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DETERMINANTS OF THE ADOPTION OF ONLINE BANKING IN COMMERCIAL BANKS IN KENYA

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ABSTRACT

The general objective of this study was to establish the factors that contribute to the adoption of online banking in Commercial Banks of Kenya. This study employed descriptive design and the target population comprised of 42 commercial banks in Kenya focusing on bank officials and bank customers. It employed purposive sampling to select 42 bank officials and simple random sampling to select 150 bank customers. The study relied on primary data specifically a questionnaire that comprised of open and closed ended questions. SPSS was used to generate frequencies, descriptive and inferential statistics were used to derive conclusions and generalizations regarding the population. Descriptive statistics included use of percentages, mean,frequency distribution and standard deviation while inferential statistics used included correlation and multiple regression analysis. The study findings indicated that most of the respondents were using online banking since it reduced the amount of time used to access banking services. It was also a convenient way of providing customer service and online banking saved customer time since they no longer needed to physically visit the banking hall. However the younger respondents adopted online banking compared to elderly customers which could be associated with the factors. In addition, results revealed that customer attitude, customer awareness (internet knowledge), consumer trust and perceived risk were statistically significant in explaining adoption of electronic banking by customers. The study concluded that online banking adoption and usage in Kenya was very low despite the high levels of internet access. Moreover, the results showed that the younger population were adopting and using internet banking more than the older generation. In addition, the younger generation had a higher exposure to internet use. The study recommended that banking institutions must identify and manage the factors affecting the consumer's intention to adopt and continue usage, to increase the adoption rate of internet banking.

Key Words: *Consumer's Attitude, Perceived Risk, Internet Knowledge, Perceived Ease, Online Banking*

INTRODUCTION

The advantages of any technology on the development of an economy can simply be recognized when there is considerable usage and dispersion of the technology. Technology adoption is a key medium which permits a good number of people to play a part in a fast shifting world where technology has turned out to be essential in our lives. Persons that don't or can't become accustomed to technology will more and more limit their abilities to partake completely in the fiscal and handiness benefits linked to technology (Bridges, 2012).

Clear and considerate understanding of the factors influencing technology adoption assists in predicting and managing who adopts, when, and under what conditions. Equipped with this kind of data it is easy to review the adoption process and know which stage individuals are in thus supporting them as they progress from technology recognition throughout to usage (Bridges, 2012). Sadly there is no comprehensible description of technology adoption, in big portion because of great inconsistency in kinds of technologies and conditions under which citizens accept them. For a few individuals technology adoption is as same as computers and internet usage but populace accepts a broad variety of technologies that are not clearly computer-based. Devices such as in-store kiosks, digital cameras, Global Positioning Systems (GPS) in cars, telephone banking, ATMs, and self-medication devices are all types of technology broadly accessible to clients (Bridges, 2012).

The banking industry has been considerably manipulated by the technology advancement. The emergent applications of automated systems being used by banks has condensed the transaction costs and enlarged the rate of service delivery considerably. The environment for monetary intermediaries made banks to advance their production technology by focusing on products distribution. In other words, the development of banking technology has been largely determined by changes in distribution channels as documented from over-the counter (OTC), automated-teller-machine (ATM), telephone-banking, and recently internet banking (IB) (Yoonhee, 2007).

The swift development of Internet has radically transformed delivery conduits in the banking sector and several banks have created accounts on the internet (Trideau, 2010). Furthermore, the Internet banking mostly practiced within the majority of developed nations including Austria, Spain and Korea since above 75% of all banks provide services through the Internet. (Maenpaa, 2006). Additionally, the growth of internet as the marketing and service channel has breached industrial and geographical limitation thus establishing new market chances, services and products (Liao and Cheung, 2002).

Simone and Jean-Paul (2012) found that in South Africa, changes in the managing of account foundations were for the most part dictated by innovation and globalization. Then again, rivalry was controlled by IT development and the progression of other conveyance implies. Internet banking was seen as a standout amongst the best market. The change was empowered by customer's multifaceted nature, accessibility of most recent IT innovation and the Internet. However, the most basic concerns were service quality, customers focus and revenue performance.

Internet banking in Kenya is on its way to be the focus of direct banking strategies, with the world's most important banks coming up with new monetary services or changing the existing services to match clients' needs of conducting financial operations and activities not physically going to the bank. As per Mr. Isaac Awuondo, the Managing Director of Commercial Bank of Africa, Internet banking is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution. It's this dissemination of fiscal services that has engrossed examination of self-service technologies in banking, with increased number of banks in Kenya and globally offering Internet banking. Locally, commercial banks have

launched online banking because of: Rapid changes in consumer's needs, wants and preferences, competition and products differentiation strategies, development of customers relationships management and demands to reducing transactions and operational costs and surpass the benefit to the clients (Wang, 2007).

