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DEPARTMENT OF SERVICE MANAGEMENT AND SERVICE STUDIES

INTRODUCTION OF A NEW DIGITAL TECHNOLOGY IN THE M-COMMERCE INDUSTRY

Customer experience from a theoretical perspective

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Abstract

The objective of this study is to explore a new synthesized field and contribute to a better understanding of customer experience in relation to the introduction of new digital technologies focusing on the m-commerce industry. The core fields involved in the synthesis include technology, customer experience and ethics. Quantitative in nature, the study relies on online self-completion questionnaires as the data gathering method and on the correlation analysis to examine and answer the hypotheses. The findings illustrate that convenience, enjoyment, trust and privacy concerns are important elements to customers when considering using a new mobile application for m-commerce purposes and especially the connection between these elements in the wider framework has revealed how customer experience can be prompted in a positive way. The discussion and conclusion have paved the way for synthesis within this field and by revealing new unreciprocated questions, future research can investigate these questions and further expand upon the framework presented in this study.

Keywords: Customer experience, Technology, Ethics, M-commerce, Convenience, Enjoyment, Time distortions, Trust, Privacy concerns

Acknowledgement

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1. Introduction

1.1 Background

In more recent decades, technology has been playing a more prominent role in creating value and so changes the landscape for customers and organizations alike (Kristensson, 2019). The most notable of changes of value creation in the retail industry has been the shift from commerce to e-commerce. This disruption has led to the fall of many traditional physical stores worldwide as the behaviour of customers today has undergone a transformation compared to those in the past. This transformation is due to adaption of new technology which directly exposes customers to new kinds of conveniences that ultimately led to the transformation of their experiences and behaviours. The rise of Internet users contributed significantly towards the growth of e-commerce and convenience became a vital aspect to drive value creation in technology towards new innovations that improve user experiences (McKenzie, Burt, & Dukeov, 2018). The shift from traditional business concepts in many ways has expanded on discovering new types of value often created from intangible assets as opposed to the tangible assets from traditional brick and mortar businesses (Santos, 2012; Siwicki, 2014).

In the last decades, the way consumers use the Internet changed from mainly traditional online surfing via desktops PCs and laptops to more convenient devices such as mobile phones and tablets and this led to the establishment of mobile-commerce (m-commerce). Durlacher (Müller-Veerse, 1999), defines m-commerce as any transaction that is conducted through a telecommunications network that require monetary value to complete (Lehner & Watson, 2001). A broader definition of m-commerce according to Sadeh (Sadeh, 2003), is characterized as the emerging set of applications and services individuals can access from their internet-enabled devices. This broader definition suggests that m-commerce is comprised of multifaceted dimensions rather than of a single cryptic definition. M-commerce brought convenience for consumers to a higher degree by enabling them access to the Internet whenever and wherever they are. Convenience has also contributed to a more distinct problem as the rapid technological change has exposed risks in privacy and trust as companies gather more personal data and enable third-parties to sell or share this information. Even though it is with the customer's consent, it is typically easily given as they do not always understand the terms and conditions offered by firms (Martin, Shilton, & Smith, 2019; Pirson, Martin, & Parmar, 2019).

The Internet played a key role in the evolution of the retail landscape and many retailers obtained significant advantages such as reduced costs, lower geographical barriers, broadened reach as well as continuous accessibility. The usage of mobile applications by retailers and service delivery providers has enhanced their brand image by prominently displaying the brand identity via the logo, the name of the application or through the customer experience when they are using the application (McLean, Al-Nabhani, & Wilson, 2018). It is due to the nature of mobile phones that the experience of consumers is changing as the dynamic mobile interface may affect the response of consumers who use and view content with a different set of variables then those viewing through static websites consequently influencing the customer experience (Brynjolfsson, Hu, & Rahman, 2013). Mobile applications are an important part of m-commerce, yet there seems to be a rather limited amount of literature to determine how it influences the customer experience. Previous research on mobile service delivery (Kleijnen, De Ruyter, & Wetzels, 2007) determined that consumers with a high need for personal interaction may not be so inclined to use mobile services. This, however, seems to be less burdensome for Internet-savvy consumers today as at the time of the study in 2007, the mobile transactions were still relatively in its infancy stage while consumer awareness and experience with m-commerce rather limited (Wagner, Schramm-Klein, & Steinmann, 2013).

1.2 Problematization

At the time of writing, the m-commerce landscape has significantly expanded worldwide with companies in China having taken the lead to further improve convenience for Chinese consumers. These firms accomplished this by integrating the distribution channels of several different service providers and retailers into a single universal mobile application technology. This application has enabled consumers to swiftly access each of the product and service portfolios of the retailers and service providers by simply signing in as a member of the platform. This advancement has simplified the lives of consumers in China and it is today one of the most essential applications to have in China to make life comfortable (Gan, 2017). Several of its primary functions such as the chat option, the official payment option and the direct access to third-party retailers and service providers make the application one of the most common used applications in China today and it continues to attract new consumers while retaining the experienced users by expanding on its services (Gan, 2017; Gong, Liu, Zheng, & Wu, 2018).

It needs to be considered that the Chinese Internet landscape, is very different from the European landscape as the main players in China are all of Chinese origin and not the typical multinational giants such as Facebook, Google, Amazon, and eBay who are leading companies in Europe. As a consequence, differences are expected in the way customers are experiencing their purchase in China as to those in Europe as the search for information is quite different. While the online industry differs a lot from Europe, the mobile platform application technology seems to be highly successful in China so will a similar mobile application technology work for customers in Europe? Due to the different organizational structures and rules that apply to both regions. Fundamentally different values and considerations are attached to their sense of customer experience which calls for a deeper dive into existing research on the implementation of technology to explore what needs to be analysed in order for the mobile application technology to successfully work for customers in Europe.

Looking at existing research, the implementation of new digital technologies in the m-commerce market in general have been studied and marked convenience among others as an important variable for technological developments (Klaus, 2013; McLean et al., 2018). In addition, the research revealed that customer experience appeared to be closely related to the design and implementation of new digital technologies. Moreover, another study examined customer experience within the online environment indirectly connecting customer experience and technology. The link was drawn by addressing causes such as enjoyment, time distortions and telepresence to be influencing factors that make customers fall into a deep cognitive state known as flow , being completely engaged in a specific online activity (Bilgihan, Kandampully, & Zhang, 2016; McLean et al., 2018; Novak, Hoffman, & Yung, 2000). Flow is thus, considered an important factor being able to influence customer experience within the online environment. Unclear however, is its effect within the m-commerce industry as the study primarily focused on online activities through desktop devices (Hoffman & Novak, 2009; Novak et al., 2000). For the implementation of a new technology within the m-commerce it is thus important to find out how these causes of flow are connected to customer experience. More recent studies have also shown that the field of ethics is often related to either customer experience or technology when emphasis is on the m-commerce industry (Belanger & Crossler, 2019; Martin et al., 2019).

With the move towards the online environment, companies have been able to gather more data from customers as mentioned in the background and research has revealed trust and privacy concerns to be leading elements of ethical considerations.(Belanger & Crossler, 2019) These important elements have shown to have certain connections to customer experience and to technology but the exact relationship for the specific mobile application technology discussed in this study is currently unknown. The reason is that no prior research has been conducted on a similar m-commerce model as currently exists in China that focuses on whether such technology would be desirable for the potential customers in Europe. Convenience plays a key role in the success of this application in China, and an interesting question for the European region would be what aspects European customers deem important for their customer experience when such a technology is available in the enter the market.

To discover whether the mobile application would work in Europe, a uniformity of the three fields of technology, customer experience and ethics needs to be drawn for this specific technology. While the three fields each have a rich accumulation of research papers specifically designed for their own relative field, there is rather limited research on the synthesis of at least two of the three fields. Moreover, there currently exists no study on the integration of all three fields together within or outside the scope of any relative field within Service Management. It is thus interesting to discover new potential directions within a synthesised field that may change the current m-commerce landscape though the implementation of a new digital technology.

1.3 Research Aim and question

The aim of this Master thesis is to synthesize the three fields of technology, customer experience and ethics by discussing the relevant relationships within the three fields when implementing a new digital technology in the m-commerce. The viewpoint of the customer is taken with their experience as the focus point throughout this study and within the synthesized field, several elements that have been highly regarded throughout the previous section are to be studied using the implementation of the specific mobile application technology as the leading thread. Within the wider framework of Service Management, this study is aiming to enlarge the theoretical fields within the retail and service industry. This is done through the combination of the three proposed fields and use their relationship as a framework for and beyond the scope of this study.

In order to pursue the goals and objectives of this study, the following research questions were formulated:

RQ1: How do customers in Europe perceive high levels of convenience through this new mobile application technology?

RQ2: What causes of flow are affecting customer experience when they would use this new mobile application technology?

RQ3: How do trust and privacy considerations influence customers in Europe if they should consider using this new mobile application technology?

For the investigation of the research questions it is important to clarify that the mobile application technology is currently not available in the European region. The questionnaire of this study focuses on a theoretical scenario which will be presented to potential customers to gauge whether they show an interest towards this new mobile application technology. Moreover, the questionnaire is influenced on literature from the theoretical framework to build logical questions to answer the research questions. In accordance with the research aim, individuals living in Europe were chosen to form the study sample.

1.4 Disposition

The thesis follows a traditional thesis structure designed across six chapters starting with this chapter the introduction clarifying the gap in existing research and by addressing the significance of the research aim and research questions. The following chapter describes the theoretical framework of three themes that represent the core of the research gap: technology, customer experience and ethics. Chapter three presents the methodology and describes the research design, the data collection method and the data analysis. In the fourth chapter, the empirical data is presented based on the data collected from the questionnaire and this data is analysed and discussed in chapter five and compared to the literature provided in chapter two. The last chapter will enclose a conclusion based on chapter five and additionally incorporates a critical reflection and a recommendation for future research purposes.

2. Theoretical framework

The theoretical framework of this chapter will provide the reader with a description of three important fields that are connected and form the groundwork for this study. The description of the three important theoretical fields are the following: A) technology focusing on value creation in m-commerce, B) customer experience in general and the online environment and C) ethical considerations focused on privacy concerns and trust in the introduction of new digital technologies. The three fields are essential in understanding which elements are important to shape a good customer experience in m-commerce with the introduction of new digital technologies. The objective of this theoretical framework is that synthesizing the literature should lead to a potential conceptual framework for the empirical section in chapter four.

2.1 Technology and value creation in retail and services

Technology in the retail and service industry has transformed over the years and the key lesson for new service technologies to be successful is targeted to organizations that implement new service technologies also consider how they can benefit both the organization and more importantly the customer. The contradiction here is that when organizations focus primarily on how they can maximize the benefits for themselves, it will become less likely for them to achieve the benefits for their customers which in turn will negatively impact the organization (Kristensson, 2019). Due to the rapid growth of future service technologies, new opportunities have arisen for firms, as well as for their customers. This directly relates to the importance of how managers incorporate and solve new problems with the implementation of technological advancements on different service layers while keeping a customer focused mindset. Therefore, the impact of future service technologies on value creation is tremendous and can alter the position of an organization either positively or negatively depending on how it is applied. Future service technologies are identified as new technological opportunities that improve the firm's capability to co-create services with its customers and users.

Value creation according to explains how different single-actors such as humans or machines or group of actors for example collectives or organizations obtain benefits from using one or multiple resources (Kristensson, 2019; Storbacka, 2019). While value creation in future technologies has had a large impact on society in the past decades, it was not always the predicted result as people may had been influenced beyond the predictive capabilities of

researchers and managers alike. This phenomenon is the result of closeminded thinking with fixation for current knowledge of how everything works today, that prevents innovative thinking beyond the current extent (Kahneman & Tversky, 1977). When experiencing and valuing future service technologies, there is a contradiction regarding innovation and the relationship it has with value creation. The contradiction here is perhaps better illustrated in the following scenario depicting a situation where a new technological innovation involving a new offering, does not affect customer awareness and thus this creates a lack in detectable value for the customer as a result (Snyder, Witell, Gustafsson, Fombelle, & Kristensson, 2016). Regular customers are not technology experts and are thus not always aware how abundant the amount of new technology incorporated into a new service or product always is. As the improvement appears to be incremental they will perceive it as such and so these type of changes generally signify only small increases in experienced value for the customer (Kristensson, 2019).

Contrarywise, customers that are exposed to new radical technologies that are fundamentally different from predecessors can dramatically improve experience value for customers if they become popular. These popular technologies do not necessarily have to incorporate new technological innovations. In fact, some innovations simply arise by incorporating existing technologies and combine them with new business models to improve existing and more conventional approaches for customers. For firms, there is a distinct balance when it comes to the development and implementation of future service technologies as it can be a supplement factor for a product or a service or become the main core of the product or service itself (Kristensson, 2019; Snyder et al., 2016). The thought of future service technologies and value co-creation comes from the alternative view, service-dominant (S-D) logic. This view, unlike the traditional goods-dominant (G-D) logic, does not set designate roles to companies and customers and value creation is thus not simply seen as a series of activities performed by the company. In S-D logic, the roles are not fixed, illustrating that value is co-created between the organization and the consumers through interactions among producers and consumers on the integration of resources and competences thus enhancing the process of value creation (Lusch & Vargo, 2014; Vargo & Lusch, 2008; Vargo, Maglio, & Akaka, 2008).

