Exploring the Key Drivers behind the Adoption of Mobile Banking Services

Abstract

This research examines the main drivers behind the adoption of mobile banking, a concept that has revolutionized the day to day activities of humans. A review of relevant literature on the topic, leads us toward testing the following key hypotheses: consumers are adopting mobile banking due to the perceived usefulness and benefits associated with the concept; and consumers are adopting mobile banking due to technological advances meaning increased access to the mobile phone devices. We published an online questionnaire on Amazon Mechanical Turk to obtain responses from Internet users. A dominating proportion of participants highlighted how mobile banking is a concept that they adopted between three and five years ago, showing just how recently mobile banking took off. The results also showed a number of links between the study's research hypotheses and the adoption of mobile banking. The overall result of the study shows online banking as a concept that is influenced by a number of both internal and external factors. No single factor plays a dominating force in pushing retail bankers to adopt mobile banking, with it instead being a culmination of numerous different factors. The recent introduction of mobile banking is made seemingly apparent, as is the increasing susceptibility to change in the near future. Subsequently, countless opportunities for further academic research are likely to arise.

Keywords: Mobile banking; Usefulness; Ease of use; Off-line channels; Internet

Introduction

People often declare how they have been witnesses to the huge technological advancements that have ensued in recent years, which subsequently has improved consumer accessibility toward internet and mobile phone services. Online banking was first introduced in 1981 in New York where 4 major banks combined to offer a home banking service. The Bank of Scotland were soon responsible for its introduction into the United Kingdom in 1983, henceforth the concept grew. Despite slow progression following its arrival in the UK and other countries, prolific acceptance of the concept in more recent years has led it to "become one of the most profitable e-commerce applications over the last decade" (Lee, 2009, p.9). The rapid growth of internet and mobile banking and the short period of time that it has been

around stand aloud as the two fundamental reasons behind our research. On top of this, e-commerce is an area in business that faces constant adjustments as a result of the numerous influential factors surrounding the topic. Our specific motivation into the topic considers the determining drivers in pushing retail bankers to adopt the concept of mobile banking. Current research from across the world delves a range of both internal and external factors responsible for adoption. We aim to identify the adoption drivers within our sample population as well as arbitrating what we deem to be most influential should analysis make that apparent.

The study contributes to the extant literature in the following two important ways: first, it examines the premise that mobile banking is a beneficial tool, which may result in regular use of the concept. Second, to what extent mobile banking application is simple and error free, which may prove influential toward its adoption. The growth of technology and the Internet has led to online banking. Even with the many advantages it has, there is still a reluctance to adopt the service. Factors have been recognized, particularly stemming from the Technology Acceptance Model, which have an influence in the adoption of online banking. The Technology Acceptance Model (TAM) was initially proposed by Davis (1989); and the purpose was "to pursue better measure for predicting and explaining use" (Davis, 1989, p.320) of technology systems. This model is prominent in literature within the field of online financial services, and has been commonly found to provide the theoretical foundation for a vast amount of research. The original model uses two factors of perceived usefulness and perceived ease of use, where he constructed new scales that were then validated within his research – and is still being used today.

Online banking is now one of the easiest ways to conduct banking transactions. Banks are strongly encouraging customers to start using their free online services, therefore it is important to know what factors will make them use online banking. Many factors have been previously recognized to influence the adoption. For example, perceived usefulness and perceived ease of use present a significant influence (Davis, 1989; Xue, Hitt and Chen 2011). However, there are indications that new factors could be developed and investigated that fit with the technological environment today. We examine these factors in our research; we thus provide new insights for marketing analytics related studies on technology adoption in the area of

mobile banking. This also suggests that banks should continue to improve the system to make it easier to use for customers. This would lead to a higher convenience due to the ease of use, as it would not require so much time to learn how to use it. Banks should also attempt to eliminate any risk that could cause psychological effects to customers, to maintain a high usage of online banking. In a world troubled by economic inequality, viewpoints on the concept are likely to differ between countries, as well as the proportion of residents using the concept. This does create difficulties regarding the generalization potential of our results, but on the contrary proposes the ability to make comparisons between our research and that of others internationally.