According to Awuondo (2007), majority of the clients in Kenya do not have knowledge and awareness on internet banking and the advantages of it hence standing out as the main hindrances to adoption of Internet banking. The other issue that led to resistance of internet banking adoption in Kenya was security. Majority of the citizens were scared of losing their funds whilst conducting on-line transactions and therefore opted for making the transactions physically in the banking hall. In opposition to this the Managing Director of Commercial Bank of Africa Isaac Awuondo called attention to the attributes and points of interest of Internet keeping money as: Execute wherever and at whatever point it suits, Access your record data and exchanges, Make electronic finances exchanges, View, download and print articulations, View banks progressive day by day trade rates, Transfer assets between your own records (Awoundo, 2007).

Statement of the Problem

Banking industry has been considerably impacted by the growth of technology since competition between individual banks has made the new markets to extend and the figure of commercial institutions providing electronic services has amplified (Almazari and Siam, 2008). Consequently, banks have begun offering electronic banking services with an aim of improving the effectiveness of distribution channels by minimizing the transactions costs and escalating the rate of services. Lately, e-banking has turned to be the best way of growth of the banking sector and the role of e-banking is augmenting in several nations (Ayrga, 2011). It presents chances for creating service procedures that require a small amount of internal resources, and thus, lowering costs and providing a broader accessibility and likelihood in reaching many consumers.

In accordance with Gitugu (2012) regardless of the fact that online banking makes the transactions swifter and more suitable, various commercial banks in Kenya are yet to completely implement this latest banking products. The banks that have accepted the product have been faced with different hindrances leading to poor application of internet banking services. As per Ayrga (2011), the main concerns that the banking industry in Kenya faced are, "mistrust, bad client's aptitude and perceived risk of the services and E-transaction security". Similarly, Brian (2008) opined that lack of security reduces the confidence level of many clients. Majority of the consumers find internet banking to be exemplified by elevated rate of fraud due to phishing and hacking of different websites that host internet banking services. Adoption of first-class security systems which leads to confidentiality of online transactions is still a vital predicament that has persuaded clients to defy usage of internet banking services thus slugging the rate of adoption for internet banking by the commercial banks.

Several studies have been done on electronic banking in Kenya. For instance; Njuru (2007) studied the challenges for e-banking plan implementation by business banks in Kenya, Ongare (2013) and Maiyo (2013) examined the impact of electronic banking on the monetary performance of banks in Kenya, Aduda and Kingoo (2012), focused on the correlation between electronic banking and financial performance among commercial banks in Kenya and Mwangi (2007) investigated into web-based banking strategy implementation within the banking industry in Kenya. However, regardless of having many studies carried out on internet banking, to the best of my knowhow no major research has been conducted to address the factors affecting the implementation of online banking in commercial banks in Kenya and this had generated a foremost knowledge gap among

the banks managers on effective management of the factors deterring the success of the online banking services. This research therefore sought to fill the missing gap by exclusively identifying the determinants of the adoption of internet banking in the Kenyan commercial banks.

Research Objectives

The main aim of the research was to determine the determinant of online banking adoption in the commercial banks of Kenya. The specific objectives were:-

- To determine the impact of consumer attitude on the adoption of online banking in Kenya.
- To identify the influence of perceived risk in the adoption of online banking
- To assess the effect of internet knowledge on the use of online banking
- To determine the impact of perceived ease of utilization in adopting internet banking.

LITERATURE REVIEW

Theoretical Review

Technology Acceptance Model

As indicated by TAM, adoption of services or innovation is impacted by the client's goal to make utilization of the framework which is successively chosen by the client's state of mind towards the framework (Davis, 1989). This hypothesis also recommended that two qualities, usability and convenience are basic in clarifying the varieties in client's aims. Seen helpfulness is the degree to which an individual esteems that utilization of a specific administration would make his work straightforward while usability is depicted as the degree to which an individual trusts that utilization of a careful framework is probably going to be easy (Davis, 1989). These two social qualities at that point prompted individual conduct goals and distinct conduct. In his investigation Davis (1989) found that apparent convenience is the most grounded indicator of a person's selection conduct. This model has been reached out to incorporate other variable which impacts client conduct with a specific end goal to be material in different fields which include mechanical reception and the utilization of new administrations. TAM has been widely researched and accepted hence it is the acknowledged assumption that can be adjusted or extended using distinct builds or speculations (Masinge, 2010).

Unified Theory of Acceptance and utilization of Technology (UTAUT)

Brought together Theory of Acceptance and Use of Technology (UTAUT) is an innovation acknowledgment hypothesis defined by Venkatesh and others in as the customer acceptance of information innovation toward the bound of mutual observation (Venkatesh et al., 2003). The UTAUT attempts to explain clients' aims' to make utilization of data frameworks and progressive use conduct. The hypothesis holds that four principle builds "execution anticipation, exertion hope, social impact, and encouraging conditions" are unswerving determinant of clients' expectations and practices while "sex, age, involvement, and willfulness" directs the impact of the four primary develops on clients' goals and practices.