2.1.1 Value creation through E-commerce

With its dynamic, swiftly rising, and highly competitive characteristics, business conducted over the Internet has brought with its new opportunities for the creation of wealth. While established firms created new online businesses to keep up with the trends, new businesses have

taken full advantage of the opportunities that the Internet has provided (Amit & Zott, 2001; H.-J. Lee, 2015). E-commerce has realized its potential of generating new value through new ventures and technology and has transformed the rules for competition for older and more established companies in unparalleled ways. With the influences of technology, researchers have been trying to map and understand the value and benefits of information technology (IT) at the level of the individual organization. Researchers varied in their study results and thus the productivity paradox was invented to describe such conflicting findings (Soto-Acosta & MeroñO-Cerdan, 2008). Doubt about the value of IT and e-businesses have been priorly assessed by researchers due to a large gap between IT investments and in particular Internet technologies and the other hand, the common perception that E-businesses lack in value (Zhu & Kraemer, 2005). There are case studies on organizations such as Amazon, Alibaba and eBay that illustrate how e-businesses can in fact create value, but the question then remains whether the lessons learned from these large conglomerates are appropriate to replicate (Gensler, 2017).

While researchers have argued that Internet technology by itself rarely creates value for the business, they did find that Internet capabilities are the leading key factors in determining e-business value (Soto-Acosta & MeroñO-Cerdan, 2008). Retailers and service providers viewed technology through different a different lens and viewed it as a way to decrease costs, both in-store and at the back-end becoming more competitive in the long run. Service technologies were utilised to enhance operational performance where the strategy focused on a customer centric approach (McKenzie et al., 2018). The increased dependency on technology in turn supplied retailers and service providers with valuable data and information that enhanced enhance processes and operational performances of not just the organization themselves but for all players involved in the supply chain. Through technology retailers and service providers increased their online presence and now offer a greater amount of options in terms of product and service delivery. These businesses have continuously examined how to fit technology into their e-commerce strategies by co-creating value together with customers and other parties to partake in a process with the ultimate objective that leads to new value for customers using the service logic approach (Grönroos & Gummerus, 2014).

2.1.2 Mobile applications and innovation platforms

One of the largest technical innovations of the 21st century is without a doubt the rise of mobile applications. As with any new highly significant and promising industry, mobile applications industry is in the middle of the experimental phase and similar to the IT industry, there is a lot of uncertainty present about the commercial capabilities of applications rather than with the technological innovation itself. The key questions that researchers and managers try to figure out are what type of applications consumers use, whether they want to pay for the application, if the application displays advertisements and which industries are affected by the disruption of the application (Bresnahan, Davis, & Yin, 2014). Applications are involved in a process of sharing general elements across applications, initiating lower entry cost for new innovative applications and this resulted in applications achieving the fastest growth in the IT industry. Whenever a new platform-based industry arises, it incorporates the features of a general purpose technology (GPT). GPT are disruptive technologies that completely affect and change the economy and recreates the landscape in such a way that it can completely alter societies through its impact on the established social and economic foundations (Bresnahan & Trajtenberg, 1995; Helpman, 1998).

The innovation in platform-based industries often recombines existing components and develops new economies and so avoid spending a majority of spending on R&D by incorporating existing suppliers into the supply chain. The new platform presents application developers with a limited solution, as it is up to them to find valuable uses of the general technology and so engage in value creation activities by appealing to new market needs (Bresnahan et al., 2014). The recombination of existing technologies and the evolving tech savviness of consumers has allowed the invention of new GPT components such as the Apple interface iOS, and its music store, iTunes with similar technological adaptations from Google's Android (Bresnahan et al., 2014; from Internal, 2003). Social media platforms were responsible for the change in human behaviour regarding interaction with one another and sharing experiences. These innovation platforms have become the centre of the telecommunication industry and digital platforms have created a shared economy (de Reuver, Sørensen, & Basole, 2018). Competitors no longer focus on obtaining the entire value chain, but around attracting generative activities associated with an innovation platform. Disruptive service technologies are formed through innovative digital platform logic and not through a traditional non-digital point of view (Tiwana, 2014). Innovative digital platform related research is in the maturing phase as early assumptions are progressively validated in both economic and industrial

innovation management literature (Gawer, 2014; Parker, Van Alstyne, & Choudary, 2016). However, studying digital innovation platforms remains challenging as a result of their scattered nature as platforms are integrated into larger and more complex digital infrastructures thus increasing the difficulty for researchers to research the platforms (de Reuver et al., 2018).

2.2 Customer experience

The hypothetical groundwork of the customer experience is based on the concept that a customer's experience with a certain organization is the result of all the touch points the customer has with that organization that the customer can compare to their prior perceptions and thus form an opinion that in turn creates an overall customer experience (Homburg, Jozić, & Kuehnl, 2017; McLean et al., 2018; McLean & Wilson, 2016; Payne, Storbacka, & Frow, 2008). In the article: "Understanding Customer Experience " (2007), by Christopher Meyer and André Schwager, the authors define customer experience as the intrinsic and subjective reaction customers encounter to any direct or indirect interaction with a company (Meyer & Schwager, 2007). Homberg et al, (2017) has defined customer experience in more recent research that customer experience is the gradual change of a person's stimulating, sentimental, intellectual, personal and behavioural responses to a company brand by experiencing a journey of touchpoints along pre-sale, sale and post-sale and so repeatedly judging this journey against response boundaries of similar experiences (Homburg et al., 2017; McLean et al., 2018). McLean et al, (2018) presented customer experience as a holistic process as a result of the combination of cognitive and affective, components leading to impressions that the customer will memorise in follow-up interactions with a company.

A key distinction between customer experience and the service quality of companies is the recognition of emotions from customers that form the experience (Edvardsson, 2005; Schembri, 2006). The emotions of customers are often clearly remembered yet difficult to describe, thus quite a few researchers have applied numerous psychological theories and models to assist in understanding and measuring customer experience (Edvardsson, 2005; McLean & Wilson, 2016; Verhoef, Kannan, & Inman, 2015). Customer satisfaction, trustworthiness, intention to re-visit, loyalty and the intention to re-purchase have been marked as factors to positively influence customer experience (Bilgihan et al., 2016; McLean et al., 2018; Meyer & Schwager, 2007; Shobeiri, Mazaheri, & Laroche, 2018). Customers are constantly having an experience

when interacting with a company through different service delivery channels such as in-store, online through mobile or website and the experience they receive can be either good, neutral or bad depending on the service they received. For customers, service quality and scope also matter, but largely when the core offering is service itself (Meyer & Schwager, 2007).

2.2.1 Online Customer experience

Customer experience has been given more importance on the online platform as organizations have transitioned from static websites towards more dynamic websites catered to become more interactive to engage customers more actively during their visits (Klaus, 2013; McLean et al., 2018). Reason for this being that more customers have made the transition to the Internet to do their shopping by using several devices such as computers and mobile phones to complete a purchasing process from start to finish. Due to the advances in mobile technology and its adoption by the growing number of customers have pushed organizations to redesign its interaction and service delivery system to achieve the ideal online customer experience (Bilgihan et al., 2016). When customers shifted towards the Internet, a considerable increase and shift in online shopping behaviour was revealed and thus firms were forced to act and compete with one another on various online platforms, focusing on e-commerce and m-commerce and even through social media platforms to engage their customers in an interactive manner (Wagner et al., 2013). Social media and company websites are common platforms to frequently get visits from customers through computer or mobile phones to visit the e-commerce and m-commerce sites to compare or for purchasing orders. Online experience of customers therefore, includes every point of online contact a customer has with a company, consider websites, applications and social media that a customer can have an interaction with (Oinas-Kukkonen, 2013).

For companies it is important to interact with customers across multiple online channels to create a holistic online customer experience. With the new generation of mobile phones, customers can effectively do multiple tasks on their device like surfing online on websites, watching videos as well as placing orders online. In addition, the mobile phones can now also be used as online wallets due to new technology and these changes are improving the online customer experience by delivering more convenience and daily routine (Siwicki, 2014). The online customer experience is highly sensitive as customers can use mobile devices when they are home. During the decision-making process customers often contemplate their choices and thus being able to compare products and or services at home. This way, customer experience

will be easily affected whenever a product or service is not displayed correctly, is missing information or any other communication interference that prohibits the customer from making a diligent choice. Customers nowadays are expecting quality service regardless of the platform that they are operating. They also believe that when they use mobile devices for their purchase, that it will save them time, that they will be able to complete the task and at the same time entertain themselves while connecting with others through social media (Bilgihan et al., 2016; Novak et al., 2000).

Numerous researchers have investigated possible effects of online customer experience. Based on a theoretical study, repurchase intention is one of the outcomes as a results of enhanced online customer experience (Rose, Hair, & Clark, 2011). Empirical research examined repeat purchases in the context of shopping through online channels illustrated that that positive customer experience is the important key aspect that leads the customer to have repeat purchase intentions. In addition, customer loyalty also positively increased as a result of a positive customer experience felt by customers (Bilgihan et al., 2016; Chiu, Hsu, Lai, & Chang, 2012). Another study focusing on female online customers also found that the repurchase intention of the customer is intrinsically linked to customer satisfaction and they also discovered that word of mouth (WOM) and electronic word of mouth (eWOM) are acting in a supportive role in the relationship between repurchase intention and customer experience (Kuo, Hu, & Yang, 2013). Several companies and especially high profile brands are struggling to meet the expectation of their customer especially in the field of m-commerce (Murtagh, 2014). Developing online channels that embrace customers with positive feelings will in turn provide a positive effect on online customer experiences. By influencing the customer, the aesthetics make the experience interesting and appealing for the customer to stay on the website and create a positive experience. Two factors are integral for the online customer experience which are the enjoyment and usefulness of the website or application (Bilgihan et al., 2016).

2.2.2 Flow theory

The concept of flow in relation to online customer experience was introduced by Novak, Hoffman & Yung (2000) and based on the work of Mihaly Csikszentmihalyi(Csikszentmihalyi, 1976). Flow theory is a concept created from research that is based on the cognitive state of an individual who is completely immersed in an activity in such a deep state trying to complete a task while experiencing time distortion and a loss of your self-conscious during the entire

activity. Within the online environment, flow has been described as a cognitive state that is experienced when an individual is submerged while navigating online. Thus, flow can also be depicted as an important factor that is able to influence online customer experience. Literature has revealed that enjoyment, telepresence and time distortion were regarded as the causes of flow occurring (Hoffman & Novak, 2009; Novak et al., 2000).

Telepresence is described as having the feeling that being present in the virtual environment feels more real than the real environment he or she is supposed to live in (C. H. Lee & Cranage, 2011). Hoffman & Novak (2009), summarize that individuals who experience telepresence often forget about their immediate surroundings when browsing the Internet. This interpretation suggests that while a person may be physically present in the real world, their ability to apprehend cognitive thinking in their mind is lacking as their mind is fixated on the virtual environment and even can consider it to be more real than the real world. Other research suggests that when customers engage in an online purchasing activity, they can become immersed to such an extent that they can experience a distortion in their sense of time but that they experience positive emotions during this loss of connection with real time. As a result, real time slowly fades into the background of their conscious (Faiola, Newlon, Pfaff, & Smyslova, 2013).

Comparable to telepresence, time distortion is an important factor of flow and is referring to a situation in which customers are so involved in the activity in front of them that time flies by without them being consciously aware of it. (Hoffman & Novak, 2009). When customers are experiencing time distortions unconsciously, they get it because they are so focused on the task ahead and this results in positive customer emotions and ultimately results in positive customer experience. Regardless of the research done on flow theory and on the factors of telepresence and time distortion, the actual usefulness has been doubted by researchers and managers alike (Klaus, 2013; McLean et al., 2018; McLean & Wilson, 2016). Both Klaus (2013) and Mclean & Wilson (2016) describe customer experience in its own context so when they describe smartphones devices and the use of applications they explain that consumers may be conscious of the time that they spent on an activity or task and so complete their purchasing process in a sensible timeframe which leads to effective online customer experience in this setting. The last of the three factors of flow, enjoyment described in later research as the factor leading to towards a satisfactory experience (Hsiao, Chang, & Tang, 2016).

In earlier research, references to enjoyment are described as an activity or task uses a specific system that is experienced as genuinely enjoyable by itself and not considering any outcomes resulting from using the system (McLean et al., 2018; Venkatesh, 2000). In the online environment research has emphasized that customers who have not experience any sense of enjoyment during a purchase online will most likely complete the purchase with a competitor (Faiola et al., 2013). Hsiao, Chang & Tang (2016) illustrated that customers will not be satisfied using mobile applications if there is not a hedonic component of enjoyment. Hoffman & Novak (2009) also suggest that customers will not achieve the best possible experience if they do not experience a sense of enjoyment while doing their task or activity (McLean et al., 2018).

