



# Electronic Banking and Entrepreneurial Development in Nigeria

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## ABSTRACT

Electronic banking means a system through which financial service providers, customers, individuals and businesses are able to access their accounts, do transactions and obtain latest information on financial products and services from public or private networks, such as the internet. The main objective of the study is to investigate the effect of electronic banking on entrepreneurial development in Nigeria. The specific objectives are to investigate the effect of electronic mobile banking on entrepreneurial development in Nigeria, examine the effect of internet banking transactions on entrepreneurial development in Nigeria, assess the effect of automated teller machine on entrepreneurial development in Nigeria and to examine the effect of point of sale on entrepreneurial development in Nigeria. Econometric techniques involving Augmented Dickey Fuller and Philip Perron tests for Unit Roots and the Ordinary Least Square (OLS) were adopted. The regression result indicates that electronic mobile banking, internet banking, automated teller machine and point of sale have positive and significant effect on return on asset. The coefficient of determination ( $R^2$ ) = 0.712561 showed that about 71% of changes in entrepreneurial development in Nigeria is accounted for by the level of electronic banking in Nigeria. The study thus concludes that electronic banking has positive effect on the entrepreneurial development in Nigeria. The study recommend that: Government should provide adequate infrastructure in the area of power supply, telecommunications and the internet. Industry stakeholders will have to join hands with other stakeholders in improving infrastructure. The banks, switching companies, card companies etc. must work towards improving equipment quality and standardization, as well as maintenance. The banks must improve service quality and customer responsiveness in cases of lost or stolen cards, frauds, and other customer complaints in relation to e-payments

**Keywords:** Electronic Banking and Entrepreneurial Development in Nigeria

## INTRODUCTION

Electronic banking is founded on the employment of innovative tools to provide various banking products to customers. Over the years technology has had a significant impact on how banks operate and formed bedrock upon which banks individuate their products from competitors. The products are provided through electronic intermediaries such as automated teller machines, cellular devices and the internet. Banks regularly depend on modern technology for customer service to satisfy their banking needs (Kolodinsky, Hogarth & Hilgert, 2004).

According to Abaenewe, Ogbulu, and Ndugbu, (2013) electronic banking is the conduct of banking business electronically which involves the use of information communication technology to drive banking business for immediate and future goals. Electronic Banking System is seen to be an innovative service delivery mode that offers diversified financial services like cash withdrawal, funds transfer, cash deposits, payment of utility and credit card bills, cheque book requests, and other financial enquiries, (Onyedimekwu & Oruan, 2013). Similarly, Imiefoh (2012) sees electronic banking as an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution. That is, automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. E banking generally implies a service that allows customers to use some

form of computer to access account-specific information and possibly conduct transactions from a remote location like home or workplace, (Odulaja 2012).

Delgado (2004) describes e-banking as the provision of banking services to customers through the internet.

Electronic banking is defined to include 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 delivered electronically. Alsmadi and Alwabel (2011) expressed that the definition of electronic banking varies among researchers partially because electronic banking refers to several types of services through which bank customers can request information and carry out banking services. Almost all banks in Nigeria offer online, real-time banking services. Banks that are not able to brace up to this new development are rapidly losing their customers. Online, real-time banking system has now become commonplace as customers are offered the ease of operating an account in any branch of their bank's network.

The evolution of electronic banking in Nigeria can be traced to 1986 when the banking sector was deregulated. The result of this deregulation brought far-reaching transformation through computerization and improved bank service delivery. Competition with new products became strong within the system while customer sophistication posed a challenge for them, hence the reengineering of processing techniques of business accounts encourage the automation of financial services especially among new generation of commercial and merchant banks (Oluwatolani, Joshua & Philip, 2011).

The 21st century has witnessed a dramatic revolution in the financial service industry as a result of the rapid advancement in technological transformation which has become known as e-developments. These changes have engulfed all areas of financial intermediation and financial markets such as e-finance, e-money, e-banking, e-brokering, e-insurance, e-exchange and e-supervision. Thus, information technology (IT) is turning into the most important factor in the future development of banking, influencing bank's marketing and business strategies. As a result of rapid advancement in IT and intensive competition in the banking sector, the adoption of e-banking is being increasingly used as a channel of distribution for financial services (Fonchamnyo, 2013).