The hypothesis was produced through a survey and solidification of the develops of eight speculations that prior research had utilized to clarify data frameworks utilization conduct hypothesis of contemplated activity, innovation acknowledgment hypothesis, motivational hypothesis, hypothesis of arranged conduct, a joined hypothesis of arranged conduct, hypothesis of PC utilize, dispersion of advancements hypothesis, and social cognitive hypothesis.

Roger's Innovation Adoption Theory

The Roger's (1995) innovation adoptions curve theory has been used to explain innovation adoption. Rogers distinguishes five traits of an advancement that impact the selection and acknowledgment conduct:

near preferred standpoint, many-sided quality, similarity, trialability, and discernibleness (Li, 2010). As indicated by Li (2010), people's observations about these attributes of a data innovation are vital factors in affecting a person's appropriation conduct.

Relative favorable position is characterized as how much the development is seen as superior to anything the innovation it replaces, including specialized execution, cost, chance or different traits. Similarity is how much development is affirmed as being trustworthy with the accessible standards, precedent occurrences and necessitates the prospective users. Complexity on the other hand is the intensity of how difficult it is to understand and use technology. Recognizability is how much the aftereffects of new innovation can be watched or noticeable to other people. Preliminary capacity is portrayed as the aptitude to attempt or explore different ways regarding the execution of a new innovation on a restricted basis (Rogers, 1995).

Conceptual Framework

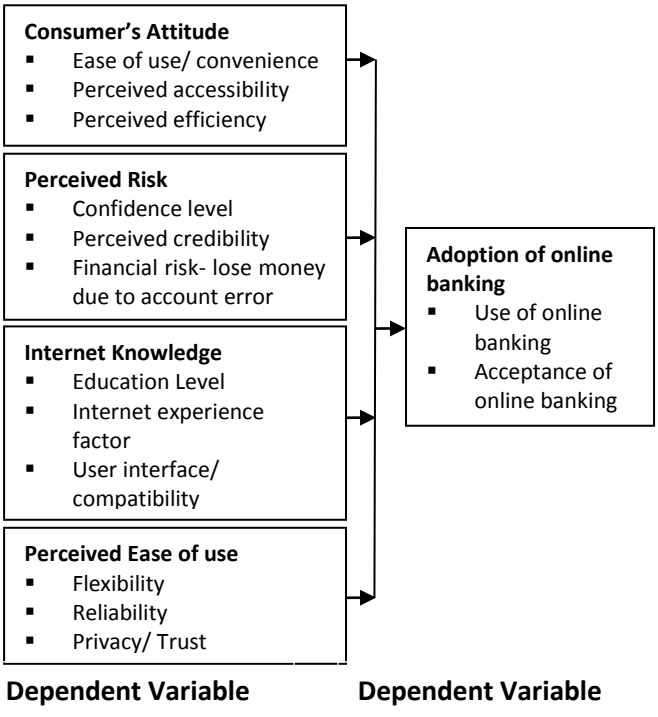

Figure 1: Conceptual Framework
Source: Author (2018)

Consumers Attitude

The Technology Acceptance Model (TAM), suggested that a potential user's general thoughts or mind-set towards making use of a particular technology-based structure or procedures represents key determinant as to whether or not he/she will eventually use the system (Davis, 1993). Heikki (2002) studied "Electronic banking in Finland Consumer Beliefs, Attitudes, Intentions, and Behaviors" using 30 in-depth interviews and mailed questionnaires (1167 responses), and established that 39 percent of the Finnish clients that took part in the survey were already using Internet banking services in their residences or place of works. The investigation discoveries outlined that; (1) feelings and demeanors toward e-saving contrasted between non-customers and customers of internet banking. The results suggested that educated and rich people use web based keeping money services. Electronic banking was seen as a snappy strategy to manage monetary exchanges. (2) Individual banking involvement and related information of PCs and development were the essential variables deciding the choice toward web based banking. Attitude toward PCs use was seen to be the most essential factor impacting the odds of partaking in IB. Web based banking customers had a more rousing attitude toward advancement, especially toward PCs, than people who don't utilize online services. (3) An unfavorable perspective toward advancement, esteeming individual services, and measurement ascribes were seen to be the most huge hindrances to the usage of internet banking in Finland.

Perceived Risk

Perceived risk is vulnerability about the result of the utilization of the development (Chitungo and Munongo, 2013). Perceived danger is additionally characterized as a potential misfortune because of hacker or fraud compromising the safety of web-based bank (Lee, 2009). Hacker and fraud interruption may prompt clients' money related

misfortune and disregard clients' privacy. Lee (2009) recognizes five features of apparent hazard which are "money related hazard, security or protection danger, social peril, time peril and execution peril".