2.3 Ethical issues of technology

The mobile phone and mobile application market is expanding at tremendously with more people connected to the Internet every day. These technological changes also have implications as mobile phones and applications not only play an enormous role in daily life, they also operate as data gathering tools for the companies that created them. Mobile phones for example, track their owners as they go shopping physically or online and can understand where and what they do based on algorithms which extract commercial data which companies collect. Based on prior customer data, the companies are able to customize the products customers can see depending on their previous spending pattern and will thus withhold products they assume the customers cannot afford to pay for (Martin et al., 2019). The use and implementation of technology can have a harmful effect on the people using them or those that are simply victim to it. For instance, technology can threaten independence, violate the privacy rights of citizens or harm them physically or financially (Laczniak & Murphy, 2006; Martin et al., 2019).

In addition, technology can make activities easier, difficult or even change the activity completely depending on the different groups of people using them (Shcherbina et al., 2017). Ethical considerations in the field of technology have been analysed throughout different disciplines such as management, computer science, engineering and technology studies but a lack of focus was placed on the role that managers and organizations play concerning the design, development, and distribution of technology across relevant industries and societies that the organization interacts with (Martin et al., 2019). When discussing technology, the ethical assumptions are likely to take biases or certain standards that are incorporated into the design

of product as well as through unforeseen effects when using the new product (Shilton, Koepfler, & Fleischmann, 2013). It is becoming more common and generally accepted that companies who develop and implement new technology also carry the responsibility to carefully address problematic assumptions to the public about ethical questions regarding the design and use of digital technologies (Martin et al., 2019).

There are currently two major drivers that give companies complete responsibility over new technology. The first is because, there does not exist an independent organization that provides oversight due to social and ethical problems related to new technology and there are no methods to measure the implications of new digital technologies on ethical issues. But in the meantime, there is only internal restraint with no external supervision (Smith & Shum, 2018). The second driver is that new technologies require the attention of existing ethics during the design phase and the choice of design is ultimately regulated by the private corporations themselves (Martin et al., 2019). The argument against this process is that while technology oriented companies do consider ethical implications, it is always in contrast to their financial bottom line. Researchers agreed, that the efficiencies created by the implementation of digital new technology or a good return on equity for shareholders are not validating arguments for the development and commercialization of a new technology (Martin et al., 2019).

While business ethicists debate the legitimacy of the responsibility held by companies whose main interest in the end is to make financial gains by profiting from the development of new technology. They argue that the impact made by these companies on ethics and how they validate their reason to continue implementing the new digital technologies is flawed and that this issue should be addressed in a similar way as has been done with new non-digital technologies such as for example in the pharmaceutical industry (Martin et al., 2019). In this industry, each new pharmaceutical product carries with it a set of special ethical questions related to human subjects, data collection methods and analysis, how research on the product is financed and potential conflicts of interest. Using these types of competing ethical considerations researchers obtain unrelated information to the innovation of the product itself and can thus produce social relationships with companies that could have compromised the responsibilities they have towards the development of pharmaceutical products that are meant to enhance the living standards of patients (Martin et al., 2019; Santoro & Gorrie, 2005). When connecting the narrative back to digital technology, researchers have argued that there are ethical considerations that are closely connected to digital technology. These ethical

considerations are knowledge, privacy, independence and trust and are supposed to protect the integrity and lower the risks of the implementation of new digital technologies but show more concern when the firms in question are financed by investors and private organizations with a pure for profit mentality (Rose et al., 2011).

2.3.1 Trust and privacy in online mobile applications

Trust and privacy have been the most dominating ethical questions discussed by the public due to the inability of technology firms to protect the information and data of its users. Most discussion has been arising around AI, big data and algorithms within mobile applications and online platforms and how companies incorporate it. Trust is defined as the willingness to become vulnerable and open op to someone else (Pirson et al., 2019). Other research has identified trust as a contributing factor towards the intention of using new online technologies (Bélanger & Carter, 2008; Belanger & Crossler, 2019). It is claimed by research that trust leads to willingness among users to share information and that these users are more willingly to reveal their information whenever an organization appears to be trustworthy (Dinev & Hart, 2006). Trust plays a vital role in the online environment and especially in the mobile context as users are more likely to download an application and share user information with it if they trust how the application provider will handle their private information (Belanger & Crossler, 2019; Keith, Thompson, Hale, Lowry, & Greer, 2013).

Other research discusses how trust can influence the behaviours of potential customers to use mobile applications as these applications can share purchasing related information between the different users resulting that the trust levels of individual users can lead to more information disclosure which will not always be advantageous for the users themselves as they will possibly receive advertisements based on their shopping patterns and this might lead to irritation (Wang, Shen, & Sun, 2013). Looking at the mobile phone industry, the object of ethics and more specific trust in the online mobile phone industry, and this includes the mobile phone, the applications on the phones and the data on the phone received from providers through subscriptions (Belanger & Crossler, 2019). Privacy concerns are listed as an important ethical concern among users and customers. No matter what the circumstances are in which privacy concerns have been used, studies have always consistently illustrated that privacy concerns do affect user or customer behaviour either in a direct or indirect way (Anderson & Agarwal, 2011; Belanger & Crossler, 2019). Dinev & Hart (2006) list Internet privacy as a negative factor for

customers and users in their willingness to provide their personal information and data. These concerns are catered towards the opportunistic behaviour which is related to users and customers personal data which are submitted on the Internet to the receiving parties. When users and customers experience higher concerns they are less willing to share their information (Belanger & Crossler, 2019; Dinev & Hart, 2006).

Like privacy concerns, trust has been revealed to lower the concerns of users and customers about sharing information in the online environment (Krasnova, Spiekermann, Koroleva, & Hildebrand, 2010). A substantial issue regarding these two elements is that most users and customers have little to no knowledge about data protection tools and information so if they decide to make use of an application they already give some sort of trust to the organization who is in charge of the online mobile platform, when they do not trust the company there are most likely reasons or concerns for why they do not (Anderson & Agarwal, 2011; Belanger & Crossler, 2019). While researchers acknowledge that there is a link between trust and privacy concerns, it remains ambiguous whether the direction of the link is truly positive or negative.

2.4 Reflection on existing research

To end the theoretical framework, a summary of the key divergences within technology, customer experience and ethics in the context of the implementation of new m-commerce platforms within the online environment are presented. While research on the three fields separately is enormous, there seems to be a lack of cohesion amongst the three when considering the m-commerce industry. Especially in terms of ethics, while the studies are undeniably emerging, it is due to the volatility in the m-commerce market, the introduction of new digital technology seems to create more gaps as the studies on these innovative platforms remain challenging due to their nature and thorough integration into larger digital infrastructures that are difficult and complex to comprehend and thus to study (de Reuver et al., 2018). Within the literature, customer experience is an important factor in determining whether a new technology becomes successful in the market space. This understanding, however, is what makes it complicating as customer experience in itself is dependent on many other factors and while research has shown that there are links between these factors, that it is not entirely clear whether they are influencing customer experience in a positive or negative way.

2.5 Summary of this study's theoretical framework

In Figure 1, a conceptual framework is illustrated based on the fields of the theoretical framework and shows how they are interchangeably connected with each other. While the framework does not follow a hierarchical structure, it needs to be viewed that the three core fields form the centre of this framework. The conceptual framework is highlighting the important elements that have been derived from the literature and their relationships with the three core fields indicate that these elements have been mentioned within the literature of the fields that they are connected with. While this is the case, it needs to be clarified that in no paper, all three fields were discussed simultaneously. The conceptual framework will be essential to generate general predictions based on the synthesized literature and the purpose is that these hypotheses will be tested in the analysis section of this thesis. The hypotheses that will follow in this section were considered based on previous studies on the link between the found elements presented in the conceptual framework and on the research questions proposed in chapter one to formulate proper hypotheses that illustrate an association to the main research questions.
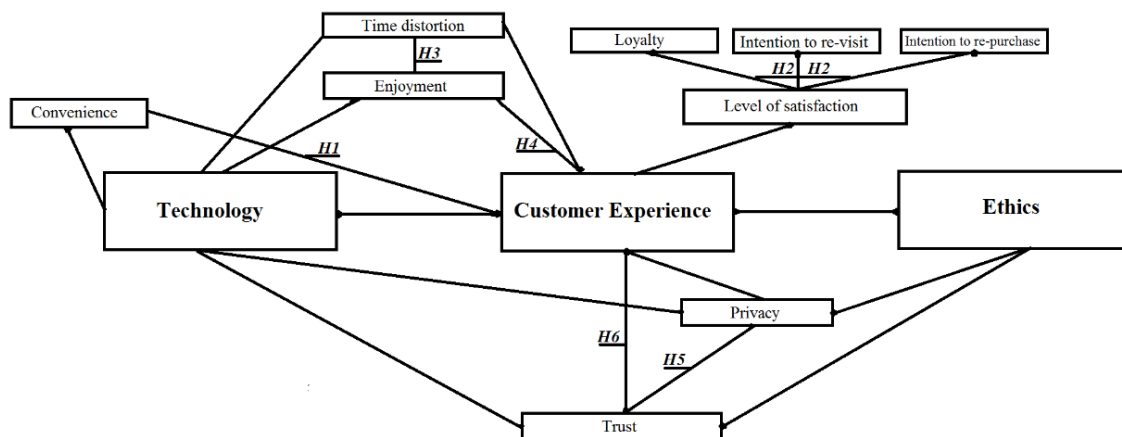
Figure 1: Conceptual Framework

The first hypothesis (H1) was created from the important variable that pushes forward technology. In the literature convenience is important to the development of technology and leads to higher satisfaction among customers, so a higher level convenience leads to positive customer experience levels. Thus, hypothesis H1 states:

(H1) There is a positive relationship between high levels of convenience and customer experience.

Hypothesis 2 (H2) is emphasizing the link between a high level of customer satisfaction which in turn can influence loyalty, intention to re-visit and intention to-repurchase as described in chapter 2.2 (Bilgihan et al., 2016). Thus, hypothesis H2 states:

(H2) High Level of customer satisfaction has a positive effect on customer loyalty, intention to re-visit, and intention to re-purchase.

Hypotheses (H3) and (H4) centre around flow theory. Time distortions and telepresence have a considerate effect on customer experience with the gaps in time due to complete absorption into a current activity. Likewise, enjoyment is also an important variable to flow and while both seem to have a connection leading to higher customer satisfaction, a direct link with each other and the overall impact to satisfaction still needs to be considered. (Hoffman & Novak, 2009). The following hypotheses state:

(H3) Time distortions drive the enjoyment of a customer during use of a mobile application.

(H4) The level of enjoyment a customer experiences influences the customer experiences and impacts the level of satisfaction.

Hypotheses (H5) and (H6) focus on the ethical considerations and how in more detail privacy concerns and trust are connected with each other as well as the relationship between trust towards customer experience. (Anderson & Agarwal, 2011; Belanger & Crossler, 2019) When a customer has more trust in the mobile application then this will positively enhance their customer experience. When customers are showing higher concern for their private data that it directly or indirectly negatively impacts trust between the customer and the organization. The following hypotheses therefore state:

(H5) Mobile privacy concerns have a negative effect on trust

(H6) Trust in the mobile application is positively related to customer experience

Looking at the created conceptual framework and the presented theoretical framework, further investigation of the connection between these three important fields is needed to find the answers regarding the adoption of new digital technologies in m-commerce. The critical lens on the presented reflection provides knowledge to further develop the empirical research to illustrate how these three core themes are connected and how it can lead to answering the research questions. Finally, the hypotheses based on the conceptual framework shall be analysed accordingly in the analysis of this study providing the necessary answers. In the following chapter the methodology of this thesis will be presented.

3. Methodology

This chapter presents in detail the methodology and method used for the data collection of this study. To start the methodology, the foundation of this study will be described describing the research positioning and the research design. In social research the focus is on academic research on topics related to questions that are relevant to the social scientific fields (Bryman, 2016). It is also more ambiguous to define certain methods above others in a specific context, it depends on the type of investigation needed to determine the suitability of the method and thus can heavily impact the contribution of the study to the relevant social scientific field (Bryman, 2016; Easterby-Smith, Thorpe, & Jackson, 2015; Flick, 2018). Thus, this chapter is crucial in explaining the research position, research design and method to critically assess the study's validity and reliability.

3.1 Research positioning

This study has adopted a research position within the field of social scientific field and has manifested a critical realism epistemology with the ontological orientation of objectivism (Bryman, 2016). The main objective of this study is to collect valuable knowledge by searching for relevant new information about the chosen topic and which can be directly linked to existing research knowledge and is represented as the deductive theory (Bryman, 2016; Creswel, 2009; Flick, 2018). This study thus follows a deductive approach by testing existing theory. Within social science research, there are two various approaches of looking at research philosophy. These are ontology and epistemology. Ontology is emphasizing on the question whether social entities are considered objective entities that exist independently of human actors or whether they are social constructs created from the perceptions and actions of these human actors (Bryman, 2016; Easterby-Smith et al., 2015). Epistemology is the exploration of the nature of knowledge and the ways of investigating into the natural and social fields (Easterby-Smith et al., 2015). Realism, similar to positivism shares the believe that natural and social sciences research should apply the same approaches to the collection of data, the explanation of data and a commitment to the principle that there is an external reality to which researchers direct their attention (Bryman, 2016; Easterby-Smith et al., 2015). Critical realism as a form of realism explains the philosophy to accept and recognize the reality of the natural order and the events and discourses of the social world and claims that if it is understood that it will be able to change the social world by identifying how the structures work and generate the events and discourses.

