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**M.Sc. in Marketing**

**Mobile Banking Adoption in Iceland: The Behaviour  
and views of Managers and Consumers**

Laufey Fríða Guðmundsdóttir

Supervisors: Dr. Valdimar Sigurðsson & Dr. Vishnu Menon

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## Abstract

The constant evolution in wireless technology and smartphone services has encouraged banks and financial institutions to implement mobile banking in their services. However, a substantial number of consumers have yet to adopt this new technology. The objective of this thesis is to assess which factors influence consumer behaviour regarding adoption of mobile banking in the consumer market. In addition, the behaviour of managers in financial institutions providing mobile banking services was analysed. The thesis is based on the theoretical model named: The Marketing Firm by Gordon Foxall. The research is derived from two separate studies; the first study is a questionnaire-based survey on the use of mobile banking services in a population of Icelandic bank consumers ( $N = 485$ ). The second study is built on a number of semi-structured interviews with current managers in the mobile banking sector in Iceland. The aim was to determine which factors most strongly affect consumer behaviour when adopting a mobile banking application. The findings showed that higher education and higher income had the largest effect on the probability of non-users adapting to mobile banking in the future. However, the gender and age of non-users had no effect on their responses. Furthermore, the perceived trustworthiness of the provider, and the interest in an educational course on mobile banking apps was positively related to consumer willingness to adopt mobile banking. Users generally approved of mobile banking services and their beneficial impact on their daily business. According to responses from consumers and managers, mobile banking services are beneficial for both parties. Hopefully the findings will encourage mobile banking suppliers in both the development and improvement of their services in order to further increase the quality of mobile banking in Iceland.

**Keywords:** Mobile banking, mobile banking adoption, consumer behaviour, customer-orientation, The Marketing Firm.

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## **Introduction**

Digital technologies have pressed the entire world into a small frame and are changing the way we live and behave. The engagement with mobile apps has been an emerging trend for a while. The term “app” is an abbreviation of the term “application software”, which is a small, specialized program downloaded into mobile devices such as smartphones and tablet computers. It can be defined as a “software running on a mobile device that performs certain tasks and provides values to users” (Valvi & West, 2015). Apps provide a lot of functions, from checking the weather, to social networking, to banking transactions (Bellman, Potter, Treleaven-Hassard, Robinson, & Varan, 2011).

The world is clearly developing into the technical side, business and transactions never stop and one of the things that has changed the most in business is how we trade (Alavi & Ahuja, 2016). The banking industry is becoming increasingly competitive, which increases the pressure on commercial banks to develop exclusive services and products to serve and satisfy their existing consumers and gain new ones (Gumussoy, 2016). Banks and financial companies have created new and improved ways to engage and involve their consumers, and one of the new technical tools are the mobile banking apps (Laukkanen & Lauronen, 2005). The use of mobile banking app is referred to as mobile banking and it is defined as “the use of mobile terminals such as cell phones and personal digital assistants to access banking networks through the wireless application protocol” (Zhou, Lu, & Wang, 2010). Mobile banking gives consumers the chance to do their banking activities with a device that is close, at anytime and from anywhere, hence increasing variability for consumers in their banking actions (Alavi & Ahuja, 2016). Mobile banking has been referred as one of the most influential technological innovations of the 21<sup>st</sup> century in the banking industry, which has been developed as one of the main platform for increased access to banking actions through mobile devices or tablets and working wireless interaction technologies (Laukkanen & Lauronen, 2005). The main banking innovations are the various technological devices to offer services, transaction costs, easier applications of transferring amounts from one end to the other, safety of technologies, and improved services of technologies in quality perspective (Agolla, Makara, & Monametsi, 2018).

Mobile banking can be observed as one of the key aspects of online banking and

is considered as an one of the important delivery and communication channel for modern banking (Pousttchi & Schurig, 2004). Furthermore, mobile banking is an important asset in helping banks attract new consumers and hold on to the existing ones (Gulamhuseinwala, Bull, & Lewis, 2015). Even though mobile banking offers great advantages, some consumers prefer not to use this new technology (Altin Gumussoy, 2016). They prefer to use online banking without the app or to visit their bank branches. There are two ways of consumer's adoptability of non-mobile Internet banking. Banking consumers are moving more towards online mobile banking and become more digitalized. The digitalization has forced the banks to go into the broadest transformation in their history (Laukkanen, 2007).

### **1.1. Mobile banking development**

Mobile technology is progressively changing the system of banking. However there are some new threats entering the market with advanced mobile banking solutions (Gupta, 2013). Big organizations such as large credit card companies, Google Wallet and other financial companies like PayPal are developing their own devices. These can become strong competitors in the nearest future (Gupta, 2013). The threats are impending in the banking business worldwide. Recently in Iceland an article was published about a German mobile bank offering their services in Iceland ("Þýskur netbanki ætlar að opna á Íslandi," 2018). This development makes managers and bank consumers consider their situation. The banking sector is discovering new opportunities and facing new challenges such as offering services and products that can serve the demand on the market. Banks and almost all competitive financial companies today are facing a great challenge of understanding customer experience and perception of quality (Laukkanen & Lauronen, 2005). However, most of the international banks have adopted innovative products and services through the application of new technologies to gain customer satisfaction, attraction and importantly higher retention rate (Sampaio, Ladeira, & Santini, 2017).

This constant development in mobile banking is important because apps offer the best experience for their consumers in banking through the mobile devices (Kabir, 2013). According to Laukkanen (2007) mobile banking has several benefits. It allows more freedom in time and place for individuals, and is more applicable and efficient in

banking transactions. Mobile banking has increased in attention amongst practitioners and academics for that reason (2007). The financial industry has experienced some interruptions and that has simply changed the behaviour of the banking sector. This applies to policies in awarding credits in exclusive and algorithmic trading, and instruments for risk management (Alt & Puschmann, 2012). All these technical innovations in the banking business are affecting both people and banks. Data from a Wall Street Journal report indicates that banks are shutting down more branches now than they have in the past few decades (Ensign, Rexrode, & Jones, 2018). According to the report, more than 1700 bank branches in the United States were shut down for the past 12 months before June 2017. The main reason can be related to ATM's and of course the rise of digital and mobile banking. Additionally the financial crisis was cited as another leading factor along with high maintenance costs.

Consumers are being informed and tempted about different types of mobile banking apps in the market and it is much easier for individuals to switch banks or trading with big suppliers, it doesn't even have to be a bank (Personal communication, Respondent C., November, 2018). This technical development and the intensive circulation of smartphone and new players on the banking market are one of the factors that pushes banks into developing advanced mobile banking systems (Valvi & West, 2015). However the adoption rate of mobile banking has not reached expectations. Therefore studies of mobile banking adoption are required. There are seven billion people in the world, who have about six billion mobile phones but the bank accounts are about 2 billion worldwide (Gupta, 2013). There are obviously potential consumers available that have not adopted that mobile banking as bank or other organisations are providing.

## **1.2. Mobile banking in Icelandic market**

There are several mobile banking apps available in Iceland, and the largest ones are provided by the three main Icelandic commercial banks; Arionbanki, Íslandsbanki and Landsbankinn, others are provided by mobile banking suppliers. In this study we will mainly look into the mobile banking apps that are provided by the banks since those apps have the highest usage. The adoption of Mobile banking has grown much faster than the adoption of Online or Internet banking (Gupta & Herman, 2010). One of the

managers of an Icelandic bank stated about mobile banking today, “for the first time in many years the Internet/online bank is going down a deep hill while the banking app has three times more usage than the Internet/online bank”. (Respondent C., personal communication, November 2018).

The first Icelandic mobile banking app was established in 2012 so when this research was conducted the mobile banking in Iceland had been available for six years. The first mobile banking app in Iceland was established from one of the banks and later the other banks followed (Respondent B., Personal communication, November 2018). If we compare the numbers from the three main commercial banks in Iceland and how the adoption is going we see that in Bank A. 48.5% of their active bank consumers are using one or more of the mobile banking apps that they are providing. In bank B. 60% of the active consumers are using their mobile banking app, and in bank C. 70% of their active consumers are using mobile banking app provided by them (Personal communication with Bank A., B., and C., December 2018). The first driver that made banks start thinking innovatively could be linked to the consequences of the financial crises in 2007 (Ensign et al., 2018).

The aim of this thesis, which is built on quantitative and qualitative studies, is to gain an insight into the intentions of individuals who are using mobile banking apps in Iceland as well as individuals who do not use mobile banking apps. This is what the quantitative study explores and will from now be called study 1. The study also examines the behaviour and actions of mobile banking managers on Icelandic market, which is the qualitative study, from now called study 2. The thesis is built and developed on the Marketing firm theory, while the bilateral contingency model in The Marketing Firm will be used as the main framework. The reason for the dual approach in this thesis is that the theoretical frameworks of The Marketing Firm and bilateral contingency requires studies from both consumers and managers side. The findings can be used by banks and mobile banking suppliers to develop further strategies. It can also help to advance their services to increase the adoption rate of mobile banking. This thesis differs from previous literature in terms of the use of theoretical framework. The Marketing Firm theory has not been used before in research conducting mobile banking usage behaviour as far as the author knows. To gain better understanding and insight into the mobile banking in Iceland, the interviews with the managers of mobile banking have been cited and will be in the thesis when applicable and relevant. Due to respect

for their privacy and their bank or organization they have been renamed Respondent A., B., C. and D.

This thesis seeks to answer the following research questions:

- 1. What factors have the most effect on consumer intentions to use mobile banking?*
- 2. Are Icelandic mobile banking suppliers customer-oriented?*
- 3. Do mobile banking suppliers on the Icelandic market respond to customers in ways that are beneficial for both customer requirements and corporate financial goals?*

The two studies of this thesis aim to answer these three research questions in reference to the theoretical model, previous literature and the responses that were conducted from mobile banking users, non-users and mobile banking managers.

### **1.3. Structure of the thesis**

The thesis consists of 7 chapters; the Introduction provides a brief overview of mobile banking in general and mobile banking in the Icelandic market for both professionals and academics. It presents some of the previous studies on the adoption of mobile banking. In the last part of the Introduction, the aim and objective of this thesis are discussed and the research questions are presented. The chapter that follows is the Literature review. It presents earlier literature on mobile banking and is categorized into six sections. The end of the chapter introduces The Marketing Firm theory, which is the theoretical framework for the thesis. The third chapter further explains The Marketing Firm theory as well as the bilateral contingency model and relates it to mobile banking services. The fourth chapter, the Method, describes the methodology, data collection, design and format of the questionnaires and the research approach. In the fifth chapter, the results of the two studies, study 1 and study 2 are presented. Thereafter, in the Discussion chapter, the main findings of the thesis are presented and compared to earlier studies, also the limitations of the study. Finally, the last chapter, Conclusion and recommendations, presents a conclusion of the work and a recommendation for further research in the field of mobile banking.

## **2. Literature Review**

This chapter will provide overview of previous research, which examines mobile banking adoption and customer satisfaction, benefits of mobile banking for the banks and consumers. Consumer attitude towards mobile banking, obstacles in mobile banking adoption, and various motives and barriers to mobile banking adoption. The chapter also include an overview of the main theoretical framework that the theoretical model of this study is built on, the marketing firm and the bilateral contingency model.