Internet Knowledge

Adoption of online banking needs learning of manager, workers and clients. Keeping in mind the end goal to offer and keep up electronic banking with no blame, banks require skilled labor. Different analysts saw that banks needed talented labor and in some cases they witnessed resistance from the staff individuals to build up these administrations since they fear losing their employments. They inferred that the banks ought to establish awareness and train the staff individuals before the introduction of electronic services. David cracknel (2004) clarified that advertising online banking to the poor is probably going to include more budgetary training than other services and products. Additionally, the research illustrated that a fit between assignment that is saving money, innovation (UI and its dependability) and people that is clients and their insight about utilizing the service is the way to have successful e-banking system.

Perceived Ease of Use

Kent et al. (2011) completed research on clients' acknowledgment of web-based banking in Estonia. The research utilized three measurements from TAM approach including trust, handiness, and usability and included trust as another factor. A quantitative report was chosen to get information with respect to the utilization of, and attitude towards the online banking channel. Further, the study utilized primary data, a survey was sent to 9000 bank clients in Estonia. The discoveries recommended that Internet banking usage amplifies if clients see it as valuable. The apparent handiness is vocal on the grounds that it decides if the assumed simplicity of web-based banking use would prompt upgraded use of Internet banking. Thus it implies that a well-constructed and simple to utilize framework may not be utilized if it isn't seen as useful. The research presumes that apparent helpfulness of online banking is, for banks, a key development for advancing client use. They additionally recommended that models of technology acknowledgment ought to be re-detailed to concentrate more on the major task of the perceived helpfulness of the service implanted in the innovation. They exhorted banks to put much exertion not just into making an easy to use web bank, but clarifying to their clients how the web bank is valuable to them.

Empirical Review

Wu (2005) in his study Factors that affected the use of online banking by South Africans in the Ethekweni metropolitan area The investigation presents both the findings of the 400 interviews and the analysis of these outcomes, with diagrams and figures to decide the degree that the components considered impact client reception of web-based banking. Furthermore, the hypotheses of the exploration were tested with the chi-square test and autonomous sample t-test. The chi-square test was utilized to examine for connection between consumers statistic attributes and the adoption of online bank. Moreover, the independent sample t-test was utilized to evaluate contrasts among clients and non-clients regarding their views of e-banking. The major discoveries uncovered that statistic factors including age, salary, edification level and profession have an association with the use of web-based banking. Mental components including apparent relative benefits, compatibility, complexity, danger, and perceived cost were found to impact the implementation of online banking. Additionally, social impacts including conclusions of companions, guardians and associates were not observed to be huge elements to impact the reception of web transactions in the South Africa setting.

Nasri (2011) examined the determinants of tolerating Internet banking (IB) for the clients' of Tunisia. The

motivation behind this paper was to identify those elements that impact the use IB services in Tunisia. A sum of 253 respondents in Tunisia was used for the study: 95 were web bank clients, 158 were web bank non clients. Factor analysis and regression procedure were utilized to examine the relationship. The outcomes demonstrated that utilization of IB in Tunisia is impacted most emphatically by perceived handiness, danger, safety and earlier web knowhow. The outcomes likewise suggested that statistic factors affect altogether IB use. At long last, this paper prescribe for the banks to actualize new security arrangements, give encryption and solid verification, and give free PC courses on the utilization of IB to bank clients.

Syed and Nida (2011) conducted a research in Pakistan to discover factors influencing web-based banking among interior and outer clients. This examination explored the determinants by utilizing inside and outside clients, on a sample size of 210 for internal and 151 for outer respondents utilizing a questionnaire. Internal clients were workers of the banks being analyzed. Six hypotheses were defined in view of the six factors including Convenience, Perceived Usefulness, Information on Online banking, Government Support, Perceived Risk, Security and Privacy. At that point, numerous regression procedure was used for inside and outer information to look at the connections that exist between the components for receiving IB services. The outcome of the study demonstrated that apparent convenience, data of Internet Banking, Risk, security and protection were more powerful to the expectation of outside clients' adoption of IB services while Government Support gave more impact to the inside clients' adoption of e-banking services. For the factor convenience, the research concluded that, external customers never adopt any service if it is not convenient.

The analysts at last suggested that banks should take some thought to apply IB by conveying the data in a less demanding way, give more data on its convenience and benefits, and furthermore limit the misrepresentation by giving greater security and protection. This will enable the banks to expand their benefit by lessening costs, sparing time and holding more potential clients.

Maiyo (2013) completed a research on the impact of e-banking on the monetary performance commercial banks in Kenya. The fundamental goal of the investigation was to determine the impact of IB on the execution of business banks in Kenya. Furthermore, the specific aims were to decide the degree of IB adoption and the impact of this reception on monetary execution of business banks in Kenya. The investigation utilized the descriptive research outline. Essential information was gathered through information collection type that was created and sent to the respondents of business banks. The adoption of IB has improved performance of business banks because of expanded proficiency, viability and efficiency.