## **Review of Related Literature**

### **Conceptual Review**

#### **Electronic Banking**

E-banking means a system through which financial service providers, customers, individuals and businesses are able to access their accounts, do transactions and obtain latest information on financial products and services from public or private networks, such as the internet. For example, using intelligent devices such as personal computer, automated teller machines (ATMs) and personal digital assistant (PDA), customers access e-banking services and do their transactions with less effort as compared to the branch based banking. The term e-banking can be explained in different way from different perspectives. Nonetheless, researchers across the world have made extensive efforts to provide a precise and all-inclusive concept of e-banking.

The term "e-banking" refers to a method of banking through which customers are able to carry out their banking transactions electronically without visiting a bank branch (Simpson 2002). Among other benefits, e-banking saves time, customers need not to visit the bank branch and banks have the opportunity to enhance their customer base thereby experience improved profits (Okibo, Wario 2014). According to Basel Committee Report on Banking Supervision (2003), e-banking is to include 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 delivered electronically. With respect to the field of banking and financial services, e-banking has been described as a product of e-commerce. According to Sokolov (2007), financial institutions, in addition to provide traditional banking products and services, can also facilitates a wider array of banking products and services that have been designed or tailored to shore up e-commerce. The most common and popular support services are:

Electronic card; Phone and mobile bank; Call center; Home bank; Corporate bank and Internet bank.

In Bangladesh, to date, scope of e-banking is very limited. Some of the private commercial banks and foreign-owned commercial banks have offered internet banking, mobile/ tele-banking and online banking facilities in a closed network environment. Al-Amin and Rahman (2010) defined that e-banking is such a method through which customers are able to access their accounts and get information about updated products and services provided by banks with the help of a personal computer or other intelligent devices. They also mentioned that although there are some electronic products and services being offered by the banks, true e-banking system is yet to be developed. Existing form of e-banking in Bangladesh takes mainly internet banking, online banking and mobile banking. Among these forms of e-banking, Automated Teller Machines (ATM) and mobile banking are the most popular. Thus, as evident in the above empirical studies, different scholars have conceptualized e-banking from different dimensions. On the basis of literatures explained above, in this paper, we conceptualize e-banking as a method of banking which involves use of information and communication technologies to conduct banking operations.

According to Ojeka and Ikpefan (2011), the concept of e-banking includes types of banking activities performed through electronic networks. They maintained that e-banking refers to several types of services through which a bank customer can request information and carry out most retail banking services through a computer, or mobile phone, Atiku, Genty and Akinlabi (2011) posits that e-banking refers to systems that enable banks customers to get access to their accounts and general information on banks products and services through the use of banks website without intervention of or inconvenience of sending letters, faxes, original signatures and telephone confirmations

Bedman (2012) defined e-banking as banking by which individuals transfer funds, make account balance enquires, pay bills and manage such assets stocks online. It is the use of banking products and services over electronic and communication networks directly by customers

#### **Automated Teller Machine**

Automated teller machine **is** a computer controlled device that dispenses and provides other services to customers who identify them with a personal identification number (PIN). The physical carriage of cash as well as frequent visit to the banks is being reduced. The principal advantage of ATM is that it dispenses cash at anytime of the day even as it needs not to be located within the banking premises but in stores, shopping malls, fuel stations etc, unlike the traditional method where customers have to queue for a very long period of time to withdraw cash or transfer funds. The ATM is the most popular e-transaction solution in Nigeria. ATM is popular because of its convenience.