### **2.2 Effects on mobile banking adoption**

Researchers are enthusiastic in determining the factors that influence banking consumers behaviour, attitudes, and why some individuals don't want to adopt new technology like mobile banking (Keeling, Doherty, Lee, & McGoldrick, 2003). Various studies have indicated theoretical frameworks and models regarding adoption of technological innovations. The Technology Acceptance Model (TAM) has been the most used theory of describing individuals' acceptance towards technical systems and information (Stoel & Hye Lee, 2003) Perceived usefulness is one of the constructs in the TAM model that has had the most significant influential factor for the intention of using mobile banking (Keeling et al., 2003). Corner & Tran (2016) investigated the effects of some distributional channels, social media, mass media and social networks on consumers' usage and intention of adopting mobile banking. The most important influential factor for mobile banking adoption was perceived usefulness. Tezcan & Akturan, (2012) investigated young consumers adoption of mobile banking in Turkey who had never adopted mobile banking. The results showed that perceived usefulness, social risk, performance risk and perceived benefits predicted attitude towards mobile banking. A research generated by Yiu, Grant, & Edgar (2007) showed that the factor of risk influenced the acceptance of online banking services. The researchers Hanafizadeh, Behboudi, Koshksaray & Tabar (2014), Altin Gumussoy (2018) , Palmer, Koenig, Lewis, & Moll, (2010), Gu et al. (2009) were all in agreement according to their research that perceived usefulness was the most important factor of influencing in adopting mobile banking after trust and risk. Usefulness was found to have the most impact with reference to mobile banking adoption. Foley & Jayawardhena (2000), and Mattila, Pento, & Karjaluoto (2003) revealed that younger people are more likely to use

Internet or online banking. Palacios and Jun (2016) explained what has the effect on the intention to use mobile banking by TAM and trust. They found that perceived usefulness was the strongest influential factor, followed by trust. Gu et al. (2009) also examined what factors could effect the intention to use mobile banking with trust. They found that perceived usefulness was the strongest factor, followed by trust. Tran and Corner (2016) conducted mobile banking survey with young adults in New Zealand where usage intention in a mobile banking context were investigated. The most influential factor to use mobile banking in the future was perceived usefulness, followed by perceived credibility and perceived costs. Communication with bank staff in the branch and close connections was perceived as the most reliable and persuasive sources of banking-related information. Several studies have examined what factors influences people to adopt mobile banking. A study by Gumussoy, Kaya, & Ozlu, (2018) which was built on the TAM model, found that perceived use and perceived risk had a significant effect on the intention to use mobile banking. Lin (2011) examined the effect of attributes that were innovated and knowledge-based trust on the intention to use and adopt mobile banking. The results showed that ease of use, compatibility, competence and integrity had a significant effect on behavioural intention to use mobile banking. Lin (2011) examined the effect of innovation attributes (compatibility perceived relative advantage and ease of use) and knowledge-based trust on the intention to use and adopt mobile banking. The results show that perceived relative advantage, ease of use, compatibility, competence and integrity had an effect on intention to use and adopt mobile banking.

Palmer et al. (2010) examined the factors that affect the intention to use mobile banking using of young customers in England. The TAM model was used and the innovation diffusion theory was used as a theoretical framework. The results showed that risk, perceived usefulness and compatibility had the most effect on the intention to adopt mobile banking. Gumussoy (2016) analysed the effects of satisfaction, flow, trust, task-technology fit (which is a construct to understand the influence of technology on individual) and service quality on the intention to keep using mobile banking. Results suggested that customer satisfaction was a straight predictor of the intention of continued usage, whereas the effect of task-technology fit was found to be insignificant. Another TAM study on mobile banking usage by Gumussoy et al. (2018) showed that ease of use, usefulness, and risk had a significant effect on the intention to adopt mobile

banking. Also, access to mobility and ease of use were the most important factors of perceived usefulness. In addition, compatibility was by far the strongest factor for perceived ease of use. Hanafizadeh et al. (2014) investigated the behavioural intention to use mobile banking of Iranian bank consumers with TAM. Results show that perceived ease of use, perceived usefulness, need for interaction, cost, risk, compatibility, credibility and trust had a significant effect on the behavioural intention to use mobile banking.

### **2.3 Demographic factors in mobile banking**

Studies have shown various results regarding whether gender has any impact on online banking adoption, the reason is unknown but this may vary between countries and societies (Hernandez & Mazzon 2007; Youzafzai & Yani-de-Soriano, 2012). Higher education is an indicator for Internet or online banking adoption (Hernandez & Mazzon; 2007; Jayawardhena & Foley 2000). Barczak, Ellen, & Pilling, (1997), Hernandez & Mazzon (2007), Jayawardhena & Foley (2000) all found out that people with higher income were more likely to use online banking. In addition, young people in relationships are more likely to use Internet banking compared to those who are single (Barczak, Ellen, Pilling 1997; Hernandez & Mazzon 2007; Jayawardhena & Foley 2000). Age is likely to play a role in the relevance of the factors influencing mobile banking adoption (Venkatesh, Morris, Davis, & Davis, 2003). Generation X is the most likely generation to adopt new technology such as mobile banking (Freestone & Mitchell, 2004). Glavee-Geo, Shaikh, & Karjaluoto (2017) Conducted a large study about consumer behaviour, attitudes and adoption of mobile banking, with a particular focus on developing economies. A thesis done in Norway, which examined factors that had effect the intention to adopt mobile banking in Pakistan. Gender differences were also tested. The results indicated that bank marketers should approach female and males with custom-made strategies to increase adoption rates of mobile banking. (Teo, Tan, Cheah, Ooi, & Yew, 2012). Explored demographic background variables were examined such as gender, age, income and education. on the intention to use mobile banking in Malaysia. The results from the model, which was based on TAM, show that these demographic factors had significant effects on perceived usefulness. However, education and gender were the only factors that were significantly related with

perceived ease of use (Teo., et al 2012). Rios & Riquelme (2010) found gender difference in their research about mobile banking usage. Ease of use had a stronger effect on females but relative advantages had stronger influence on males. Social norms influenced females more strongly than males in the adoption of mobile banking.

#### **2.4. Customer satisfaction in mobile banking**

Floh & Treiblmaier (2006) showed that loyalty to consumers is influenced by satisfaction and trust towards Internet banking, which are affected by how decent the service is. Floh & Treiblmaier (2006) examined the importance of antecedents of loyalty among online banking consumers such as quality, trust of the Internet website, value of the service and overall approval. The study was done among consumers of an Austrian Internet bank using a structural modelling approach to get better insights into how customer-orientation in the online banking business can be ensured. Trust and satisfaction was the most significant backgrounds of loyalty. Age, gender, involvement, variety seeking behavior and phobic to new technology exert a significant influence on some of the proposed relationships. These results have several implications for those banks which want to increase loyalty on the Internet (Floh & Treiblmaier, 2006b). Studies on mobile banking have found that it has many significant advantages to bank customers, including cost savings, time savings and other benefits (Howcroft, Hamilton, & Hewer, 2002) Palacios & Jun (2016) revealed seventeen items of mobile banking service quality. Ease of use, and constant improvement, are considered as the main sources of customer satisfaction or dissatisfaction.

Sampaio, Ladeira and Santini (2017) found that mobile banking could offer benefits related to customer satisfaction, also that justice moderates the relationship between the benefits offered by mobile banking and the causes of satisfaction with mobile banking. Moreover, three consequences of customer satisfaction were examined: positive word-of-mouth (WOM) trust and loyalty. Positive WOM is clarified as the consumer is willing to recommend or approve a service (Sampaio et al., 2017). Matos & Leis (2013) claim that one of the greatest importance in customer satisfaction is a positive WOM.

## **2.5. Security and privacy in mobile banking**

With the income of mobile banking, consumers may feel unsecure of using mobile banking for banking actions like transactions of money (Luarn & Lin, 2005). Security has been the main barrier for mobile banking adoption and use in mobile banking transaction. Consumers are afraid of distributing personal data and the lack privacy of encryption in SMS (short message service) (Li & Laforet, (2005); Liao & Cheung, (2002). In mobile banking, consumer trust and concern whether or not mobile banking suppliers have the ability to provide the services accurately. Kim, Shin, & Lee (2009) argue that it is important whether mobile banking suppliers are keen to bring generous and secure services and make confidence agreements in terms of banking transactions. The trust of consumers plays an important role in illustrating the motives and barriers of mobile banking adoption. Several studies have indicated the importance of trust for mobile banking consumers. Mentioned above has been supported by several recent studies (Kim et al., 2009). Social influence was stated as the least influential factor amongst all factors that were explored. The other eight factors were: usefulness, ease of use, compatibility, privacy, security, risk, social influence, self-efficacy, cost and awareness (Shankar & Kumari, 2016).

## **2.6. Mobile banking advantages for banks and suppliers**

There are some good reasons for Internet and Online banking development, they are that banks save a lot of costs by providing online banking services. It has also been proved that online banking is the less expensive distribution channel for banking products (Bellman et al., 2011). Banks have spent less effort in their branch networks and number of service staff is decreasing (Karjaluo, Koivumaki, & Salo, 2003). Furthermore, banks have been able to expand their market territories, and meet consumers banking needs by analysing data collected from consumers use of their connected devices (Tezcan & Akturan, 2012). In the competitive environment, where there is less loyalty to consumers, innovative technology such as mobile banking gives banks the opportunity to be more competitive. Mobile banking builds on more satisfaction among consumers and it reduces costs (Shankar & Kumari, 2016). Being innovative is essential for financial firms and banks today if they want to retain their position on the market. A study by Agolla et al. (2018) showed that innovative banks were more attractive to new customers and more likely to satisfy their

current customers. These findings can be useful to build on when it comes to introduction of innovation in practices that seek to satisfy, retain and attract new customers in the changing and competitive environment. There are several things to consider according to customer satisfaction and gaining new customers. Studying customer behaviour can help managers in the mobile banking sector to cater their current and future customers (Alt & Puschmann, 2012).

### **2.7. Obstacles in mobile banking adoption**

The perceived obstacle of the adoption of mobile banking was studied by Neto et al., (2010) in Brazil. The results indicated that the most of the respondents did not use mobile banking services or did not have a mobile phone. Cost, risk, low perceived relative advantage and complexity were revealed to be the main reasons behind unwillingness to adopt mobile banking.

Brazilian consumers responded to a survey on reasons for using or not using mobile banking. The results indicated that the majority of respondents did not use mobile banking services, which is similar to the findings from (Barretto Filgueiras Neto, Laukkanen, Muñoz-Gallego, & Cruz, 2010). In another research about mobile banking adoption perception of cost, risk, low perceived relative advantage and complexity were revealed to be the main reasons behind the refusal to use mobile banking (Barretto, et al.) Individuals who don't want to adopt new banking technology are generally rather negative towards technological innovations and age is a very important factor (Yani-de-Soriano & Yousafzai, 2012).

### **2.8. Customer-Orientation in mobile banking**

Customer-orientation is provided in a service offered by organisations and companies are those who put their main focus on their consumers, both internal and external (Foxall, 2018b). Customer-orientation establishes and monitors standards of satisfaction of the consumers. Alt & Puschmann (2012) argue that innovation based technology and financial services offered by financial organizations are strong drivers to more customer-orientation in the banking industry. Building on these developments on the one hand and existing electronic market infrastructures in the banking industry on the other, the concept of a customer-oriented financial market infrastructure is proposed as a possible future solution (Alt & Puschmann, 2012). Customer-oriented

marketing management is a key aspect of the theory of The Marketing Firm. According to the theory of The Marketing Firm, a profitable reality of firms is subjected to their relationship with their customers. Firms who put a lot of effort on satisfying customers and fulfilling their needs by devising and modifying marketing mixes can create a sustained relationship. In others words, both the firms and their customers exist if they maximize their utilitarian and informational reinforcements. The benefits are revenue and reputation expansions for managers, and consumption and social status maximization for consumers (Foxall, 1999). In a research built on this qualitative information from managers regarding the factors and tasks that make their firms profitable can unlock our understanding of whether firms adopt customer-oriented marketing management (Foxall, 2018). This understanding can be achieved by asking managers how they determine the types of service their mobile banking app provides and what kind of service the app delivers. The managers' questions should be about how they promote the products, how they price them and how they select placement including distribution of products. Additionally, how they interact with existing customers and how they identify and gain new ones (Foxall, 2018). Banks should use their efforts to focus on retain and gain new consumers through marketing to ensure their long-term existence. This consideration has led to the analysis of the existence of firms from the marketing point of view using the theory of the marketing firm (Foxall, 1999). The Marketing Firm places a strong emphasis on marketing without ruling production at a firm level.

Alt & Puschmann (2012) argue that the arrival of customer-oriented electronic markets in the banking industry is expected to have huge implications for banks and to establish financial service providers. They mentioned four factors would determine this transformation as the financial crises, the behaviour of banking customers, the pace of diffusing innovative downstream technical solutions, and the emergence of other organisations that provide mobile banking services.

Banks and other organizations will use the opportunity with new technical solutions and become more customer-oriented. The concept of a customer-oriented financial market infrastructure could be the future solution to holding on to excising customers (Alt & Puschmann, 2012). The management and staff of customer-orientated companies focus on helping customers to meet their needs and wants. Sales and product-oriented firms would on the contrary have a strategic method because the needs

and wants of the firm are unfortunately valued over the customer (Alt & Puschmann, 2012). Customer-orientation encourages the need of building the view of the firm on observations of changed economic and social circumstances such as technical innovation. It is necessary to focus on forces in the environment that encourage a customer-orientation, which at the time Coase wrote were only beginning to emerge in many industries (Coase, 1937). It is parallel to the level of analysis Coase employs in arguing that firms economise transaction costs by adopting operations.