The rest of the paper is organized as follows. The next section will provide a review of relevant academic literature that we performed prior to research. Following, will be a methodology section illustrating our research instrument and the methods that we implemented. Lastly, will be a section of data analysis followed up by a conclusion, exemplifying the findings from our research.

Review of Literature

Despite the slow start that mobile banking made, it has since blossomed, hugely changing the way customers interact with organizations on a day to day basis. In the words of Nitsure (2004, p.21) “there are not many interventions that have changed the business of banking as quickly as the e-banking revolution”. Its recent growth and successes have not gone unnoticed in the academic world, leading to a number of academic journals devoted to its existence. The success of mobile and online banking can be linked to two fundamental reasons. It has firstly proved to be of huge benefit to the banks themselves (Xue, Hitt and Chen 2011; Bitner, Booms, and Tetreault 1990). This comes as a result of the reduced necessity for employee presence, reduced service charges and many other benefits as seen in the following text. The second fundamental driver behind the success of the concept is the array of benefits that it brings to consumers (Peterson and Peterson, 2015; Kuzic et al., 2002). Subsequently, it is made apparent that both sides of the process benefit from online banking (Martins et al., 2014; Xue, Hitt and Chen 2011).

The world we live in is becoming "increasingly characterized by technology-facilitated transactions" (Meuter et al, 2000, p.35), and the sheer importance of online banking has not gone unnoticed by banks. The majority of banks worldwide now offer online banking services, and some studies have actually concluded that online bankers are a banks most profitable consumer segment (Robinson, 2000; Sheshunoff, 2000). The sheer importance of online and mobile banking is clearly evident. The concept was first introduced in the 1980's, where transactions were dominated by telephones and ATM's (automatic teller machines). Early adoption was labelled as 'disappointing' and an 'anticlimax', with the acceptance by the public falling far from expectations (Bielski 2003 and Hutto 2002). A hugely influential Internet transformation in the 1990's soon changed this however, which subsequently has revolutionised the online banking ways of today (Peterson and Peterson, 2015).

Some advantages of online banking is the convenience, better cash management and time saved, which have been found to result in increased customer satisfaction (Chavan, 2013) – where the satisfaction of customers can also define the success of online banking (Singh, 2011). A bank's reputation can also be enhanced, provided that their services are of a good standard (Martins et al., 2014) – which has a strong influence on customer loyalty (Yee and Faziharudean, 2010). Additionally, Singh (2011) has found that new segments within the population can now be connected. This is especially beneficial to customers who may have to travel long distances to the nearest bank – thus saving their time and potentially money. The reduced demand for 'brick-and-mortar' institutions are saving costs for banks to finance them as they are deemed to be expensive. Now, simple transactions can now be carried out online without the need for a cashier (Chavan, 2013, Martins et al., 2014). The efficiency of banks has also improved with a combination of increased turnover – which had come as a surprise (Kuzic et al., 2002). These benefits have resulted in the continuous development into online banking.

Aside from the aforementioned successes and gains, studies have made clear the opportunity for improvement in the concept with a large proportion of bankers not using the online channel. First, many consumers do not see the concept of online banking as totally substitutable with all methods of transactions remaining as important (Dabholkar, 199; Bitner et al., 2000; Durkin et al., 2008). On top of this,

some consumers prefer the confidence of meeting with a professional, which is something that mobile-based banking eliminates. Further, many authors comment on the potential security issues related to online and mobile banking, which can deter many people (Lee, 2009; Hamlet and Strube, 2000). There is also the associated 'switching cost' of learning to use the concept (Wernerfelt 1991; Klemperer, 1995). This switching cost can however act beneficially to banks, as a result of the increased customer loyalty it creates when customers avoid having to endure such costs again. Theoretically, the increased customer loyalty should increase firm's profits as a result of increased transaction volume over a consumer's lifetime (Becker et al, 1999). Back to the online banking negatives, Meuter et al (2000) discloses there to be three main dissatisfying elements in his study; a technology/service failure; poor software design and usage difficulties; and consumer driven failure where consumers experience difficulties in transitioning to the software. The above points play an influential role in deterring retail bankers from adopting online banking, as well as cutting short their use of the concept following original adoption.

