meeting _____
- Telephone _____
- Online (e.g. chat) _____
- Email _____

**When you decide on how to contact your bank, how much of an influence do the following factors have on your choice of customer service channel?** Place them in order from 1 to 8, where 1 is the factor with the largest influence, and 8 the one with least influence. You are allowed to rank factors as equally important.

- Perceived Usefulness _____
- Perceived Ease of Use _____
- Risk _____
- Trust _____
- Convenience (e.g. carrying out an errand at a time and place that suits you) _____
- Social influence (e.g. recommendations/complaints from family and friends) _____
- Awareness (already existing information on the service) _____
- Technological Experience _____

*All information from this focus group will be recorded and used in this thesis.*

I ______________________________________________________ approve that all information from this survey and the following focus groups can and will be documented for the purpose of the thesis.
Appendix 3: Focus group guidelines – Swedish

Fokusgrupp riktlinjer:

Sektion 1:
Frågeformulär, samt information om den kommande fokusgruppen och om frågeformuläret
- Berätta för deltagarna att det inte finns några rätta eller felaktiga svar.
- Informera deltagarna om att diskussionerna kommer att spelas in, men att de kommer vara anonyma. Be deltagarna signera sina formulär för att godkänna ljudinspelnings.
- Be deltagarna fylla i sina frågeformulär som har delats ut.

Sektion 2:
Bakgrund om AI och vår problemformulering
- Berätta om att banker i Sverige stänger ner lokala kontor, som resulterar i att personliga möten minskar. Vilket har resulterat i att kundnöjdheten överlag hos de fyra stora bankerna är lägre än den har varit på 20 år.
- Bankerna lanserar AI som ett substitut till fysisk kundservice, i hopp om att återgå till full service och att kunna skräddarsy kundupplevelsen.
- Känner ni till detta? Visste ni om att banker har börjat erbjuda AI services? (=awareness). Om JA, hur visste ni detta, informationskälla

Sektion 3:
Generell diskussion och övergripande attityd
- Med detta vi precis berättat om i åtanke, berätta om eran attityd gentemot AI inom banksektorn som ett alternativ till mer traditionell kundtjänst.

Sektion 4:
Generell diskussion och fördelar, samt nackdelar
- Med faktorerna som tagits upp i enkäten i åtanke, vad ser ni för potentiella fördelar med AI som substitut mot det fysiska mötet?
- Med faktorerna som tagits upp i enkäten i åtanke, vad ser ni för potentiella nackdelar med AI som substitut mot det fysiska mötet?

Sektion 5:
Frågor angående faktorerna
- Vad ser ni för användbarhet av denna tjänst? Hur påverkar användbarheten (tex. Tidssparande, effektivitet etc.), er attityd mot AI som bank-kundtjänst?
- Anser ni att AI-tjänster är/kommer vara lätt att använda? Hur påverkar användarvänligheten/enkelheten (tex. Lätt att förstå, lätt att använda etc.), er attityd mot AI som bank-kundtjänst?
- Är det en skillnad på er attityd beroende på hur mycket information ni har om en service (tex. Vet ej mycket om fenomenet=negativ attityd? etc.?)
• Hur påverkar bekvämligheten (tex. Effektiviteten att utföra ett ärende eller att du kan utföra det när som helst på dygnet etc.), er attityd mot AI som bank-kundtjänst?
• Hur resonerar ni kring risk hos AI (tex. Riskfritt, för mycket risk etc.), och hur påverkar det er attityd mot AI som bank-kundtjänst?
• Hur påverkar tilliten till en teknologi som AI, istället för en fysisk kontakt, (tex. Utdelning av personlig information, eller trovärdigheten i informationen du får), er attityd mot AI som bank-kundtjänst?

Sektion 6:
Övriga frågor
• Finns det något någon skulle vilja tillägga kring frågorna?
• Känner alla att ni har fått en chans att säga vad ni tycker och känner?
• Är det någon som vill tillägga något, utöver det som har diskuterats, som den tror kan vara relevant och viktigt för vår studie?
Appendix 4: Focus group guidelines – English

Focus group guidelines:

Section 1: Questionnaire
Information regarding the upcoming questionnaire and discussion.
- Make sure all participants know that there are no right or wrong answers and ensure a relaxed atmosphere.
- Inform the participants that the discussion will be recorded, and that they will be anonymous. Ask the participants to sign their questionnaires to approve of the recording.
- Ask the participants to fill in their questionnaires.

Section 2:
Background on AI and the thesis problem formulation.
- Tell the participants about Swedish banks closing down their local branches, and that, as a result, the amount of physical meetings are declining. This has resulted in a record low customer satisfaction level for the four major Swedish banks.
- The banks are launching AI customer service technology as a substitute for the physical customer service, in the hopes of customising the customer experience and regaining a higher customer satisfaction.
- Explain that the AI technology is an intelligent robot that can answer the questions of the customer as a normal person would. Give examples on what this AI technology could currently help customers with, by showing Aida, a chatbot developed by SEB. (E.g. “Hello! I need help downloading Swish.”)
  https://seb.se/kundservice/kundservice-privat/chatta-med-oss
- Ask the participants if they are aware of this service, and if they knew that banks were in the process of initiating this service. If YES, ask them how they know about it and note the source of information.

Section 3:
General discussion and overall attitude
- With what we have just told you in mind, tell us about your initial attitude towards AI within the banking sector, as an alternative to the more traditional customer service channels.

Section 4:
General discussion on advantages and disadvantages
- With regard to the factors mentioned in the questionnaire, what are the potential advantages of AI as a substitute to the traditional physical meeting at brick and mortar offices?
- With regard to the factors mentioned in the questionnaire, what are the potential disadvantages of AI as a substitute to the traditional physical meeting at brick and mortar offices?

Section 5:
Questions regarding the factors
• How useful do you find this new service? How does the usefulness of it (e.g. time saving, effectiveness etc.) affect your attitude towards AI as a banking customer service channel?
• Do you believe this AI-service to be simple to use? How does your perception on the ease of use (e.g. easy to understand and use) affect your attitude towards AI as a banking customer service channel?
• Is there a difference in your attitude depending on the amount of information you have of a service (e.g. if you find a sufficient amount of information on the phenomena and how it is linked to either a negative of positive attitude towards a service)?
• How does convenience (e.g. being able to run a bank errand whenever, and wherever it suits you) affect your attitude towards AI as a banking customer service channel?
• What is your reasoning on the risks of AI technology, and how does it affect your attitude towards AI as a banking customer service channel? Are there any risks associated with it, or does it feel risk-free?
• How does your trust towards AI technology, in comparison to a meeting with a physical being, affect your attitude towards AI as a banking customer service channel? Regarding the distribution of personal information, and the credibility of the information received from both channels.

Section 6:
Additional questions
• Is there anything else you would like to add, in regard to the questions?
• Does everyone feel that they’ve gotten the chance to say what you think and feel?
• Is there anyone who wishes to add anything, in addition to what has been discussed, that could be of relevance to this study?
Appendix 5: Questionnaire results – bank visits per year

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Appendix 6: Questionnaire results – preferred channel
### Appendix 7: Questionnaire results – Relevance of factors

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