Modern firms should show compassion to the difference we have drawn between marketing management and marketing-oriented management and its implications for the internalisation of marketing operations. It is a difference between operations that are economised because they are brought into the firm rather than obtained from suppliers and operations that are economised because they are undertaken within the firm rather than delegated to marketing agencies (Foxall, 2018).

Technical innovations have emerged, Alt and Puschmann (2012) illustrated how regular banks and bank branches are expected by the environment to have less control to approach new and existing consumers. A customer-oriented financial market infrastructure could be one solution for more control in the competition. The impact is demonstrated using a competitive strategy of the banking industry and analogies to the media where new entrants from the technical industry have caused this disruptive changes. This is how Alt & Puschmann (2012) describe how the technical innovation is a threat to commercial banks. Over the last decades banks have invested in expensive technology and developed individual applications to support their business (Tallon, 2010).

### **3. Theoretical framework**

In this chapter the theoretical framework of the thesis is further explained The Marketing Firm theory as well as the bilateral contingency model is related to mobile banking services.

#### **3.1. The Marketing Firm Theory**

Firms have been facing intense competition for selling their products and

services and mobile banking is no exclusion. Consumer income has increased over the last several decades. Consumers are being more informed about the different types of products that are available in the market. To be competitive, firms should apply efforts to focus on winning over consumers through marketing to ensure that they stay. This consideration has led to the analysis of the existence of firms and why they exist, from the marketing point of view using the theory of the The marketing Firm (Foxall, 1999). Firms should constantly be asking themselves what consumers want, why there are firms, what the marketing firm is and why there are consumers? To be aware of what they stand for and what they are aiming for (Foxal, 2018). Coase (1937) proposed that there is not a single mechanism for the distribution of resources, which means that there is an invisible hand of the market. Also, firms plan and coordinate extensive tasks for themselves and managers use their vision to assign resources within their organizations (Foxal, 2018).

The Marketing Firm concept is an extension of Coase's (1937) understanding that firms exist because they minimize transaction costs. This view has become central to the meaning of economic organizations and the description of their nature. Coase's recognition of the implications of transaction cost in the marketplace transformed understanding of the nature of the behaviour in business and of the business enterprise itself (Foxall, 2015). The main difference between the marketing firm and Coase's theory of transaction cost of the firms is that the marketing firm places a strong importance on marketing without ruling on a firm level.

The Marketing Firm theory suggests in behavioural-scientific terms how to define and measure the links between parties to transactions. More specifically, it argues that such interrelationships are conjectured within an economic-psychological framework that highlights the bilateral contingencies (Foxall, 2015). The concept of the marketing firm describes business behaviour in marketing-oriented initiatives as the management of the possible consumer behaviour (Foxall, 2017) "In a nutshell, the marketing firm is that organization which responds to consumer choice in ways that satisfy both customer requirements and corporate financial goals". (Foxall, 2018). The key imperatives of marketing-oriented management that now describe markets are four fold. Because of changes in production methods there has been fast change in the ability of firms to produce in both quantity and quality. In most industries, therefore, the

problem of production has been solved. Today it is possible for firms to establish an industry together and produce more than consumers can buy. Supply is frequently capable of exceeding demand and this has had vast implications for the intensity of competition in various industries. Second, consumers now have higher income. The degree of industrial competition is the third imperatives of marketing-oriented management among firms. Marketing has been described as the attempt to capture this optional income in a world where consumers can choose and decide exactly what they want. Fourth, consumers today are way more sophisticated when it comes to technology and knowledge in many fields. This is however not universal. Tendency and people are for example struggling to understand the hardware and software they are buying (Foxall, 2018). The theory of the marketing firm has been analyzed before in various case studies (Vella & Foxall, 2011). For these thesis the relationship between managers and bank customers, mobile banking in Iceland is investigated.

### **3.2. The Bilateral contingency**

The bilateral contingency is a model built from the theory The Marketing Firm (Foxall, 1999). The relationship between firms and their consumers is showed in terms of bilateral contingencies in which the behaviour of marketers is reinforced and punished by consumer behaviours, while consumer behaviour is reinforced and punished by managerial actions, like in positive and negative reinforcement in psychology (Foxall, 1999). Bilateral contingency analysis explores the relationship between the marketing firm and a customer, either a final consumer or a business buyer. The marketing management role is to invent and plan a marketing mix that delivers satisfaction for the consumers that make profit for the firm. The instruments of the marketing mix (place, product, promotion and price) perform in the marketplace mainly as discriminative stimuli for the consumer consumptions behaviours. A big role in marketing includes knowing that the firm needs first and foremost customers to survive. With no customers there is no firm. This means that firms have to please their customers in the most profitable way and that can be done by adopting customer-oriented marketing management (Foxall, 1999). Firms should invent strategies to create long-term and loyal relationships with their customers while at the same time they have to be able to gain news ones. The understanding of consumer behaviour in order to meet

competition in the best possible ways can lead to successful firms as well as customer satisfaction (Foxall, 2018).

The behavioural perspective model, which is the consumers' part in the bilateral contingency from The Marketing Firm theory, can be illustrated using the "three-term contingency". It involves discriminative stimuli ( $S^D$ ), response to  $S^D$  ( $R$ ) which can be either a reinforcing stimulus ( $S^r$ ) or a punishing stimulus ( $S^p$ ). Previous experiences of consumers control their learning history, which in combination with their behavioural setting informed by  $S^D$ , form the consumer situation. This in turn controls their behaviour, which can have either a rewarding or a punishing effect in terms of utilitarian or informational reinforcements (Foxall, 2018). While utilitarian reinforcement (UR) refers to the functional benefits of the product, informational reinforcement (IR) involves indications of social status as a result of using the product.

The role of the marketing firms is to manage the customer behavioural settings, which is the first step in the behavioural perspective model, by creating and purifying the marketing mixes. Consumers respond to these actions in a way that reinforces or punishes the behaviour of the marketing firms. In other terms, manager behaviour is reinforced or punished by consumers while consumer behaviour is also reinforced or punished by the activities of the marketing firms (Foxall, 2015).

The bilateral contingency is a key element of customer-oriented marketing management and requires extended marketing operations. In addition to recognizing and managing the marketing mixes, this involves inventing appropriate marketing strategies as well as meeting vital marketing intelligence. Marketing intelligence is important to understand and to predict consumer choices and their changing preferences. Using this information, marketing firms identify marketing mixes presented as discriminate stimuli for consumers that will initiate consumer responses. If the responses are such that they inspire purchase of the products or services, executive behaviour is rewarded with utilitarian reinforcement and informational reinforcement. The responses with purchasing and observation serve as stimuli for The Marketing Firm, which will determine the development of the marketing mixes in the future. Generally speaking, bilateral contingency is directly linked to maximizing utilitarian and informational reinforcements, which do meet the interests of both parties (Foxal, 2018).

Going through each component in bilateral contingency in the context of mobile

banking in Iceland will give a better insight in the fields of mobile banking of consumers and managers' behaviour from the perspective of The Marketing Firm. Each component will be listed in the next chapters. Figure 1 explains their position and their directions in the bilateral contingency model.

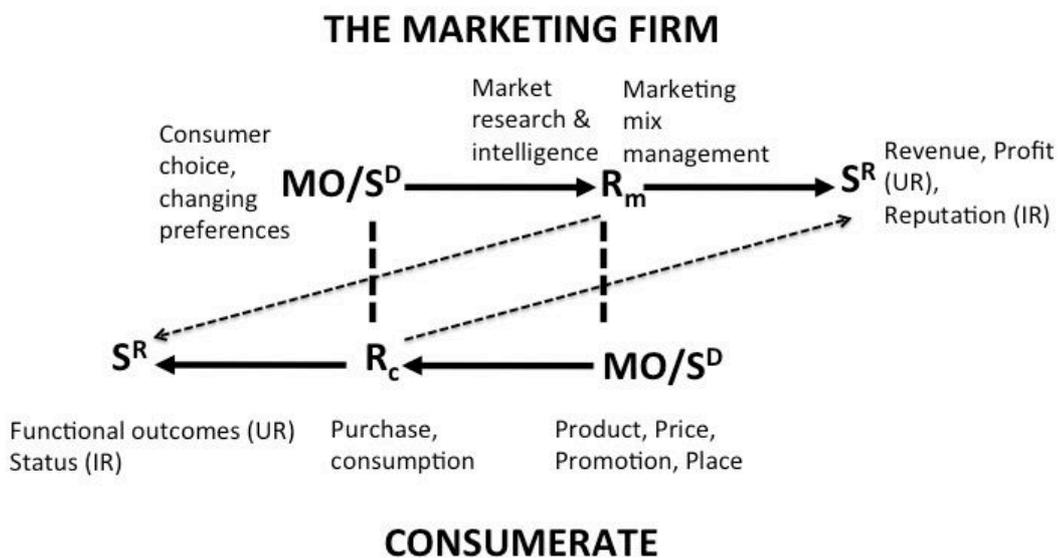


Figure 1. The Bilateral Contingency Model

### 3.3. Consumer choice, changing preferences ( $S^D$ )

The Marketing Firm is an organization that responds to what consumers want in means that is beneficial for both customer requirements and corporate financial goals (Foxall, 2018). The behaviour perspective model of the firm that demonstrates how marketing organizations are subject to the possibility of their behaviour settings and the pattern of reinforcement that grows from their interaction with their consumers. The most important source of restraint on the actions of the marketing firm is the actual and expected behaviour of their consumers, creating and rejecting opportunities for product

development and marketing, revenue generation and profit (Gordon R. Foxall, 2015). The main essence of bilateral contingency is the shared modification of behaviour setting possibility by the parties to marketing transactions. This interaction constrains what consumers and firms can do and, in the case of firms, presents the possibility of influencing consumer choice by the provision of innovation, not only in products and services but in all elements of the marketing mix or mixes that the organization offers (Foxall, 2018a).

In the mobile banking app sector the aim is to gain customers and holding on to the current customers. In this developing market where new players are a substantial threat, changing preferences and putting focus on what the customer chooses is extremely important. The many options for customers in mobile banking today can be a big threat for mobile banking suppliers, but it can also be a motivator for new innovations. If the suppliers are not listening to what the customer wants they easily fall behind, because the customer has a choice where he or she wants to be.

### **3.4. Market research and intelligence (R)**

Marketing intelligence includes internal data and external data collected by other corporations and can be purchased. In some large firms there are special research or data collective departments so the company does not have to seek or purchase this support externally (Foxall, 2018a). The information is about a specific market, which the company that initiates the research wants to know more about. The results make it easier for the managers to make decisions. Marketing intelligence is not doing simple market studies. Marketing intelligence is a vital input to the selection of market segments to serve and the capabilities of the firm in meeting their requirements. It is a process in which information is translated into intelligence, which makes decision-making easier. This makes market intelligence over and above market research (Foxall, 2018). The mobile banking suppliers have great advantages to monitor their customers' behaviours and actions through their digital device forms. That is a resource that mobile banking technology possesses. That does not mean that they don't have to do any more studies but this kind of information can be a great foundation to build on in marketing research.

### 3.5. Marketing mix management (R)

Marketing professionals have the important role to make decisions about the features of the product, its price, and how it will be promoted and delivered, if they want their business to be successful (Baker & Hart, 2016). The last of the marketing firm's efforts is the delivery of marketing mixes to potential customers, designed to satisfy their wants as well as donate to the objectives of the firm. This third kind of marketing operations includes adapting the possibility of the consumer behaviour setting and inspire consumer behaviour, which eventuate in patterns of utilitarian and informational reinforcement likely to promote repeat purchasing (Foxall, 2018). Marketing mix helps to explain the thinking of management in all areas and that it has to be oriented to the market (Foxall, 2018a). The elements of the marketing mix are the incomes available to firms to achieve these goals. Some components of marketing mix management can be readily delegated to external organizations responsibility for the physical delivery of products by firms, for the end-user markets of one's products by wholesalers and retailers, and the delivery of services one owns through franchisees can. Other components of marketing mix management, such as advertising creation and advertising research, and public relations may also be commercially delegated (Foxall, 2018a). Firms that represent themselves in this way may employ mechanisms by which they maintain some control over these operations they may become integrated with wholesalers and retailers under arrangements which allow them to exercise some control over the way in which the products are presented to customers though they do not own the distributors. Control may be exercised over franchisees via the requirement that these agents lodge financial deposits, which deter the temptation to relax standards of customer care. Such arrangements are predictable, in broad terms, from transaction cost considerations (Williamsson, 1985).