However, to identify these structures practical and theoretical work must be conducted within social research (Bryman, 2016).

3.2 Research design

For the deductive approach, a quantitative research strategy is fitting and intrinsically linked to the described ontology and epistemology in the previous paragraph and so a cross-sectional research design was selected to examine the aspects that customers consider when using new m-commerce platform. The numerous variables described in the theoretical framework which are linked will be tested through this quantitative approach. The cross-sectional design is defined as: "The collection of data on more than a single case and at a single point in time in order to collect a body of quantitative or quantifiable data in connection with two or more variables, which are then examined to detect patterns of association" according to Bryman (2016, p. 58).

For this study, the cross-sectional research design is optimal to find the association of the variables in question that are necessary to answer the research questions and find a suitable conclusion for the research aim. The research methods that fall under the cross-sectional research design include questionnaires, structured observation, content analysis and official statistics. Using the deductive approach in this study, a theoretical framework has been generated using existing literature within the three core fields of technology, customer experience and ethics and the theoretical framework stood central in generating the hypotheses. The hypotheses presented in chapter two are statistically tested in chapter five against the findings from the collected data. The hypotheses will thus be accepted or rejected based on the analysis and will result in a contribution to existing literature with new empirical findings and the last step involves an action from the opposite of deduction, that is induction as a suggestion will be presented for the existing literature in chapter six (Bryman, 2016; Creswel, 2009; Easterby-Smith et al., 2015).

3.3 Data collection method

As integral part of the methodology and a manifestation on the fundamental ontology and epistemology the preferred data collection method for this study is the method of self-

completion questionnaires. Self-completion questionnaires are as it name indicates; a type of questionnaire that is intended to be filled out by the respondents in their own leisure time. An important factor in choosing this method is because it provides respondents with anonymity so that they are able to express their beliefs (May, 2011). The form of self-completion questionnaire used is the Internet survey where the survey is hosted on a web server and completed by the respondents online. The advantages of this method are firstly, that it is cheap and especially beneficial when a study like in this case the sample is geographically widely dispersed. Secondly, it is efficient to reach a large group instantly thus able to obtain a larger sample size. Thirdly, there is a distance between the researcher and the respondent so interviewer effects are eliminated, and respondents gain a sense of comfortability as they can complete the questionnaire whenever they want at their own pace. Lastly, self-completion questionnaires do not suffer from an illogical order of questions such as is often the case with interviews as interviewers often change the order of the questions.

Next to the advantages presented of the self-completion questionnaires, there are also disadvantages to using this method. Firstly, there is no indication if the respondents have any difficulties in answering the questions. Secondly, it is more difficult for the researcher to elaborate on answers. Thirdly, it is hard asking questions that are not necessarily relevant for the respondent as the threshold for them to complete the questionnaire is relatively low. In addition, it is difficult to probe who actually answers the questionnaire and lastly, it is sometimes not appropriate for certain respondents due to literacy or language constraints (Bryman, 2016; Creswel, 2009; Easterby-Smith et al., 2015; May, 2011).

A critique on this particular method is that the low response rate is one of the most detrimental limitations as it affects the risk of bias as it would be likely that there are distinct differences between those that have responded and those that have refused to participate. This results that the relating sample will be affected when the response rate is low (Bryman, 2016). Due to the nature of this study, which is to focus on the identification of important aspects to customer experience if they should use a new m-commerce platform and is specifically a theoretical question as the respondents are in fact not actual customers of this specific technology yet, as it has not been launched on the market as of yet. This study is thus primarily focusing investigating whether the respondents would be interested in having this technology in Europe and if they would use it. It is essential to only use a quantitative method for this study because the respondents have not truly experienced this technology yet. Therefore, it is difficult to

assume a position on qualitative data as they would need to experience it. Quantitative data, however, largely focusses on the if's and are not users in reality and thus suitable in answering the research questions as presented in this study.

3.3.1 Questionnaire

The online self-completion questionnaire is the only critical tool used to provide this study with empirical data on customer experience when introducing new m-commerce technology in the European market and is divided into two parts. The first part focuses on classification questions in order to categorize the different respondents based on age, gender, work, living conditions and education (May, 2011). In addition, the later questions of part one emphasize on the chosen topic and respondents were thus asked about mobile phone usage based on their current situations. These questions in the later part are essential to illustrate the current behaviour of the respondents in general. The factors of convenience, enjoyment and time distortions have been introduced in this part in question 1.9, 1.11 and 1.12 to find how these aspects are felt and experienced by the respondents. While part one provides each respondent with an identity, it also offers an amount of data for the hypotheses. Part two starts by referring back to the scenario describing the new technological platform in detail such as how it works, what they can do with it and what effects it can have on ethical considerations.

In addition, the questions of part two are completely emphasized on the hypotheses and the relation between the variables. Questions 2.1 and 2.2 for example, address convenience in regard to the new application and identify what the effect is when a customer has high level of convenience on their customer experience, whereas questions 2.3, 2.4 and 2.5 look to identify what effect a high level of customer satisfaction has on customer loyalty, intention to re-visit and the intention to purchase products from the application again. Question 2.6 refers back to enjoyment and customer experience and how the former influences the later. Questions 2.7, 2.8, 2.9, 2.10, 2.11 and 2.12 emphasize on privacy concerns as well as trust and identifies if there is a relationship between these two variables and in what way these variables are connected to customer experience.

All questions of part one and part two that emphasized any variable was formulated through a five point Likert scale also known as the attitude scale which ranges the attitude of the respondents on an attitude continuum from for example very bad to very good on a five point

scale. (May, 2011). The other questions consisted of classification questions with pre-defined answers. All questions were closed-ended questions (Bryman, 2016; Easterby-Smith et al., 2015). The language of the questionnaire was in English to reach out to all people living in Europe and the academic grammar was reduced in order to make it more understandable amongst the different groups of respondents. In addition the questions were analysed to prevent poor question wording in order to minimize the non-sampling error (Bryman, 2016; Creswel, 2009).

Before the official launch of the questionnaire, a sample was sent to ten test subjects who critically assessed the questions based on choice of wording, sentence construction, and question formulation. These subjects were selected based on age, gender, educational level and hours spent using a mobile phone per week. The subjects provided critical feedback on grammar and choice of wording and in accordance, the questionnaire was edited and completed. The self-completion questionnaire was online launched through google forms, which generated a link to the specific questionnaire and this link was distributed through social media contacts starting on the 9th of March until the 23rd of March on which the data collection officially halted in order to move forward with the analysis.

3.3.2 Analysis of questionnaire

The data uncovered from the questionnaire, is processed through google forms and then import the data using the IBM SPSS Statistics program. In SPSS the analysis part can be computed using quantitative formulas with the purpose of analysing survey data and so mine the necessary data using complex statistical data analysis to discover the answers to the hypotheses and thus obtaining the findings that lead to answers for the research questions of this study. The analysis consists of a scale reliability test to measure whether the different questions asked on the survey also measure the same thing in different ways to illustrate whether there is consistency. To do this the Cronbach alpha and the mean inter-item correlation are used to find out whether the questions are illustrating consistency. For the reminder of the analysis to answer the hypotheses, the Spearman's Rho test was used to do a correlation analysis using categorical ordinal values to find a relationship between the important elements found in chapter two (Aron & Aron, 2002).

3.4 Population and sample

The chosen population that stands central within this study are individuals who reside within the European region who can be either citizens or resident holders. The size of the population is large, so it is very unlikely to obtain a response from every single individual within the population. Therefore, only a portion of the population will be used for this study as a sample and an important criterion is that it must inhibit the same characteristics as those from the population. Thus, for survey design, sampling stands at the core of its success rate (Creswel, 2009; May, 2011). Samples can be either categorized in two main type of samples which are called probability samples and non-probability samples. Probability samples are known as random samples as it is possible to precisely illustrate the probability of the sample being replicated in the population. In non-probability, there is no sampling frame available or the size of n is unknown. In quantitative research, probability sampling are the preferred samples for survey designs.

This study, nevertheless, follows a non-probability sample method and most closely resembles that of convenience sampling as respondents were chosen based on their availability and closeness to the researcher. A problem with this sampling method is that it is impossible to generalize the findings because the population size is unknown. However, the chosen sample, complies with the criterion of individuals who reside in Europe thus, as definitive findings cannot generated due to the problem of generalization, it could however, provide a pathway for further research and connect to other existing findings within the three core fields (Bryman, 2016). This study aims to investigate individuals in Europe who are potential customers in order to answer the research aim. The online self-complete questionnaire was launched on social media websites such as Facebook, WhatsApp and LinkedIn. While the coverage intended to focus on the entire European region, most close connections from the researcher could be identified within two countries which are Sweden and The Netherlands. The study does not have sample frame and identifies each respondent as a potential part of the population.

3.5 Ethical consideration in data collection

Ethical principals in social research tend to revolve around core areas such as: whether participants are being harmed, if they have not been informed about giving their consent, whether there exist a breach of privacy whenever a participant completes the questionnaire and

if there is any deception involved (Bryman, 2016; Creswel, 2009; Easterby-Smith et al., 2015). As in other social research, this study has scrutinized the underlying ethical consideration and emphasized on the questionnaire for each respondent to read that for the empirical data of this study, all respondents are completely anonymously and that their email addresses are thus not saved to protect their privacy. As a result, it is not possible to retrace each respondent back to each filled out questionnaire and so the anonymity of the respondents is guaranteed. Furthermore, the data from the collected from the respondents will not be shared or sold to third parties to ensure that the respondents know exactly what happens with the data. In the cover description of the questionnaire, the respondents were made aware of what the nature of the questionnaire was and the purpose of the research. The distributed online self-completion questionnaire on all the social media platforms was the same and the respondents knew what the questionnaire was intended for due to the explanation in the cover.

3.6 Critical reflection on research Methodology

As a research methodology, quantitative research has limitations that needs to be considered for this study. While the data collected can come up with conclusive evidence, provide future predictions and test hypotheses. It remains difficult to interpret the behaviour of the individuals and more importantly their reasonings behind it. Although surveys are to some extent explanatory, they are specifically created to test hypotheses (May, 2011). For the purpose of this study however, having accurately followed the foundation using the appropriate epistemology and ontology, the most proper research strategy was chosen as not all methods are equally suitable in answering the research questions. In addition, incorporating a mixed methods approach for this study was unquestionably difficult to achieve because the target audience has in fact not actually experienced this technology yet and it is therefore difficult to analyse their behaviour accordingly and extract more valuable data than when using a survey design. Thus, using a qualitative research strategy with an inductive approach would pose more difficulty and could harm the research quality of this study. Using qualitative methods in this study was therefore not included.

3.6.1 Reliability and Validity

In order to critically evaluate the quality of the research, the concepts of reliability and validity are used to indicate how a method, test and technique provides a measurement. Reliability

focuses on the consistency and validity on the accuracy of a measure (Bryman, 2016; Creswel, 2009) and for this study, the reliability measured is considerably high as the data collected from the online self-completion questionnaire focuses on closed-ended question where pre-defined answers have been given for the respondents to fill in as re-administering the questionnaire to the same samples would thus result in the same answers. The three factors of reliability; stability, internal reliability and inter-observer consistency are important criterion to check reliability and verify that the measures are high in reliability (Bryman, 2016).

For the research quality of this study, three issues of validity are included. They are measurement validity, internal validity and external validity. Measurement validity looks at the measure of a concept and whether it truly measures the concept (Bryman, 2016). The online self-completion questionnaire was created using easy understandable vocabulary which was tested by test samples who provided useful feedback on it. Furthermore, the questionnaire itself focused on simple terms and daily aspects that every individual in Europe experienced thus making it very unlikely for it to be ambiguous for the respondents to answer. No prior knowledge was necessary to be able to answer the questions so not being unable to answer these personal questions can be assumed. Internal validity focuses on causal relationships between variables and whether a true relationship can be detected (Bryman, 2016; Easterby-Smith et al., 2015). For this particular study, the internal validity is high because there is a low chance that the variables linked between the core themes within the theoretical framework are associated with variables outside of the theoretical framework. Whether the chosen variables affect one another is the important question of this study. Lastly, the external validity focuses whether the results of the study can be generally applied to other research contexts (Bryman, 2016; Creswel, 2009). Some results of this study can be applied such as the hypotheses, but due to the non-probability sampling method chosen, the convenience sample, it becomes difficult to create validity so external validity could be low.

Concluding the methodology chapter, the foundation seems resilient and consistent throughout the chapter and for this particular study deemed reliable and valid. Trying to generalize the results of this study, however, must be done with caution and through comprehensive examination must identify whether the results are actually applicable to other research contexts.