Technology acceptance models

In today's technology based world, organizations are continually making adaptions to current principles, as well as implementing new methods. This comes as a result of the influential role that the public play, with them standing as a key determinant toward the success of both old and new concepts. We touched earlier on the revolutionary Internet transformation that changed the online banking world in the 1990's. This point lies perfectly with the technology adoption lifecycle (MaRS, 2015) which estimates the early and late majority of consumers to have adopted the concept in the late 1990's and early 2000's. It must be noted however that the technology adoption lifecycle is considered outdated, which hinders the validity of this point. The following review of relevant literature makes it evident that there are a number of more individual drivers responsible for the adoption of mobile banking.

The drivers of adoption

The adoption of online banking and it's perceived benefits go hand in hand with models that attempt to explain why new technologies are accepted by consumers. Earlier writing into relevant models led us to look at the Technology Adoption Lifecycle, and we are now going to follow this up with an insight into the Technology Acceptance Model. There are two main points to take from this; first, is the concept of 'perceived usefulness', which looks at how consumers believe the adoption of a particular system will make direct enhancements to their job performance. Secondly, is the concept of 'perceived ease of use' which looks at how the adoption of a particular system can simplify processes and reduce the relative effort required (Davis 1989).

'Perceived ease of use' has become an increasingly important point in recent years as a result of the rather dramatic technological advances that have ensued. Constant adaptions have meant online banking systems continue to be simplified and made more user friendly. In the majority of circumstances, consumer accounts can now be accessed using online banking in a matter of seconds. Retails banks are "consumer depository and lending institutions" that propose a variety of different services to their customers (Xue, Hitt and Chen 2011, p.26). However, such large institutions also bear a variety of different costs, with service charges being one of the most significant. The reduction of this specific cost component has subsequently been a key driver in the adoption of online banking by retail banks themselves (Xue, Hitt and Chen 2011). Online banking reduces service charges by decreasing the necessity for employee presence associated with visiting a branch. Retail banks have shifted a proportion of staff labour onto the consumers themselves, which has consequently decreased transaction times on both sides (Lee, 2009; Mansumitrchai and AL-Malkawi, 2011; Ojeka and Ikpefan, 2011). As a result, mobile banking adoption saves both office time and money (Bitner, Booms, and Tetreault 1990).

Mobile banking systems, or in some cases 'SST's' (self-service technologies), have also been shown to reduce service costs for consumers. With the assumption that 'time is money', reduced consumer transaction time means they also save money, and can be more efficient and productive with their time (Sasser 1976; Curran et al 2003). Studies by Hitt and Frei (2002) and Campbell and Frei (2004) showed significant

increases in customer performance and profitability as a result of using online banking. Hence a core benefit is the transaction ease and time efficiency associated with the concept. The process of mobile banking in some cases has a 'volume effect', with more banking transactions being made due to their relative simplicity. The adoption of mobile banking can also cause a relevant intuition and promotion to use other banking services. This comes in consequence of increased consumer confidence in using the relevant technological devices. Some retail banks have actually seen a resulting increase in their market share from increased online banking adoption (Campbell and Frei, 2010). It is therefore quite evident from the above that online banking can actually improve productivity on both sides of the process.

Meuter et al. (2000) concluded their findings with three main benefits from using SST's; the ability to get a customer out of trouble quickly should they need to pay a bill or debt off, the overall benefits customers get from using them (time, ease of use, account access); and lastly that some consumers gain satisfaction from using SST's, finding the process enjoyable and rewarding. To follow on, Barczak et al. (1997) showed that a benefit of online banking is the increased money management of consumers. The concept differs from offline branches in that it provides consumers with 24 hour access of their accounts, significantly reducing the risk of unexplained overdrafts and missing payments. A small, but in some cases important, benefit of online banking is that it is almost totally paperless. This can favor individuals that do not like printed statements and postal documentation. The viewpoints on this are split however, with a significant consumer proportion still in preference of hard copy financial statements.

