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Customers' adoption of e-banking and its effects on banking services patronage in Ghana

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Abstract
The aim of the study was to ascertain the effects of customers' adoption of e-banking on banking services patronage in Ghana. The study was explanatory and quantitative in nature. The population comprised customers of commercial banks in Ashanti region. Convenience sampling was used in selecting 450 customers within the Kumasi metropolis (regional capital) of the Ashanti region. The customers were selected from GCB Bank, ADB, UBA, Cal Bank, Fidelity Bank, and Access Bank. A structured questionnaire was developed for both categories of respondents, and the data was analysed using SPSS (v.20). The study concluded that, the speed of e-banking and privacy issues, were the two dimensions of e-banking that significantly impact on the patronage of general banking services. Automated Teller Machines (ATMs) was the most patronised e-banking services, followed by Internet banking, Mobile banking, Credit cards, and Telephone banking. The main reasons customers used e-banking services were to check account balance, withdraw cash, deposit cash, check bank statement, and to request for check book. Generally, customers had a favourable response towards e-banking. Security and cost issues were among the most significant hindrances in e-banking adoption. It was recommended that, banks already adopting e-banking must enhance its speed of service delivery. ATMs which are the most popular e-banking product in Ghana must be really enhance, and drastically minimise the service errors that are mostly encountered.

Keywords: e-banking, online banking, financial services, banking, Ghana

Introduction
There are many definitions of Electronic Banking (e-banking), however Prakash and Malik (2008, p.84) defined it as "the use of technology to communicate instructions and receive information from a financial institution where an account is held. This service includes the system that enables financial institution customers, individuals or business to access accounts transact business, or obtain information on financial products and services through a public or private network". E-business was also defined by Annin (2014, p.154) [5] as "a process where banks create platform for its customers to generally access information and to transact businesses electronically through an electronic device without necessarily being present at the bank". In recent times, e-banking has seen some significant growth in many Africa countries like Ghana, which hitherto was not so. According to Parisa (2006) [27], e-banking services help banks to lower their operating costs, enhance customer service deliver, increase bank patronage, effective cashiering work, and also reduce pressure and overcrowding in banking halls. Tandrayen-Ragoobur and Ayrga (2011) [35] also stated that, the increase in globalization activities, stern business competition and technological advancements, have changed the business operations of banks. The changes that occur in technology have an effect on the day-to-day operations of professionals, management members, and all staff in a formal organisational setting (Gallivan, 2004). Studies by Yasuharu (2003), and Hunter and Stephen (1991) showed a positive relationship between e-business and banks' productivity.
According to Annin *et al*. (2014) [5], the banking industry in Ghana has had some paradigm shift in recent years. This they attributed to the new minimum bank set-up capital and the adoption of e-banking in their operation. Other studies also attributed the changes in banking business operation to changes in customer needs and preferences, fierce competition from non-banking institutions (mobile money in Ghana is an example), advancement in information technology, and government regulations and policies for the banking industry (Byers & Lederer, 2001).
Existing literature has pointed out a number of transactional benefits received from e-banking adoption by banks (Gan *et al*., 2006; Cairo & Staten, 1999) [16]. Other studies have attempted to show the variables that influences customers' adoption of e-banking services (Akinci *et al*., 2004; Laforet & Li, 2005; Wan *et al*., 2005; Hernandez & Mazzon, 2007) [20, 39, 17]. However, one key issue that needs to be well answered is, 'how well do customers adopt e-banking services in developing countries?'
In Ghana, only few works have been done on the adoption of e-banking (Abor, 2004; Marfo-Yiadom & Ansong, 2012; Annin *et al*., 2014) [21, 5]. And none of these studies looked at e-banking adoption by customers, and how it impacts on patronage. For example, Abor (2004) and Marfo-Yiadom & Ansong (2012) [21], only considered customers' perception on e-banking services. Annin *et al*. (2014) [5] also considered how socioeconomic classifications influences e-banking. This has been the motivation for studying e-banking adoption by customers, and how this impacts patronage of banking services.

Literature Review
Definition of electronic banking
International and domestic customers of all banks have used electronic means to undertake their banking operations. Of late, banks use electronic channels more often than not to convey their services and products to their clients and receive instructions as well. Even though there are several

varieties of services provided by banks over the electronic channel, however, they differ in content; this approach of banking is by and large referred to as e-banking (Azouzi, 2009) [9].