4. Empirical data presentation and analysis

In this chapter, the data collected for this study, will be presented to accurately analyse the theoretical assumptions created with the hypotheses for the purpose of providing an appropriate conclusion for the research questions. The chapter will start with a description of the sample including the respondent rate in order to present the viewer with the empirical data before the analysis is offered followed by the analysis part, in which each hypothesis is tested against the empirical data using the Spearman's Rho test to conduct a correlation analysis. The findings will then be illustrated in this chapter whereas the discussion follows in the subsequent chapter.

4.1 Description of empirical data collected

The questionnaire was posted on social media platforms such as Facebook and LinkedIn, and response rate was based on the total amount of views on the webpage of the questionnaire. The tracking of views was achieved through google analytics and a total number of 177 unique viewers visited the webpage of the questionnaire. Out of the 177 viewers, 129 respondents filled in the questionnaire either partially or completely. Of the 129 individuals, 123 filled it in completely whereas 6 left open one question. The question that was not filled in was allowed to be bypassed depending on the previous answer which related to it. However, as a result of reviewing the data collected, it was decided to exclude the 6 cases part of the total sample size. In the data, some inaccuracies were manipulated with the nationality of respondents as some wrote more than one nationality. In this case, the first nationality they wrote was used to identify them so that their data could be properly used for the analysis. No other changes were made it to the final data set.

The data in this study includes both inferential and descriptive statistics, with the former describes that conclusions can be drawn from the sample of a conclusion while the latter describes important characteristics of the data using measures such as mean, median and mode to summarize and present data in a way that makes the data more observable (Aron & Aron, 2002). Like other studies within social sciences, this study will use a confidence level of 95% which indicates that the findings presented in this study, will be significant if the significance level is 0.05 or bellow. To analyse the data, the potential customers are categorized in several groups based on the categorization questions, to find out whether the different groups have different behavioural characteristics. The first category is the gender category which split the

respondents into two groups, male and female as no respondent filled in other, this category was thus excluded from the data set. Of the total respondents, 55.3% or 68 respondents identified themselves as female and 44.7% or 55 identified as male based on Table 1.

Table 1: Respondents categorized based on gender

What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	68	55,3	55,3	55,3
	Male	55	44,7	44,7	100,0
	Total	123	100,0	100,0	

The second category looks at the educational level of the respondents of both genders to see whether there are strong differences between the educational levels of both groups. First the total percentages per educational level from the respondents are 4.9% or 6 respondents having obtained a secondary education, 33.3% or 41 respondents has a bachelor's degree or is in pursuit, 39.8% or 49 respondents has a master's degree or is in pursuit, 11.4% or 14 respondents has or is in pursuit of a PhD and 10.6% or 13 respondents is classified as other as shown in Table 2.

Table 2: Educational level of respondents

What is your educational level?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary education	6	4,9	4,9	4,9
	Bachelor degree	41	33,3	33,3	38,2
	Master degree	49	39,8	39,8	78,0
	PhD	14	11,4	11,4	89,4
	Other	13	10,6	10,6	100,0
	Total	123	100,0	100,0	

Now to compare whether both genders have similar characteristics a crosstabulation is completed to compare the data from Table 1 and Table 2 in Table 3.

Looking at Table 3, it can be described that both genders have a majority of the respondents that are either bachelor or master's degree holders or pursuers and using SPSS on educational level in general a skewness of 0.534 was calculated thus showing a slightly moderated skewness. In addition, the kurtosis is at -0,177 which shows that the distribution is slightly flatter than a normal curve with a similar mean (Aron & Aron, 2002). The third category is focusing on nationality and country of residence to see in which length the sample covers the target population. 36 countries have been listed in the dataset from respondents from all over the world but currently residing in a European country. In addition, 17 countries within Europe have been marked as country of residence by the respondents. Of the 123 respondents however, 73.98% or 91 respondents has residence in just two of the 17 selected countries. Sweden with 43.90% or 54 respondents and The Netherlands with 30.08% or 37 respondents score the highest. Of the respondents living in Sweden, 54 respondents come from 28 different countries whereas the 37 respondents living in The Netherlands come from 12 different countries. With 6.5% or 8 respondents France is the third highest with respondents all coming from France. The other countries of residence all score below 5% on average having between 1 and 6 respondents each.

Table 3:Gender and educational level comparison

What is your gender? * What is your educational level? Crosstabulation

			What is your educational level?					
			Secondary education	Bachelor degree	Master degree	PhD	Other	Total
What is your gender?	Female	Count	2	24	31	7	4	68
		% within What is your gender?	2,9%	35,3%	45,6%	10,3%	5,9%	100,0%
	Male	Count	4	17	18	7	9	55
		% within What is your gender?	7,3%	30,9%	32,7%	12,7%	16,4%	100,0%
Total		Count	6	41	49	14	13	123
		% within What is your gender?	4,9%	33,3%	39,8%	11,4%	10,6%	100,0%

When comparing respondents on gender and their country of residence from Table 4, it can be concluded that 52.9% or 36 out of 68 females and 32.7% or 18 males out of 55 currently reside in Sweden whereas 22.1% or 15 females and 40% or 22 males currently reside in the Netherlands indicating that there is not a perfect symmetric balance between the two genders in terms of respondent size per country which makes sense since the non-probability convenience sampling method was used.

Table 4: In which country do you live and what is your gender comparison

			In which country do you currently live?								
			Austria	Belgium	Czech republ	Denmark	Finland	France	Germany	Greece	Italy
What is your gender?	Female	Count	2	2	0	1	0	4	2	2	0
		% within What is your gender?	2,9%	2,9%	0,0%	1,5%	0,0%	5,9%	2,9%	2,9%	0,0%
	Male	Count	0	2	1	2	1	4	2	0	1
		% within What is your gender?	0,0%	3,6%	1,8%	3,6%	1,8%	7,3%	3,6%	0,0%	1,8%
Total		Count	2	4	1	3	1	8	4	2	1
		% within What is your gender?	1,6%	3,3%	0,8%	2,4%	0,8%	6,5%	3,3%	1,6%	0,8%

Table 4: In which country do you live and what is your gender comparison (continued)

			Netherlands	Poland	Russia	Spain	Sweden	Switzerland	United Kingd	Total
What is your gender?	Female	Count	15	1	1	1	36	1	0	68
		% within What is your gender?	22,1%	1,5%	1,5%	1,5%	52,9%	1,5%	0,0%	100,0%
	Male	Count	22	0	0	1	18	0	1	55
		% within What is your gender?	40,0%	0,0%	0,0%	1,8%	32,7%	0,0%	1,8%	100,0%
Total		Count	37	1	1	2	54	1	1	123
		% within What is your gender?	30,1%	0,8%	0,8%	1,6%	43,9%	0,8%	0,8%	100,0%

The last category, looks at the age of the respondents and the gender, as this study focuses on customer experience when introducing a new technology, it can be quite a different experience for the various age groups, so this might also affect the findings of the study and will be discussed accordingly in the discussion part. In Table 5, it can be illustrated that the majority of female respondents is between the age of 24 to 29 scores 54.4% or 37 respondents whereas the older segments score significantly lower with the age of 50 to 59 scoring 4.4% or 3 respondents and 60 to 69 with merely 1 respondent good for 1.5%. The males also show an inconsistent frequency of respondents in terms of the age groups with the age group between 24 to 29 achieving 41.8% or 23 respondents while the group 50 to 59 scores 1.8% or 1 respondent and the group 60 to 69 with respectively 3.6% or 2 respondents. The younger age groups are thus overly represented in both the female and male categories with females being slightly younger on average.

Table 5: Gender and Age groups comparison

What is your gender? * Age Groups Crosstabulation

			Age Groups						Total
			18 - 23	24 - 29	30 - 39	40 - 49	50 - 59	60 - 69	
What is your gender?	Female	Count	12	37	10	5	3	1	68
		% within What is your gender?	17,6%	54,4%	14,7%	7,4%	4,4%	1,5%	100,0%
	Male	Count	4	23	17	8	1	2	55
		% within What is your gender?	7,3%	41,8%	30,9%	14,5%	1,8%	3,6%	100,0%
Total		Count	16	60	27	13	4	3	123
		% within What is your gender?	13,0%	48,8%	22,0%	10,6%	3,3%	2,4%	100,0%

Now that the respondents has been described more in detail, better conclusions can be drawn based on this particular sample. Thus, in the following sub-chapter, the hypotheses will be tested against the data from the questionnaire to find out which conclusions can be drawn.

4.2 Scale reliability testing

In order to test and evaluate the hypotheses, questions were devised to test each hypothesis and to compute these questions into workable data values, the questions need to be grouped based on each variable as depicted in the theoretical framework and included in the hypotheses. These variables are convenience, enjoyment, time distortion, customer satisfaction, privacy and trust. All these variables have been linked to Likert scale questions to test the scale reliability. Convenience is connected to question 1.9 and 2.1. The variable enjoyment is connected to question 1.12, 2.6 and 2.7. Time distortion is connected to questions 1.8, 1.12 and 1.13. Customer satisfaction is linked to questions 2.2, 2.3, 2.4 and 2.5. Privacy is connected to questions 2.8, 2.9 and 2.14. Lastly, Trust is linked to questions 2.10, 2.11, 2.12 and 2.13.

Table 6 represents a summary of the testing of the scale reliability of these variables and due to a limitation on questions used for the Cronbach Alpha, the mean inter-item correlation has thus been included to test internal consistency reliability. The Cronbach Alpha, should be high and according to Cortina (1993), should be above .700 to be deemed satisfactory, with .600 and below being unacceptable. Every score in between these two numbers are either undesirable or minimally acceptable and above .700 being considered good (Cortina, 1993). Mean inter-item correlation should ideally be between .150 and .500 as below the .150 would suggest that items do not correlate to one another and fail to measure, while scoring above .500 is contemplated that the items are so similar to each other that the answers are repetitive.

Table 6: Scale reliability test

Value	Cronbach Alpha	Mean Inter-item correlation
Convenience	0,880	0,787
Enjoyment	0,688	0,398
Time distortion	0,604	0.337
Customer satisfaction	0,806	0,514
Privacy	0,662	0,495
Trust	0,595	0,402

As can be seen in Table 6, the Cronbach Alpha for all the variables are varying considerably, with trust and time distortion being borderline unacceptable, the other variables score better in comparison. But using the mean inter-item correlation to look at the variables. Except convenience, all the other variables are considered to be well within range or bordering the threshold. Due to the mean inter-item correlation illustrating good scores for time distortions and trust, it is unreasonable not to accept their results as it has become clear that they do test the same thing developing some consistency. On the other hand, it shows that the items for convenience might be too repetitive as it scores a tad too high, but looking at the overall results of the scale reliability test are felt to be positive and thus moving on to the hypothesis testing is deemed reasonable.

4.3 Hypothesis testing

The hypotheses testing will commence using the same sequence as the hypotheses were presented in chapter two, from H1 to H6. For every hypothesis, the customers have been segmented based on gender to illustrate comparisons. The findings will be further discussed using the categories described in 4.1, in the following chapter.

4.3.1 Hypothesis 1

There is a positive relationship between high levels of convenience and customer experience.

Testing H1, it needs to be considered that there is no positive relationship between high levels of convenience and customer experience which is H0. To test whether to follow H0 or the alternative H1. The categorical questions: "*How would a high level of convenience in the app affect your customer experience?*" and "*If you would enjoy using the app how would this affect your customer experience*" were used in a Spearman's Rho test to find the association between the two ordinal variables. Table 7 has presented the Spearman's Rho test and the findings illustrate that the significance level as calculated through the test are presented as .000 with correlation showing as .390 which indicates a moderate positive relationship between the variables. The test uses a one-tailed significance because it needs to test whether there is a positive relationship between the variables. Thus, it can be suggested that this result meets the 95% significance level threshold or the .050 threshold which implies that there is a relationship

between high levels of convenience and positive customer experience which provides support for the alternative hypothesis (H1) and thus rejects the null hypothesis H0.

Table 7: Spearman's Rho test: Convenience - Customer experience

Correlations

			Would convenience be an important factor for you to decide on installing and using this app?	If you would enjoy using the app how would this affect your customer experience?
Spearman's rho	Would convenience be an important factor for you to decide on installing and using this app?	Correlation Coefficient	1,000	,390**
		Sig. (1-tailed)	.	,000
		N	123	123
	If you would enjoy using the app how would this affect your customer experience?	Correlation Coefficient	,390**	1,000
		Sig. (1-tailed)	,000	.
		N	123	123

**. Correlation is significant at the 0.01 level (1-tailed).

Convenience can thus be considered an important variable for customer experience and for the new technological application a requirement to consider based on the sample results.

4.3.2 Hypothesis 2

High Level of customer satisfaction has a positive effect on customer loyalty, intention to re-visit, and intention to re-purchase.

