ELECTRONIC PAYMENT AND QUOTED FINANCIAL PERFORMANCE OF DEPOSIT MONEY BANKS IN NIGERIA

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Abstract

Electronic -payment is increasingly becoming a daring means of payments in today's business world. This is due to its efficiency convenience and timeliness. The aim of this study is to empirically analyze the relationship between electronic payment and quoted financial performance of deposit money banks in Nigeria. Data on different types of electronic payment and return on equity from 2007-2018 were collected from the central bank of Nigeria Statistical bulletin, annual Central Bank of Nigeria reports, Federal Inland Revenue Service, financial annual reports and e-business units report of the quoted deposit money banks. The ordinary lest square, Auto-Regressive Distributed Lag, Unit Root Test, Panel Cointegration, Granger Causality Test and Panel Dynamic, Error Correction Model was used in analyzing the data with the aid of E-view version 10. The empirical results indicate that electronic payment significantly relate to return on equity; explaining about 85.3% of the total variation in return on equity, web pay and mobile pay were each found to significantly relate to quoted financial performance, sustaining long run equilibrium relationship with return on equity. We therefore conclude that e-payment has the potency to make significant contribution to quoted banks financial performance and recommends that Central Bank of Nigeria should provide adequate regulatory framework that will ensure customer protection and security of their transactions from cyber-crimes and hackers. The use of established information system models in technology related researches so that the needed factors to be examined would be properly investigated and addressed.

Keywords: Electronic Payment, web Pay, Mobile Pay, Quoted Deposit Money Banks and Financial Performance.

Introduction

Electronic payment has become an important component for the success of businesses and financial services (Adeniran & Junaidu, 2017; Balaji & Balaji, 2017; Mahboub, 2018; Enoruwa., Ezuem & Nwani, 2019; Ibanichuka & Oko, 2019; Asamoah; Takioddine & Amedofu, 2020). The reason for the popularity and importance of e-payment methods as compared to traditional payment methods is its several favourable characteristics. These include security (Gathina, 2018), reliability (Gerpott, 2018), scalability (Rebiu., Ladan., Usman & Garba, 2019), anonymity (Ibanichuka & Oko, 2019), acceptability (Jumba & Wepukhulu, 2019), privacy (Thankgod., Alhassan & James, 2019), efficiency (Xena & Rahadi 2019) and convenience (Asamoah., Takieddine & Amedofu, 2020). Having efficient payment systems is the backbone of a highly competitive issue. The effort to prioritise e-payment as a global agenda is important to boost productivity and contribute towards raising a company's competitiveness (Shagari., Abdullah & Saat, 2017; Rabi, 2019). Regrettably, there exist some problems confronting deposit money banks from achieving the set objectives of e-payment in terms of maximum performance. Despite the growth record of banks and non-bank financial institutions in Nigeria, and financial liberalization policy, the Nigeria economic growth has been sluggish and stagnant (Maduka & Onwuka, 2013).

There is lack of diffusion of innovation in e-products/services and technology to customers by the service providers. This constitutes a gap or a lacuna in the study domain. The incessant link-down and unreliable on-line connectivity is an issue of concern and worrisome. The continued crack into database, unauthorized access or intrusions to financial institutions' systems and transactions are having negative effects on the banks performance (Jumba & Wepukhulu, 2019). Issue of insecurity, lack of privacy and spate of hackers' activities constitute nuisance in the perceived benefits of electronic banking system in Nigeria. Most Nigerian banks encounter problems of meeting customer's expectation of services and satisfaction, the issue of money transfer delay, long queues and huge crowds in the banking halls can be highly devastating and discouraging. Also, high volume of cash handling exposes banks to risk of assets loss giving rise to a source of concern. Differential charges by some bank in rendering these services through e-products to the customer are at times considered a rip-off. Some policy issues on the modus operandi of these e-products demean the financial performance of the banks. There is problem of virulent liquidity in the financial systems, how can the Deposit Money Banks control this excess liquidity to improve their performances is a source of worry.

