

Critical Common Success and Hindering Factors on the Use of E-Banking in Developing Countries: A Case of Bank Websites Evaluation in Tanzania

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Abstract: *This paper analyses the common success and hindering factors for key players on the use of E-Banking in developing Countries such as Tanzania. In surveying peer-reviewed literature, analyzing websites of three local and three foreign banks in Tanzania, factors for success and hindering the use of E-banking has been identified. From the literature review we have found out that security issues, digital divide, web usability and organizational influence were the critical common factors bases by users to use E-banking services. On the other hand, the findings from surveyed bank websites show that most of local and foreign bank put much efforts in general information, Check account balance, Transfer funds between accounts, Check bank statements and Search functions and disregard important issues such as legal statements and ease of use, community/social contribution and competition/rewards. The obtained findings provide useful insight for bank managers in developing appropriate marketing strategies to meet customer satisfaction and will assist both practitioners and academicians in doing future empirical research to understand better common factors for both users and banks as all of them are key players in the success of e-banking services.*

Keyword: E-Banking, Security, Digital divide, web usability, Developing Countries

1. Introduction

With the rapid advancement in information technology (IT) and increased speed of internet the majority of banks in developing countries spend a lot amount money on IT investment aimed at aligning their business strategies. Banks become dependent on IT in conducting their businesses for various reasons and moving from traditional distribution channel banking to electronic distribution channel banking (Banan, 2010; Al-Hajri, 2008) without diminishing the existing service level (Akinci et al, 2004) . Reasons for integrating Information Technology into the banking industry include: reducing operation costs and gaining competitive advantage over competitors (Hashim & Chaker, 2009). Furthermore it increases market penetration, survival in business (Laudon & Laudon, 2009), generation of additional revenue, improvement in customer service among others.

In summary, as pertains customers, there is increase in service availability, convenience, quality, flexibility, ease of transactions, customer trust, customer commitment, customer satisfaction, reduction in customer visits to the banks and hence an opportunity for a customer to get bank services anytime and anywhere in the world.

The number of individuals accessing the internet over mobile devices has doubled over the past five years to 3.6 billion, and will rise to 4.7 billion, equivalent to 60% of the global population, by 2020 (GSMA,2017). The introduction of electronic banking (EB), various banks have made a great effort to offer customers better services through ATM machines, debit cards, point of sale devices, telephone banking through SMS, mobile phone banking, and internet banking. In recent years, in developing countries like Tanzania, both local and foreign banks such as CRDB, NMB, NBC, STANBIC, BARCLAYS etc have introduced various electronic banking services for their customers among which include bill payments for UMEME (LUKU) and water, buying airtime for mobile phones, payment of school fees, checking of account balances, PIN number

exchange, transfer of money via mobile phones, request for mini statements, cash withdraw and deposit either through ATMs or mobile phone, managing and monitoring accounts online while performing some payments to third parties.

Despite the benefits of EB to bank customers and banks, there has been little and not comprehensive research done on the factors affecting its use in developing countries (Hosein, 2010; Dewan, 2010). Understanding and assessing the relationships between common factors that enhance the use and adoption of EB services will help bank managers to come up with a right solution to improve their EB service as well as to increase the rate of EB usage to customers and hence allow banks in achieving their goals on the EB implementation. It further explores various areas of future research for practitioners and academicians and will add literature to the already existing body of knowledge on electronic banking customer usage in the context of developing countries such as Tanzania. This paper attempt to analyses ATM and web service technology of banks in Tanzanian context using a model introduced by Chung and Payter (2002). This will enable better understand critical common success and hindering factors for key players on adoption and use of e-banking in developing countries.

2. Literature Review

2.1 Importance of Electronic Banking

Moving from the traditional way of cash deposits and withdraws over the counter; there was introduction of networked computers that replaced the manual update of bank transactions. Thereafter Automated Teller Machines (ATM) were introduced to facilitate the deposit, withdraw and to purchase or pay some mobile services. Nowadays, mobile phone and internet banking are the major concern since they allow customers to use banking services virtually (Chang, 2004).

E-banking has enabled both banks and their customers; both individual and corporate to significantly lower costs of

transaction and delivery costs. As such, it is now easier to compare the services of various banks (Nitsure, 2004; Ahmad, 2006). However, using e-banking, customers have greater control over their bank accounts (Riyadh et al, 2009). With e-bank services customers can get services anytime and anywhere given the fact that there is availability of computers connected to the internet, mobile phone communication and ATM machines.

3. Empirical Experiences

Ease of Use and Usefulness: Hashim and Chaker (2008) found that customers may adapt the internet banking technology only if they perceive the technology to be useful. According to Al-Hajri (2008) observed four perception issues among others were relative advantage and ease of use. Furthermore, Eriksson et al (2004) observed that users may use internet banking if and only if they perceive it as useful. So perception of usefulness and ease of use is the key factor that promotes customer use of EB.