With ATM, it is a lot easier to withdraw money or to check account balance. However, despite its popularity, the ATM has done very little in reducing the amount of cash in the economy. This is because most Nigerians use ATM only for cash withdrawal. Although ATM machines can perform other functions like fund/cash transfer, mobile phone credit recharge and bills payment, cash withdrawals and balance inquiry remain the most popular applications sort after by users in Nigeria. This is largely due to ignorance and the absence of merchants. Because ATM machines are mainly used for cash withdrawals, they do not go far enough in turning Nigeria into a cashless economy. ATM only makes more cash available in the economy because of the ease at which depositors can withdraw cash. To turn Nigeria into a cashless economy Nigerians need more than just ATM cards, Nigerians need credit/debit cards.

a. **Bankers Automated Clearing Services:** The automation focus of the instrument is to reduce the number of clearing days and improve on security arrangement in the course of settlement and collection of Cheque. This involves the use of magnetic ink character reader (MCR) for Cheque processing which makes it capable to encode, read and sort out changes even as request for Cheque books can be made via electronic devices.

b. **Card System:** It is a unique electronic payment type which involves the use of smart cards. Smart cards are devices with embedded integrated circuit being used for settlement of financial obligations. It can be used as credit card, debit card and even ATM cards. The power of these cards lies in its sophistication and acceptability to store and manipulate data as well as handling of multiple applications on one card securely. While ATM cards make cash withdrawal convenient (thereby contributing to the problem), Credit cards, debit cards and e-wallets (like mobile money) makes cashless shopping a lot more convenient. Hence to turn the country to a cashless economy the drive should be towards credit cards, e-wallets and debit cards. While ATM cards require ATM machines to

operate, credit and debit cards require a Point of Sale (POS) terminal. POS terminals are located at accredited retail shops (merchant). These merchants accept credit and debit cards as means of payment by customers. Credit and debit cards like Visa, Inter Switch and MasterCard can also be used to purchase from merchants on the internet.

### **Internet Banking**

Internet banking refers to systems that enable bank customers to get access to their accounts and general information on bank products and services through the use of bank's website, without the intervention or inconvenience of sending letters, faxes, original signatures and telephone confirmations (Olorunsegun, 2010). Siyanbola (2013) puts it that internet banking involves conducting banking transactions on the internet (www) using electronic tools such as the computer without visiting the banking hall. E-commerce is greatly facilitated by internet banking and is mostly used to effect payment. Internet banking like mobile banking also uses the electronic card infrastructure for executing payment instructions and final settlement of goods and services over the internet between the merchants and the customers. Commonly used internet banking transactions in Nigeria are settlement of commercial bills and purchase of air tickets through the websites of the merchants. Level of awareness of the advantages of this product to the saving populace is still very low; hence, there is every room for improvement if cashless banking would be effective as expected (Siyanbola, 2013). Funds transfer, airtime top up, balance enquiry, password change, bill payment etc can also be conducted on the internet banking platform.

Internet banking (e-banking) is the use of internet and telecommunication networks to deliver a wide range of value added products and services to bank customers (Uchenna, 2015) through the use of a system that allows individuals to perform banking activities at home or from their offices or over the internet. Some online banks are traditional banks which also offer online banking, while others are online only and have no physical presence. Online banking through traditional banks enables customers to perform all routine transactions, such as account transfers, balance inquiries, bill payments, and stop-payment requests, and some even offer online loan applications. Customers can access account information at any time, day or night, and this can be done from anywhere. Internet banking has improved banking efficiency in rendering services to customers

### **Mobile Banking**

This involves the use of mobile phone for settlement of financial transactions. This is more or less fund transfer process between customers with immediate availability of funds for the beneficiary. It uses card infrastructure for movement of payment instructions as well as secure SMS messaging for confirmation of receipts to the beneficiary. It is very popular and exciting to the customers given low infrastructure requirements and a rapidly increasing mobile phone penetration in the country. Services covered by this product include account enquiry; funds transfer; recharge phones; changing passwords, bill payments. Even though the product is exciting most customers are yet to fully buy into it in Nigeria, hence, both the apex bank and other banks still have a lot to do in terms of increasing awareness of the product to the saving populace in the country (Siyanbola, 2013).

Mobile banking (m-banking) refers to provision and availment of banking and financial services through the help of mobile telecommunication devices. The scope of services offered may include facilities to conduct bank and stock market transactions, administer accounts and to access customized information (Kennedy & Jacky, 2013).