Following H1, the second hypothesis H2 was created to investigate the effects of a high level of customer satisfaction as to illustrate if it has a positive effect on customer, loyalty, intention to re-visit and the intention to-repurchase positively. The H0 is that a high level of customer satisfaction does not result in a positive effect in these three variables. The questions incorporated in answering whether the alternative hypothesis is corrects are derived from the following questions: "*How would a high level of convenience in the app affect your customer experience?*", "*If you had a good experience using the app, how would this affect your loyalty towards the app?*", "*If you had a good experience using the app, how would this affect your intention to use the app again?*" and "*If you had a good experience using the app, how would this affect your intention to use the app again?*". The Spearman's Rho test was used to present

the findings on whether to reject or accept the null hypothesis. Tables 8 illustrates the data to answer whether the null hypothesis or the alternative hypothesis are chosen by independently testing for the significance for each factor. In Table 8, the significance levels are .000 for each variable in relation to each other with a moderate to good positive correlation ranging between .424 and .640.This accentuates that good customer experience which relates to customer satisfaction as shown in chapter two, has a positive effect on customer loyalty, on customers wanting to re-use the application after successful use and that they would desire the need to re-purchase products after receiving a good customer experience. The Spearman's Rho test determined that all three variables score below the .050 or 95% significance mark thus accepting the alternative H2 hypothesis that a high level of customer satisfaction does have a positive effect on loyalty, intention to re-use and intention to re-purchase from the application. Thus, finding the variables that trigger customer experience is an important key issue in order to make the application successful.

Table 8: Spearman's Rho test (Customer experience - Loyalty, Intention to re-use and Intention to re-purchase

Correlations

			How would a high level of convenience in the app affect your customer experience?	If you had a good experience using the app, how would this affect your loyalty towards the app?	If you had a good experience using the app, how would this affect your intention to use the app again?	If you had a good experience using all functions of the app including buying products or services, how would this affect your intention to buy more products/services using the app?
Spearman's rho	How would a high level of convenience in the app affect your customer experience?	Correlation Coefficient	1,000	,607**	,539**	,424**
		Sig. (1-tailed)	.	,000	,000	,000
		N	123	123	123	123
	If you had a good experience using the app, how would this affect your loyalty towards the app?	Correlation Coefficient	,607**	1,000	,640**	,530**
		Sig. (1-tailed)	,000	.	,000	,000
		N	123	123	123	123
	If you had a good experience using the app, how would this affect your intention to use the app again?	Correlation Coefficient	,539**	,640**	1,000	,536**
		Sig. (1-tailed)	,000	,000	.	,000
		N	123	123	123	123
	If you had a good experience using all functions of the app including buying products or services, how would this affect your intention to buy more products/services using the app?	Correlation Coefficient	,424**	,530**	,536**	1,000
		Sig. (1-tailed)	,000	,000	,000	.
		N	123	123	123	123

**. Correlation is significant at the 0.01 level (1-tailed).

4.3.3 Hypothesis 3

Time distortions drive the enjoyment of a customer during use of a mobile application.

The third hypothesis H3, was formulated to understand whether distortions in time are responsible for the creation of enjoyment for customers when they use a mobile application. H0 dictates that time distortions have no direct impact on the enjoyment of a customer when they are using an application. The questions used for the findings are the following: "*How many hours per week do or did you spend on your phone using a mobile application or simply browsing the Internet?*", "*When you felt like time went faster, how would you describe your level of enjoyment?*" and "*When you are enjoying yourself, how do you experience your loss of time?* For this hypothesis too, the Spearman's Rho test was used to reject or accept the null hypothesis. In Table 9, the findings are shown and by looking at Table 9 a two-tailed significance level was used since it is not clear if and whether time distortions drive enjoyment in a positive or negative way. Using the Spearman's Rho test, the significance scores of .066 and .297 illustrate that the results which show correlations of .166 and .095 which hardly give a positive correlation are deemed not significant enough as the .050 or 95% significance level was not reached. This indicates that time distortions do not drive the enjoyment of a customer during use of a mobile application thus the null hypothesis is to be accepted as there has not been enough weight to prove the alternative hypothesis to be true.

Table 9: Spearman's Rho test (Time distortions - Enjoyment)

Correlations

			How many hours per week do or did you spend on your phone using a mobile application or simply browsing the Internet?	When you felt like time went faster, how would you describe your level of enjoyment?	When you are enjoying yourself, how do you experience your loss of time??
Spearman's rho	How many hours per week do or did you spend on your phone using a mobile application or simply browsing the Internet?	Correlation Coefficient	1,000	,166	,095
		Sig. (2-tailed)	.	,066	,297
		N	123	123	123
	When you felt like time went faster, how would you describe your level of enjoyment?	Correlation Coefficient	,166	1,000	,703**
		Sig. (2-tailed)	,066	.	,000
		N	123	123	123
	When you are enjoying yourself, how do you experience your loss of time??	Correlation Coefficient	,095	,703**	1,000
		Sig. (2-tailed)	,297	,000	.
		N	123	123	123

**. Correlation is significant at the 0.01 level (2-tailed).

4.3.4 Hypothesis 4

The level of enjoyment a customer experiences influences the customer experiences and impacts the level of satisfaction.

Hypothesis four (H4) focuses on the link between the variable enjoyment and the core theme of customer experiences. H0 describes that the level of enjoyment a customer experiences does not influence the customer experience and as a result does not impacts the level of customer satisfaction. To test whether to accept or reject the null hypothesis, the Spearman's Rho test was selected to illustrate the findings. The questions that need to answer the hypothesis are: *"When you felt like time went faster, how would you describe your level of enjoyment?"*, *"If you would enjoy using the app how would this affect your customer experience?"* and *"How would you describe your level of enjoyment when you have a obtained a good experience?"* Table 10 shows the Spearman's Rho test which is two-tailed and has presented the findings whether there is a correlation between enjoyment and customer experience to be present with two scores of .275 and .681 illustrating that the correlation is small to moderately positive. Moreover, the significance level is .002 and .000 which make the results of the scores significant enough to reject the null hypothesis and accept the alternative hypothesis.

Table 10: Spearman's Rho test (Enjoyment- Customer experience)

Correlations

			When you felt like time went faster, how would you describe your level of enjoyment?	If you would enjoy using the app how would this affect your customer experience?	How would you describe your level of enjoyment when you have a obtained a good experience?
Spearman's rho	When you felt like time went faster, how would you describe your level of enjoyment?	Correlation Coefficient	1,000	,275**	,681**
		Sig. (2-tailed)	.	,002	,000
		N	123	123	123
	If you would enjoy using the app how would this affect your customer experience?	Correlation Coefficient	,275**	1,000	,202*
		Sig. (2-tailed)	,002	.	,025
		N	123	123	123
	How would you describe your level of enjoyment when you have a obtained a good experience?	Correlation Coefficient	,681**	,202*	1,000
		Sig. (2-tailed)	,000	,025	.
		N	123	123	123

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Enjoyment is thus a valuable indicator that positively improves the customer experience and thus impacts the satisfaction levels of customers.

4.3.5 Hypothesis 5

Mobile privacy concerns have a negative effect on trust

Hypothesis five (H5) puts emphasis on the link between customer experience and ethics and focuses on mobile privacy and trust. The null hypothesis H0, mentions that mobile privacy concerns of customers does not have a negative effect on their trust in the application. The question to discover the findings and thus answer whether the null hypothesis needs to be accepted or rejected are the following: *"Since the app has so many functions and gathers a lot of data, how would it influence your privacy concerns?", "If you had many privacy concerns about the app, how would this affect your trust?"* and *"From a scale from 1 (low) to 10 (high), how high is your concern for privacy when one company can gather all your data?"* The third question has been transformed into a five-point Likert scale to make comparisons easier to compute.

To illustrate the findings, the Spearman's Rho test was used to find a correlation between privacy concerns and trust. Table 11 presents the findings and by looking at the significance which is a one-tailed significance we can see that the significance level ranges between .000 and .031 which determine that the 95% significance level threshold has been reached. The results on the other hand, present that customers do have high privacy concerns for the application presented in the questionnaire with a correlation score of .523 and when the connection to trust is made from the sample that it indeed shows a negative correlation of -.249 and -.169 which imply that there is a small negative relationship between privacy concerns and trust. The higher the concerns for privacy the lower their trust in the application will be. The results thus conclude that the null hypothesis can be rejected and so in turn the alternative hypothesis H5 can be accepted.

Table 11: Spearman's Rho test (Privacy concerns - Trust)

Correlations

			Since the app has so many functions and gathers a lot of data, how would it influence your privacy concerns?	If you had many privacy concerns about the app, how would this affect your trust?	Privacy groups
Spearman's rho	Since the app has so many functions and gathers a lot of data, how would it influence your privacy concerns?	Correlation Coefficient	1,000	-,249**	,523**
		Sig. (1-tailed)	.	,003	,000
		N	123	123	123
	If you had many privacy concerns about the app, how would this affect your trust?	Correlation Coefficient	-,249**	1,000	-,169*
		Sig. (1-tailed)	,003	.	,031
		N	123	123	123
	Privacy groups	Correlation Coefficient	,523**	-,169*	1,000
		Sig. (1-tailed)	,000	,031	.
		N	123	123	123

**. Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed).

4.3.6 Hypothesis 6

Trust in the mobile application is positively related to customer experience.

The sixth and final hypothesis H6, focuses on the trust in relation to customer experience. The null hypothesis dictates that when customers have expressed trust in the application that it does not relate positively to customer experience. In other words, trust does not impact the customer experience. The questions used to answer the hypothesis are the following: "How important is trust in the app for your overall customer experience?" and "If you trust the app, how will it influence your customer experience?" The Spearman's Rho test was also used for this hypothesis to find the correlation between trust and customer experience. The test uses a one-tailed significance level to find out whether trust positively relates to customer experience. In table 12, the significance level shown is a .000 score which determines that the results of the test are significant. The results itself illustrate a correlation of .418 which indicates that there is a moderately positive relationship between trust and customer experience thus implying that the null hypothesis can be rejected. The alternative hypothesis H6, can thus be accepted.

Table 12: Spearman's Rho test (Trust - Customer experience)

Correlations

			How important is trust in the app for your overall customer experience?	If you trust the app, how will it influence your customer experience?
Spearman's rho	How important is trust in the app for your overall customer experience?	Correlation Coefficient	1,000	,418**
		Sig. (1-tailed)	.	,000
		N	123	123
	If you trust the app, how will it influence your customer experience?	Correlation Coefficient	,418**	1,000
		Sig. (1-tailed)	,000	.
		N	123	123

**. Correlation is significant at the 0.01 level (1-tailed).

Concluding the hypothesis testing, the findings will be critically discussed within the following chapter reviewing the synthesis between the empirical findings and the theoretical framework and using the sample data to answer questions and extending the field by illustrating new questions that were uncovered while analysing the hypotheses.

4.4 Summary of hypotheses

A short summary of the results from the hypothesis testing are presented in Table 13 illustrating which of the alternative hypotheses were accepted and which were rejected based on the empirical findings.

Table 13: Summary of hypothesis testing

(H1) There is a positive relationship between high levels of convenience and customer experience.	**Accepted**
(H2) High Level of customer satisfaction has a positive effect on customer loyalty, intention to re-visit, and intention to re-	**Accepted**
(H3) Time distortions drive the enjoyment of a customer during use of a mobile application.	Rejected
(H4) The level of enjoyment a customer experiences influences the customer experiences and impacts the level of satisfaction.	**Accepted**
(H5) Mobile privacy concerns have a negative effect on trust	**Accepted**
(H6) Trust in the mobile application is positively related to customer experience	**Accepted**

5. Discussion

In this chapter, the empirical data will be viewed in comparison to the theory and underlines how the results of this study illustrate how the three core themes, technology, customer experience and ethics are connected and dependent on each other to make this new technological application a success in Europe. The conclusions from the hypotheses will be reflected in the discussion with the data from the samples in chronological order as they were presented in the previous chapter and ends with a concluding note on the cooperation between core themes discussed in this study. Further research to find conclusive evidence on this topic is necessary to make specific claims so the author will refrain from doing so. Although the majority, of the sample arose from two countries, a multitude of different cultures within and outside of Europe were present in the final sample thus making careful assumptions in this discussion chapter more reasonable.

Hypothesis 1

Looking at the findings of H1, there is a positive relationship between convenience and customer experience which imply that technologies incorporating convenience as a metric are more likely to increase customer experience. In chapter 2.2.1, Siwicky (2014) has also described that new technology in the mobile phone industry which directly leads to improved convenience and thus simplifying the daily routine of customers in return improve customer experience. The online customer experience especially on phones shifts quickly as it is highly sensitive due to its availability to use wherever and whenever a customer feels like. Thus, convenience can help in many ways such as easing up the decision-making process, making comparisons between products and services easier and improving the service quality by integrating a system which makes it easy for customers to interact with the retailers and service providers. Customers expect a high service regardless on which medium they interact with their retailer or service providers, so they will be more open towards systems with increased convenience.. Bilgihan et al, (2016) mentioned that convenience leads to the believe of customers that using mobile phone to make a purchase saves them time that they can invest in other tasks.