Security and Trust: Hashim and Chaker (2008) discovered that despite its benefits and the internet access among most of the customers, many customers do not use online banking for various reasons; among which include: safety, security and lack of knowledge about the services. According to the study conducted by Reid (2008) on integrating Trust and Computer Self-Efficacy with Technology Acceptance Model, based on structural equations modelling, result showed that apart from perceived usefulness and perceived ease-of-use, trust was significantly different between male and female bank customers. It is therefore security and trusts that are the most important factors for the users to use EB. Trust is another variable which influences customer's use of internet banking and it includes privacy, security, reliability and assurance (Prompattanapakdee, 2009)

Lack of Knowledge and Skills: Hosein (2008) in his research discover that those customers who have some level of internet usage and some degree of internet experience have greater chances to adopt internet banking. Hashim and Chaker (2008) discovered that lack of knowledge about the services influence the customers to use or not to use the electronic banking services. Barati and Mohammadi (2009) in analysing factors affecting acceptance of mobile banking, explored that facilitating factors like the time of usage, familiarity of the mobile device and users' technology skills were among the determinants of adherence to mobile banking.

Service Quality: Haque et al (2009) found that service quality is the most important variable in expansion and strengthening the operations of E-Banking. Chandio (2008) discovered that system quality was the major factors that contributed to acceptance of e-banking. According to Li (2009) who investigated factors affecting user satisfaction from internet banking, he observed that security and risk perceptions were the major concerns in influencing behaviour and customer satisfaction. In further establishing the relationship, he found that individual differences, websites design and service quality directly affect has indirectly affect user behaviour and satisfaction.

Demographic Characteristics: According to the review by Prompattanapakdee (2009), found that more attention should be given to younger people who may not have graduate level educational qualifications and high incomes especially females. Sulaiman et al (2005) found that adopters will use e-banking services if they perceive it to be an easy and convenient way to conduct banking transactions. They also found that age, income and positions held influence a lot in e-banking adoption. Furthermore, many customers use the e-banking services for basic banking facilities such as balance inquiries, savings and current account facilities as well as to view summaries of report transactions; while few of them use it for personal investment, loan and housing mortgage related services.

4. Methodology

This study is a review of previous literature on the use of e-banking services and bank website evaluation. The setting for the study is Tanzania, a developing country in East Africa. It mainly focuses on how customers intend to use e-banking services taking consideration on the critical common success and hindering factors. Various articles were reviewed from various Journals. The articles reviewed were extracted from online and different business and information systems' databases such as ABI Inform and Emerald by searching through various search engines. Terms such as adoption and use, E-Banking security, Digital divide/gap, developing Countries, and the search date to be between (2006 and 2016) were used in order to get current prevailing critical factors (Al fawz et al, 2008). For better understanding, critical factors for user acceptance or rejection to adopt and use e-banking services were analysed critically based on combined variables which seemed to be related.

However, to better understand e-banking services using bank web service technology usability, functionality, sociability and efficiency, a general survey in which we employed the model used by Chung and Payter (2002) for which various local (such as CRDB PLC, NMB and NBC) and foreign banks (such as STANBIC, STARNDARD CHARTERED and EXIM) websites were surveyed and evaluated using table 1 below to get critical insight into services which are offered by these banks. This survey took place between the end of May 2017 and January 2018.

Table 1: Component for website evaluation (Adapted from Chung and Payter 2002)

Components	Elements
Information	Company information
	Customer information
	Product information
Legal Statement	Legal Disclaimer/Terms and Conditions
	Privacy policy
	Security policy
Order	Check account balance
	Transfer funds between accounts
	Check bank statements
	Download account information
	Make payment
	Order cheque or deposit book
	Change password

Components	Elements
Ease of use	Cheque reconciliation
	After sale services (e.g. email enquires)
	Frequently asked questions (FAQs)
	Search functions
	Help functions
	Tutorial/Demonstration
Aesthetic effects	Navigation Menu/buttons
	Graphics
Performance	Animations
	Update frequency(daily)
	Response time (within 5 seconds)
	Download time (within 10 second)
	Technical problem
Others	Innovation features
	Competitions / rewards
	Community contribution

Critical Success and hindering Factors	References
	Mohammadi (2009), Sulaiman et al (2005)
organizational performance , regulatory frame work, ease of use, websites design	Al-Hajri (2008), Haque et al (2009), Reid (2008), Barati and Mohammadi (2009), Li (2009), Hernandez and Mazzon (2007)
customer relationship	Al-Hajri (2008)
cultural behaviour , perceived behavioural control	Nor (2008), Barati and Mohammadi (2009), Hernandez and Mazzon (2007)
Subjective norms	Hernandez and Mazzon (2007)