Since e-banking is made up of several categories of services which ranges from customers information request, retail banking services undertaken using computer, television or mobile phone; several researchers have defined it their own way (Daniel, 1999). The "Basel committee" report (2003) defined e-banking as the "provision of retail and small value banking products and services through electronic channels as well as a large value electronic payment and other wholesale banking services which are delivered electronically. These products and services can include deposit taking, lending, account management, the provision of financial device, electronic bill payment, and the provision for other products and services such as electronic money" (Basel committee, 2003).

Customer perception on e-banking

This section considered some customers perception on e-banking. These include, perceived usefulness, perceived ease of use, perceived service quality, and perceived trust.

Perceived usefulness

Perceived usefulness is defined as the degree to which clients can trust that the services E-Banking can enhance their performance of work (Dillon & Morris, 1996). Previous Studies have shown the fact that, perceived usefulness has a considerable effect in E-Banking implementation (Eriksson *et al*., 2005; Wang *et al*., 2003; Davis *et al*., 1989; Jackson *et al*., 1997) [15]. Therefore, in general it can be anticipated that, people use E-Banking due to the fact that they find it helpful.

Perceived ease of use

Perceived Ease of Use is defined as "the perception of users about services that it is easy to use and it does not require any mental effort" (Rehman *et al*., 2013) [31]. Usually, the users may want to utilize this technology which is so easy to use and unsophisticated (Calisir & Gumussoy, 2008) [12]. Perceived ease of use is the easy use of E-Banking system which has direct relationship with the attitude of E-Banking patronage (Rigopoulos & Askounis, 2007). Several studies have opined that, perceived ease of usage has remarkable consequence on attitude of utilizing E-Banking (Venkatesh & Davis, 2000; Teo, 2001; Gefen *et al*., 2003; Davis *et al*., 1989).

Perceived service quality

In determining the satisfaction level of customers, service quality plays a significant role (Pitt *et al*., 2005). According to Dilijonas *et al*. (2009) provision of service quality at a rational cost can help in the fulfillment of the numerous demands of customers which will move towards the implementation of E-Banking. Service quality also affects customer satisfaction towards banking products (Venkatesh & Davis, 2000). Quality of service is also an external variable that affect the easiness of using of E-Banking (Khan, 2010) [18].

Perceived risk

Perceived risk is the customer's perceived uncertainty and the possible unfavorable effect on purchasing services or products. "The extent of risk that customers perceive and their own acceptance of risk taking are factors that affect their buying decision" (Nasri, 2011) [23]. Moreover before an entity decides to adopt a new technology, both risks and benefits to the consumer may have to be accessed and evaluate the risks and benefits of the newly introduced technology. This general rule is also applicable e-banking services. Hence, when there is a larger anticipation of risk, there will be reduction in the anticipated benefit of the technology (Dogbe *et al*, 2019) [14].

Past studies established that, with electronic banking services perceived risk was a prominent factor that affects its adoption (Polatoglu & Ekin, 2001; Tan & Teo, 2000). Perceived risk was defined as "the potentiality of loss in the pursuit of a desired outcome of using electronic services" (Featherman & Pavlou, 2003). Therefore, the higher the level of uncertainty or the possibility of adverse consequences, the high the perceived risk. Several of studies found that consumers' perceived risk was a multi-dimensionally built and such dimension may change according to the type of service or product. From previous studies, five main dimensions of perceived risk have been noted (Featherman & Pavlou, 2003; Kuisma *et al*., 2007; Lu *et al*., 2005; Natarajan *et al*., 2010) [19, 24]. These dimensions are: "performance risk, social risk, financial risk, privacy risk and time risk".

Perceived trust

One of the prominent factors to consider in analyzing customer's behaviour of E-Banking adoption is perceived trust (Theodosios & George, 2005) [36]. The customers' perceived trust is influenced during the use of electronic systems in banking transactions (McKnight *et al*., 2002). For the reason that the E-Banking users incur no or less switching cost, it is always prudent for banks to develop perceived trust in customers. "Perceived trust is the factor that builds positive expectation about the adoption of E-Banking in customer's thoughts" (Mayer *et al*., 1995), and includes three factors, namely: "ability, integrity and benevolence" (Zahedi & Song, 2008) [40]. Ability is service provider's ability to satisfy the customers' need. Integrity refers to the term as the service provider fulfills users' expectation and do not create any negative image. Benevolence on the other is define as the service provider more customized their service as compared to their self-interest.