In the past, studies have addressed conceptual issues and conducted general consumer surveys (Kumar, 2017). However, there is little research available in the literature on effects of adoption of e-payments in Nigeria. Along with popularity of electronic commerce and online purchasing, e-payment systems have been developed and expected to be the main payment means of e-commerce (Mahboub, 2018). Despite the benefits associated with electronic money payments, a majority of Nigerians have generally been slow in adopting the use of e-payments (Mbogo, 2016). The future of e-payments seems promising and on the rise, if the challenges are addressed. The Central Bank of Nigeria (2017) report shows that e-payments grew by 19 percent to ₦2.31 trillion, nearly equaling the ₦2.37 trillion handled in 2014. This means Nigerians made an average of ₦192.7 billion of real-time mobile-based payments monthly, or ₦6.4 billion a day in the period to October 2015 compared to ₦5.4 billion daily in a similar period last year. Only 42 percent of Nigerians over the age of 15 have bank accounts and only 30 percent have debit cards. This low rate of financial inclusion

typically creates substantial barriers for increasing cashless share of payments (Mahboub, 2018). According to Thomas and Angus (2013), e-payments in Nigeria achieved a double-digit growth which is attributed to the convenience of the platform and the increased utility of Electronic based payment. Upadhyay and Jahanyan (2016) note that key challenges beyond financial inclusion rates include low availability and affordability of financial services, infrastructure challenges and a large informal sector. In Nigeria, several studies have been undertaken relating to effect of adoption of e-payments. The studies sought to establish the impact of financial innovation on commercial banks in Nigeria. Shukla (2017) carried out a study to establish the relationship between financial innovation and the growth of commercial banks in Nigeria. The study was based on profitability to base the banks revenues, pretax profits, customer deposits, loan advances and number of innovations. The research found out that financial innovation greatly influences the financial performance of listed commercial banks in Nigeria. He also identified a research gap to the fact that past studies did not exhaust such aspects as efficiency, risk and performance but rather centered on productivity.

Strikingly, in the measurement of financial performance, the study observed that; a myriad of studies only turn to conventional measure of financial performance such as After Tax Profit and Return on Assets. The drawback of these measures of financial performance is attributed to the poor coverage of the interest of shareholders. More encompassing measures like price to earnings ratio and return on equity are fundamental since they are likely to help investors determine the market value of a stock as compared to the company's earnings. The empirical literature on the investigation of the assessment of the simultaneous presence of e-payment and performance in Nigeria is just at its embryonic stage. Related empirical studies on the phenomenon of interest and their contextual analysis include those by Abaenewe., and Rogoff (2018), Akhisar., TunAy and Tunay (2015), Hamidianpour., Esmaeilpour and Daryanavard (2016), Ighobor (2017), Hastomo and Aras (2018), Jumbo and Wepukhulu (2019), Asamoah., Takieddine and Amedofu(2020), Nwaiwu and Amah (2021) for Ethiopia; Sierra Leone, Sudan, Egypt, Ghana and Nigeria. However, the empirical studies in this genre pale in comparison with those from Aisa and developed countries. Empirical exploration of e-payment and financial performance has been few and far between. Although, empirical studies of this kind enrich the literature and are potentially beneficial to extent and potential investors, analysts, policymakers, regulators and researchers. The rest of the paper is organized as follows after introduction. Section 2 presents the relevant theoretical and empirical literature. Section 3 describes the data and econometric methodology. The econometric results are discussed in section 4, while section 5 layout concluding remark, recommendation, limitation and suggestion for further studies.

Literature Review and Hypotheses Development

Financial Inclusion Theory

The Financial Inclusion theory as postulated by Shukla (2017) states that financial inclusion refers to the process of ensuring access to appropriate financial products and services needed by all sections of the society in general and vulnerable groups such as weaker sections and low-income groups in particular, at an affordable cost, in a fair and transparent manner, by mainstream institutional players. This theory supports how financial accessibility influences financial performance. Financial inclusion theory states that an inclusive financial sector is one that provides access to credit for all bankable people and firms, to insurance for all

insurable people and firms, to savings and payment services for everyone (Osei-Assibey, 2015).