5. Findings and Analysis from Literature Review and Survey

5.1 Findings and analysis from literature review

Based on the reviewed literature, it has been found that security, digital gap, web usability and organization influence are strong factors in understanding customers' decision to accept or reject the use of e-banking services. These factors strongly support perceived usefulness and hence intension to use e-banking services. However, web usability and digital gap strongly support ease of use of e-banking services. Table 2 below summarises the main factors from the literature review that were found to be vital and related to successful user adoption and/or rejection of e-banking services:-

Table 2: survey on this research on critical Success Factor: Summarised Critical Success and hindering Factors

Critical Success and hindering Factors	References
Digital gap (Lack of knowledge, internet experience, awareness, Ddemographic)	Hashim and Chaker (2008), Hosein (2008), Chandio (2008), Barati and Mohammadi (2009), Prompattanapakdee (2009), Akinci at el (2004), Reid (2008), Sulaiman et al (2005)
security (safety, service quality, Trust and risk perceptions), reliability and assurance	Hashim and Chaker (2008), Haque et al (2009), Reid (2008), Chandio (2008), Barati and Mohammadi (2009), Li (2009), Prompattanapakdee (2009)
Relative advantage, Self-Efficacy	Hashim and Chaker (2008), Al-Hajri (2008), Eriksson et al (2004), Barati and

5.2 Finding and analysis from bank websites and ATMs

The evaluations of this research reveal that there isn't such a big difference in web design, usability and functionality between local and foreign banks as shown in Table 3 below.

Table 3 below shows the total score of each bank vertically and the total score of each component element horizontally. However this research found that all banks lack elements such as Cheque reconciliation, Help functions, Tutorial/Demonstration, Technical problem and Competitions / rewards on which they got a zero (0) score (i.e. 0%) . CRDB and STANDARD CHARTERED bank websites appear to have high percentage (i.e. 69%) while NBC bank was of low percentage (i.e. 34%) in terms of web design, usability and functionalities. This implies that users of CRDB and STANDARD CHARTERED bank websites can find what they want quicker and do what they want easier as well and hence improving user confidence on using the bank website.

However all surveyed banks put more emphasis on Company information, Customer information and Product information. In terms of Check account balance, Transfer of funds between accounts, Checking of bank statements and changing of passwords all banks scored 100%. Furthermore, because they are very essential components in web usability banks, should pay attention to improving Community contribution, Updating frequency(daily), Navigation Menu/buttons, Frequently asked questions (FAQs), after sale services (e.g. email enquires) and order of cheques or deposit books. However, Security policy, privacy policy and legal disclaimer/Terms and conditions need to be included in some bank websites so as to give users assurance about the services which they can get from specific banks.

Components	Elements	CRDB	NBC	NMB	STANBIC	EXIM	Standard Chartered	Total Score per Element	% score per Element
Information	Company information	1	1	1	1	1	1	6	100%
	Customer information	1	1	1	1	1	1	6	100%
	Product information	1	1	1	1	1	1	6	100%
			100%	100%	100%	100%	100%	100%	
Legal Statement	Legal Disclaimer/Terms and Conditions	0	0	1	1	0	1	3	50%
	Privacy policy	1	0	0	1	0	1	3	50%
	Security policy	1	0	0	1	0	1	3	50%
			2	0	1	3	0	3	
			67%	0%	33%	100%	0%	100%	

Components	Elements	CRDB	NBC	NMB	STANBIC	EXIM	Standard Chartered	Total Score per Element	% score per Element
Order	Check account balance	1	1	1	1	1	1	6	100%
	Transfer funds between accounts	1	1	1	1	1	1	6	100%
	Check bank statements	1	1	1	1	1	1	6	100%
	Download account information	1	0	0	0	1	1	3	50%
	Make payment	1	0	1	1	1	1	5	83%
	Order cheque or deposit book	0	0	0	0	0	1	1	17%
	Change password	1	1	1	1	1	1	6	100%
	Cheque reconciliation	0	0	0	0	0	0	0	0%
	After sale services (e.g. email enquires)	1	0	0	0	0	1	2	33%
		7	4	5	5	6	8		
		78%	44%	56%	56%	67%	89%		
Ease of use	Frequently asked questions (FAQs)	1	0	0	1	0	0	2	33%
	Search functions	1	0	1	1	1	1	5	83%
	Help functions	0	0	0	0	0	0	0	0%
	Tutorial/Demonstration	0	0	0	0	0	0	0	0%
	Navigation Menu/buttons	1	0	0	0	0	0	1	17%
			3	0	1	2	1	1	
		60%	0%	20%	40%	20%	20%		
Aesthetic effects	Graphics	1	0	1	1	1	1	5	83%
	Animations	1	0	1	0	0	1	3	50%
		2	0	2	1	1	2		
		100%	0%	100%	50%	50%	100%		
Performance	Update frequency(daily)	0	1	0	0	0	0	1	17%
	Response time (within 5 seconds)	1	1	0	1	1	1	5	83%
	Download time (within 10 second)	1	0	1	1	1	1	5	83%
	Technical problem	0	0	0	0	0	0	0	0%
		2	2	1	2	2	2		
		50%	50%	25%	50%	50%	50%		
Others	Innovation features	1	0	1	0	0	1	3	50%
	Competitions / rewards	0	0	0	0	0	0	0	0%
	Community contribution	0	1	1	0	1	0	3	50%
		1	1	2	0	1	1		
		33%	33%	67%	0%	33%	33%		
Total number of presence		20	10	15	16	14	20		
Score for each bank in percentage		69%	34%	52%	55%	48%	69%		