Factors affecting adoption

Several studies have been conducted on the factors affecting adoption or usage of new products and services. Some of these factors are mainly broken down into behavioural and psychological. These factors affect the implementation of any new innovation like e-banking and they are: "consumer awareness, ease of use, security, accessibility, techno phobia or simply reluctance to change, preference for personalised services and cost of adopting the innovation". The most essential characteristic for acceptance or adoption any innovative service or product is the creation of awareness among the consumers of the product or service. For this reason, Rogers and Shoemaker (1971) emphasized that for consumers to adopt a product or service consumers they go through a chain of processes in conviction, knowledge, decision and confirmation in which this adoption or rejection of the innovation commence when the consumer

becomes aware of the service or product. Howard and Moore (1982), and Guiltian and Donnelly (1983) added that creating the awareness for the adoption of any new innovation is of great importance.

Nevertheless, when innovation is very sophisticated and not user friendly an awareness alone is not sufficient since consumers would reject it. From this perspective, Cooper (1997) found that, one of the three important characteristics for adoption from the customer's perspective is the ease of use of innovative service or product. The friendliness of domain names plus the navigation tools available in the websites are essential factors for easy utilization by users. The configuration of the sites with suitable utilization of graphical UI is additionally considered as a vital determinant. Also, the design and content of a website have been found to be an influential on the satisfaction of consumers. Therefore, Doll *et al*. (1995), and Muylle *et al*. (1998) established "that product information content, the amount of product information, product information format, language(s) and layout features affect customer satisfaction".

Additionally, appropriate search facility and navigation features will undoubtedly be supportive to consumers when they surf the Internet. Moreover, consumers' perception of the user friendliness of Internet banking site is surely affected by the level of interactivity of the site. Cooper (1997) and Daniel (1999) established that the level of security or risk associated with a new innovation is a very important factor affecting the acceptance and adoption of is e-banking. Even in the advanced countries where e-banking has been in operation for long, risk associated with usage of e-banking p is one of the most important factors slowing the growth of this Internet Banking Patronage (Sathye, 1999).

Moreover, e-banking customers would as well be concerned about ascertaining how the banks would for the most part manage erroneous transaction that may happen in online transaction. Will the weight of verification be on the clients or the banks would settle the issue in advance and explore the issue later? The component of trust in this setting would decide the security of executing for shoppers by and large and decide the agreeableness rate of this option conveyance direct over the long haul. On this issue, Stewart (1999) asserted that the disappointment of the Internet as a retail dispersion channel has been ascribed to the absence of trust purchasers have in the electronic activities and in the web vendors. Another element that would hinder buyer reception of e-banking is the cost variable. In e-banking, two sorts of expenses are included. In the first place, the ordinary expenses connected with Internet access expenses and association charges and besides the bank expenses and charges.

Rothwell and Gardiner (1984) observed that two main basic provision of factors affecting the desires of client, namely value and non-value elements. As a result of this, Guadagni and Little (1983), Gupta (1988), Mazursky *et al*., (1987) identified price as a main consideration in brand switching. On the off chance that buyers are to utilize new technologies, the technologies must be sensibly evaluated with respect to options. Otherwise, the acknowledgment of the new innovation may not be suitable from the point of view of the customer. Additionally, hesitance to change is also a factor that affects selection in light of the fact that the current method of service or product conveyance satisfies the customer's needs enough. With regards to e-banking, brick and mortar branches are the current option methods of transacting banking business. For customers to change their present methods for working and to take up new technology, it must "satisfy a specific need". Unless such a need is satisfied, customers may not be set up to transform from the present ways of working. Numerous ways can be acquainted with defeat of reluctance to change. Provision of personalised client services personnel to help buyers in performing transactions by means of the Internet as well as giving particular value-added service, which are at presently not provided through conventional banking channels can likewise diminish the customers' reluctance to change. An indispensable prerequisite for the adoption of e-banking is the availability of internet access. E-banking's ability operate is dependent on extensive access to computers and the internet. O'Connell (1996) found that, adoption of e-banking is low because of the lack of access to computers and internet.