The above text makes clear the significant range of benefits that it offers to consumers should they choose to adopt it. Consequently, we have chosen to construct our first hypothesis as follows:

H1: Consumers adopt mobile banking due to the perceived benefits related to the concept, including ease of use, usefulness, compatibility, security and previous experience.

Technology and the Internet

Immense technological advances in recent years, have seen electronic devices such as mobiles and computers become far more widespread, affordable and accessible to the general public. Despite the "huge observed income disparity across countries" (Parente and Prescott, 1994), increased effort is being devoted to try and conquer the problem. More economically developed countries such as the United States and the United Kingdom continue to see significant increases in household computer possession, with 80% of households (21 million) owning a computer in 2012 (www.ons.gov.uk). Although the majority of households in poorer countries do not possess computers, new retail banks and technological developments are continually being implemented. As a result, an increasing majority of people worldwide are experiencing a progressive increase in their day to day accessibility to online banking.

The history of computers dates back to the 1800's, but it was not until the 1990's when coincidentally, the first general purpose computer and mobile phone were introduced. Years of steady progression and improvements led technology to the 2000's, where further developments had improved both the efficiency of online banking and the accessibility of the concept to consumers. A study by Daniel (1999) concluded online banking adoption in the United Kingdom and Ireland as being detrimentally affected due to poor access to suitable computing devices. Hence, the strict importance of computer possession in allowing online banking to work is highlighted. Subsequently, the increased computer ownership that has ensued in recent years, coupled with improved worldwide Internet services, is sure to have disproved the above. Technological determinism theory highlights technology as the largest current factor in defining the movement of modern day society and economics (Wooster et al, 1964). Despite the theory being old, technology has maintained the dominating effect that it has on the world today. Mobile phone and computer possession ownership has been rapid, totally revolutionising the way in which the world nowadays operates. Research by Roboff and Charles (1998) did however highlight some drawbacks associated with technology. It was discovered that many online banking users expressed security concerns regarding the electronic devices they use, which has consequently hindered their adoption of online banking. Alongside the significant technological advancements, comes a substantial increase in

the availability and quality of worldwide Internet connections. For online banking to operate efficiently, good quality Internet services are paramount. A study in Australia by Sathye (1999) found that a lack of Internet access was the reason for 26% of her respondents not adopting the concept. Also highlighted in the study, was a degree of concern from her participants toward the security of the system. Technology acceptance is hindered by various technology adoption barriers before being deemed a success, as can be seen above. However, the vast improvements toward computer and Internet accessibility, as well as improved technology handling and security are likely to decrease the impact of these barriers. As a result, we deemed it appropriate to construct our second hypothesis as follows:

H2: Consumers adopt mobile banking due to its impact on travel time to offline branches.

Decrease in branches and offline channels

Chen and Hitt (2002) explain how online banking can detrimentally reduce a retail banks physical presence. With an ever increasing adoption of online banking, fewer and fewer consumers are finding the necessity to visit offline branches for banking purposes. A study in Finland by Karjaluoto et al (2002) gave evidence to support the claims from Chen and Hitt. The study discovered a reduction in both the number of bank service staff and the number of branch networks, which came as a result of an ever increasing online banking adoption. It must be noted however that "few customers use the online channel exclusively" (e.g., Fisher 2007)" (Xue, Chen and Hitt, 2011). For many consumers it is hard to find a pure substitution between an online bank and an offline branch, with both forms being deemed individually important.

