

Original Research Article

The Impact of Electronic Banking on Customer Satisfaction in Ghana

ABSTRACT

The phase of the entire banking industry is rapidly changing in the 21st century. A focus-shift from traditional banking to new service delivery channels is paramount among many banks to provide customers with 24/7 access to banking services for improved customer service delivery. Herein, we investigate into the impact of electronic banking (e-banking) service delivery on customer satisfaction in Ghana. For this study, a positive correlation between customer satisfaction and e-banking availability, reliability and convenience is established. It is therefore recommended that banks provide customers with uninterrupted, reliable and convenient e-banking services in order to satisfy and retain customers.

Keywords: Electronic business, Electronic banking, Customer satisfaction, Ghana

1. INTRODUCTION

The introduction of electronic business (e-business), one of the Information technology (IT) applications has changed the traditional way of conducting business transactions in many organizations and as such a growing number organizations launch new Internet-based business lines to improve their businesses [1]–[3]. Organizations in the banking industry have also launched an IT application known as electronic banking (e-banking) in order to meet the growing demands of their customers and to also meet the growing trend of technological advancement in recent years [4]–[7]. E-banking is now a key element for improving efficiency and productivity in both private and government banks in order to strengthen the national economy [8]–[11]. This presupposes that the benefit of E-banking does not only lie in enhancing the ability of banks to meet the demands of their customer but to also strengthen the national economy. An assessment of E-Banking and its related variables such as service delivery and customer satisfaction is therefore very crucial.

Banks have to provide an excellent service to customers with varied backgrounds and greater expectations who will also not accept any mean service. Therefore, service marketing in general, and particularly banking service has become one of the most significant and modern areas which has seen a substantial growth during the last years globally especially in the area of E-banking [12]–[15]. The considerable growth in banking service may accrue to the widening and variety that banking services are associated with.

Majority of banks in the developed world and some in the developing world are now offering E-banking services with various degrees of complexities [16]–[19]. This gives the indication that E-banking is gradually taking the place of traditional banking services even in developing countries like Jordan, India, Malaysia, Nigeria and Ghana. In developing countries, for example, some banks have adopted E-banking as a way of communicating to customers with regards to issues concerning bank statements whiles other banks use internet banking services to allow customers to access their bank accounts and perform other banking transactions [20]. In Ghana, the phase of the entire banking industry is rapidly changing and the focus is now on new delivery channels in order to improve customer service delivery and to provide customers with 24 hours a day access to banking services [17], [21]. E-Banking gives customers the opportunity to customers to access banking

services from the comfort of their homes and offices and also be able to do most of the transactions which would have been done in the banking halls. With the use of personal computer (PC) or even mobile phone with an internet connection, customers are able to carry out transactions such as cash withdrawals, payments of utility bills, Transfers from one account to the other viewing and printing of statements, request for cheque books on their traditional accounts [22]. For example, banks such as United Bank for Africa, Merchant Bank Ghana, Ecobank Ghana, Barclays Bank Ghana, among others, provide their customers with a broad range of electronic services and some of these services allow customers to receive their monthly bank statements via e-mail, online checking of accounts balance, the use of electronic cash systems, online transfer of funds among others.

Despite the adaptation to E-banking by many banks in Ghana in their quest to meet the banking needs of their customers, the issue of service delivery and customer satisfaction with E-Banking service has not received much attention in literature [4], [23]–[28]. Most of the studies conducted on service delivery and customer satisfaction have looked at traditional services even when banking services were concerned. There is therefore the need to assess E-Banking and its impact on service delivery and customer satisfaction in the Ghanaian banking industry so as to have empirical evidence on it and to also provide feedback to the banking institutions on customers' satisfaction with their e-banking services.

This paper therefore seeks to investigate into e-banking service delivery in the Ghanaian banking industry and to also ascertain the impact of the phenomenon on customer satisfaction in the country.

2. RESEARCH OBJECTIVES

The main objective of conducting this research is to determine the impact of e-banking services delivery on the satisfaction customers in the Ghanaian banking industry. The two specific objectives to be considered are as follows:

- To assess the e-banking service availability, convenience and reliability in the Ghanaian banking industry.
- To analyse the impact of e-banking service delivery on the satisfaction of customers in the Ghanaian banking industry.

3. LITERATURE REVIEW

3.1 Concept of E-Banking

E-banking encompasses the provision of banking services and products by banks to their customers through electronic medium. This definition also extends to the use of information and communication technology (ICT) by banks to provide services and manage customer relationship more quickly and most satisfactorily. E-banking covers both computer and telephone banking [29], [30]. For many banks, inclination to e-banking services improves customer services while closely welding customers to the bank. The adoption of e-banking is also seen as a new method of expanding customer base and to also counteract the aggressive effort made by traditional banking institutions [31]. E-banking allows customers to inquire information and carry out most banking services such as account balance inquiry, bill-payment and inter-account transfers through the Internet. E-banking, therefore, includes systems that enable financial institutions, customers, individuals and businesses to access accounts, transact business, and obtain information on financial products and services through public or private networks. Customers access e-banking services using electronic device, such as a personal computer (PC), personal digital assistant (PDA), automated teller machine (ATM) and tele-communication routes. 'Closed' private networks restrict access to participant (financial institutions, customers, merchants, and third party service providers)

90 bound by agreement on the terms of membership. On the other hand, 'open' public networks
91 have no such membership requirements [22], [32].