**Product:** is the touchable or untouchable object that the company offers to its customers. A mobile banking app is a product and a service provided by banks or financial institutions. The customers of mobile banking apps can conduct financial transactions by using their mobile/smartphone or a tablet. A regular Internet banking the customers has to go on a web browser on the Internet but this service provides software, an app. The app it self is a product but there are also services or products in the app that is possible to purchase. Transactions or actions in the app involve fees, just like when

visiting bank branches or taking money out of an ATM. There are more features or products available in the app such as buying grant or subsidy, new credit card, a higher authority and so on. Mobile banking is usually available 24 hours a day every day of the year.

Using a mobile banking app decreases cost of handling transactions by decreasing the need for consumers to visit bank branches. In study 2 in the thesis the respondents from the interview were asked about how they managed their marketing mixes and when Respondent A (Personal communication, November 2018) was asked particularly about the product the respondent stated that they had regular conversations with a large group of specific customers, that they had a type of customer portfolio, specific types that they are most interested in for a reason. They try to address which product or feature the consumers would like to see developed and modified. Then they go ahead and change the product. They ask customers where and how they want the product to be delivered. If they want to have it digital or if they want to have it in the branch. Because for the most profitable segment they are happy to have those consumers.

**Price:** is an important factor of mobile banking services and it can affect consumers' decisions on whether or not to adopt the service. The bank or mobile banking suppliers need to find out what is the suitable price for the service so they will make profit out of it, but also that the customers will want to adopt it use it and buy it. With every transaction or action in the app the bank takes their share from the customer's account (Constantinides, 2006).

Respondent A: "pricing in banking is tricky, in some cases we are changing pricing of a product regardless of whether the customer wants it or not, because nobody wants the price to go up but we have to accept the fact and try to come up with some additional benefits, other than the product itself, and try to buy it with services or improvement in distributing channel so we can somehow justify increased pricing, which in reality we don't really control, and we have this conversation with our customers of course, we don't offer everything for free, we charge for everything we can charge for like in every other business" (Respondent A., Personal communication, November, 2018).

**Promotion:** is the real marketing for the mobile banking, the product and price are presented to the customers through various channels. Advertising, digital marketing and public relations all include promotion (Hofmaier, 2015). A vital point to make the product succeed is to select the right place to promote it. It depends on each bank or mobile banking app suppliers how and how much they promote their app. The advertisements, the distribution systems and communication through promotion affect consumer behaviour in a way that makes the behaviour of the organisation predictable and understandable (Foxal, 2018).

**Place:** the process when moving products or services somehow from the producer to the intended user or consumer is the “place”. It is how your product or service is bought and where the consumer can buy it (Hofmaier, 2015). The place states where the promotion takes place, it can be on the Internet on a webpage or in a smartphone. In the development technology world the definition of place has changed widened the placement options. The consumer can purchase online or explore the product online but the purchasing can be somewhere else. The app is placed in a smartphone or on a tablet. The customer can use it any place where there is WIFI or 4-G connection. To download the app the customer has to go on a store in their phone like for example app-store. Today the “place” contribute in mobile banking is online or in the app. Respondent B (Personal communication, November 2018) said that it depended what place we are talking about, it could be online, because the branches are shifting more and more online, and of course in the app, and than he stated that no one liked to go to a bank, very few people today.

### **3.6. Revenue, profit, reputation (S')**

The consequence of the process is a very important factor in The Marketing Firm theory, the outcome of consumer behaviour. The consequences are reinforcing and aversive, they are two folded (Foxall, 2015). Functional outcomes, the behaviour that are related to gaining, owning and using the economic product or service, utilitarian reinforcement (UR) and the symbolic and social status of consumption, informational reinforcement (IR). Informational reinforcement and punishment are from the social and symbolic outcome of consumption (Foxall, 2015).

### **3.7. Purchase, consumption (R)**

Customers who purchase a product or a service meet the goals of the firm, which is determined by the part of the firm profit and reputation. This consumer behaviour (R) also provides discriminative stimuli for further marketing intelligence activities, marketing planning and the devising and implementation of marketing mixes that respond to the stabilities and/or to dynamic nature of the behaviour of the consumers (Vella & Foxall, 2011). It is one of the firm's goals to get the customer to purchase. In mobile banking, downloading the app is a kind of purchase and doing actions in the app are the products the firm is providing and that the customer is buying. There are also products in the app that can be bought by consumers.

### **3.8. Functional outcomes (S<sup>R</sup>) (UR) / (IR)**

Functional outcomes are the consequences that are behavioural and functionally related to gaining, having and using the economic service or product, utilitarian reinforcement (UR). There is status, the social and symbolic outcome of consumption (IR). In mobile banking the customer can download the app without using it, which could be because of functional outcomes and also because of the social status. Functionally outcome in mobile banking is extremely important. The social and symbolic status can also have much to with mobile banking usage (Foxall, 2018a).

## **4. Method**

This chapter gives an overview of the methodology used in this thesis for both study 1 and study 2. The chapter explains the research design, sampling, data collection, measurement and procedure. The method chapter includes review of participants, research condition, research design and data analysis. In the end of the method chapter the findings of linear regression analysis is showed which was used to evaluate the possible effect of the data collection on result.

### **4.1. Participants**

**Study 1:** The participants were chosen with a convenience sample. The quantitative study (study 1) refers to the consumer side of the marketing firm. All participants were Icelandic bank customers ( $N= 486$ ) who either responded from a bank

branch or from an online survey. Participants were men and women ranging from 18-70 years old or older. Gender balance was rather equal, 49.8% female and 50.2% males. There were 37 people who refused to respond to the questionnaire in the bank branch.

**Study 2:** The participant in study 2, which refers to the manager side of the marketing firm theory, was four. The respondents in the interviews were experts in the field of mobile banking marketing they were interviewed in order to gain better understanding of mobile banking suppliers' visions and actions. Three of the respondents (Mobile banking suppliers A., B., and C.) were advocates from the three largest banks in Iceland, one from each bank. The fourth respondent was an advocate from one of the largest mobile banking app supplier in Iceland (Mobile banking supplier D.). The reason why there is only one respondent from each bank is that the managers that were interviewed claimed that they spoke on behalf of the mobile banking supplier policy in their bank/company.

#### **4.2. Research conditions**

**Study 1:** The researcher went to two different bank branches in the capital area of Iceland and asked present customers to participate in a survey. The interviewer introduced the questionnaire, told possible respondents the instructions very shortly, and mentioned that the study was a part of a master thesis from Reykjavík University. The online survey was conducted through Google forms and published on the Internet. Participants could choose between two surveys whether they used mobile banking or not. The questionnaires took between 5 and 10 minutes to complete, and data was collected from 8-15 November 2018. A total of 485 questionnaires were completed, 273 in the bank branch and 212 online.

**Study 2:** The researcher prepared questions and asked each respondent those same questions respectively. The interviews were semi-structures and took place in their bank or company with no external interference. Each interview took about 30-35 minutes and were recorded by the interviewer with approval from the participants. The interviews were then transcribed.

#### **4.3. Research design**

To explore both sides of The Marketing Firm in the bilateral contingency, both qualitative and quantitative research designs were used to get the overall image of the bilateral contingency model. In the bilateral contingency theory one side applies to managers, which is in study 2. The consumer side of the model is the quantitative part (study 1), which includes consumers' behavioural patterns from learning history or consumer situation to a response. A questionnaire structured from the marketing firm and the bilateral contingency model had not been conducted before referring to mobile banking behavioural research. The questions were then built on The Marketing Firm theory, were self created or built on an earlier literature.

### **Study 1.**

Two questionnaires were developed with The Marketing Firm model; with focus on the bilateral contingency model as the theoretical background (See Appendix A) the questionnaires were designed for both users of the mobile banking app and non-users. The consumer's side of the bilateral contingency model is described in more details in the behavioural perspective model for customers. The questions are structured for each component from consumer learning history or behaviour to customer response, which is either, explained as a positive or negative reinforcement  $S^D \rightarrow R \rightarrow S^{r/p}$ . **S<sup>D</sup>**: Product, price, promotion and place. **R**: Purchase, **S<sup>r/p</sup>** can be both: utilitarian reinforcement (UR) and informational reinforcement (IR). **Learning history** is a current probability of a response, which is determined by the individual's learning history, the manner in which the individual's pattern of previous behaviour and the outcomes it has engendered influence current choice. **Consumer situation** is the instant precursor of the behaviour of consumer in their situation, that represents the interaction of the consumer's learning history, and the discriminative stimuli that make up the current behaviour setting (2018a).

The questionnaire included questions that referred to each group (user of mobile banking or non-user group) to get a better insight for each group separately. The user group received questions about their experience in using mobile banking and the questions for the non-users entailed why they did not use mobile banking. Both groups were asked about behaviour and attitude towards mobile banking and questions about their background. Data was collected in two ways; the researcher visited two Icelandic

bank branches and asked volunteers to answer a survey about mobile banking. The questionnaire was also published online for several days with instructions. The survey was pre-tested among 12 participants to check if the questions were understandable with no spelling or grammatical errors. The questions were then modified for clarity as suggested by the participants. After the pre-test, a pilot test of 8 participants was conducted.

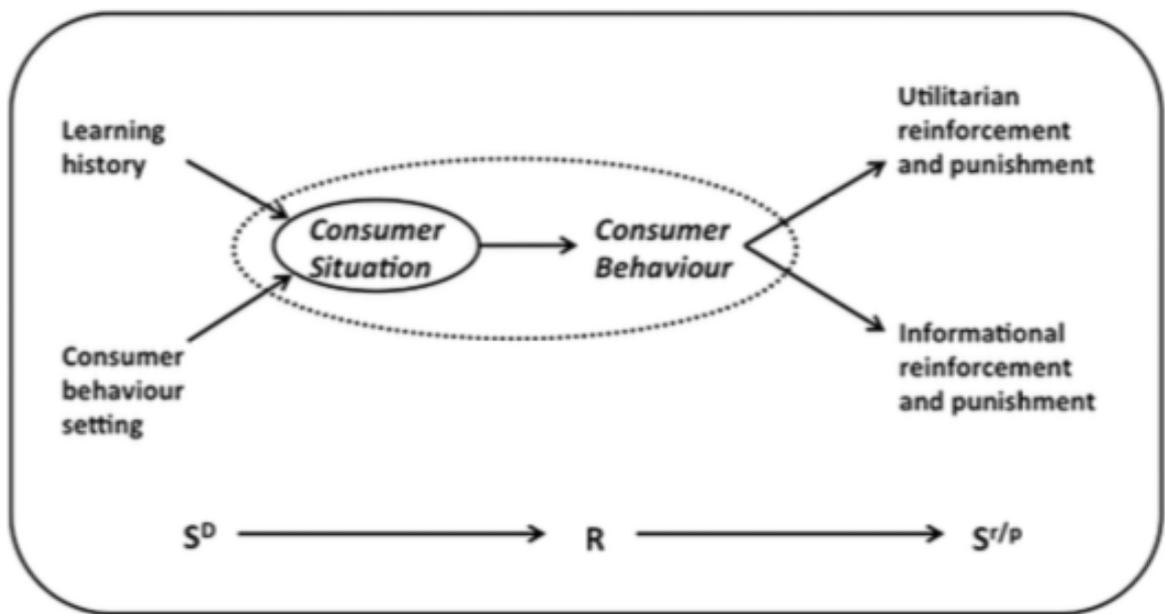


Figure 2. The behavioural perspective model

The behavioural perspective model explains consumer's behaviour from learning history, to make a decision until the response of the consumption with positive or negative reinforcement. The behavioural perspective model is the more detailed version of the consumer part in the bilateral contingency model (Foxall, 2018).

The questions in the questionnaire for the individuals that used mobile banking are presented in table 1 with structure and source information if that applies.