Mobile banking is an electronic banking product that allows customers to access banking services through a dedicated telephone line from the comfort of their homes, offices etc. Services rendered here include; balance transfer, change of pin, authorization of inter-branch money transfer, transaction alert (withdrawal or deposit) and enquiry (Adewoye, 2013). This is the most familiar of the tele-banking devices and it allows customers to transact banking business over the phone. It can be used as an alternative to the traditional branch banking or in conjunction with it (Agwu, Atuma Ikpefan, & Aigbiremolen, 2014). The customer can access their accounts using telephone lines as a link to the financial institutions computer centre. Services rendered here include account balance, transfer, change of pin etc. This product has also experienced low patronage due to inadequate awareness and education of the customer on how to maximally use their phone to transact simple banking operations (Siyanbola, 2013).

### **Entrepreneurship**

Entrepreneurship can be defined as the process of identifying opportunities in the market place, marshalling the resources required to pursue these opportunities and investing the resources to exploit the opportunities for long term gains. It involves creating wealth by bringing together resources in new ways to start and operate an enterprise (Vural, Sökmen & Çetenak, 2012).

According to Ogborne (2000), he opines that entrepreneurship occurs when an enterprising individual pursues lucrative business opportunities, mobilizing men, materials, machines and financial resources in order to produce new products and to serve new market

Gupta and Khanka (2006) define an entrepreneur as the person who bears risk, unites various factors of production and carries out innovation

According to Ogborne (2000), he opines that entrepreneurship occurs when an enterprising individual pursues lucrative business opportunities, mobilizing men, materials, machines and financial resources in order to produce new products and to serve new market. He added that it is the process of looking for things in such a way that possible solutions to problems, needs, ethics, standards and dealings evolved based on morals and values. Entrepreneurship is a process by which individuals pursue opportunities, fulfillments of needs through innovations without regards to the resources they currently control.

Entrepreneurship cuts across academic discipline, age and gender. Recently, it was discovered that there are more male entrepreneurs than females. Entrepreneurship is the key to industrialization. The concept of entrepreneurship is further refined when principles and terms from business, managerial and personal perspective are considered. In particular, the concept of entrepreneurship from a personal perspective has been thoroughly explored in the country.

Entrepreneurship is the process of identifying opportunities in the market place, marshalling the resources required to pursue these opportunities and investing the resources to exploit the opportunities for long term gains (Wasiuzzaman & Arumugam, 013). It involves creating wealth by bringing together resources in new ways to start and operate an enterprise (Dauda, 2015).

Kao and Harvard (1984) define entrepreneurship as the attempt to create value recognition of business opportunity, the management of risk-taking appropriate to the opportunity and through the communication and management skills to mobilize human, financial and material resources necessary to bring a project to fruition.

### **Theoretical Framework**

The study is anchored upon the Technology Acceptance Model (TAM) and Diffusion of Innovation (DOI) Theory. Fred Davis (1985). TAM is an information systems theory that models how users come to accept cashless policy and use a technology that will enhance the performance of Deposit money Banks in Nigeria. TAM is one of the models that have been developed to provide a better understanding of the usage and adoption of information technology which is the base of cashless policy that will promote the performance of Deposit money Banks in Nigeria. It is presently a prominent theory used in modeling technology acceptance and adoption in information systems research. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it. The factors are; perceived usefulness (PU) and perceived ease-of-use (PEOU). According to TAM, one's actual use of a technology system is influenced directly or indirectly by the user's behavioral intentions, attitude, perceived usefulness of the system, and perceived ease of the system. DOI theory seeks to explain how, why, and at what rate new ideas and technology spread through cultures. Innovation Diffusion Theory (IDT) consists of six major components: innovation characteristics, individual user characteristics, adopter distribution over time, diffusion networks, innovativeness and adopter categories, and the individual adoption process which are the bases of cashless policy that promote the performance of commercial banks in Nigeria.

### **Empirical Review**

Ogutu and Fatoki (2019) examined the effect of electronic banking on financial performance of listed commercial banks in Kenya. The study employed quantitative research design using panel data analysis. The targeted population of the study was the 11 listed commercial banks in Kenya. Secondary data was extracted from CBK banking supervisory reports and published annual reports of

banks. The data was recorded on data collection sheets. Both descriptive and inferential statistics were used. The findings were presented using tables with associated explanations. The study found that there was strong positive relationship between mobile banking, agency banking, ATM banking and online banking and financial performance of listed commercial banks in Kenya. Financial performance of commercial banks and m-banking were strongly and positively correlated. There was a strong positive correlation between financials performance of individual commercial bank and agency banking. There was a strong positive correlation between financials performance of individual commercial bank and agency banking. There was a weak positive correlation between financial performance of individual commercial bank and online banking.