Looking at the sample results, females and male customers use their phones between 4 and 7 hours on average which provides them with plenty of time to browse the application to find the products or services that they are looking for. When looking at the importance of convenience

between groups, it shows that female customers find convenience to be more important than their male counterparts with differences in mean scores of 3.87 for females compared to 3.11 for males. While the sample results for convenience cannot be taken as concrete evidence for the customers in Europe in general, it does provide similar results as other studies which provides an appropriate narrative to make certain conclusions for the research aim and for further research directions.

Hypothesis 2

For H2, the findings has shown that a high level of customer satisfaction indeed has a positive effect on customer loyalty, intention to revisit and the intention to re-purchase a product through the application. Rose, Hair & Clark (2011) in their study provided support for this claim that the intention to repurchase products is an outcome as customer experience increases. Bilgihan et al (2016) also examined customers on repeat purchases in the online channels as discussed in chapter 2.2.1. and has shown that positive customer experience is a major key that leads to repeat purchase intentions. Moreover, in the study, loyalty was also positively increased when customers felt to have a good customer experience. The strong positive correlation between these variables had been tested in this study and similarly illustrate the importance of what a good customer experience can mean for their loyalty towards the company and their intention to re-use and re-purchase products or services.

When viewing the means of the samples for these variables it shows slight differences in how important the samples view these variables. Females give a mean score for 4.12 on loyalty and a 4.12 on intention to re-use the app and a slightly lower score of 3.62 for their intention to re-purchase using the app. Males on the other hand score 3.91 on loyalty, 4.13 on intention to re-use using the app and 3.44 on their intention to re-purchase the app which show that the effects of a good customer experience show slightly better results on female customers than on their male counterparts but that both do show positive effects as determined by the analysis. The importance of a good customer experience is illustrated and is considered a key issue for the company that is able to create the application for the European markets. Companies can utilize the key findings and conclusions of this study and include it in their concept idea for the application but that it cannot be completely dependent on the data from this study alone to came to final conclusions.

Hypothesis 3

The findings of H3, had shown that time distortions do not necessarily drive the enjoyment of a customer during use of a mobile application. In the literature, Novak, Hoffman & Yung (2000) introduced the concept of Flow in chapter 2.2.2 in which time distortions were described as an individual being immersed in an activity or task that the flow of time has become distorted due to extreme focus on the task or activity at hand. Together with enjoyment and telepresence, time distortion made up the origins of Flow theory and that it is an important factor that can influence customer experience. McLean et al (2018) already discussed the usefulness of time distortions and the direct link with the enjoyment customers should experience and mentioned that regardless of research on flow theory, the effects are still doubted by researchers and managers. The sample results show a somewhat neutral to positive position for both female and male customers with the first scoring a mean of 3.40 and the latter a score of 3.71 but as the results have not reached the proper significance level it remains ambiguous for future research.

An interesting comparison is that the literature has come to similar conclusions with different researchers arguing whether it actually improves enjoyment and more importantly customer experience. Both Klaus (2013) and Mclean & Wilson (2016) as mentioned in 2.2.2 have each separately described customer experience in their own contexts describing the smartphone industry and more importantly specified that customers use smartphone devices to complete a task faster which contradicts them losing themselves in time when using the application. The difference here may lie in which context the customer uses their smartphones, is it to play games, or go shopping or some other activity. For the application which composes of several different functions this can mean that depending on the customer, the effects can be different, and this can be a key issue for further investigations on the application and its relation to customer behaviour.

Hypothesis 4

The findings in the previous chapter on H4 have illustrated that the level of enjoyment a customer experiences positively influences customer experience and thus impacts the level of satisfaction. Mclean et al (2018) in chapter 2.2.2 described that in the online marketspace research has illustrated that customers who do not obtain any sense of enjoyment will in turn not be satisfied and will presumably look towards a competitor to finalize their purchase. Hoffman & Novak mentioned that customers will not be able to obtain the best possible customer experience if they do not experience any enjoyment during their purchase. Bilgihan

et al (2016) used enjoyment as one of two integral factors to the success of customer experience which creates the overall census that enjoyment is an important part of online customer experience. The sample results show mean scores of 3.96 for females and 3.91 for males indicating that both customer groups think similarly and feel enjoyment to be an important factor that demonstrates that a high level of enjoyment affects customer experience in a positive way. Enjoyment is thus an important variable to think about for companies when developing a concept application for the European market. A more challenging assumption for this study is to find out what exactly causes the enjoyment amongst the different customers to rise as customers have different criteria that they consider for mobile applications. Therefore, follow-up research is needed to find the triggering factors amongst European customers to what they consider enjoying when using a mobile application. Unlike time distortions, enjoyment as a factor of flow theory does have merits and throughout different studies has revealed to be a positive factor of customer experience.

Hypothesis 5

The discussion on the findings of H5 start with the results of the fifth hypothesis which revealed that mobile privacy concerns have a negative effect on trust. For the success of the application on the European market, a strong roadblock from the start seemed to be the ethical considerations as this difference in attitude towards ethics had separated the European region from China in the implementation of new technologies in which ethics stands central. In different literature, the use and implementation of technology may have a harmful effect on individuals who use these new technologies or those that fall victim to it. In chapter 2.3, a number of examples have been mentioned from different researchers and most notably, Martin et al (2019) explained that new technologies can threaten the independence of people, violate privacy rights, and can even cause physical or financial impairments. Belanger & Crossler (2019) in chapter 2.3.1 have shown in their study results that privacy concerns has an effect on customers or users and alters their behaviour directly or indirectly as a result. Krasnova, Spiekermann, Koroleva & Hildebrand (2010) have revealed in their study that trust has been a factor that lowers the concerns customers experience regarding the sharing of information in the online environment. While the theory discusses that trust high trust can lower concerns, the findings of the hypothesis have discovered that privacy concerns in turn can lower trust. This may be result of customer perception and on how they perceive their privacy.

Comparing means, females score 1.91 on average and males score 2.51 illustrating that the trust is more negatively affected amongst females than it is amongst males, but that both show a negative relationship. However, when looking at the survey data set on whether the customers read the terms and conditions so that they can find out how their privacy is protected the following sample mean results show that females score 1.94 and males score 1.89 illustrating that most customers seldomly read the terms and conditions and thus become unaware of their privacy rights and what the company actually does with their data. It is hard to appoint a reason as for why the customers never read the terms and conditions but very likely is that if further research is conducted in this field, it is of utmost importance to map out how privacy concerns is affected and why customers avoid reading the announcements that may prevent their privacy concerns to appear in the first place. Trust also needs to be considered when researching this phenomenon as it is inevitably connected in both a positive and negative way to privacy concerns.

Hypothesis 6

The last hypothesis, H6 focuses on how trust in the mobile application would positively relate to customer experience and through the findings of the last hypothesis a positive correlation was indeed found between the two variables. According to Belanger & Crossler (2019) in chapter 2.3.1 trust is the key within the online environment for customers in the mobile phone industry as trust creates a safe environment in which customers or users are more willing to share their information data. Wang, Shen & Shun (2013) revealed in their study that trust may influence the behaviour of potential customers who start using mobile applications when the application distributes purchasing information between different customers, which leads to information disclosure that can help the company pinpoint the wants and needs of customers but gives customers little to no benefits. Although the study has not directly specified how trust influences customer behaviour in general, the sample results points toward positive correlation when considering the variables trust and customer experience from the theoretical framework.

To better illustrate this relationship a comparison of means shows respective scores of 4.02 on average for female customers and 3.88 for male customers. When looking at this specific relationship, both customer groups showcase that trust is an important variable for a positive customer experience. Generalization of the results for the entire European region cannot be made due to the non-probability sample method used having resulted in an unequal representation of several countries located in the region. However, the findings do provide an

entrance towards further research considerations specifically focusing on countries within the European region that have not been fairly represented in the sample of this study.

5.1 Final thought on discussion

The hypotheses from chapter four and comparing it with literature mentioned in the theoretical framework of chapter two, has provided assumptions regarding the research questions which were made based upon the findings of this study. The sample which represents the potential customers, have answered the questions of the online self-completion questionnaire based on a theoretical outline of the application that was presented to them at the introduction of the questionnaire. Synthesizing these findings with the literature and having reflected back on this connection during the discussion of the hypotheses questions has revealed which elements customers in the European region consider if they should use a new multifunctional m-commerce platform. Lastly, by critically looking at the analysis and the literature has widened and strengthened the understanding of the relationship between the three core themes and through the findings presented answers to the research questions used in this study.

6. Conclusion

The objective of this study is to contribute to the understanding of customer experience in the m-commerce industry within the boundaries of service management by focusing on interpreting the connection between a new digital technology and its effect on customer experience when the digital technology centres its focus around a convenience that generates new user-friendliness for customers to initiate the interaction with service-providers and retailers more easily using a mobile application platform with integrated social media interfaces . In addition, the ethical considerations were included to add an important dimension that needed to be discussed as this field in Europe represents an important key being dissimilar to the Chinese market in which this technology had become a success. The leading thread for the theoretical and empirical work has come from the chosen research questions: *" How do customers in Europe perceive high levels of convenience through this new mobile application technology?", " What causes of flow are affecting customer experience when they would use this new mobile application technology?"* and *" How do trust and privacy considerations influence customers in Europe if they should consider using this new mobile application technology?".*

The findings of this study have revealed that convenience, enjoyment, trust, and privacy concerns are important elements that shape a good customer experience and play a decisive role in whether customers should use a new mobile commerce application that could change their current buying pattern. Although the findings have been based on statistics from the selected sample, it has to be taken into consideration that the data extracted was from a non-probability sampling method and as can be seen from the data in chapter four is mostly centred around individuals from two countries in Europe namely Sweden and The Netherlands. True generalization of the findings for the entire European region is thus not applicable. However, when specifically focusing on the two countries, more reliable assumptions are able to be drawn as the final conclusions made can be used as introductory to the field upon which new research can be built in different specified fields. For this study, the empirical work has provided satisfactory answers and has shown on multiple instances that further research within this field is necessary to elaborate on the findings presented in this study. This is to frame a more overall indication whether the mobile application presented in this study could be the digital technological advancement in the retail or service industry that the customers living in Europe have truly been waiting for.

By exemplifying the research aim, a conclusion can be drawn that this study has achieved the expectations mentioned in the research aim and has offered a new perspective in which the three core themes have been synthesized using the underlying theoretical orientation. Moreover, by merging the theoretical orientation with the empirical findings, this study has offered new entry points in this wider framework. While synthesizing, the research has succeeded in creating a new framework to provide the answers for the research questions. It has also opened new research gaps within the created framework as presented in chapter two which can be pinpointed in follow-up research. Managers and researchers within the wider framework of service management, ranging from the retail intensive perspective to the more service-minded perspective can from different angles probe and make use of the findings and conclusions presented in this underlying study. The literature used in this study has provided valuable insights on which the findings could be assessed within a proper framework. This framework has illustrated the general idea behind the synthesis of these three core themes and could be essential for the implementation of new digital technologies as these questions have a general nature applicable to customers in different industries.

6.1 Limitations

As mentioned in earlier chapters and sub-chapters alike, this underlying study like any other academic study has limitations which need to be addressed properly so that data extracted from this study by a third party can be used in the right way without any detrimental effects and thus carefully used within a relevant field. The investigation of the research questions have illustrated that the choice to conduct non-probability sampling method has resulted in a limitation to draw certain conclusions due to the lack in generalization of the results as some countries were overly represented where others were heavily underrepresented. Another limitation is linked to the choices made to include certain samples in the final sample count. As it focused on individuals living in any European country, the people living in Europe for only a short-term were most likely also included in the sample and this could have affected the results due to for example, a different set of cultural values especially concerning ethical considerations in technology. The final conclusions can therefore not lead to definite answers and should be carefully considered when linking the sample results to the total population size. Moreover a possible limitation has arisen due to the digital technology not being released in the European region yet, it must thus be considered that the customers perhaps did not envision the concept

of the mobile application in the same way as the researcher intended and thus could derive to different answers if they had been aware. Although the questionnaire had been tested before being revealed to the final samples, there exists a possibility that this is the case due to the questionnaire being administered online and the customer had therefore no way to ask whether they understood the concept in the same way as was intended for this study. Lastly, similar to many other studies, time and the access to resources has been a limitation for this study as the sampling method could have been adjusted if these factors did not detrimentally contribute to this underlying thesis having had implications to the final results presented within this study.

6.2 Recommendations for future research

Throughout the discussion and conclusion chapters, different research directions have been described in which future research can expand itself to fill in the gaps left behind by this underlying study. The potential topics discussed were: 1) expansion on the connection between convenience and customer experience for European customers, 2) consumer behaviour using smartphones and time distortions completing the different sets of tasks depending on their wants and needs to better illustrate on which type of customer time distortions have a positive or negative effect, 3) determining the cause of enjoyment amongst the different customer groups within the m-commerce industry, 4) what factors increase privacy concerns for customers in the m-commerce industry, 5) mapping out why customers would avoid reading company terms and conditions while showing increased privacy concerns and 6) expanding on the relationship between trust and customer experience per country in Europe. Most of all, a recurring theme is to expand on sample size to obtain findings which can be used to make generalized conclusions.