Table 1

*Questions or statement for users of mobile banking*

<b>Question</b>	<b>Structure</b>	<b>Source</b>
For how long have you been using the mobile banking?	S <sup>r/p</sup> (UR)	
What made you begin using mobile banking?	S <sup>D</sup>	(Gu et al., 2009)
Cons of using mobile banking?	S <sup>r/p</sup> (UR)	
How frequently do you use your mobile banking?	S <sup>r/p</sup>	
“It took me long time to learn using it”	S <sup>r/p</sup> (UR)	(Gumussoy, Kaya, & Ozlu, 2018)
How easy/hard was it to learn using mobile banking	S <sup>r/p</sup> (UR)	(Luarn & Lin, 2005)
It is easy to get help from my supplier or others using mobile banking	S <sup>r/p</sup> (UR) / (IR)	
Would you recommend using the mobile banking with your friends and family?	S <sup>r/p</sup> (UR) / (IR)	(Lee & Chung, 2009)
“I am proud of using mobile banking”	S <sup>r/p</sup> (IR)	
“Using mobile banking has benefits”	S <sup>r/p</sup> (IR)	(Sampaio et al., 2017)

The questions in the questionnaire for the individuals that did not use mobile banking are presented in table 2 with structure and source if that applies.

Table 2

*Questions for the non-users of mobile banking*

Questions	Structure	Source
“I don’t have MB-app because I don’t have a smartphone/smart board”	Consumer’s situation. <b>S<sup>D</sup></b>	
Why don’t you use MB?	Learning history	(Barretto Filgueiras Neto et al., 2010)
I have experienced barrier, not using MB	Consumers situation	
I like doing business like I am used to	Consumers situation	(Barretto Filgueiras Neto et al., 2010)
Agree/disagree, I think it is more risk making actions in MB than in a bank branch	<b>S<sup>D</sup> / R</b>	(Yiu et al., 2007)
“Mobile banking is not for me”	Learning history	(Barretto Filgueiras Neto et al., 2010)
If your bank would provide a service how to use the MB, would you be interesting in that?	<b>S<sup>D</sup></b>	Self-created
I will probably use MB in the future	<b>S<sup>D</sup></b>	(Altin Gumussoy, Kaya, & Ozlu, 2018b)

In table 2 there are questions and statements where individuals were asked how much they agreed or disagreed to or, how closely a question or statement applied to them. The question “If your consumer bank or mobile banking supplier would provide a service or a course, how to use the mobile banking app” was added after personal conversation with one of the bank managers, Respondent A. Their bank and others have recently been providing simple learning courses for their consumers in regular banking actions, like “how to buy your first apartment”. According to Respondent A this has been well received and attended by their customers. Hence, it was deemed useful to evaluate interest for simple learning courses about how to use mobile banking.

In table 3 questions for both users and non-users of mobile banking are presented with

construct and source.

Table 3

*Questions for both users and non-users*

<b>Question</b>	<b>Construct</b>	<b>Source</b>
How often do you go to a bank branch?	Consumers situation	(Pousttchi & Schurig, 2004)
“Using MB has a lot of benefits”	S <sup>r/p</sup> & S <sup>D</sup>	(Altin Gumussoy et al., 2018a)
“People around be encourage me to use ”	S <sup>D</sup>	(Hung, Ku, & Chang, 2003)
“I am one of the first to try technical innovation”	S <sup>D</sup> / S <sup>r/p</sup> (IR)	
Agree/disagree, “I trust Icelandic banks today”	Learning history	
If you have noticed MB advertisement, where have you noticed it?	S <sup>D</sup>	(Valvi & West, 2015)
Agree/Disagree, privacy is an important factor in MB usage	Learning history	(Luarn & Lin, 2005)
Agree/Disagree, security is an important factor in MB-app usage	Learning history	(Luarn & Lin, 2005)
Agree/Disagree, Reliability is an important factor in MB	Learning history	(Luarn & Lin, 2005)
Mobile banking includes cost	Learning history	(Luarn & Lin, 2005)

#### **4.4. Research design for study 2**

Based on a convenience sampling procedure, four managers were interviewed face-to-face. The interviews were recorded and then coded to clarify the results. A semi-

structured interview technique was used; the researcher was prepared for “probing” in need for more detailed information from the respondents’ answers.

The semi-structured interview frame included twelve questions (Appendix B), which asked each manager in the study 2. The components in the bilateral contingency were explored to get a better insight into each component and behaviour  $S^D \rightarrow R \rightarrow S^{r/p}$ . The questions contained material related to  $S^D$ : consumer choice, changing preferences.  $R$ : Marketing research and intelligence, marketing mix management.  $S^{r/p}$ : Revenue, profit, Utilitarian reinforcement (UR) and Informational reinforcement (UR). The managers were asked about who were their customers and future customers, their awareness of marketing of mobile banking from other suppliers, factors that make their mobile banking app profitable, issues that are related to research and marketing intelligence. Additionally, the managers were asked how they interact with existing customers and how they identify and gain news ones. They were asked whether their firm were customer-orientated and about their future actions to gain more individuals to adopt their mobile banking app.

#### 4.5. Data analysis

##### Data analysis for study 1

To evaluate the effect of the intention to use mobile banking a multiple linear regression was performed. Analysis of the assumptions revealed no substantial bias. To evaluate the effect of the data collection method a five linear regression analyses were performed, where the data collection method (online collection or the data collection from the bank branches) was the independent variable and age, education, income and gender were used as control variables. In each analysis, a random item from the questionnaire was chosen as the dependent variable to estimate whether the data collection method affected results. Age, education and income were recoded into two groups. Age two groups: 49 years old and younger and 50 years old and older. Education two groups: Individuals with university degree and individuals who did not have a university degree. Income: Individuals with 549.000 ISK or less in monthly income and individuals with 550.000 ISK or higher monthly income.

The results from the analysis are presented in Table 4.

Table 4

*Possible effects from the data collection ecaluated with multiple regression analyses*

		Unstandardized Coefficients (B)	Std. Error	Standardized coefficient (β)	t	p
Dependent variable: Using the app includes costs (R <sup>2</sup> = .111)	(Constant)	2.446	.296		8.267	<.001
	Online/Branch	.346	.106	.168	3.259	<.001
	Age	.139	.113	.061	1.227	.220
	Education	-.272	.113	-.133	-2.413	.016
	Income	-.299	.108	-.145	-2.772	.006
	Gender	-.079	.103	-.038	-.761	.447
Dependent variable: A/D long to learn to use app (R <sup>2</sup> = .068)	(Constant)	1.234	.294		4.190	<.001
	Online/Branch	.242	.109	.145	2.216	.028
	Age	.224	.140	.098	1.592	.113
	Education	-.158	.116	-.095	-1.364	.174
	Income	-.091	.111	-.055	-.825	.410
	Gender	-.033	.104	-.020	-.317	.752
Dependent variable: I intend to use MB in the future (R <sup>2</sup> = .189)	(Constant)	1.433	.673		2.129	.036
	Online/Branch	.014	.217	.006	.066	.948
	Age	.190	.214	.078	.887	.377
	Education	.742	.231	.291	3.211	.002
	Income	.679	.217	.277	3.127	.002
	Gender	.161	.217	.065	.742	.460
Dependent variable: I trust Icelandic banks today (R <sup>2</sup> = .042)	(Constant)	3.456	.308		11.217	<.001
	Online/offline	.118	.110	.057	1.071	.285
	Age	.184	.118	.081	1.559	.120
	Education	-.080	.117	-.039	-.681	.496
	Income	-.195	.112	-.094	-1.739	.083
	Gender	-.258	.107	-.126	-2.404	.017
Dependent variable: Security is important factor in MB (R <sup>2</sup> = .132)	(Constant)	4.885	.215		22.675	<.001
	Online/offline	-.011	.077	-.008	-.148	.882
	Age	-.447	.082	-.267	-5.432	<.001
	Education	.197	.082	.130	2.400	.017
	Income	.177	.078	.117	2.263	.024
	Gender	-.055	.075	-.037	-.737	.461

As seen in table 4, two of the regression analyses the data collection had a significant effect on the dependant variable, when “Using mobile app includes cost and “it took me long time to learn how to use the mobile banking app” were used as dependent variables. So there was little difference between the responds that came from the online survey and from the survey that was conducted in a bank branch on those two variables.

**Data analysis for study 2**

After the data had been collected, the interviews were transcribed to textual form to get a better oversee and understanding. Then the transcript was organized and coded to categorize the data. The processes of coding ranged from a single word to a full sentence to a full page of text. Then the coding was decreased to get a good overview. The coded interviews were placed into a table showing each question with the answer from the respondents (Mobile banking app supplier managers/respondents A, B, C, and D).

**5. Results**

**Study 1**

Results revealed that 69.1% ( $N = 336$ ) of the sample used mobile banking, 30.9% ( $N=150$ ) did not use mobile banking. Table 6 presents use of mobile banking analysed by home income, personal income, education, parental status, age and gender).

Users of mobile banking and non-users where examined separately or the two groups were compared. In table 5 the background variables of users of mobile banking are compared with non-users backgrounds variables.

Table 5

*Users and non-users of mobile banking by background variables*

	Non-uses	Users	Chi-square tests		
			$X^2$	df	$P$
Home income in ISK			6.620	2	.037
549k or less	35.3%	64.7%			
550k - 999k	35.7%	64.3%			
Million+	22.9%	77.1%			
Personal income			3.578	2	.167
549k or less	33.5%	66.5%			
550k - 999k	22.9%	77.1%			
Million+	30.4%	69.6%			

Highest education			32.647	3	<.001
Primary school	28.0%	72.0%			
Secondary school	45.3%	54.7%			
Bachelor degree	32.7%	67.3%			
Master degree or higher	13.6%	86.4%			
Age			78.379	5	<.001
18-24	13.1%	86.9%			
25-34	19.3%	80.7%			
35-49	20.3%	79.7%			
50-64	59.2%	40.8%			
65+	61.1%	38.9%			
Children under 18			8.250	1	.004
No	36.3%	63.7%			
Yes	24.0%	76.0%			
Marital status			22.499	3	<.001
Single	19.6%	80.4%			
In a relationship	51.2%	48.8%			
Living with someone	21.2%	78.8%			
Married	36.6%	63.4%			
Gender			10.619	1	<.001
Female	23.9%	76.1%			
Male	37.9%	62.1%			

As presented in table 5, 77.1% of the respondent who had high home income used a mobile banking app. Compared to individuals with low income 33.5% did not use mobile banking and 65% mobile banking used a mobile banking app.

Of respondent who were highly educated, 86.4% used a mobile banking app, however 72% of the participants with low education used mobile banking. Looking at the youngest segment 86.9% of them used mobile banking app. In the oldest group 65+ the users where were 38.9% and the non-users where 61.1%. Only 24% of individuals who had children did not use the app, 76% of them used a mobile banking app. 80.4% of those who were single used a mobile banking app. 63% of married people in the study used mobile banking.

Users of mobile banking got questions about their mobile banking usage. For how long they had been using mobile banking app and how frequently they used it. The results are presented in table 6.

Table 6

*Mobile banking usage*

<b>For how long have you been using a mobile banking app?</b>	
Less than one month	2,1%
1-6 months	8.5%
1-2 years	42.9%
3-4 years	29.9%
5 years or longer	16.6%
<b>How frequently do you use your mobile banking app?</b>	
Once in a month or less	2.1%
Few times in a month	10.6%
Once in a week	10.3%
Few times in a week	37.8%
Once a day	19.6%
Few times each day	19.6%

The users of mobile banking were asked how long they had used the mobile banking app 42% had used it from 1-2 years and only 2.1% less than one month.

The most common answer for how frequently the users used their mobile banking app was few times a week.

All banking consumers of the sample, users and non-users of mobile banking were asked how frequently they visit a bank branch. In table seven the results are presented.

Table 7

*Frequencies of bank branch visit*

	<b>Non-users</b>	<b>Users</b>
Virtually never	20.4%	18.5%
Once in a year	11.3%	9.1%

2-3 times a year	7.7%	25.5%
4-5 times a year	20.4%	22.4%
Monthly	30.3%	19.1%
Weekly or often	9.9%	5.5%
<hr/>		
Number of respondents	142	330

A Mann-Whitney test confirmed that Non-users (Mean rank = 256.48) visited bank branches more frequently than users (Mean rank = 227.90,  $U = 20.593$ ,  $p = .033$ ). The users and non-users were asked what they did in a bank branch in an open question. The most common responses among users were that they went to a bank branch to meet a consultant or to get an electric ID. Some of them responded in writing that they went to the bank branch to buy gift cards. The non-users frequently responded that they went to the bank branch to pay bills and withdraw money. Both groups wrote down that they went to bank branches to buy foreign currency (see Appendix C).