Hussein and Elyjoy (2018) examined the effect of internet banking on operational performance of commercial banks in Nakuru County, Kenya. The study employed Bank-Focused Theory and The Technology Acceptance Model (TAM). This study adopted a cross-sectional research design. The study population comprised of 56 employees of the commercial banks. Since the banks are few, the study adopted a census survey. Data was collected using structured questionnaires. A pilot study was conducted in Uasin Gishu County to determine validity of the research instruments where Cronbach's alpha coefficient (0.7) was employed. Data was analyzed using correlation and regression analysis. The study established that internet banking has a positive significant effect on operational performance of the commercial banks.

Taiwo, and Agwu (2017) investigated the roles e-banking adoption has played in the performance of organizations using a case study of commercial banks in Nigeria. Primary data were obtained by administering questionnaires to staff of four purposively selected banks (Ecobank, UBA, GTB and First bank). Pearson correlation was used to analyze the results obtained using the Statistical Package for Social Sciences (SPSS) and it was observed that banks' operational efficiency in Nigeria since the adoption of electronic banking has improved compared to the era of traditional banking. This improvement was noticed in the strength of banks, revenue and capital bases, as well as in customers' loyalty.

Amu, and Nathaniel, (2016) studied the relationship between electronic banking and the performance of Nigerian commercial banks. The study became necessary due to the increased adoption of the electronic banking which has redefined the banking service both in Nigeria and internationally. Electronic banking was proxied by value of Point-of-Sale transactions while commercial banking performance was proxied by customers' deposits. Engle-Granger cointegration model was used to analyze data. The results show that POS is not cointegrated with both the savings and time deposits but are cointegrated with demand deposits. It is recommended that the monetary authorities and commercial banks should embark on an all inclusive enlightenment campaign for the banking public on the benefits, convenience and importance of adopting e-banking channels in completing their transactions

Abaenewe, Ogbulu, and Ndugbu, (2015) investigated the profitability performance of Nigerian banks following the full adoption of electronic banking system. The study became necessary as a result of increased penetration of electronic banking which has redefined the banking operations in Nigeria and around the world. Judgmental sampling method was adopted by utilizing data collected from four Nigerian banks. These four banks are the only banks in Nigeria that have consistently retained their brand names and remain quoted in the Nigerian Stock Exchange since 1997. The profitability performance of these banks was measured in terms of returns on equity (ROE) and returns on assets (ROA). With the data collected, we tested the pre- and post-adoption of ebanking performance difference between means using a standard statistical technique for independent sample at 5 percent level of significance for performance factors such as ROE and ROA. The study revealed that the adoption of electronic banking has positively and significantly improved the returns on equity (ROE) of Nigerian banks. On the other hand and on the contrary, it also revealed that e-banking has not significantly improved the returns on assets (ROA) of Nigerian banks.. The findings of this study have motivated new recommendations for bank customers, bank management and shareholders with regard to electronic banking adoption for banking operations.

Alao and Sorinola, (2015) examined cashless policy and customers' satisfaction: A Study of Deposit money Banks in Ogun State, Nigeria. The study seeks to investigate the customers' satisfaction of the recently introduced cashless policy in Ogun State, Nigeria with a survey of bank customers in Abeokuta. Data was collected with a well structured questionnaire and analyzed with descriptive

statistics, while hypotheses formulated for the study were tested with correlation co-efficient. The findings of the study reveal that cashless policy contributed significantly to customers' satisfaction in Ogun State. Also, the study revealed that cashless policy contributed significantly to customers' satisfaction through electronic channels.

Osazevbaru and Yomere (2015) investigated the benefits and challenges of Nigeria's cashless policy. Secondary data were collected and content analysis applied in data analysis. The study found banks' income higher in cashless setting than in cash based arrangement.