6.3 Critical reflection

The findings of the study, like any other academic research should contain a critical reflection to objectively assess the findings from an impartial point of view to be able to look at the wider framework. When looking at the understanding of the customers towards a new digital technology in the form of an m-commerce platform, it is clear that if they would be exposed to an application of this nature that they would be willing to use it if it actually helps them save time and if the privacy concerns can be downplayed by trustworthy transparency. However, it is not strange to see why no company has tried to market this concept in the European region

as the rules and regulations in the European region are stricter than other markets of similar developments and thus provides a roadblock for its conceptualization. That being said, it is not impossible to realize this idea if the company complies with the rules and regulations of the region and provides a transparent communication of its services to its customers to provide a sense of trust. In addition, the theory and the empirical findings have shown that there are a lot of similarities rather than differences between the test sample for this application and the theory in a wider framework focused on the mobile technology industry. Moreover, looking at the general idea of mobile applications in term of growth, it illustrates that these applications have become part of daily life, and even though privacy concerns exist about these applications, it has not slowed its market size down at all. It is because people continue to use these systems as it provides them with important elements such as: enjoyment, convenience, satisfaction and even trust from their personal experiences. Would privacy concerns really prevent the conceptualization of this application from becoming a success within the European region? Or will this application like many other applications before it become a part of customers' daily routines? Maybe there have been other deciding factors outside the scope of this study that have prevented such an invention from seeing the light in this specific region and thus it is important for research to be continued on this particular field to come with new findings to form conclusions on whether the conceptualization is feasible in Europe or not.

Reflecting back upon the selected method taking into consideration the limitation, the decision to choose the self-completion questionnaire and thus the survey design would still be the preferred choice by looking back on the entire study. Another method in the form of semi-structured interviews was amongst the more favoured options to use for this study, but because the study had built on a theoretical scenario, it would be more difficult to extract more information through interviews as they have not been exposed to this application. Moreover, the sample size would be too low to draw similar conclusions and the risk of bias would be higher as during an interview one sample could need more information on the scenario to give their answers while others did not. Observations were also briefly discussed at the beginning of the study, but early on two major problems occurred. The first was that the Chinese application would have had to be used and thus some form of bias could have occurred. The second was about the functionality of the application itself as it only has the limited function to chat when used outside of China. Observations were thus also discarded. Out of the methods available, the survey would gather the most results within the given timeframe while also being most useful in finding answers based on a theoretical scenario.

When reflecting on all the parts of this study and the synthesis of the core themes it is with interest to have found how the fields are integrated within one another as the elements found in the literature were able to construct the theoretical framework as shown in chapter two making a wider framework portray exactly how the elements are connected. If follow-up research on these connections come to similar conclusions as this study, how will this affect the different impacted industries if this application would be commercially realized? With more answers, new questions are discovered as well to expand within the field.

While a lot of speculation is left, there are no exact answers to be found within the reflections as there are no right or wrong answers. The reflections do however emphasize that there seems to be a good link between prior literature and the findings discovered within this study and to further shape the foundation behind this framework that thorough considerations are made for future researchers to follow the guidelines and further adopt new entries into this framework.

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Appendix

Appendix A: Codebook

SPSS name	*Label*	*Value (coding)*	*Measurement*
Gender	What is your gender?	(1) Female (2) Male (3) Other	Nominal
Age	What is your age?	Age in years	Scale
Educational_level	What is your educational level?	(1) Secondary education (2) Bachelor (3) Master (4) PhD (5) Other	Nominal
Nationality	What is your nationality?		Nominal
Country_live	In which country do you currently live?		Nominal
Work	Are you currently working?	(1) Yes (2) No	Nominal
Own_Smartphone	Do you currently or have you ever owned a smartphone?	(1) Yes (2) No	Nominal
Hours_perweek	How many hours per week do or did you spend on your phone using a mobile application or	(1) less than 1 hour (2) Between 1 and 4 hours (3) Between 4 and 7 hours	Ordinal

	simply browsing the Internet?	(4) Between 7 and 10 hours (5) More than 10 hours	
Convenience_onlineshopping	How important is convenience for you when you shop online on your mobile phone?	(1) Not important at all (2) Not important (3) Neutral (4) Important (5) Very important	Ordinal
Terms_and_conditions	When you download and install an app, do you read the terms and conditions before you provide your information?	(1) Never (2) Seldom (3) Frequently (4) Always	Ordinal
Time_distortion_general	Have you ever been using an app so intensely that it felt like time went faster?	(1) Yes (2) No	Nominal
Enjoyment_time_distortion	When you felt like time went faster, how would you describe your	(1) Not good at all (2) Not good (3) No change	Ordinal

		(4) Good (5) Very good	
convenience	Would convenience be an important factor for you to decide on installing and using this app?	(1) Not important at all (2) Not important (3) Neutral (4) Important (5) Very important	Ordinal
conv_customer_experience	How would a high level of convenience in the app affect your customer experience?	(1) Very negatively (2) Negatively (3) No change (4) Positively (5) Very positively	Ordinal
Experience_loyalty	If you had a good experience using the app, how would this affect your loyalty towards the app?	(1) Large decrease (2) Small decrease (3) No change (4) Small increase (5) Large increase	Ordinal
Experience_revisit	If you had a good experience using	(1) Large decrease	Ordinal

		(2) Small decrease	
		(3) No change	
		(4) Small increase	
		(5) Large increase	
Experience_rebuy	If you had a good experience using all functions of the app including buying products or services, how would this affect your intention to buy more products/services using the app?	(1) Large decrease (2) Small decrease (3) No change (4) Small increase (5) Large increase	Ordinal
Enjoyment_experience	If you would enjoy using the app how would this affect your customer experience?	(1) Very negatively (2) Negatively (3) No change (4) Positively (5) Very positively	Ordinal
Privacy_concern	Since the app has so many functions and gathers a lot of data, how would it influence your	(1) Large increase in concern (2) Small increase in concern	Ordinal

	privacy concerns?	(3) No change (4) Small decrease in concern (5) Large decrease in concern	
Concern_trust	If you had many privacy concerns about the app, how would this affect your trust?	(1) Very negatively (2) Negatively (3) No change (4) Positively (5) Very positively	Ordinal
Trust_experience	How important is trust in the app for your overall customer experience?	(1) Not important at all (2) Not important (3) Neutral (4) Important (5) Very important	Ordinal
Influence_experience	If you trust the app, how will it influence your customer experience?	(1) Very negatively (2) Negatively (3) No change (4) Positively (5) Very positively	Ordinal

Trust_companies	From a scale from 1 to 10, how much trust do you have in companies protecting your data?	(1) = 1 (2) = 2 (3) = 3 (4) = 4 (5) = 5 (6) =6 (7) =7 (8) =8 (9) = 9 (10) = 10	Scale
Privacy_bigdata	From a scale from 1 (low) to 10 (high), how high is your concern for privacy when one company can gather all your data?	(1) = 1 (2) = 2 (3) = 3 (4) = 4 (5) = 5 (6) =6 (7) =7 (8) =8 (9) = 9 (10) = 10	Scale
Agegroups	Age groups	(1) = 18 - 23 (2) = 24 - 29 (3) = 30 -39 (4) = 40 - 49 (5) = 50 -59 (6) = 60 - 69	Nominal
Privacygroups	Privacy scale groups	(1) = 1 - 2 (2) = 3 - 4 (3) = 5 - 6 (4) = 7 - 8 (5) = 9 - 10	Ordinal
Trustgrouped	Trust scale grouped	(1) = 1 - 2 (2) = 3 - 4	

		(3) = 5 - 6	
		(4) = 7 - 8	
		(5) = 9 - 10	
Enjoyment_exp2		(1) Very negatively	Ordinal
		(2) Negatively	
		(3) No change	
		(4) Positively	
		(5) Very positively	
Tme_enjoyment		(1) Not good at all	Ordinal
		(2) Not good	
		(3) No change	
		(4) Good	
		(5) Very good	
Trust_exp		(1) Very negatively	Ordinal
		(2) Negatively	
		(3) No change	
		(4) Positively	
		(5) Very positively	

Appendix B: Questionnaire

This is a questionnaire designed by a master student of the Service Management department of Lund University in Sweden for the purpose of collecting data on customer experience and its connection to technology and ethics. This survey is especially focused on the implementation of new digital technology in the mobile commerce (m-commerce) industry in Europe and therefore primarily on users in Europe.

To give some more information context of this survey. You have to imagine that you can use a new mobile application (app) that has just launched on the European market that has absolutely everything in it. You can use it to chat, use it to pay in-store or online, use it to translate documents, find and buy plane, bus or train tickets, order your favourite food or use it to shop for the newest clothing collections. In addition, your housing, insurance and utilities can be found paid or changed using it. This app must create the utmost of convenience for you as a customer while having a simple design for easy use. You have to see the app as a gateway between you and the companies that you usually connect with physically in-stores or online on the web. An additional note that you have think about is that the company will be able to collect all your data when you use each function of the app.

The structure of the questionnaire is that in section 1 you will have to answer some personal questions and the questions in section 2 are more centred around the scenario described in the previous paragraph. I wish everyone good luck and thank you very much for taking the time to answer this survey.

PS: All data gathered from this survey will explicitly be used for a Master thesis and will not be shared or sold to third-parties. The privacy of participants will be guaranteed.

Section 1: personal questions based on your situation

1.1 What is your gender? (option question)

- Male
- Female
- Other

1.2 What is your age? (open question)

1.3 What is your educational level?

- Secondary education
- Bachelor
- Master
- PhD
- Other

1.4 What is your nationality? (open question)

1.5 In which country do you currently live? (open question)

1.6 Are you currently working?

- Yes
- No

1.7 Do you currently or have you ever owned a smartphone? (if yes go to 1.8, if no go to 2.1)

1.8 How many hours per week do or did you spend on your phone using a mobile application or simply browsing the Internet?

- less than 1 hour
- Between 1 and 4 hours
- Between 4 and 7 hours
- Between 7 and 10 hours
- More than 10 hours

1.9 How important is convenience for you when you shop online on your mobile phone?

(1) Not important at all
(2) Not important
(3) Neutral
(4) Important
(5) Very important

1.10 When you download and install an app, do you read the terms and conditions before you provide your information?

(1) Never

(2) Seldom

(3) Frequently

(4) Always

1.11 Have you ever been using an app so intensely that it felt like time went faster? (if yes go to 1.12, if no go to 2.1)

- Yes

- No

1.12 When you felt like time went faster, how would you describe your level of enjoyment?

Not good at all

Not good

No change

Good

Very good

1.13 When you are enjoying yourself, how do you experience your loss of time?

Not good at all

Not good

No change

Good

Very good

Section 2: questions based on the scenario

You do not need to currently own a smartphone to answer these questions, we are currently only looking forward to your opinions based on the scenario itself.

2.1 Would convenience be an important factor for you to decide on installing and using this app?

(1) Not important at all

(2) Not important

(3) Neutral

(4) Important

(5) Very important

2.2 How would a high level of convenience in the app affect your customer experience?

Very negatively

Negatively

No change

Positively

Very positively

2.3 If you had a good experience using the app, how would this affect your loyalty towards the app?

Large decrease

Small decrease

No change

Small increase

Large increase

2.4 If you had a good experience using the app, how would this affect your intention to use the app again?

(1) Large decrease

(2) Small decrease

(3) No change

(4) Small increase

(5) Large increase

2.5 If you had a good experience using all functions of the app including buying products or services, how would this affect your intention to buy more products/services using the app?

(1) Large decrease

(2) Small decrease

(3) No change

(4) Small increase

(5) Large increase

2.6 If you would enjoy using the app how would this affect your customer experience?

(1) Very negatively

(2) Negatively

(3) No change

(4) Positively

(5) Very positively

2.7 How would you describe your level of enjoyment when you have a obtained a good experience?

(1) Very negatively

(2) Negatively

(3) No change

(4) Positively

(5) Very positively

2.8 Since the app has so many functions and gathers a lot of data, how would it influence your privacy concerns?

Large increase in concern

Small increase in concern

No change

Small decrease in concern

Large decrease in concern

2.9 If you had many privacy concerns about the app, how would this affect your trust?

(1) Very negatively

(2) Negatively

(3) No change

(4) Positively

(5) Very positively

2.10 How important is trust in the app for your overall customer experience?

(1) Not important at all

(2) Not important

(3) Neutral

(4) Important

(5) Very important

2.11 If you trust the app, how will it influence your customer experience?

(1) Very negatively

(2) Negatively

(3) No change

(4) Positively

(5) Very positively

2.12 What effect has a good customer experience on your trust?

(1) Very negatively

(2) Negatively

(3) No change

(4) Positively

(5) Very positively

2.13 From a scale from 1 (low) to 10 (high), how much trust do you have in companies protecting your data?

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

2.14 From a scale from 1 (low) to 10 (high), how high is your concern for privacy when one company can gather all your data?

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

You have reached the end of this survey! Thank you very much for your time and energy. I wish you a wonderful day.