92 In Ghana, e-banking has emerged as a new medium of delivering banking product/services
93 to customers. This innovation in the Ghanaian banking industry is intended to provide
94 customers with more valuable services including convenience and easy access to their
95 money and other banking information they may need. Many institutions in the Ghanaian
96 banking industry have inclined to e-banking in the broader sense which includes the use of
97 smart cards for banking, ATMs and Tele-banking. However, few banks have actually
98 adopted the use of the internet channel in their electronic banking systems. This
99 presupposes that only a few have actually gone beyond the use smart cards, ATMs and tele-
100 banking in their electronic banking services. Some of the banks that provide e-banking
101 services in Ghana are: Cal Bank, Sahel -Sahara Bank Limited, Stanbic Bank Ghana Limited,
102 Ghana Commercial Bank, Merchant Bank, Barclays Bank Ghana, Bank of Baroda, Ecobank
103 Ghana Limited, Societe Generale Ghana Limited (SG Ghana), Guaranty Trust Bank (GTB),
104 Zenith Bank (Ghana) Limited and United Bank of Africa (Ghana) [21].

105 **3.1 E-Banking service delivery and customer satisfaction**

106 Recent growth in technology and innovation has fast-tracked the desire of customers of
107 banks for exceptional services to meet the current trend of technological advancement.
108 Customers therefore want to perform their banking transactions at any location and any time
109 convenient for them [30]. E-banking offers customers 24/7 banking services. E-banking
110 customers are able to check their account balances, pay bills, apply for a loan, trade
111 securities, and conduct other financial transactions [33]. The need for banks to satisfy the
112 changing demands and tastes of customers could therefore be a major reason for
113 implementation of e-banking in many institutions even in developing countries like Ghana.

114 Many studies argue that the success of electronic banking depends on e-banking service
115 quality and reliability [34]–[36]. Reliability is one of the important of factors considered by
116 customers before subscribing to e-banking services [37], [38]. In the past, many banks
117 provided customers with products and services deemed fit for customers. However,
118 currently, buyer power as indicated by the increase in wealth and sophistication of the most
119 profitable customers makes it possible for customers to determine the which institution to
120 bank, products and services to use, delivery channels to choose as well as the price to
121 accept. Failure on the part of banks to recognize customers' requirements could easily result
122 in 30-50% customer loss, especially the most profitable customers including the 'magic'
123 top10% [39]. Again, Mols confirms that the more profitable customers are more likely to
124 migrate to a different bank in comparison with less profitable customers [39]. Apparently,
125 there is pressure on banks to adopt a strategy that is focused on buyer driven desires so as
126 to satisfy the demands of customers. Success in the e-banking age is undoubtedly
127 measured from the customers' satisfaction lens. A bank has to profitably meet the needs of
128 customers and continuously improve its ability to meet the demand of its customers.

129 Recent studies conducted in some countries on customers' perception of and reaction to
130 e-banking products and services, and others on customer satisfaction concluded that the few
131 e-banks that face liquidity problem in so-called advanced countries is as a result of non-
132 availability and disruptions in e-banking services [40]–[42]. The satisfaction level of e-
133 banking users is related to the availability [43], [44]. This gives further indication that e-
134 banking service availability does not only affect satisfaction of customers but also
135 antecedently affects profitability and ability of banks to remain in business into the
136 foreseeable future. Many banks have realized the impact of e-banking availability on
137 satisfaction of customers and even the profitability and liquidity of banks [45]. A fundamental
138 realization in recent e-banking developments is the change from seller-driven to buyer-driven

139 process. Thus, the success of e-banking depends on customers' satisfaction of e-products
140 and e-services. The conceptual framework for this study is depicted in figure 1.

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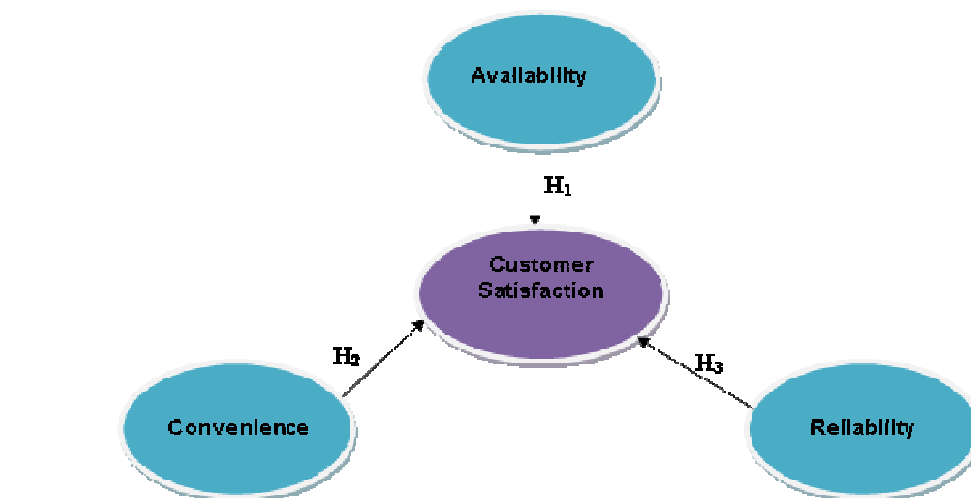