Osazevbaru, Sakpaide and Ibubune (2014) examined cashless policy and banks' profitability in Nigeria against the backdrop that these banks in a cash based economy are known for their huge profits even in the face of associated high cost of operations. Secondary data were collected and analyzed using content analysis comparing profits under cash based policy with a cashless regime. The results revealed that cashless economic policy positively impact on banks' profit through reduction in cost of operations and banking the unbanked populace.

Isaac and Michael (2015) examined the effectiveness of mobile banking services in selected Deposit money Banks in Rwanda. Descriptive design involving both qualitative and quantitative approaches was employed. Sample size of 227 was computed from a total population of 524 employees from the selected banks and the selection of respondents was done through systematic random sampling. The instruments of data collection used in this study included both structured questionnaires and interview. In data analysis, quantitative data was analyzed through frequencies and percentages for respondents', mean values were used to determine the effectiveness of mobile banking services in the selected Deposit money Banks. Difference in effectiveness of mobile banking services was determined through One-Way-ANOVA. Research findings reveal that mobile banking services in the selected Deposit money Banks were generally effective. The most effective item under mobile banking services was noted in security measures and privacy, followed by time management and convenience and the least effective was on the financial risk measures. This study also found out that there were significant difference in the effectiveness in mobile banking services among selected Deposit money Banks. The bank with most effective mobile money services was Banque Popularize du Rwanda, followed by the Kenya Commercial Bank, next was Bank of Kigali, Equity Bank, and finally, ECOBANK. The study concluded that the mobile banking services in the selected Deposit money Banks are effective.

## **METHODOLOGY**

### **Research Design**

The data used for this study have already been documented by highly research based institutions- the Central Bank of Nigeria. Thus the study adopted the *ex-post facto* research design. The performance of entrepreneurial development is the dependent variable. The independent variables are electronic mobile banking, internet banking, automated teller machine and point of sales

### **Model Specification**

The model used for the study was the adaptation and modifications from the work of Alagh and Garry, (2015) who examined the effect of electronic banking on entrepreneurial development in Nigeria

#### **The model is stated thus:**

$$PED = f(EMB, ITB, ATM)$$

Where:

PED= Entrepreneurial Development In Nigeria

EMB= Electronic Mobile Banking

ITB= Internet Banking

ATM = Automated Teller Machine

$\mu$ = error term

#### **The model was adapted and modified**

$$PED = f(EMB, ITB, ATM, POS)$$

$$PED = \beta_0 + \beta_1 EMB + \beta_2 ITB + \beta_3 ATM + \beta_4 POS + \mu \quad - \quad - \quad - \quad - \quad -1$$

#### **Where:**

PED= Performance of Entrepreneurial Development in Nigeria

EMB= Electronic Mobile Banking

ITB= Internet Banking

ATM = Automated Teller Machine

POS = Point of sales usage by customers

$\mu$ = error term

$\beta_0$  and  $\mu$  are the constant and error term respectively while  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  are the coefficient of electronic banking on entrepreneurial development in Nigeria

**Method of Analyses**

The data will be analyzed with econometric techniques involving Augmented Dickey Fuller and Philip Perron Tests for Unit Roots, and the Ordinary Least Square (OLS)

**Unit Root Test**

The Augmented Dickey-Fuller (ADF) and the Phillips and Perron (PP) tests were conducted on the variables, to determine whether they are stationary or non-stationary series.

**Table 1: The Unit Root Test Results for the Selected Variables in Nigeria**

Variables		Levels		First Difference		Decision
		ADF	PP	ADF	PP	
FED		-4.412986*	-4.387653*	-	-	1(0)
EMB		-3.532749*	-3.532749*	-	-	1(0)
ITB		-3.789869*	-	-	-	1(0)
			2.867464***			
ATM		-2.101323	-2.111128	-5.699554*	-5.744776*	1(0)
POS		-1.263481	-1.400973	-4.180720*	-5.550966*	1(0)
Critical Values	1%	-3.679322	-3.679322	-3.699871	-3.689194	
	5%	-2.967767	-2.967767	-2.976263	-2.971853	
	10%	-2.622989	-2.622989	-2.627420	-2.625121	

\*, \*\*, \*\*\* denotes significance at 1%, 5% and 10% respectively.