METHODOLOGY

This study utilized a descriptive survey outline. As per Kothari (2008), descriptive research configuration incorporates studies and actuality discovering enquiries of various types. The target population comprised of all the 42 commercial banks in Kenya. The unit of observation was the customers and bank officials who were directly linked to the Internet banking operations. The study utilized primary data which was gathered by use of structured questionnaires, because they were easy to control, analyze and cost-effective. The questionnaires consisted of both open-ended and close-ended questions. Statistical package for social science (SPSS) was used to draw inferences from the coded data. This included descriptive and inferential statistics. The regression model used was of the following form:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Where;

Y = Adoption of online banking

X_1 = Consumers Attitude

X_2 = Perceived Risk
X_3 = Internet Knowledge
X_4 = Perceived ease of use
θ_0 = the constant term
β_ii= 1….4 measure of the sensitivity of the dependent variable (Y) to unit change in the predictor variables X_1, X_2, X_3 and X_4.
ε = is the error term which captures the unexplained variations in the model.

RESULTS

Consumer Attitude

Table 1 showed that 72% of the respondents agreed that they like the idea of using online banking services since it was easy to use, while 72.1% agreed that they thought online banking was more convenient than visiting bank branch and 70.2% agreed that using online banking was an exciting idea. In addition, 70.2% of the respondents agreed that younger consumers valued the convenience or time saving potential of online banking more than older consumers and 77% agreed that they thought online banking would enable them to accomplish their banking tasks more quickly. Finally, 72.7% of the respondents agreed that they thought online banking would make it easier for them to do their banking. The mean score for this section was 3.86 which indicated that majority of the respondents agreed with the statements that measured the customer's attitude towards adoption of online banking to a great extent. The study findings were consistent with those of Zeleke and Yitabarek (2013).

Table 1: Customer Attitude

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std. Deviation
I like the idea of using online banking services since it is easy to use	5.6%	10.6%	11.8%	45.3%	26.7%	3.77	1.125
I think online banking is more convenient than visiting bank branch.	9.3%	5.6%	13.0%	32.3%	39.8%	3.88	1.259
Using online banking is an exciting idea.	8.1%	11.8%	9.9%	31.7%	38.5%	3.81	1.287
Younger consumers value the convenience or time saving potential of online banking more than older consumers	9.9%	12.4%	7.5%	29.8%	40.4%	3.78	1.354
I think online banking will enable me to accomplish my banking task more quickly.	6.2%	5.6%	11.2%	44.1%	32.9%	3.92	1.107
I think online banking will make it easier for me to do my banking.	3.7%	11.2%	12.4%	29.2%	43.5%	3.98	1.162
Average	7.1%	9.5%	11.0%	35.4%	37.0%	3.86	1.216

Perceived Risk

Results in Table 2 illustrated that 75.8% of the respondents agreed that they thought using online banking could expose them to fraud or monetary lose, 80.2% agreed that they were not confident with the security aspects of online banking and 71.4% agreed that they thought online banking was not as secure as conventional banking (going directly to the

branch). Furthermore, 67.7% of the respondents agreed that perceived risk could also cause customers to reject new technology-based service delivery, 76.4% agreed that perceived risk was related to reliability and system failure and 82.6% agreed that when processing online information, customers may often perceive that there was a high level of risk even though the risk level may be actually low. Finally, 80.1% of the respondents agreed that more experienced online customers had more information about online banking, and therefore they perceive the risk to be less and thus had more trust in online transactions. The mean score for this section was 3.90 which indicated that majority of the respondents agreed with the statements that measured the perceived risk towards adoption of online banking to a great extent. Results were in support of Syed and Nida (2011) who conducted a study in Pakistan.

Table 2: Perceived Risk Responses

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std. Deviation
I think using online banking may expose me to fraud or monetary lose	3.7%	11.8%	8.7%	51.6%	24.2%	3.81	1.052
I am not confident with the security aspects of online banking.	3.7%	6.2%	9.9%	49.1%	31.1%	3.98	1.000
I think online banking is not as secure as conventional banking (going directly to the branch).	7.5%	9.3%	11.8%	44.1%	27.3%	3.75	1.174
Perceived risk can also cause customers to reject new technology-based service delivery	4.3%	12.4%	15.5%	43.5%	24.2%	3.71	1.099
Perceived risk is related to reliability and system failure	3.1%	6.2%	14.3%	56.5%	19.9%	3.84	0.921
When processing online information, customers may often perceive that there is a high level of risk even though the risk level may be actually low	2.5%	8.7%	6.2%	38.5%	44.1%	4.13	1.032
More experienced online customers have more information about online banking, and therefore they perceive the risk to be less and thus have more trust in online transactions	3.7%	8.7%	7.5%	38.5%	41.6%	4.06	1.085
Average	4.1%	9.0%	10.6%	46.0%	30.3%	3.90	1.052

Internet Knowledge

Results revealed that 71.4% of the respondents agreed that more experienced online customers had more information about online banking, and therefore they perceived the risk to be less and thus had more trust in online transactions. In addition, 68.9% agreed that the education level of the consumer affected the intention to use online banking, 89.4% agreed that prior knowledge of internet use contributed to one using online banking and 78.8% agreed that young consumers were more comfortable in using online banking as compared to older consumers. Finally, 77% of the respondents agreed that awareness of the services that could be done using online banking encouraged many customers and banks to adopt online banking. The mean score for this section was 3.98 which indicated that majority of the respondents agreed with the statements about the influence of internet knowledge on adoption of online banking.