In contrast to the last point, many studies have actually noted the vast increases in the number of purely online banking organizations, meaning they have no branches at all. This movement comes as a result of the great successes that have enveloped from online banking in recent times. With consumers now becoming more

and more inclined to online banking and working from home, many have been seen to change their current banks in favour of a different bank with more desirable rates. This comes as a result of the decreased importance of branch locality regarding consumer bank choice. With transport systems getting consistently more populated, and with people finding less and less time in their day, there has been an increasing consumer concern regarding the relative travel time in visiting a branch. Once again, this favours the adoption of online banking, allowing consumers to access their bank accounts from their very own pocket or computer (Chen and Hitt, 2002). A somewhat differing point by Chen and Hitt was that "customers who live in areas with a high branch density or high Internet banking penetration increase their product acquisition and transaction activity more than Internet banking adopters in other regions". This supports the importance of offline channels in allowing retail banks to get the most from online banking. With respect of this, a high density of offline branches can in fact aid the adoption of online banking. This is believed to be caused by promotions and advertising by banks, improving the desirability of the range of services that they offer. The past writing has consequently led us to propose our third and final hypothesis for the course of our research project:

H3: Consumers adopt mobile banking due to its impact on travel time to offline branches.

Research Methodology

The objectives of our research are to investigate what factors influence the choice to use online banking. Factors chosen are from previous studies that have resulted in influencing adopting online-based commercial services (Xue, Hitt and Chen 2011; Davis, 1989). Even though the majority of the population uses the Internet, and assuming they also own a bank account, there is still a gap in using online banking. This signals that there may be issues and factors that deter the use of online services. Acknowledging the importance of online services, and in particular online banking, it has led us to research into this topic. Having established a basis of theoretical outlook

for this study following our review of academic literature, it seemed appropriate that the aforementioned research hypotheses were constructed.

- Consumers adopt mobile banking due to the perceived benefits related to the concept, including ease of use, usefulness, compatibility, security and previous experience.
- Consumers adopt mobile banking due to technological advances in the area of the Internet and computers.
- Consumers adopt mobile banking due to its impact on travel time to offline branches.

We collected data for the research through an online questionnaire. The questionnaire was published on Amazon Mechanical Turk to obtain responses from Internet users (Lowry, et al., 2016). Thus, the results were collected electronically. This not only shortened the collection time, but also made the subsequent process easier to manipulate. Our questionnaire contained a variety of different questions. The resulting data set adequately covered all three of our research hypotheses. In total, 255 people answered our questionnaire with 202 of them completing it fully. Firstly, category questions were asked to collect the demographics of the participants that were needed to analyse the individual characteristics. Behavior usage questions were then asked to measure their adoption of online banking. The behavior usage questions used were deemed to be appropriate by Lowry, et al. (2016), by measuring the actual usage of online banking as stated by participants. The questions used for perceived usefulness and perceived ease of use modified from Wang et al. (2003); compatibility from Tan and Teo (2000); and security and previous experience from Martins et al. (2014) and Nasri (2011). We chose to use these questions and scales because they had been used in previous research and been tested for their validity and reliability. We also conducted Cronbach's Alpha for the multiple items that measured each factor to ensure that a strong internal reliability was present. Spearman's correlation coefficient was conducted to test all the hypotheses aside from H3 (results are not reported here). All of the factors measured had a Cronbach's Alpha of at least 0.8, aside from

compatibility with an internal reliability of 0.75, representing a 'good' internal reliability.

Results

Descriptive statistics

Table 1 presents the demographic information that was received as a result of our research. Gender: As seen in the table, an almost equal number of responses were received between males and females, with 52% males completing the questionnaire compared to 48% females. Age group: it is important to highlight that 83% of the 202 participants were from the 25 or under age group, with the remaining 17% participants coming from the 41 to 55 age group. Employment Status: In total, 85.3% of participants were in full time employment; just 2.9% of participants were self-employed and just 1.0% of participants were unemployed. There were no participants in my study who were homemakers, from the military, retired or unable to work, meaning our results can in no terms be held representable for these demographic groups. Our first question within our survey looked at the timescale that participants have been using the concept of online banking. 95.1% of participants declared how they had been using mobile banking for no more than 5 years. This highlights how recently online banking has taken off, and also the potential for it to continue to make huge changes and successes. It must however be noted that a majority 52.9% of participants voted '3-5 years' suggesting the most significant adoption has perhaps passed.