The results on Table 1 indicate that variables of FED, ATM, POS, EMB and ITB were stationary at level. This means that these variables are integrated in the order of I(0).

**Analyses of the Effect of Electronic Banking on Entrepreneurial Development in Nigeria**

Dependent Variable: PED

Method: Least Squares

Date: 01/24/21 Time: 15:27

Sample: 2015 2020

Included observations: 32

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.667553	0.824890	10.809263	0.0260
EMB	0.164745	1.010577	2.163021	0.0058
ITB	0.518247	0.672745	3.770347	0.0183
ATM	0.068816	0.039042	2.762604	0.0302
POS	0.027885	0.022862	2.219695	0.0040

R-squared	0.712561	Mean dependent var	4.676947
Adjusted R-squared	0.655073	S.D. dependent var	7.153306
S.E. of regression	6.953540	Akaike info criterion	6.888364
Sum squared resid	1208.793	Schwarz criterion	7.165910
Log likelihood	-100.7696	Hannan-Quinn criter.	6.978837
F-statistic	19.349696	Durbin-Watson stat	1.971283
Prob(F-statistic)	0.006525		

The results from coefficient of showed that electronic mobile banking (EMB) has positive (0.164745) and significant ( $p < 0.05$ ) effect on performance of entrepreneurial development. This means that hypothesis one: Electronic mobile banking (EMB) has no significant effect on performance of entrepreneurial development, is not rejected.

**Internet Banking** (ITB) on performance of entrepreneurial development, the coefficient of internet banking (ITB) was used. The result showed that internet banking (ITB) has positive (0.518247) and significant ( $p < 0.05$ ) effect on performance of entrepreneurial development. Thus hypothesis two:



Internet (WEB) banking transactions has no significant effect on the performance of entrepreneurial development, is rejected. The study therefore concludes that Internet (WEB) banking transactions has significant effect on performance of entrepreneurial development

**Automated Teller Machine** showed that automated teller machine (0.068816) has a positive and significant ( $p. < 0.05$ ) effect on performance of entrepreneurial development. This implies that hypothesis four “automated teller machine has no significant effect on performance of entrepreneurial development” is not rejected. This indicates that automated teller machine has significant effect on performance of entrepreneurial development.

**Point of Sales (POS)** showed that point of sales (POS) has a positive (0.027885) and significant ( $p. < 0.05$ ) effect on performance of entrepreneurial development.

However, the coefficient of determination ( $R^2$ ) = 0.712561 showed that about 71% of changes on the performance of entrepreneurial development in Nigeria is accounted for by the level of electronic banking in Nigeria. This implies that electronic banking is one major contributor on the performance of entrepreneurial development in Nigeria. The F-statistics (19.349696;  $p. < 0.05$ ) indicated that all the variables of the model (electronic banking variables) have significant effect on the performance of entrepreneurial development in Nigeria. The Durbin Watson statistics (1.971283) showed that there was no autocorrelation in the model employed.

## CONCLUSION

The regression result indicate that electronic mobile banking, internet banking, automated teller machine and point of sales have positive and significant effect on performance of entrepreneurial development

The study thus concludes that electronic banking has positive effect on entrepreneurial development in Nigeria

## RECOMMENDATIONS

In line with the objective and findings, we recommend that:

1. The banking industry should adjust to full and effective deployment of information technology due to its sophistication since the technology is irreversible with relative perceived advantage.
2. Those Nigerian banks should be able to accept the level of risk that they can cope with in electronic banking system, measurable to the bank’s overall strategic and business plans. Though there is inherent risk for not adopting e-banking.
3. Banks should be able to provide adequate security both physically and electronically to check the incidence of hacking by fraudsters. Network hackers successfully dupe banks of billions of naira at a strike and can send banks into liquidation.
4. The holder of banking transaction cards should be able to secure them by providing passwords. Banks management should from time to time train customers with regard to electronic banking, its benefits, risk exposure, physical and electronic security to avoid financial loss in the hands of hackers. Again, trainings should be held for bank staff in short periods to acquaint them with modern developments of the sophisticated technology in changing times.

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