Several research work have also discovered that there is a significant correlation between Web user satisfaction and (Web-site download speed Hoffman & Novak, 1996; Muylle *et al*., 1998 In this connection, the utilization of higher solution representation and wasteful web servers has a huge negative effect. However, it must be recognized that download speed is likewise subject to the user's computing hardware and method of connection. A more prominent larger part of bank clients might at present want to go for individual collaboration when undertaking banking transactions. The individual touch of officers and directors builds the estimation of each exchange. In the Ghanaian setting, an individual relationship amongst customers and financier ascends over various breaking points especially in less supplied territories of the nation. A couple of clients have for the most part been on edge about new innovation. These clients won't not have the learning or know-how in overseeing PC especially and henceforth trust people more than e-banking.

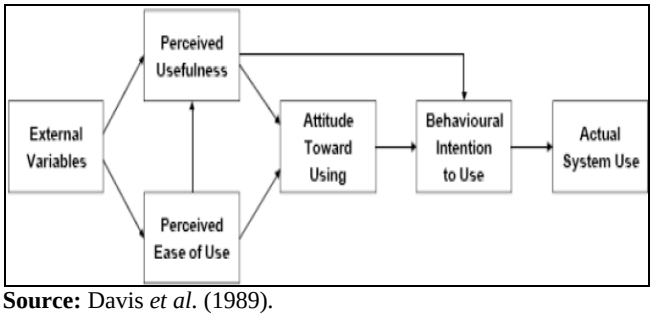
Theoretical framework

Technology Acceptance Model (TAM) was introduced by Davis (1986). Technology acceptance model is an adjustment of Theory of Reasoned Action (TRA), created to explicitly manage displaying client acknowledgment of data frameworks. When contrasted with TRA, Technology Acceptance Model is essentially less broad. The model was created to especially clarify the PC utilization conduct. In any case, since, TAM incorporates discoveries gathered from over 10 years of Information System research, so it is especially appropriate for demonstrating computer acknowledgment. Davis recommended that the behavioural intention to use it, which is sequentially affected by the users' attitudes toward utilizing the system and the perceived usefulness of the system, is based on the usage of an information system which are directly determined. Attitude and perceived usefulness are also affected by the perceived ease of use. According to TAM, "greater perceived usefulness and the perceived ease of use of an information system will positively influence the attitude toward this system".

The attitude thusly prompts a more noteworthy aim to utilize the framework, which emphatically influences one's real utilization of the framework. TAM assumes that, other thing being equivalent, seen convenience is impacted by the apparent usability in light of the fact that the simpler an

innovation to utilize, the more valuable it can be. Perceived usefulness is characterized as the extent to which a man trusts that utilizing a specific framework would improve his or her occupation execution. Perceived usefulness alludes to the extent to which a man trusts that utilizing the framework will be free of exertion. Demeanor clarifies a man's great or unfavorable appraisal with respect to the conduct being referred to. Expectation is a measure of the quality of a man's ability to utilize exertion while playing out a specific conduct. The outer variables in the model allude to an arrangement of variables that can impact data framework selection by implication through saw usability and saw convenience (Davis *et al*., 1989).

As indicated by Taylor and Todd (1995), develops of TAM are verging on measured similarly in each connection. Moreover, TAM is a solid instrument and observationally stable. A few meta-investigation concentrates on have given adequate information about TAM to be exceedingly trustworthy and judiciously disclose up to 40 percent of the behavioral goal to utilize (King and He, 2006; Yousafzai *et al*., 2007). What's more, a few studies have connected TAM to assess clients' reception in various settings, for example, electronic trade (Gefen *et al*., 2003); electronic learning (Arbaugh, 2000); web keeping money (Al-Sukkar and Hasan, 2005) and e-government (Alhujran, 2009) [4].



Source: Davis *et al*. (1989).

Fig 1: Technology acceptance model

Research Methodology

Population, sample and sampling technique

For the purpose of the study, the population was made up of all bank customers in Ashanti Region of Ghana. Due to limitations such as access to respondents, time limitation, and other factors, the study sampled 450 bank customers. The banks were from GCB Bank, ADB, UBA, Cal Bank, Fidelity Bank, and Access Bank. The customers were selected using convenience sampling technique.