Table 3: Responses on Internet Knowledge

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std. Deviation
More experienced online customers have more information about online banking, and therefore they perceive the risk to be less and thus have more trust in online transactions	9.3%	8.7%	10.6%	38.5%	32.9%	3.77	1.256
The education level of the consumer affects the intention to use online banking	4.3%	13.7%	13.0%	42.2%	26.7%	3.73	1.128
Prior knowledge of internet use contributes to one using online banking	1.2%	6.8%	2.5%	44.1%	45.3%	4.25	0.896
Young consumers are more comfortable in using online banking as compared to older consumers	0.6%	8.1%	12.4%	45.3%	33.5%	4.03	0.918
Awareness of the services that could be done using online banking encourage many customers and banks to adopt online banking	1.2%	8.7%	13.0%	31.7%	45.3%	4.11	1.019
Average	3.3%	9.2%	10.3%	40.4%	36.7%	3.98	1.043

Perceived Ease of Use

Results in Table 4 demonstrated that 77% of the respondents concurred that trust in IB and its framework lessened clients exchange particular vulnerability and related dangers related with the likelihood that a bank may carry on sharply, another 77% concurred that clients introduction towards online business innovation and the degree to which they trust the electronic framework was an intermediary for their trust in web managing an account and 79.5% concurred that client demeanors towards Internet saving money are driven by trust, which assumed a critical job in expanding ease of use inside the IB condition. Seventy six point four percent of the respondents concurred that issue of trust was more imperative in online instead of disconnected

managing an account since exchanges of this nature contain touchy data and gatherings associated with the monetary exchange were worried about access to basic documents and data exchanged through web. At long last, 80% of the respondents concurred that there was a critical connection among trust and IB or any internet business adoption. The mean score for this segment was 4.05 which demonstrated that greater part of the respondents concurred with the announcements about the impact of perceived convenience on the adoption of IB.

Table 4: Responses on Perceived Ease of Use

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Std. Deviation
Trust in electronic banking and its infrastructure reduces customers transaction-specific uncertainty and related risks associated with the possibility that a bank might behave opportunistically	0.6%	9.3%	13.0%	33.5%	43.5%	4.1	0.995
customers orientation towards e-commerce technology and the extent to which they trust the electronic system is a proxy for their trust in internet banking	1.2%	9.3%	12.4%	36.6%	40.4%	4.06	1.008
Customer attitudes towards Internet banking are driven by trust, which plays an important role in increasing usability within the internet banking environment	5.0%	6.8%	8.7%	37.9%	41.6%	4.04	1.109
Issue of trust is more important in online as opposed to offline banking because transactions of this nature contain sensitive information and parties involved in the financial transaction are concerned about access to critical files and information trans	4.3%	11.2%	8.1%	33.5%	42.9%	3.99	1.165
There is a significant relationship between trust and electronic banking or any	1.2%	13.8%	5.0%	40.0%	40.0%	4.04	1.057

e-commerce adoption							
Average	2.5%	10.1%	9.4%	36.3%	41.7%	4.05	1.067

Adoption of Online Banking

The respondents were asked to indicate whether they used online banking. Majority (66%) of the respondents indicated that they used online banking while 34% indicated they didn't use online banking.

The respondents were asked to indicate how often they used online/ internet banking. Table 5 revealed that 42.2% indicated they used online banking oftenly, while 34.8% indicated they used online banking rarely and only 23% indicated they used online banking always.

Table 5: Extent of Using Online Banking

	Frequency	Percent
Rarely	56	34.8
Often	68	42.2
Always	37	23
Total	161	100

The investigation tried to discover the degree to which the clients' embraced web based banking. Table 6 showed that 83.3% consented, all things considered, that there was decrease of time to get to banking services, 80.2% consented, as it were, that IB was an advantageous method for giving client benefit and 82.6% consented, as it were, that IB spared client time since they never again expected to physically visit a bank. Seventy three point nine percent of the respondents consented, as it were, that internet banking spared clients from loads of printed material and 79.5% consented, as it were, that web based transaction services were very proficient and enhanced nature of services conveyance. The mean score for this segment was 3.98 which showed that greater part of the respondents consented, all things considered, with the explanations that deliberate adoption of IB.