A chi-square test confirmed differences in advertising attention by user groups ( $\chi^2(7) = 289.34$ ,  $p < .001$ ). About 55% of the non-users had noticed advertisements about mobile banking apps. A good majority, or 64% of the users had also noticed an advertisement about mobile banking apps. Most of the users had seen a mobile banking advertisement on their bank’s website, but most of the non-users had seen advertisements on television (see Appendix D).

Only users of mobile banking got questions about their experience and feeling of using mobile banking. The Questions were statements, which participants either agreed or disagreed to.

Participants who used mobile banking were asked several questions about their attitude and experience from using mobile banking, in table 8 the responds from the answers are shown.

Table 8

*Answers from mobile banking users about mobile banking*

	Strongly Disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree	N	Mean	SD
Learning	59%	28%	9%	3%	1%	335	4.61	.631

how to use MB, was difficult.								
Easy to get help from others using MB.	6%	5%	56%	17%	16%	328	3.31	.999
Using MB has great benefits.	3%	3%	19%	28%	47%	480	4.14	.997
I am proud of using MB.	3%	2%	41%	35%	19%	324	3.66	.909

In table 8 the responses of the mobile banking users are showed, their answers from questions how much they agree or disagree about statements related to the mobile banking usage. When asked whether the respondents found it difficult to learn how to use the app, 95.5% said that they found it easy to learn how to use and 1.2% found it difficult. 3.3% stated it was neither easy nor difficult. Responding to the statement that they were proud users of the mobile banking app, 54% of the users agreed. When asked whether the respondents would recommend the app to friends and family, 2.6% stated they were unlikely to do so, 14.1% stated they were neither likely nor unlikely to recommend the app, and 83.5% were likely to recommend the app to friends and family (52.6% very likely and 30.9% somewhat likely).

The participants who did not use mobile banking got questions about why they did not use mobile banking. Also if they had experienced discomfort for being a non-user. In table 9 the results are presented.

Table 9

*Answers from non-users of mobile banking*

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree	N	Mean	SD
I don't have Smartphone.	42.30%	38.30%	10.70%	2.00%	6.70%	149	1.93	1.103

I intend to use it in the future.	16.10%	8.70%	38.30%	22.80%	14.10%	149	3.10	1.234
I want to do business like I am used to.	5.40%	8.70%	36.90%	24.80%	24.20%	149	3.54	1.112
I used it before, and quitted.	30.20%	22.10%	28.20%	11.40%	8.10%	149	2.45	1.254
I have experienced barrier not having a MB.	25.50%	22.10%	33.10%	13.80%	5.50%	145	2.52	1.173
MB is not for me	10.80%	20.30%	42.60%	9.50%	16.90%	148	3.01	1.189

As presented in Table 9, 47% of the non-users strongly disagreed that the reason that they did not have a mobile banking app was because they did not have a smartphone. 14.1% strongly agreed that they intended to use it in the future and 22.8% somewhat agreed. 16.9% strongly agreed to the statement that mobile banking app was not for them. 24.2% strongly agreed that they liked to do business like they are used to, and 24.8% somewhat agreed to that statement. Most respondents disagreed that they had experienced barrier not having a mobile banking app, 25.5% strongly disagreed and 22.1% somewhat disagreed.

Several open questions were asked in the questionnaire to get better insight in users' and non-users' attitudes or experiences of mobile-banking (see Appendix E). The users of Mobile-banking were asked if there were any cons in their Mobile-banking app, and if they thought there were any cons they were asked to note them down. The most common answers were privacy and security concerns and also that there were fewer things that they could do in the app than in their Online/Internet bank. The non-users of Mobile-banking were asked why they did not use a Mobile-banking app in an open question. The most frequent answer was that they rather used the Online/Internet bank.

To find out what had the most effect on mobile banking usage in the future, a linear regression was conducted with the dependant variable: I intend to use mobile banking in the future.

Table 10

*Regression analysis from the sample that did not use mobile banking*

Question/Statement	Std.				
	B	Error	Beta	T	Sig
(Constant)	2.378	.814		2.923	.004
I don't have a smartphone/tablet	.064	.073	.060	.880	.381
I like doing business like I am used to	-.212	.089	-.171	-2.371	.020
I have experienced obstacles not using MB	-.025	.083	-.025	-.305	.761
I would use service from MB-supplier to learn	.387	.081	.406	4.757	<.001
MB is not for me	-.363	.082	-.349	-4.432	<.001
Using MB has benefits	-.156	.086	-.131	-1.818	.072
Reliability is important in MB	.191	.095	.154	2.009	.047
MB includes costs	-.355	.133	-.209	-2.667	.009
I trust Icelandic banks	.182	.090	.151	2.031	.045
I am Innovative	.217	.092	.184	2.375	.020
It is more risk using the MB than the Online bank	.116	.087	.107	1.335	.185
People encourage me to use MB	.053	.073	.050	.733	.465
Age	-.255	.192	-.103	-1.324	.189
Education	.404	.174	.159	2.328	.022
Income	.464	.194	.192	2.391	.019
Gender	.172	.160	.069	1.074	.286

To identify the factors that had the most effect on the intention to use mobile banking among those who do not currently use Mobile-banking, a linear multiple regression was done with the dependant variable: "I intend to use Mobile banking in the future" The distribution in the independent variables explained 67.5% of the dependant variable's distribution ( $R^2 = .675$ ,  $F(16, 94) = 12.179$ ,  $p < .001$ ). As shown in table 10, Several independent variables of 16 had positive effect on the dependant variable. Education ( $B = 0.404$ ) and income ( $B = 0.464$ ) had the most positive effect on the dependant variable. Followed by the independent variable: "If a Mobile-banking supplier or bank would provide a service to show or teach individuals to use a Mobile-banking app" ( $B = .387$ ). Reliability also had a positive effect ( $B = 0.191$ ). The statement "I am innovative person, and I dedicate myself new technology very fast" had a positive effect on the intention to use Mobile-banking in the future ( $B = .217$ ). The statement I trust Icelandic banks today had also positive effect on the dependent

variable ( $B = .182$ ). The independent variables that had a negative effect on the dependant variable were the statements “ I like doing business like I am used to” ( $B = -.212$ ). “I have experienced obstacles not using mobile banking” ( $B = -.025$ ), “mobile banking is not for me” ( $B = -.363$ ). “using mobile banking has benefits” ( $B = -.156$ ), “mobile banking usage includes cost” ( $B = -.355$ )

To see the how likely respondents were to use a service provided by their bank or a mobile banking supplier including explanations how to use the app, 18% found it very unlikely, 14.7% found it somewhat unlikely, 24.7% neither likely nor unlikely, 24.7% somewhat likely and 30.7% very likely that they would use such service if it were available. This question is related to customer-orientation in The Marketing Firm, the customers are getting served to what they want and need.

User and non-users were asked various questions about their attitudes and beliefs regarding mobile banking and their scores compared. Results are presented in Table 11.

Table 11

*Average score and Mean from bouth users and non-users*

Statement	User group	<i>M</i>	<i>SD</i>	<i>N</i>	<i>t</i>	<i>df</i>	<i>p</i>
Using MB has benefits	Non-users	3.29	1.025	150	-13.50	214.032	<.001
	Users	4.53	0.698	30			
People around me encourage me to use MB	Non-users	2.67	1.222	149	-3.736	262.763	<.001
	Users	3.11	1.110	329			
I am innovative person	Non-users	2.32	1.035	149	-10.24	479	<.001
	Users	3.42	1.103	332			
Security is an important factor in MB	Non-users	4.18	1.010	150	-5.91	196.833	<.001
	Users	4.70	0.587	325			
Privacy is an important factor in MB	Non-users	4.18	1.010	150	-5.94	198.134	<.001

	Users	4.71	0.596	326			
	Non-users	2.69	0.704	150	3.775	422.718	<.001
Using MB involves costs	Users	2.38	1.089	325			
	Non-users	3.08	0.997	147			
I trust Icelandic banks today	Users	3.15	1.033	330	-0.71	4.75	.472
	Non-users	4.18	1.010	150			
Reliability is an important factor in the MB	Users	4.71	0.589	325	-6.01	197.158	<.001

The non-users less agreed that mobile banking had benefits ( $M = 3.29$ ) Users of mobile banking ( $M = 4.53$ ) The users agreed more on the question if other people had encouraged them to use mobile bank ( $M = 3.11$ ). the non users had not as high agreement about that ( $M = 2.67$ ). Both users and non-users got the question about if they were innovative to new technology non-users ( $M = 2.32$ ) users ( $M = 3.42$ ). They were asked if mobile banking involved cost the difference was not very high, users ( $M = 2.38$ ) non-users ( $M = 2.69$ ). Security is an important factor for bout users ( $M = 4.70$ ) and non-users ( $M = 4.18$ ). Privacy was also important to both groups, users ( $M = 4.71$ ) Both users ( $M = 3.15$ ) and non-users ( $M = 3.08$ ) seem to agree that they trust Icelandic banks today. In the end the users ( $M = 4.71$ ) and non-users ( $M = 4.18$ ) agreed that Reliability was an important factor in mobile banking usage.

## Study 2

In study 2 the interview were coded in a pattern to get a better overview.

Table 12

*Coded answers from managers in mobile banking*

Question	Bank A	Bank B	Bank C	MB-app supplier
Current	One third of	Our customers	Our customers	Collage

<b>customers</b>	Iceland	and 40% of them are using the app		educated people 30-40 years old. Capital area
<b>Future customers</b>	More likely digital	All of our customers and others	All customers in the market	16-20 and 50-65 years old
<b>Goals in MB marketing</b>	Aim to different shade of compatible products	Give customer access of what they need	Gaining number of users	Signing up new users
<b>Is your MB profitable?</b>	It is cost saving, will be profitable	In a way, you don't pay for the app but it saves cost	Yes, it saves cost. And it delivers value	Yes in a sense
<b>Do you rely on external suppliers?</b>	Yes, mostly from ad agencies	Yes and we are in tight relationship with them	Yes	Yes
<b>Do you do anything to retain customers?</b>	Offer same things that competitors are offering and a loyalty system	No reward	Loyalty system is in the making	Yes
<b>How do you interact with your customers?</b>	Mostly through e-mail.	Email, SMS and messages through the app	Email, we are lacking chat boxes in the app.	A new solution in the app where we can contact users directly
<b>In marketing, do you provide information related to lifestyle</b>	Yes	Yes	Yes	Yes, we want it to be a lifestyle app
<b>How consumer-oriented are you?</b>	More consumer-oriented now	Yes, we listen to our customers and act on that	Yes, we focus on the needs of customers.	Yes, we look for what our customers wants
<b>Do you conduct or purchase marketing intelligence?</b>	Yes	Not in the marketing apartment, we do it in-house	Yes and we also work with the third party	Yes
<b>Do you base marketing efforts on the marketing intelligence?</b>	Yes and no	Yes	Yes	Yes

<b>Why don't some customers use the app?</b>	People are afraid and they are used to their habits	Lack of knowledge	It is mainly related to age	Fear, also people know about it but just haven't got there yet.
<b>Plan or action to attract the non-users?</b>	Going to be more educationally heavy	Release newer products that customers seek	More educationally heavy	Yes by educating both younger and older people
<b>Would you consider that MB is beneficial for both customers and suppliers?</b>	Yes	Yes	Yes	Yes

As seen in table 12, all answers from the managers are there in a abbreviated versions. In the first question, the managers from the banks and the mobile banking supplier organization were asked about their current and future consumers. Their consumers are all on the Icelandic mobile banking market so their consumers are Icelandic mobile banking users. Their future consumer could be all Icelandic smartphone users. The banks are in a good position to gain consumers because most of their current mobile bank consumers are their current banking consumers. In contrast to Respondent D, their consumers are individuals who choose to have a mobile banking app that is not provided by a bank. In the organisation that Respondent D comes from, their consumers are not only mobile banking app consumers; their consumers are also Icelandic banks and banks abroad. They sell their digital mobile banking solutions to them. However, Respondent D was asked to talk only about their mobile banking consumers within the interview to be comparable to the other respondents. They need many consumers to their mobile banking app to test all kinds of new digital solutions for the purpose of later selling the most successful solutions to banks or other companies. They all seem to have similar goals, that is to gain more consumers. When they were asked if their mobile banking app was profitable they all agreed that it saved cost and would be more profitable in the nearest future. Respondent C claimed that it saved a lot of other costs and that it delivered value. They all seemed to be aware that

customer-orientation is helpful in gaining more customers and they wanted to increase their interaction with consumers or find a better solution regarding customer loyalty.