Data collection technique

Structured questionnaire was used as the data collection instrument. The researcher saw the questionnaire as the best data collection instrument for the study because according to Saunders *et al*. (2009) [32] both case study and experimental research approaches can make use of this instrument.

The customers' questionnaire had four sections. Section A contained demographic information, section B had information on banking services, section C had information on customer perception on e-banking, and section D addressed the challenges of e-banking.

Data analysis technique

The data gathered was first cleaned to detect outliers and other extraneous variables. After which analysis was carried out based on the objectives of the study. Percentages, frequencies, standard deviation, regression and mean were used in the analysis. The analysis was conducted using SPSS v.23.

Results

Demographics of respondents

From Table 1, it was realized that the majority of the customers sampled for the study were males. This actually reflects the gender distribution of bank customers. From the analysis, male customers represented 63.6% of the respondents and the remaining 36.4% were females.

The distribution on the age group indicate that, 21.8% of the customers were aged between 18-25 years. 30.9% were aged between 26-35 years, 18.2% aged 36-45%, 14.5% aged 46-55 years, and 14.5% aged above 55 years. The distribution indicates an evenly spread distribution across the youthful (below 35 years) and old age (above 35 years). The customer population cannot therefore be said to be youthful or old age.

The educational distribution for customers indicated 14.5% of them had no formal education, 18.5% had basic education, 30.9% had secondary education, and 36.4% had tertiary education (HND, Degree, Masters, etc.).

The number of years customers had spent with the bank were also analysed as that could also influence their wealth of knowledge and the way they will respond to the questionnaire. 14.5% of the customers had been banking with their banks for less than a year. 41.8% had been banking for 1-5 years, 10.9% had been banking for 6-10 years, 9.1% had been banking for 11-15 years, 16.4% had been banking for 16-20 years, and 7.3% had been banking for above 20 years. The distribution indicate the majority of the customers had been with their banks for more than 1 years, with almost half of them having banked for more than 10 years. It is concluded that they have adequate experience to respond to the items.

The distribution on the type of account held by customers indicated the majority held a savings account. About 54.5% of them operated savings account, 36.4% operated current account, and 9.1% operated a fixed deposit account. As indicated earlier, the majority of the respondents were into agriculture, and not a salaried worker. They therefore prefer to operate a savings account for which they will be paid interest on cash deposited, instead of operating a current account to be paying commission to the bank every month.

Table 1: Demographics of Respondents

Demographics	Options	Customers	
		Frequencies	Percentages
Gender	Male	286	63.6
	Female	164	36.4
Age group	18-25yrs	98	21.8
	26-35yrs	139	30.9

	36-45yrs	82	18.2
	46-55yrs	65	14.5
	Above 55yrs	65	14.5
Education	No formal education	65	14.5
	Basic	82	18.2
	Secondary	139	30.9
	Tertiary	164	36.4
Years with the bank	Less than 1yr	65	14.5
	1-5yrs	188	41.8
	6-10yrs	49	10.9
	11-15yrs	41	9.1
	16-20yrs	74	16.4
	Above 20yrs	33	7.3
Type of account	Savings A/C	245	54.5
	Current A/C	164	36.4
	Fixed Deposit A/C	41	9.1

Level of e-banking adoption

In ascertaining the level of e-banking adoption, customers were asked where they patronized any of the e-banking products. The analysis presented in Table 2 indicated that, the majority (69.1%) had being using e-banking services. Only 30.9% of them do not use any form of e-banking services. Out of those using e-banking services, 18.4% of them had been using for less than a year, 50.7% had been using for 1-5 years, 25.7% had been using for the past 6-10 years, and 5.3% had been using for the past 11-15 years. The majority of the respondents therefore have had some level of experience using the e-banking products.

About 42.1% of the customers who used e-banking services did so once every week, 47.4% did so once a month and 10.5% did so once in 6 months. Having about 40% of the customers using e-banking every week, indicate a high level of patronage of e-banking products.