6. Discussion of findings

From the above findings including both literature review and evaluation of bank websites, this study has revealed that security, digital gap and web usability and Organisational factors are the strong external variables in determining user's acceptance of e-banking services as discussed below:-

6.1 Security

Based on literature review, security of the EB services was the major determinant in influencing people to use EB services. People will intend to use EB services if it gives them privacy, reliability, assurance and trust. Majority of users either have ATMs, Mobile phones or are aware of internet banking but due to lack of assurance, privacy, reliability, and trust they opt to use the traditional way of performing transactions (Hashim and Chaker, 2008; Haque et al., 2009; Reid, 2008; Chandio, 2008; Barati and Mohammadi, 2009; Li, 2009; Prompattanapakdee, 2009).

6.2 Digital divide

This review discovered that the issue of digital divide among users is the second external variable for user intention to use and continued use of e-banking services. Among the factors which contribute to digital divide are educational level, gender, age, ethnicity, geographical location and economic situation. Those with low income, living in rural area, low education level especially females are most likely to lag behind in the use of e-banking services. However this review revealed that unawareness about e-banking services contributes to non- use of these services (Hashim and Chaker, 2008; Hosein, 2008; Chandio, 2008; Barati and Mohammadi, 2009; Prompattanapakdee, 2009; Akinci et al., 2004; Reid, 2008; Sulaiman et al., 2005).

6.3 Web usability and Organisational factors

Banks have a lot of influence on user to use e-banking service. Awareness needs to be spread to the customers in order to change their attitudes and beliefs that traditional ways of banking are more secure than e-banking services. However, bank websites need to be more user friendly for everybody to understand, know how to use and hence access these services (Al-Hajri, 2008; Haque et al., 2009; Reid,

2008; Barati and Mohammadi, 2009; Li, 2009; Hernandez and Mazzon, 2007). The evaluation and analysis based on the bank websites reveal that both banks (local and foreign) make more effort on uploading general bank information and order to attract customers to use their services from websites.

7. Conclusions and Lessons Learned for Future Research

From the above discussions and the main objective of this study, these findings provide useful insight for bank executive managers to develop appropriate marketing strategies aimed at meeting customer satisfaction. To enhance the use of e-banking services, banks need to improve security issues for user to use and get satisfaction towards e-banking services (Hashim and Chaker, 2008; Haque et al, 2009; Reid, 2008; Chandio, 2008; Barati and Mohammadi, 2009; Li, 2009; Prompattanapakdee, 2009). In addition, both banks (Local and foreign) needs to improve their website to some of the key information such as legal statement, frequently asked questions (FAQs), after sale services (e.g. email enquires). However, issue like navigation menu/buttons, update frequency (daily) information, innovation features, community contributions and download of account information which seems to be of more important to the users but receive little attention in design bank websites.

Since this study was based on the use of e-banking services, it is true that, the researcher did not investigate other types of e-banking services like mobile phone banking, point of sale devices, telephone banking etc. It is recommended that, in future research, these services should be taken into consideration for future benefit and useful insight for bank executive managers, academician and practitioners. However, much empirical research should be done among various banks (i.e. Local and Foreign) and among different user groups based on gender, education level, income and location to reveal actual usage of e-banking services in developing countries such as Tanzania. In a similar fashion, issues such as voluntarily, mandatory use, online transaction accountability and user support for customers should be taken into consideration for future research. Moreover, it could be of more importance if future research to be done to see whether there is a causal relationship between digital gap and security issues in relation to users' of e-banking services in Tanzania. Also, more emphasis could be put in internet banking and mobile phone banking because these services seem to be new in developing countries such as Tanzania.

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