All of the respondents were concerned about developing loyalty systems and how consumers could become more committed to their companies. They seemed to be concerned about lacking interaction with consumers and the Respondents A., B., and C might need newer technical devices for interactions with consumers. However, respondent D. and their organisation had recently come up with a device in their app where consumers contacted them directly. If this will be well received, this could become an important solution for the banks. The respondents all pointed out that they have a lot of data about their consumers action through the mobile banking app so it is very easy for them to see for example what is the most used action in their mobile banking app. Such information can be good for their marketing strategies; if they want to increase some usage they should have some banking action behavioural data about the particular group. When they were asked about their plan and actions about attract new mobile banking users, respondent A, C and D all aimed to put more emphasis on customer education in the future. They intend to gain more consumers introducing the app to consumers and show them what they can do in the app and teach them how to use it from the beginning.

The respondents were asked if they relied on any external suppliers, which they all responded positively to, albeit the answers were various. Their un-coded answers are presented below.

**Respondent A:** *“It applies to all banks, and marketing in Iceland. Marketing departments in general, specifically in the banks rely on advertising agencies, and it is one of the key suppliers. Huge amounts of annual spending from the marketing that goes to the ad agencies and banks are currently buying more and more services such as online marketing consultancy which traditionally didn’t belong in-house but should be in house. Basically content creation, you will be surprised how little they’re doing in the marketing department, other than choosing whom to outsource to and so on and maintaining the relationships. The marketing department decides which distribution to use and which channels to use, suppliers, newspaper, online magazines and so on”.*

**Respondent B:** *“Maybe not suppliers but we have the AD agency which creates everything for us and very tight relationship/communications, but obviously, in online distribution you go to Facebook, Google, for distribution. For our content we obviously need to talk with someone else, there are a lot of people who go to our webpage for example”.*

**Respondent C:** *“Yes, we do rely on the ad agency, Gallup does research for us and in-house we have the SEO and the measurement and Google analytics, Google tag, tracking the sales numbers, so it is mainly advertisements I would say”.*

**Respondent D:** *“Yes we have, or we don’t have a solid one that we use all the time, but we have had some external help here and there. Last year we had a campaign with another Icelandic company that specializes in digital channels. They were running a campaign for Google ads and Facebook. Most of the marketing that we do here in Iceland we do internally, in the marketing department, though sometimes we get some little help. We have used an ad agency but we have in-house very talented designers and in 2017 we rebranded our brand and that process was all done in-house and the result from that we won a rebrand award, the best rebrand in Iceland, we were the only company who did their own marketing without ad agencies”.*

It appears that one of the key suppliers the banks are using (Respondents A., B and C) were advertisement agencies, while the mobile supplier provider company (Respondent D) says they do rely on external suppliers but they are doing most of their advertisements themselves. Other external suppliers that were mentioned were Gallup (a research- and polling agency), Google analytics and other distribution channels online.

Looking at how customer-oriented the respondents were interesting to compare because it is related to the theoretical framework of this thesis: The Marketing Firm. Also, it gives a hint to one of the research questions in the study. The managers’ responses to the question: How market or consumer-oriented are you?

**Respondent A:** *“I think we shifted, we used to be very product focused, delivering products assuming that everyone was going to love them, but recently in the last 12 months, 12-18, the bank has been learning, there is one thing to develop a product, delivering it and people accepting it but the fact that they accept it does not mean that they love it. They just accept it because all the banks are doing the same things, so we are now increasingly putting focus on contacting customers and testing with customers, is this really something you like? So most of the things we do now is customer focus and being customer centric, and we have to be more picky on which customers we are*

*asking questions because we can't put focus on developing everything for everyone, we have to try to identify which types of customers, different segments".*

**Respondent B:** *"Nice question, this is a bank, I think a bit of both, we definitely try to listen to our customers and act on that, we act pretty fast when something is going on, and if there is a problem and we come up with a solution, we have a strong team coming up with a product and something that might benefit our customers".*

**Respondent C:** *"The bank is very market and customer oriented, extremely so actually, because we need to do is basically focus on the need an the customers experience and that is a main thing where you are doing a mobile solution that is where you have to be! We get statistics about complaining and needs, and we want to cater to those needs...for example everything is on English, it is a problem for us, switching between users. There are loads of-people from the business and the IT come together- at first, we speak to our customers, see the answers and we work out from customers feedback what they want- we have workshop for 16 weeks doing nothing else than this specific project".*

**Respondent D:** *"Mostly customer oriented here in Iceland, the user is our key. Here in Iceland we are focusing what our users are looking so we are very customer oriented here, we don't have much competition because nobody is doing the same thing like us".*

Overall, the answers from respondents A, B, C and D were similar even though respondent D did not represent a bank. Although the respondents claim that they are consumer orientated there are some answers that indicate that they might be competitive-oriented. They are competing for consumers, and they want to offer same products that the competitors are offering. When they were asked about why there are some bank customers out there that don't use mobile banking they all talk about that they are afraid. Respondent: A says that people are afraid and used to their own habits. Respondent B says it is because of lack of knowledge, Respondent C say's it's mainly related to age, meaning that older generations are the individuals who don't want to adopt mobile banking. Respondent D claimed that it was because of fear and said that those individuals would possibly adopt the mobile banking in the future. The mobile banking market in Iceland is a growing market and the managers are aware of that the consumers are important.

## 6. Discussion

In conclusion, the short answer to the first research question, regarding *what has the most effect on people's intention to use mobile banking*, is their level of education and income, while the effects of gender and age were not significant in determining how likely the non-users were to adopt mobile banking. The results showed that the positive effect on the intention to use mobile banking in the future were: higher education, higher income, a service or a learning course, innovative individual characteristics, reliability related to security and the trust of Icelandic banks. These were the independent variables that all had a positive effect on the dependant variable: "I intend to use mobile banking in the future". This is consistent with earlier literature, that individuals with higher education and higher income are more likely to use online or mobile banking (Hernandez & Mazzon, 2007; Foley & Jayawardhena, 2000; Teo et al, 2012). However, gender did not have a significant effect in this study which means that gender should not play a role in the likelihood of Icelandic consumers adapting to mobile banking. Foreign studies have shown various results regarding the effect of gender on online banking adoption where gender sometimes has an effect and sometimes not (Jayawardhena & Foley 2000; Youzafzai & Yani-de-Soriano, 2012). Other studies found gender differences in the perceived ease of use on the intention to use mobile banking (Rios & Riquelme, 2010; Teo et al., 2012).

After the financial crises in Iceland several studies have been conducted on trust towards Icelandic banks. Around 70 % of participants responded that they had little trust towards Icelandic banks (MMR, 2015). In the present study, the non-users were concerned with trustworthiness and security of using mobile banking apps. Also in this study, the non-users did not demonstrate more mistrust in general towards the Icelandic banks than mobile banking users. Previous studies have shown that security and trust is an important factor for the intention to use online banking (Shankar & Kumari, (2016); Pento, & Karjaluo, (2003); Yiu et al., (2007).; (Li & Laforet, (2005); Liao & Cheung, (2002). Not surprisingly, the non-users in this study who were open to new technology also demonstrated more willingness to consider mobile banking in the future than those who did not respond positively to a question on technological openness. In general, individuals who identify as open to new technologies are more likely to use mobile banking in the future as this trait had a positive effect on the intention to use mobile

banking. This can be associated with Yani-de-Soriano & Yousafzai (2012) study about adoption of new banking technology, which showed that individuals who don't want to adopt new banking technology are generally rather negative towards technological innovations.

Interestingly, the non-users in this study were highly positive towards taking a course in the use of mobile banking. A question regarding this was the third highest predictor on their probability of using mobile banking in the future. This demonstrates openness to this new technology among non-users and highlights an opportunity for the banks and financial institutions for gaining new mobile customers. This could for example be useful for older people who tend to be more conservative and unsecure about this new technology.

A case for the need of informing and educating the non-users about the mobile banking apps can be found in this study when the two data sets were compared, i.e. the data collected online and the data collected by visitors of the bank branch. The two groups differed in terms of how they answered two questions regarding cost of mobile banking and the perceived ease of use of mobile banking apps. The group that was visiting the branch and participated in the study were (unnecessarily) concerned about the cost of mobile app use and reported more difficulty in learning how to use a mobile banking app. Obviously, some of the non-users need to be better informed about the cost and convenience of mobile banking apps.

Some of the Icelandic banks have recently been providing simple learning courses for their consumers in regular banking actions, like "how to buy your first apartment". According to Respondent A (Personal communication, November 2018) this has been well received by their consumers. This was the idea of the self-created question, including the idea of customer-oriented service from The Marketing Firm theory.

The mobile banking users confirmed in this study that using the mobile bank had benefits 28% of the users somewhat agreed that it had great benefits and 47% strongly agreed to that mobile banking had great benefits.

Approximately 50% of the current users strongly disagreed that learning how to use mobile banking was difficult. Only 1% agreed that it was difficult to learn how to use it. Almost 85% of the mobile banking users responded that they would recommend the app to friends and family, so mobile banking consumers seem satisfied.

The users of mobile bank agreed that people had encouraged them to use mobile banking. This can be linked to positive WOM. Matos & Leis (2013) claim that in the banking, positive WOM is one of the most important consequences of satisfaction among consumers. The WOM is also coupled to if people recommend service or a product to others. In this study the majority of the banking consumers that used mobile banking were willing to recommend using mobile banking to their friends or family, 52.6% very likely and 30.9% somewhat likely.

When the usage of mobile banking was compared in the sample the results showed that 69.1% of all sample in study 1 used mobile banking already, and 30.9% did not use mobile banking. According to the data from the three Icelandic banks showed that 48,5% of active bank consumers in Bank A. used the bank's mobile banking app, 60% of the active bank consumers used the bank's mobile banking app in Bank B. and around 70% of active bank consumers in Bank C. used the bank's mobile banking app (Personal conversations with Respondents A, B and C, November 2018). This is somewhat in line with the numbers from this study, but numbers from respondent A. and B. are lower. This could be explained by the usage of mobile banking apps from other suppliers. The banks don't have data from other mobile banking usage outside their mobile banking apps. So participants in this research could have been using mobile banking app, which is not owned or supplied by their consumer bank.

Overall, the managers' responses were rather similar to each other in study 2. After examining all four interviews and transcripts results showed that they all agreed that mobile banking was profitable or cost saving. They all seemed to have the knowledge of customer-orientation and that customer-orientation is helpful in holding on to and gaining more consumers. They wanted to increase their interaction with consumers or find a better solution on consumer's loyalty. All were aiming for similar goals in gaining more consumers and their marketing is in part built on information related to lifestyle. All firms purchased marketing intelligence and relied on external suppliers. In conclusion, the answer to research question number two: *Are Icelandic mobile banking supplier customer-orientated?* All managers claimed that their bank or company were customer-oriented. Looking at some answers to other questions it is obvious that they are aware of the importance of focusing on what the consumer wants. They want to be competitive and selected from all the opportunities that the market

offers. Although the respondents argue that they are customer-orientated there are some answers that indicate that they might be more competitive-oriented. They are constantly competing for consumers, and they want to offer similar products to what the competitors are offering. The mobile banking market in Iceland is a growing market and the managers seem to be aware the importance of consumers. From the technology and cost saving perspective mobile banking may seem logical for the banks, but to be loyal to consumers and customer-orientated at the same time they are closing branches can be complicated.

The questions that rise are; are they closing branches to save cost? Is this a favour to bank consumers so they will adopt mobile banking, because it is beneficial for them too? All managers responded without hesitating that mobile banking is beneficial for both consumers and suppliers. This could answer the third and last research question: *Do mobile banking suppliers in the Icelandic market respond to consumers in ways that are beneficial for both customer requirements and corporate financial goals?* The results from study 1 discussed above showed that mobile banking users were very happy with their mobile banking experience. Foxall (2018) stated, “in a nutshell, The Marketing Firm is that organization which responds to consumer choice in ways that satisfy both customer requirements and corporate financial goals”.