Table 6: Adoption of Online Banking

Statement	Not at All	Low Extent	Moderately Extent	Great Extent	Very Great Extent	Mean	Std. Deviation
There is reduction of time to access banking services	2.5%	7.5%	6.8%	39.8%	43.5%	4.14	1.005
Online banking is a convenient way of providing customer service	3.7%	12.4%	3.7%	54.7%	25.5%	3.86	1.054
Online banking saves customer time since they no longer need to physically visit the banking hall	3.7%	6.2%	7.5%	45.3%	37.3%	4.06	1.017
Online banking saves customers from lots of paper work	6.2%	9.9%	9.9%	44.7%	29.2%	3.81	1.148
Online banking services are highly efficient and will improve quality of services delivery	6.2%	9.3%	5.0%	32.9%	46.6%	4.04	1.206

Average	4.5%	9.1%	6.6%	43.5%	36.4%	3.98	1.086

Inferential Statistics

Bivariate Correlation outcomes demonstrated that there exists a positive and huge (r=0.718, p=0.000) relationship between a client state of mind and embracement of IB. The connection between the factors demonstrated that enhanced client mentality towards online banking would be related with expanded adoption of IB as shown by a positive relationship between the two factors. The outcomes additionally demonstrated that there exist a positive and critical (r=0.768, p=0.000) relationship between apparent risk and embracement of online banking. Internet knowledge of online banking was also found to have a positive significant relationship with adoption of online banking(r=0.825, p=0.000). The correlation between the variables indicated that if internet knowledge of online banking was improved and enhanced then this would be associated with improved adoption of online banking as indicated by a positive correlation between the two variables. This implied that if the customer's internet knowledge was improved and internet access made affordable by lowering the cost then there would be increased number of customers adopting online banking. Finally results indicated that there exists a positive and significant (r=0.785, p=0.000) correlation between adoption of online banking and perceived ease of use of online banking. The correlation between the variables indicates that if online banking is made easy to use then this would be associated with improved adoption of online banking as indicated by a positive correlation between the two variables. This implied that when a new technology is made easy to use by the customers and is associated with more benefits then this will lead to high adoption levels of that new technology in this case online banking.

Table 7: Bivariate Correlation

Variable		Adoption of Online Banking	Customer Attitude	Perceived Risk	Internet Knowledge	Perceived Ease of Use
Adoption of Online Banking	Pearson Correlation	1				
	Sig.(2-tailed)					
Customer Attitude	Pearson Correlation	0.718**	1			
	Sig.(2-tailed)	0.000				
Perceived Risk	Pearson Correlation	0.768**	0.655**	1		
	Sig (2-tailed)	0.000	0.000			
Internet Knowledge	Pearson Correlation	0.825**	0.668**	0.764**	1	
	Sig.(2-tailed)	0.000	0.000	0.000		
Perceived Ease of Use	Pearson Correlation	0.785**	0.548**	0.738**	0.771**	1
	Sig.(2-tailed)	0.000	0.000	0.000	0.000	

****Correlation is significant at the 0.001 level (2-tailed)**

On regression analysis, the R square of 0.785 indicated that 78.5% of the variations in adoption of online banking were jointly accounted for by the variations in customer attitude, perceived risk, internet knowledge and perceived ease of use of online banking. From the model summary table, adjusted R^2 was 0.78 this indicated that the combined effect of predictor variables explained 78% of

variations in adoption of online banking. The correlation coefficient of 88.6% indicated that the combined effect of the predictor variables has a strong and positive correlation with adoption of online banking.

Table 8: Regression Model Fitness

Indicator	Coefficient
R	0.886
R Square	0.785
Adjusted R Square	0.78
Std. Error of the Estimate	0.35591

The F measurement was bigger than the basic F estimation of 3.88 (F = 142.477, p-value<0.05). The discoveries suggested that all the autonomous factors were factually critical in clarifying changes in reception of web based saving money. This was shown by a p estimation of 0.000 which was less than the acknowledgment basic estimation of 0.05.

Table 9: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	72.192	4	18.048	142.477	0.000
Residual	19.761	156	0.127		
Total	91.953	160			

On regression coefficients of the independent variables, the results revealed that customer attitude towards online banking was statistically significant in explaining adoption of online banking (beta=0.227 p value 0.000). The findings imply that improved customer attitude towards online banking by one unit leads to improved adoption of online banking at a rate of 22.7%. Regression results also indicated that perceived risk and adoption of online banking had a positive and significant relationship (beta=0.16 p0.035). This implied that a one percentage change in perceived risk of online banking was associated with 16 percentage increase in adoption of online banking. Results further indicated that the relationship between internet knowledge and adoption of online banking was positive and significant (beta=0.309, p value 0.000). This implied that a one percentage change in internet knowledge effectiveness was associated with 30.9 percentage increase in adoption of online banking. Finally, the results indicated that perceived ease of use had a positive and significant relationship with adoption of online banking (beta=0.289, p value 0.000). The findings implied that one percentage change in perceived ease of use of online banking was associated with 28.9 percentage increase in adoption of online banking.