Uguru., Hemen and Atube (2016) critical assessment of the concept of financial inclusion envisages the importance of having an inclusive financial system. Most of the definitional aspects of financial exclusions hover around lack of access whether voluntarily or involuntarily by certain sections of the consumers to appropriate low cost, safe and fair financial products that might act as catalyst to their economic growth by providing financial stability to the section of population who are excluded from the formal financial system. Exclusion could occur for many reasons like because of inconvenient and un-affordable product, ignorance of the customer, lack of financial literacy, high transaction cost and low outreach of banks (Marinč, 2013). To bring about financial inclusion these hurdles have to be removed by effective policy initiative after a through comprehensive measurement of financial inclusion from both supply and demand side (Moria, 2013).

Return on Equity (ROE) is a measure of financial performance calculated by dividing net income by shareholders' equity. Because shareholders' equity is equal to a company's assets minus its debt, ROE could be thought of as the return on net assets. Return on equity (ROE) deemed good or bad will depend on what's normal for a stock's peers. For example, utilities will have a lot of assets and debt on the balance sheet compared to a relatively small amount of net income. A normal ROE in the utility sector could be 10% or less. A technology or retail firm with smaller balance sheet accounts relative to net income may have normal ROE levels of 18% or more. A good rule of thumb is to target an ROE that is equal to or just above the average for the peer group (Saragih, 2018).

E-payment

An e-payment system is a way of making transactions or paying for goods and services through an electronic medium, without the use of checks or cash. It's also called an electronic payment system or online payment system. The electronic payment system has grown increasingly over the last decades due to the growing spread of internet-based banking and shopping. As the world advances more with technology development, we can see the rise of electronic payment systems and payment processing devices. As these increases, improve, and provide ever more secure online payment transactions the percentage of check and cash transactions will decrease as explained by Sujud. & Havhen (2017).

According to Daniel (1999) and Sathye (1999), they posit e-payment as the newest channel for delivering banking services in the world, and observed that e-payment refers to several types of services through which bank customers can request for information and carry out most retail banking services via computers or mobile phones. Burr and Lustsik (2004) describe e-payment as an electronic link between the bank and the customer in order to prepare, manage and control financial transactions.

In Anyanwokoro (1999), electronic banking is defined as the application of computer technology to banking especially the payment (deposit transfer) aspects of banking. He also defined e-payment as a system of banking with an electronic communication network which permits on-line processing of the same day credit and debit transfers of funds between member institutions of a clearing system. Electronic banking offers the convenience of conducting most of the banking transactions at a time that suits the customer. The customer can access funds and transfer funds between accounts, pay bills, make purchases and transfer money with ease at any time.

Hastomo and Aras(2018), defined e-payment as web-based banking. In other words, E-payment refers to the banking operations, which is done over worldwide web. However, more comprehensive and well established definition is given by the United Nations Conference on Trade and Development (UNCTAD), they describe it as the deployment over the internet of retail and wholesale banking services, which involves individual and corporate clients, and includes banking transfers, payments and settlements, documentary collections and credits, corporate and household lending, card business and some others (UNCTAD, 2002).

Mithim., Jijim & Bai (2018) defines electronic banking as a system in which funds are moved between different accounts using computerized online or real time systems without the use of written cheque. Kondabagil (2007) noted that “electronic banking is like traditional payment, inquiring and information processing systems, differing only in that it utilizes a different delivery channel. For banks to stay on track of competition there is need to be aware of the rapid and continual growth of information technology and telecommunications which encourage the introduction of electronic services of the banking activities. Also, electronic banking is defined to include the provision of retail and small value banking products and services through electronic channels as well as large value electronic payments and other whole sale banking services delivered electronically.