Table 2: Level of e-banking adoption

E-Banking Adoption	Options	Frequencies	Percentages
Patronage of E-banking products	Yes	311	69.1
	No	139	30.9
Number of years using E-banking	Less than 1yr	83	18.4
	1-5yrs	228	50.7
	6-10yrs	116	25.7
	11-15yrs	24	5.3
	16-20yrs	-	-
	Above 20yrs	-	-
Frequency of E-banking use	Once a week	189	42.1
	Once a month	213	47.4
	Once in six months	47	10.5
	Once in a year	-	-

Respondents were asked to indicate the various kinds of e-banking products usually patronised. From Figure 2, it was realised that, ATM had the largest share of 24%. So long as the Automated Teller Machine (ATM) is functioning properly, it provides an opportunity for customers to withdraw cash at any time of the day, or on any day of the week (24 hours, 7 days a week). This result is similar to that of other researches carried out in Ghana (for example, Mumin *et al*., 2014; Annin *et al*., 2014; Obiri-Yeboah *et al*., 2013) [22, 5, 26], who also found that, there is a high traffic intensity for ATMs use for most banks in the country.

Internet banking also had 18% of the total e-banking products patronised by customers. Mobile banking which involves customers receiving alerts on transactions in their accounts, also had 18% share of the total e-banking products.

Credits card users were 17%, followed by telephone banking (13%), then electronic transfers (5%) and debit cards (5%).

This indicates that, the debit card systems and the electronic transfers are not well established in Ghana.

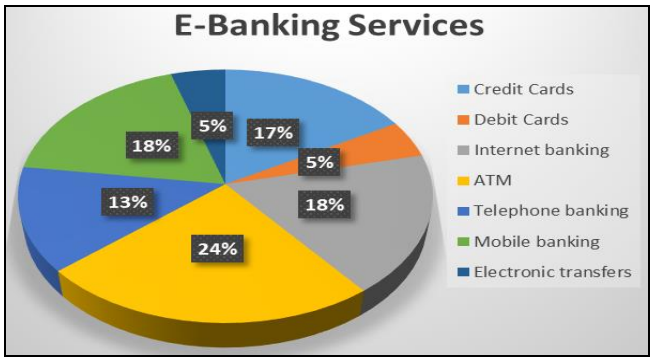


Fig 2: e-banking services

The Figure 3 presented below shows that, the major reasons customers used e-banking were to check account balance, withdraw cash, deposit cash, check bank statement, and to request for check book. Other purposes include transfer of funds, open account, to know about the bank's products, for general enquiries, paying utility bills, and for the cancellation of transactions.

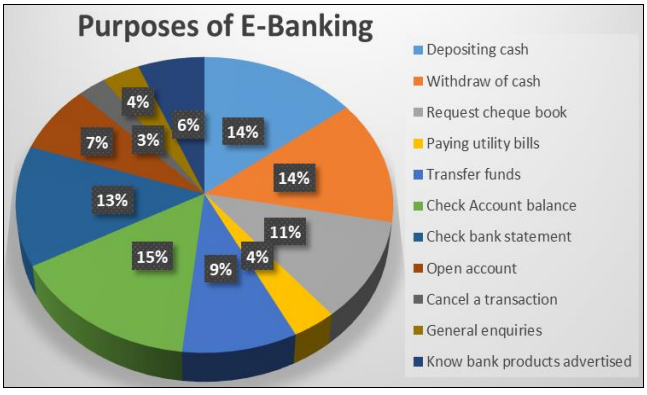


Fig 3: Purpose of e-banking

Customers' perception on e-banking

As part of the objectives, the study sought to ascertain the customers' perception on e-banking products. The analysis was presented in Table 3 below. The respondents were given a scale of 1-strongly agree, 2-agree, 3-indifferent, 4-disagree, and 5-strongly agree. By reason of the scale, the lesser the mean the better. From the analysis, customers responded favourably to all the items (mean of less than 2.5). But amongst them, speed of service delivery using e-banking was scored as the most favourable perception (mean= 1.33; S.D.=.508). E-banking services are generally faster than traditional banking as customers do not need to wait in long queues before they are been served. The time spent at banking halls even worsens during periods of pay-day.

The next perception customers had was that, e-banking provides 24 hours a day, 7 days a week service. E-Banking services have no time limit as compared to traditional banking that closes normally at 4pm on weekdays. E-banking is accessible during anytime of the day, including weekdays.