Figure 1: Conceptual framework
Source: Authors' Construct

4. HYPOTHESES

H₀: X_i does not have significant impact on customer satisfaction.

H_a: X_i has a significant impact on customer satisfaction.

For $i = 1, 2, 3$ and X₁, X₂, and X₃, represent e-banking availability, convenience and reliability respectively.

5. METHODOLOGY

Data for this study were gathered from both primary and secondary sources. The secondary data were gathered through internet web pages, journals and books. Primary data were gathered through questionnaires. The population of the study was customers of Guaranty Trust Bank Ghana Limited, Ecobank Ghana Limited and Barclays Bank Ghana Limited. Purposive sampling was utilized in a 150 sample-size selection (50 from each bank). The sample size is based on judgmental sampling approach since the population is infinite. This is because banks are not willing to disclose the number of their customers due to competition and other reasons. IBM SPSS Statistics version 21 was used to analyze the primary data. Correlation and regression analysis was performed to determine the impact of e-banking service delivery on satisfaction of customers in the selected banks.

6. RESULTS AND DISCUSSION

The following interpretations and discussions were based on the analysis and findings of the study.

Table 1 shows an R-square value of 0.725 which indicates that the predictors (convenience, availability and reliability) account for approximately 72% of the variation in customer satisfaction. The R value of 0.851 also signifies a strong positive correlation between convenience, availability, reliability and customer satisfaction. This implies that convenience, availability and reliability of e-banking services have a strong relationship customer satisfaction with e-banking services in the selected banks.

Table 1. Regression Model Summary

Model 1	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.851 ^a	.725	.719	.64198

a. Predictors: (Constant), Convenience, Availability and Reliability.

Table 2 shows an ANOVA Table of regression model. At $\alpha=0.05$, $P < .000$ indicate statistically significant predictors (convenience, availability and reliability) for the dependent variable (customer satisfaction). Additionally, $P = .05$ suggests a good fit data for the regression model. As a result, there is enough evidence against the null hypothesis (X_i has no significant impact on customer satisfaction).

Table 2. ANOVA^a

Model	Sum of squares	Df	Mean Square	F	Sig
1 Regression	158.601	3	52.867	128.276	.000 ^b
1 Residual	60.172	146	.412		
Total	218.773	149			

a. Dependent Variable: Customer satisfaction

b. Predictors: (Constant), Convenience, Availability and Reliability.

6.1 Determining the regression equation

From Table 3, it is evident that availability, reliability and convenience are all significant at $\alpha=0.05$. The coefficients table has the first column containing the beta coefficients (β_0 , β_2 , and β_3). From the table, $\beta_0 = -0.057$, $\beta_1 = 0.103$, $\beta_2 = 0.259$, $\beta_3 = 0.663$

The regression equation becomes:

$$R = -0.057 + 0.103X_1 + 0.259X_2 + 0.663X_3$$

Thus for every 1 unit change in customer satisfaction the banks must improve upon e-banking availability by 0.103 holding all other variables constant; for every 1 unit change in customer satisfaction the banks must improve e-banking reliability by 0.259 holding all the other variables constant and for every 1 unit change in customer satisfaction the banks must improve e-banking convenience by 0.663 holding all the other variables constant. From the equation a positive correlation between customer satisfaction and e-banking availability, reliability and convenience is glaring. This is an indication that improved e-banking service could be used to enhance customer satisfaction in the selected banks.

Table 3. Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	-.057	.139		-.410	.682

1	Availability	.103	.042	.115	2.476	.014
	Reliability	.259	.122	.257	2.127	.035
	Convenience	.663	.142	.559	4.683	.000

214 a. Dependent Variable: Customer satisfaction
215 Significant at 0.05 level
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217 7. CONCLUSION

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219 The impact of e-banking service delivery on satisfaction of customers in Guaranty Trust
220 Bank Ghana Limited, Ecobank Ghana Limited and Barclays Bank Ghana Limited have been
221 analyzed in this study. Based on the data analysis and findings, a positive correlation
222 between e-banking availability, reliability and convenience and customer satisfaction is
223 established. It is evident that improved e-banking service delivery heightens customer
224 satisfaction. Additionally, location and time-bound restrictions on banking service
225 accessibility are thus eliminated. It is therefore recommended that banks provide customers
226 with uninterrupted, reliable and convenient e-banking services so as to satisfy customers in
227 order to retain them.
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