[Insert Table 1 about here]

From the analysis, we see that 81.4% of participants answered 'Strongly agree' when asked if online banking allows them quicker access to their bank accounts. A further 17.6% answered 'Agree' with just the 1 participant answering as 'Undecided'. Consequently, it can be said that the population's opinion regarding the time saving benefits of mobile banking is significant. Similarly, the next variable saw

71.6% answering ‘Strongly agree’ and 23.5% ‘Agree’ when asked if mobile banking had delved them to be more time efficient. Our next analysis looked at the claim from Campbell and Frei (2010) that the mobile banking concept can aid in improving consumer productivity, and subsequently my results stood as evidence to support these claims. 51% of participants ‘Strongly agree’ that online banking has allowed them to improve their productivity, with a following 33.3% who ‘Agree’. An interesting point to pick up on is the participant who answered ‘somewhat disagree’. Going against the vast majority of participant answers, it is likely that this person has had bad experiences using our banking. Our next point looks at the assumption that users deem online banking as a simple and error free application. We have chosen to display the data for this in a bar graph as a consqeuence of the wider dispersion of the data. As can be seen, the dominating proportion of participant responses agree with the statement that online banking is simple and error free. Looking at the Figure 1, it shows 100% of participants answered to a variable of ‘Agree’ when asked if online banking was a useful and beneficial process to them. Many researchers conclude that online banking allows and pushes users to increase transaction volume. When asked, 45.1% ‘Strongly agree’ with the statement, with a further 34.35% agreeing and 12.75% of participants agreeing to some extent (Figure 2). In respect of this, it is evident that our sample population poses some similarities to the samples used by other academic researchers.

[Insert Figure 1 and 2 about here]

Our second hypothesis looks at the extent to which technological advances have proved influential in driving consumers to adopt online banking. Our results display a strong consumer agreement toward computing devices becoming more accessible in recent years. Similarly, there is a strong agreement toward the extent to which Internet accessibility has also increased in recent times. Further to this, 59.8% of participants ‘Strongly agree’ that increased computer and Internet access has made online banking more accessible and suitable to them, with a further 34.3% agreeing and 5.9% somewhat agreeing. The influence of technological advances on online banking adoption is therefore very clear within my population sample. The majority of participants strongly agree that they owned devices suitable for the access of online

banking, with everyone answering on the 'Agree' side of the scales. This highlights the recent technological improvements and increases in mobile possession. The last data set for this hypothesis show mixed opinions regarding mobile banking being a concept they have adopted following the purchase of a new phone or computer. 34.3% or participants picked an answer on the disagree side of the scale with a mean value of 3.5. This highlights a real split in opinion and somewhat 'flat' distribution of results. Consequently, this acts as a degree of evidence against my second hypothesis. Our final hypothesis looked at the potential decline in offline branches, and the potential effect of this on online banking adoption. Also considered is the effect of travel time in determining how a consumer makes a transaction. 66.7% of participants highlighted that their nearest offline branch was less than 3km from them, with just 4.9% being further than 10km from their nearest branch. In this respect, the associated travel time in visiting a branch for the majority of participants is low. That assumption does not however take into consideration the occupations of participants, and their availability in being able to get to a branch during its opening hours. As mentioned in our literature review, Karjaluoto's (2002) study in Finland concluded an influential decrease offline branch density pushing retail bankers to adopt online banking. Chen and Hitt (2002) also commented on the reduction in the physical presence of some banks as a result of mobile banking. Our results however, are in contrary. 29.4% of participants were undecided, suggesting they were not sure if they had recently seen a decrease in branch numbers. A further 15.7% of participants disagree to some extent, suggesting they have seen no change or perhaps an increased volume of offline branches around them. These findings stand as evidence in disproving the findings of Karjaluoto, and highlight a lack of evidence in being able to generalize our results with his. This was never possible however with such a small and specific sample size.