Customers perceived e-banking to be more convenient than traditional banking. Customers can transact banking operations at any location, so long as there is good network. At the comfort of home, customers could check account balance, pay bills, transfer funds, make orders, etc., without getting to go and queue in the banking hall.

Customers also considered e-banking as more prestigious than queuing in the banking halls. They also considered e-banking services easier to use. As indicated by Calisir and Gumussoy (2008) [12], customers mostly want to adopt those technology that is so simple and not complicated in use. Perceived ease-of-use therefore has an influence on e-banking adoption by customers.

Customer privacy is another consideration in adopting e-banking. According to the customers, e-banking offers more privacy than traditional banking. At the comfort of home or office, customers could order for fund transfer or any transaction, without being monitored. In the banking halls however, every move of customers are captured by the cameras.

Although there are some charges on the use of e-banking products, customers perceived those charges as cheaper compared to traditional banking. Technically speaking, traditional banking is cheaper, as most of the transactions are free. However, the hidden cost such as the time spent, the emotional stress trying to wait patiently to be served, some misbehaviours from staff and customers, etc., all make traditional banking more expensive than e-banking.

Table 3: Customers' perception on e-banking

Customers' Perception on E-Banking	Min.	Max.	Mean	Std. Deviation
Faster than traditional banking	1	3	1.33	.508
24/7 Service	1	4	1.67	.717
Convenience	1	4	1.76	.896
Easier to use than traditional channels	1	4	1.98	.865
Cheaper than traditional banking at the branch	1	5	2.47	1.322
More prestigious than queuing at the bank halls	1	5	1.96	1.097
E-banking services ensure customer privacy	1	5	2.18	1.225

Effects of e-banking on banking patronage

In ascertaining the effects of e-banking on banking service patronage, a binary logistic regression was used. This was used because the dependent variable was categorical (Yes or No), and coded as Yes-1 No-0. Customers' perception on e-banking was used as the independent variable, with their willing to continue banking, used as the dependent variable. Unlike the Ordinary Least Squares (OLS) regression, the coefficients (B) in Logistics regression output are in log-odds units, and therefore, the concentration is on the direction (+ or -). The effects were explained instead using the odds ratios, that is the Exp (B).

From Table 5, only two of the dimensions of e-banking had a significant impact on patronage (at 0.05 level of significance), that is, speed of e-banking and privacy. Speed of service delivery by e-banking had an inverse relationship with patronage of banking service (coefficient= -3.163). Considering the scale of 1-strongly agree, 2-agree, 3-indifferent, 4-disagree, and 5-strongly agree, it means, the more favourable customers rate speed of e-banking service, the more likely they are to continue the patronage of bank products. An Exp(B) value of 0.042 means that, holding other things constant, the odds that e-banking speed would affect patronage of banking service was 0.042 times, and the vice versa.

Privacy also had a coefficient of -.786, meaning an inverse relationship between the dependent and the independent variables. Once again, the scale is very key in the interpretation of this result. What this output means is that, a more favourable response to e-banking privacy (mean score approaching 1-strongly agree), the more likely customers are to remain patronising banks products. The Exp(B) value of 0.455 means that, holding other things constant, the odds that privacy with e-banking would affect patronage of banking service was 0.445 times, and the vice versa.

If the significance level is to be set at 0.1, as some researchers do, 24/7 service availability will be statistically significant in this case. The coefficient of 1.362 indicate a posit relationship between these two variables. Meaning, the less favourable (mean score approaching 5-strongly disagree), the more likely customers are to stay with bank. This sounds contradictory, but it makes sense in the context of Ghana. In Ghana, 24/7 availability of e-banking services is usually not achieved. It is very common to visit the ATM (the most patronised e-banking product in Ghana), and find it malfunctioning. It is most frustrating when it happens outside the working hours. In Ghana therefore, 24/7 availability of e-banking services does not give it an edge over traditional banking, it terms of influencing patronage of banking service. Customers will rather want to plan with the traditional banking which is more reliable in this case, than the e-banking (ATM especially). T24/7 service availability would affect patronage of banking product is 3.902.

As indicated earlier, the remaining items (convenience, ease of use, cost, and prestige) were not statistically significant at influencing patronage of banking products.