Table 10: Regression Coefficients

Variable	Beta	Std. Error	t	Sig.
Constant	0.088	0.174	0.503	0.615
Customer Attitude	0.227	0.048	4.745	0.000
Perceived Risk	0.16	0.075	2.13	0.035
Internet Knowledge	0.309	0.066	4.683	0.000
Perceived Ease of Use	0.289	0.061	4.752	0.000

CONCLUSIONS

From the investigation, it tends to be inferred that IB and use in Kenya was low in spite of the advancement in internet technology. Besides, the outcomes demonstrated that the more youthful populace received and utilized IB increasingly than the more established age. Likewise, the more youthful age has a higher presentation to web use.

The study concluded that customer attitude had a positive and significant correlation with adoption of online banking. The findings imply that the customer's intention to adopt online banking is associated with rewards and benefits the customer will gain such as reduction of transaction time, convenience and safety from hackers and fraudsters.

The study further concluded that perceived risk was statistically significant in explaining adoption of online banking in commercial banks. The perceived risk linked with i-banking deeply affected adoption of internet banking and usability by customers. Improved occurrences for cybercrimes that target persons operating bank accounts have largely impacted on adoption of online banking. The fraud risks and uncertainties have also been recognized to control adoption of internet banking. This has therefore made commercial banks to invest into security systems to guarantee security of electronic banking systems. In addition, monetary firms should thrive in ensuring that internet banking platforms are secure thus reducing the perceptions of risks linked to internet banking.

The study concluded that prior internet knowledge influenced adoption of online banking to a great extent. Since young consumers had access to internet and information about online banking they had more trust on online banking and thus high adoption among the young customers. Many customers did not have experience with the Internet banking which made them to be drawn to physical bank. Despite the many benefits of internet banking usage, physical banking is still being used at a higher percentage compared to internet banking, having high trust in the physical bank could lead the consumer not to trust in adopting Internet banking.

The study concluded that perceived ease of use was statistically significant in explaining adoption of online banking in commercial banks. Many consumers had common perceptions that the internet enabled easy access to information. Convenience and easy access at any given time are the most vital benefits connected to internet banking. A number of consumers recommended that various services can be accessed at the same time using internet banking. Internet banking is the ideal choice for customers as it offers greater convenience and time saving benefits.

RECOMMENDATIONS

Client's state of mind and recognitions by potential adopters are decidedly identified with the adoption of IB. Along these lines, banks giving online services ought to effectively address these observations. To support certainty and improve the adequacy of utilizing web transaction, exhibitions through video could be made at bank offices to grandstand the ease of use of such services. Keeping in mind the end goal to beat customers' negative observations about IB security, banks ought to advance the positives of the service, for example, appropriate and cost-adequacy, and should start an advertising effort that makes IB a new popular expression. These activities will enable clients to acquaint themselves with the bank and its web services. New innovation, similar to everything that is new, requires commencement. This is a vital foundation in helping Customers select a bank that offers web services.

Perceived risk associated with internet banking is mainly fraud through cybercrimes. Financial institutions and governments should ensure that policies and regulations are adhered to ensure security of the internet banking. Security systems to be implemented that ensures the internet banking platform is risk averse from fraud and reducing uncertainty enhancing increased adoption of internet banking. There is need to educate the consumers on

the safety measure within the internet banking platform to enhance adoption of and usage of internet banking.

Technological readiness of the consumer plays a critical role towards adoption of internet banking. How knowledgeable the consumer is about the technology behind internet banking determines his/her willingness to use the platform. The consumer's ability to utilize the internet banking platform will determine the extent of adoption of internet banking. The consumers are to be engaged and encouraged to try out internet banking to enhance their experience and readiness to facilitate adoption of internet banking. Consumers need to be engaged on the benefits of internet banking and embrace technological advancement to enhance service delivery.

Perceived ease to utilize of IB is another key factor that impacts the adoption online banking. Simple to utilize IB is essential for all clients. Banks should plan to make their IB as straightforward and simple to use as conceivable with the goal that clients don't see it as being convoluted or hard to utilize. It gives bits of knowledge to engineers to plan a web framework interface, sites, procedures, and programs and for banks to figure techniques in offering services. Sites ought to be easy to understand with clear directions for clients. The utilization of representations is prompted and will be grasped by all levels of clients. Banks ought to introduce security highlights, for example, encryption gadgets, which shield touchy data.

Areas for Further Study

The investigation prescribed that a comparative study should be done in other distinctive urban areas in Kenya and maybe utilizing diverse kinds of clients such as corporate clients. A near report could likewise be completed between personal clients and corporate clients regarding determinants impacting their reception or use conduct. Furthermore, future investigations ought to likewise factor in other statistic qualities like education levels and salary levels of both client and non-clients.

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