Analysis

A multiple regression is used to examine the effects of the five factors on the customer acceptance of in-store mobile payments. The five factors are ease of use, usefulness, compatibility, security, and previous experience of mobile payments. The regression model proposed is as follows:

$$Y=\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5,$$

where Y is the customer intention to use in-store mobile payments; β_0 stands for the constant; X_1 stands for the ease of use; X_2 stands for the usefulness; X_3 stands for the compatibility; X_4 stands for the security; and X_5 stands for the previous experience with mobile payments. From Table 2, the value of adjusted R Square is 0.620, which means that 62% of the variance was explained by the previous experience, ease of use, compatibility, usefulness, security. The value of 0.620 stands for it a good fit for the regression model.

[Insert Table 2 about here]

Based on the above table, the regression equation can be written as:

$$Y=2.425+0.005X1+0.085X2+0.41X3+0.006X4-1.84X5$$

From the established regression equation, take into consideration all values of five factors to zero, the value of intention to use In-store mobile payments would be 2.425. As shown in Table 2, the security would have a positive impact on intention to use in-store mobile payments with the standardized coefficient value of 0.017, which means that the first hypothesis could be supported with the Sig (p-value) less than 0.05 (=0.001). A unit increase in the factor of security will lead to a 0.006 intention to use if other factors kept constant. The second hypothesis could be supported due to the value of Sig of ease of use less than 0.05 (=0.010). A unit increase in ease of use will lead to a 0.005 intention to use. The perceived ease of use would have a positive impact on intention to use in-store mobile payments with the standardized coefficient value of 0.010. The compatibility would have a positive effect on intention to use with the standardized coefficients value of 0.104, which means that the third hypothesis

could be supported with the p-value less than 0.05 (=0.002). In addition, if compatibility increases a unit, that intention to use will increase 0.041. We also proposed that previous experience with mobile payments would have a positive effect on intention to use in-store mobile payments; however, this could not be supported with the standardized regression coefficient of -0.441. The usefulness would have a positive impact on intention to use with the standardized coefficients value of 0.221, which means that the hypothesis could be supported with the p-value less than 0.05 (=0.001). Moreover, a unit increase in usefulness factor will lead to a 0.085 intention to use.

As seen in the literature review, mobile banking is influenced daily by numerous different internal and external factors. When looking at the extent to which consumers make transactions using online banking, this too is likely to come as a result of a number of underlying factors. The physical use of mobile banking to complete transactions is likely to be influenced more by day to day activities, as opposed to increased computer and Internet access, and the consumer benefits that online banking offers. Mobile banking is simply the concept used to complete a transaction that a consumer finds themselves required to do. This explains the regression results were it was identified that there were some degrees of variability between results but in the majority of cases the results could not be held as statistically significant. The likelihood of extraneous variables affecting variables is too strong, and consequently we cannot draw valid links between the two. As seen in earlier analysis, the aforementioned variables can be deemed responsible for the original adoption of mobile banking, but perhaps now bare less of an influence on the regularity that a consumer uses online banking. Once again, however, original adoption of the concept is likely to come from a number of factors meaning it would be near impossible to draw perfect regression results from the data.

Conclusion

The general extent of our research shows clear links between the tested variables and mobile banking adoption. In conjunction with the technology acceptance model, it was clear in our sample that mobile banking proves to be hugely beneficial to

consumers. Similarly, the sample declared a distinct increase in their accessibility to mobile and the Internet, which subsequently has enabled a more frequent use of mobile banking. Regarding the context of the research, our results make clear the role of perceived usefulness, technological advances and travel time in determining online banking adoption. With such a broad range of influential factors, the lack of measures organizations can address should they favour an increased adoption rate also becomes apparent. Technology possession is in many respects out of the hand of retail banks, and instead they should prioritise an improved self-promotion of their services. The recent introduction of mobile banking leaves the concept highly susceptible to change in the future. Subsequently a range of opportunities for further research are sure to arise. In the context of our research, it would be interesting to look at the effect of age on mobile banking adoption, which unfortunately could not be assessed in our sample.

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