Table 4: Effects of e-banking on banking patronage

Variables E-Banking	B	S.E.	Wald	df	Sig.	Exp(B)
Faster	-3.163	.949	11.116	1	.001	.042
24/7 Service	1.362	.815	2.793	1	.095	3.902
Convenience	.274	.483	.321	1	.571	1.315
Easier to use	.237	.545	.190	1	.663	1.268
Cheaper	-.564	.509	1.230	1	.267	.569
More prestigious	-.155	.445	.121	1	.728	.857
Ensures customer privacy	-.786	.401	3.852	1	.050	.455
Constant	8.285	2.393	11.989	1	.001	3965.5
Cox & Snell R Square	*Nagelkerke R Square*					
.145	*.357*					

Source: Field data, 2016.

Challenges of e-banking

From Table 6, bank customers agreed to all the challenges of e-banking listed (mean approaching approximately 2-agree). According to the customers, security concerns is the most discouraging factor in using e-banking services. Even though e-banking offers some level of privacy, it is often perceived risky due to the high levels of cyber theft these days. And since most of the e-banking transactions are make over the internet, it is easily prone to hackers. It was also agreed that most of the customers are not aware of the e-banking services provided by their banks. Aside ATM, there are a lot of e-banking service provided which customers are unaware of, just because they are not very visible like that ATMs. And the banks do not also promote them, since it is believed they are some selected few. Another challenge indicate was that, most of the customers prefer to bank in the banking halls rather than online. But this could not be considered in isolation, as some reasons cause customers to prefer banking hall over online. As the analysis indicated, the fees charged on e-banking services put some customers off. Price sensitive customers will prefer withdrawing cash from the banking hall which is free, than using the ATM for example, which he/she will be charged. Computer literacy in Ghana is also low, making it a bit difficult for the older folks especially adopt e-banking. They consider that to be a difficult task, even in its operation. The IT infrastructure in Ghana is also not well developed. Internet connectivity in Ghana is poor, and since most of the e-banking activities are done online, it becomes difficult to adopt. The lack of commitment on the side of banks was also seen as a challenge, in that most of them provide just few e-banking services, which is either not promoted or not well developed.

Table 5: Challenges of e-banking

Challenges of E-Banking	Min.	Max.	Mean	Std. Dev.
Security concerns	1	5	2.24	1.267
Most of the customers are not aware of E-banking services provided by their banks	1	4	2.15	1.019
Most of the customers prefer traditional (Branch) banking	1	5	2.24	1.208
High fees on using E-banking services	1	5	2.13	1.163
Lack of computer literacy by customers	1	5	2.16	1.111
Difficult to operate E-banking transactions	1	5	2.25	1.313
Poorly developed IT infrastructure in Ghana	1	5	2.24	1.223
Poor internet facility	1	5	2.05	1.259
Lack of commitment on the side of banks	1	5	2.18	1.164
Banks provide few E-banking services	1	5	1.93	1.191

Conclusions

The study sought to assess the effects of e-banking on bank service patronage. It was concluded that, the speed of e-banking and privacy issues, were the two dimensions of e-banking that significantly impact on the patronage of general banking services. Automated Teller Machines (ATMs) was the most patronised e-banking services, followed by Internet banking, Mobile banking, Credit cards, and Telephone banking. The main reasons customers used e-banking services were to check account balance, withdraw cash, deposit cash, check bank statement, and to request for check book. Generally, customers had a favourable response towards e-banking. Security and cost issues were among the most significant hindrances in e-banking adoption.

Recommendations

The study showed that customers who used e-banking and perceived it as faster than traditional banking are more likely to remain patronizing the services of banks. It is recommended that, banks already adopting e-banking must enhance its speed of service delivery. ATMs which is the most popular e-banking product in Ghana must be really enhance, and drastically minimise the service errors that are mostly encountered.

Security issues has also become a great issue of concern not only in Ghana, but the world over. Banks must strike to invest in security protection issues and demonstrate to customers they are able to handle their data and financial transactions via e-banking very secured.

Banks must also strive to promote their e-banking services to customers. The study indicated lack of customer awareness on the available e-banking products.

Banks must also encourage the use of e-banking by totally eliminating charges or reducing, so as not to be seen as expensive by customers. Price sensitive customers would not patronise if perceived as expensive.

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