Although findings of this study contribute to the understanding of the factors affecting intention to use mobile banking, this study has some limitations. A part of the sample participated in a bank branch, and the other part participated in an online survey. A small difference was found between the responses of these two groups. Therefore, the circumstances that the participants were in could have affected their responses in the questionnaire. The respondents who participated online could have more familiarity with mobile Internet and that could also have affected the results. As The Marketing Firm theory has not been used as a theoretical model in mobile banking or technology acceptance adoption studies before, the researcher had no earlier structure to compare. However, using The Marketing Firm theory and bilateral contingency can absolutely be very positive and give good insight into behavior.

## **7. Conclusion and recommendations**

When the managers in study 2 were asked why there were still banking consumers that did not use mobile banking they mentioned that these people were too afraid and conservative. They also mentioned that the non-adoption was because of lack of knowledge. When this is compared to the responses from the banking consumers in study 1 there is a need to decrease this fear and convenience if they want to gain more consumers. The banks or mobile banking suppliers should educate the non-users about mobile banking. Non-users need to know how easy mobile banking can be in use and that it can save time and cost, as the individuals who participated in a bank branch thought that mobile banking included more cost than regular bank services in a branch. The users of mobile banking that participated in a bank branch also had a harder time learning how to use the mobile banking app. There is clearly a need for education for the non-users. Three of the managers in study 2 claimed that they wanted to inform their consumers through education. According to the results from study 1 the non-users claim to be interested in an educational course provided by their bank or mobile banking supplier. Further research about education in mobile banking would be appropriate, to examine what kind of learning the non-users are interested in or what kind of learning increases performance in mobile banking. By exploring this customized education or learning courses could be conducted to different segments.

Alt & Puschmann (2012) claimed that customer-oriented banking could be the answer for the banks to hold on and gain more customers. The firms or in this, case the banks or mobile banking suppliers should answer the demand of education in mobile banking by providing educational services and courses to their consumers.

Respondent C. (Personal communication, November 2018) argued that today it is much easier to change a commercial bank with the arrival of the mobile banking app. The mobile banking app could be revolutionary tool to gain more competition in the Icelandic banking market. Currently, the banks are not the only competitors as mentioned earlier there are new players on the market that all have the same goal to gain more mobile banking consumers. The banks and mobile banking suppliers have to be awake and aware of those new threats and customer-orientation can be a strong solution.



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## Appendix

### Appendix A

#### Questionnaire for participants who don't use Mobile banking

This questionnaire is part of a research conducted for Master thesis in Reykjavik University. The aim of the study is, among other things, to examine the use of Icelanders on Banking / Financial Smart Applications (App). Participant responses are not traceable and will only be used for theoretical purposes. All study data will be treated as confidential. Thank you for participating!

**1. Your consumer bank:**

- Arionbanki
- Íslandsbanki
- Landsbankinn
- Sparisjóðirnir
- Other: \_\_\_\_\_

**2. Who don't you use mobile banking?**

\_\_\_\_\_

**3. How much do you agree or disagree with the following statement: " I don't use mobile banking because I don't have a smartphone or a tablet.**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

4. **How much do you agree or disagree with the following statement: “I intend to use mobile banking in the future”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

5. **How much do you agree or disagree with the following statement: I don’t use mobile banking because I like doing business like I am used to, (in my Internet bank or in my bank branch).**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

6. **How much do you agree or disagree with the following statement: “ I have used mobile banking before and I did not like it”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**7. How much do you agree or disagree with the following statement: “I think using mobile banking has benefit”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**8. How much do you agree or disagree with the following statement: “Security is important in mobile banking”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**9. How much do you agree or disagree with the following statement: “Privacy is important in mobile banking usage”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**10. How much do you agree or disagree with the following statement: “I am innovated person; I intend to try new technology”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**11. If you have noticed an advertisement for mobile banking, where have you noticed it?**

I have not notice an ad about mobile banking

On my banks web page

In television

On the internet/Social media

In the radio

Posters

Other: \_\_\_\_\_

**12. How much do you agree or disagree with the following statement: “I think mobile banking is not a reliable way to do business”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**13. How much do you agree or disagree with the following statement: “mobile banking involves cost”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**14. How much do you agree or disagree with the following statement: “it is more risk doing banking actions in the mobile banking app than doing banking actions in the banking branch or on the Net bank”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**15. How much do you agree or disagree with the following statement: “I have experienced obstacles because I am not using mobile banking”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**16. If your bank or mobile supplier would provide a service or a course of how to use a mobile banking app, would you like that?**

- Very likely
- Somewhat likely
- Neither likely or unlikely
- Somewhat likely
- Very unlikely

**17. How much do you agree or disagree with the following statement: “People around me encourage me to use mobile banking”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**18. How much do you agree or disagree with the following statement: “Mobile banking is not for me”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**19. How often do you go to your bank branch?**

- Daily
- Weekly
- Monthly
- 4-5 times a year
- 2-3 times a year
- 1 a year
- Almost never
- Other: \_\_\_\_\_

**20. What actions do you most often do in your banking branch?**

\_\_\_\_\_

**21. How much do you agree or disagree with the following statement: “I trust Icelandic banks today”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**22. Age**

- 18-24
- 25-34
- 35-49
- 50-64
- 65-69
- 70 +

**23. Highest education**

- Primary school
- High school
- Bachelor
- Master
- PhD
- Other: \_\_\_\_\_

**24. Gender**

- Female
- Male
- Other

**25. Do you have children under 18 years old living at your home?**

- Yes
- No

**26. Marital status**

- Married
- Living with someone
- In a relationship
- Single
- Other:

**27. Estimated monthly income before taxes in ISK**

- less than 249,000
- 250,000-349,000
- 350,000-449,000
- 450,000-549,000
- 550,000-649,000
- 650,000-749,000
- 750,000-849,000
- More than 850,000
- I don't know

- I don't want to answer

**28. Combined monthly home income ISK**

- Less than 250,000
- 250,000-399,000
- 400,000-549,000
- 550,000-799,000
- 800,000-999,000
- 1.000,000-1.499,000
- 1.000,5000 or more
- Don't know
- Don't want to answer

**Questionnaire for participants who use Mobile banking**

This questionnaire is part of a research conducted for Master thesis in Reykjavik University. The aim of the study is, among other things, to examine the use of Icelanders on Banking / Financial Smart Applications (App). Participant responses are not traceable and will only be used for theoretical purposes. All study data will be treated as confidential. Thank you for participating!

**1. Your consumer bank?**

- Arionbanki
- Íslandsbanki
- Landsbankinn
- Sparisjóðirnir
- Other: \_\_\_\_\_

**2. What mobile banking app are you using?**

- Aur

- Kass
- Íslandsbanka appið
- Landsbanka appið
- Pei
- Arionbanka appið
- Fríða
- Meniga
- Kreditkort appið
- Other: \_\_\_\_\_

**3. For how long have you been using mobile banking?**

- Less than 1 month
- 1-6 months
- 1-2 year
- 3-4 years
- 5 years or longer

**4. How frequently do you perform any of following actions? (From 1-6).**

- Transfers
- View credit card status and / or records
- Payment of Accounts
- Stocks
- Find an ATM
- View currency status
- Monitor credit status
- Find the debit and / or credit card PIN

**5. How often do you go to your bank branch?**

- Daily
- Weekly
- Monthly
- 4-5 times a year
- 2-3 times a year
- 1 a year

- Almost never
- Other: \_\_\_\_\_

**6. What actions do you most often do in your banking branch?**

\_\_\_\_\_

**7. How frequently do you use your mobile banking app?**

- Few times a day
- Once a day
- Few times a week
- Once in a week
- Couple of times in a week
- Once in a month
- Less than once in a month

**8. How much do you agree or disagree with the following statement: “People around me encourage me to use mobile banking”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**9. How much do you agree or disagree with the following statement: “It took me a long time to learn how to use the mobile banking app”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree

- Strongly disagree

**10. How hard/easy was it for you to learn how to use the mobile banking app?**

- Very easy
- Somehow easy
- Neither easy or hard
- Somehow hard
- Very hard

**11. How much do you agree or disagree with the following statement: “It is easy to get help from others to use the mobile banking”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**12. What made you begin using your mobile banking app?**

- I saw it in an ad
- People around me use it
- My bank told me about it
- My friends or family recommend it
- I don't know
- Other: \_\_\_\_\_

**13. How much do you agree or disagree with the following statement: “I think using mobile banking has benefit”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**14. How much do you agree or disagree with the following statement: “Security is important in mobile banking”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**15. How much do you agree or disagree with the following statement: “Privacy is important in mobile banking usage”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**16. How much do you agree or disagree with the following statement: “I am innovated person; I intend to try new technology”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**17. If you have noticed an advertisement for mobile banking, where have you noticed it?**

- I have not notice an ad about mobile banking
- On my banks web page
- In television
- On the internet/Social media
- In the radio
- Posters
- Other: \_\_\_\_\_

**18. How much do you agree or disagree with the following statement: “I think mobile banking is not a reliable way to do business”**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**19. How much do you agree or disagree with the following statement: “mobile banking involves cost”**

- Strongly agree

- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**20. Do you think there are any con's of using mobile banking, if you think so, what are the cons?**

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**21. Would you recommend using mobile banking with your friends or family?**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**22. How much do you agree or disagree with the following statement: "I trust Icelandic banks today"**

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

**23. Age**

- 18-24
- 25-34
- 35-49
- 50-64
- 65-69
- 70 +

**24. Highest education**

- Primary school
- High school
- Bachelor
- Master
- PhD
- Other: \_\_\_\_\_

**25. Gender**

- Female
- Male
- Other

**26. Do you have children under 18 years old living at your home?**

- Yes
- No

**27. Marital status**

- Married
- Living with someone
- In a relationship
- Single
- Other:

**28. Estimated monthly income before taxes in ISK**

- less than 249,000

- 250,000-349,000
- 350,000-449,000
- 450,000-549,000
- 550,000-649,000
- 650,000-749,000
- 750,000-849,000
- More than 850,000
- I don't know
- I don't want to answer

### **29. Monthly home income ISK**

- Less than 250,000
- 250,000-399,000
- 400,000-549,000
- 550,000-799,000
- 800,000-999,000
- 1.000,000-1.499,000
- 1.000,5000 or more
- Don't know
- Don't want to answer

## **Appendix B**

### **Questions for managers of mobile banking for the semi-structured interviews**

1. Who are your current costumers? Who are your future costumers?
2. What are your goals in Mobile banking marketing?
3. Is your Mobile banking app profitable? If yes, please mention three factors that make it profitable?
4. When it comes to marketing, do you rely on any external suppliers? If yes, what determines whether you use them?

5. Do you do anything to retain costumers, if yes, what do you do?
6. How do you interact with your customers?
7. In the marketing for your mobile banking app, do you provide information related to lifestyle and benefits of using the mobile banking app?
8. How market- or customer oriented are you?
9. How do you manage marketing mixes in the pursuit of profitable consumer response?
10. Do you conduct or purchase any marketing intelligence?
11. Why do you still have consumers that don't use the app? Do you think there are some specific factors that causes this late adoption or none adoption?
12. Do you have any specific plan or actions designed for this group so you can somehow attract them or reach to them?
13. Is mobile banking beneficial for bout consumers and suppliers?

**Appendix C**

Question: What actions do you mostly do in your bank branch?	
Users	Non-users
Meeting service consultant Get an electric ID Buying gift cards Buy currency Loans/loans evaluation To complicated for net bank	Pay bills Withdraw money Buy Currency Meeting service consultant Get PIN-number or cards Loans Loans/loans evaluation

**Appendix D**

**If you have seen a Mobile-banking advertisement, where have you seen it?**

	Non-users	Users
I have not seen an ad	44,9%	36,0%

On my banks website	37,0%	48,3%
In television	44,9%	36,0%
On the internet/social media	35,5%	47,1%
Heard it on the radio	23,2%	24,5%
Posters/screens	24,6%	26,9%
Number of respondents	138	331

### Appendix E

**Do you find any cons using your Mobile-banking app? If you find any cons please write them down.**

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Other people can easily reach my phone  
 I can do fewer things than in my net bank-limitations  
 Works slowly  
 I can't see electronic overview.  
 Decreasing of branches and staff  
 Limitations

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### Appendix F

Why don't you use MB-app?
I use the net bank/online bank
Don't trust it
Don't know how to use it
I want personal service
I will use it in the future