In the works of Alhajri (2008), he described e-payment as the provision of banking services to customers through the use of internet technology. Migdadi (2008), views internet banking as quality service encounter of retail banks in Jordan and its quality dimensions that should be sustained to achieve specific purposes of the bank, that banks in Jordan should focus on providing a better service quality to their customers as a result of the impact of quality service delivery on the customers’ retention. In Aburime (2008) electronic payment includes systems that enable financial institutions, customer, individual and business to access accounts, transact business or obtain information on financial products and services through public or private networks including the internet. Customers access electronic banking services using an intelligent electronic device such as a Personal Computer (PC), Personal Digital Assistant (PDA), Automated Teller Machine (ATM), among others.

Electronic banking can be viewed as a system by which transactions are settled electronically with use of electronic gadgets such as ATMs, POS terminals, GSM Phones and v-cards etc handled by e-holders, bank customers and stakeholders. Banking over the internet has attracted increasing intention from banks and other financial services industry, from participants, the business press, regulators and law makers, both in Nigeria and other countries. According to Imiefoh (2012), refers to e-payment as the delivering services more effectively and in so doing, reinforces revenue increase, the goal is to ensure that a customer performs banking transactions electronically without physically visiting the brick-and-mortar institution.

Kumar (2016) defined electronic banking as the adoption of electronic means in the delivery of banking products and services. Such products and services include deposit taking, lending and payment products and provision of other electronic payment product and services such as electronic money.

In the researcher’s view, the “electronic payment products are those differentiated products or services but similar in modus operandi offered by the deposit money banks to meet the perceived needs and efficient service delivery demands of the customer, in order to contend with the competitive and dynamic banking environment”. Note that electronic banking and electronic products are two siamese twins that move together through technological systems,

also from the above definitions, the research defines the electronic banking as the delivery of banking products (intangible services) through the use of ATM, POS, Mobile Pay, Web Pay, SMS-Alert to the customers and banking public electronically to enhance corporate performance objective. According to Abaenewe et al (2013), e-payment 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 (EBS) is seen to be an innovative service delivery mode that offers diversified financial services like cash withdrawals, funds transfers, cash deposits, payment of utility, credit card bills, cheque book request, financial enquiries, (Oryeniron & Onikosi-Alliyu, 2016).

Electronic Mobile (*Mobile Pay*)

This product offers customer of a bank to access services as you go. Customers can make transactions anywhere, such as account enquiries, account balance check.

Electronic Direct (*Web Pay*)

Monetary values are measured in emergency units and stored in electronic form for the customers' possession. The customer uses it for huge transfers or purchases.

In recent times, the revolution of information technology all over the globe resulting in electronic banking has impacted tremendously on every facet of business life especially, banking sector. According to Onay et al (2008), the increased adoption and penetration of internet has recently redefined the play ground for retail banks. Also, the emergence of global economy, e-business and e-payment have substantially become the necessary component of business strategy and a strong catalyst for economic development, efficient service delivery, and effective wide reach-out to the customers and clienteles. Technology provides the platforms for the organizations to achieve this paradigm shift in their operations and act as their core competencies. In Nigeria, all deposit money banks are using e-payment facilities and are investing heavily in latest soft wares for improved service delivery to their teaming customers. The spread of e-payment has benefited the ordinary customer in general and corporate world in particular. The evolution of electronic banking has eroded the era of 'bricks and mortars' of banks, giving way for quality service delivery on which banks are leveraging on, to hedge against the competitive Nigerian banking industry.

However, electronic banking has been the most challenging issue to the banking industry going by its sophistication, complexity and volume of fraudulent practices associated with this form of banking in Nigeria. According to Ovie (2001), in the past few years, banking activities in Nigeria have increasingly depended on the deployment of information and communications technology, customers' insatiable appetite for efficient services has compelled financial institutions to fast-track to a more radical transformation of their business systems and models for embracing e-payment. E-payment appeal as well as its product development is fast growing, and the global acceptance has strongly encouraged its penetration. The success of e-payment using the delivery channels is consequent upon reliable and adequate data communication infrastructure. It is therefore, imperative for banks to invest in online transactions through the creation of networks and website. It is obvious that the modern day banking demands for voluminous tasks of information retrieval, data processing and storage for effective information management. It is believed that computer technology is the established tool for achieving a competitive edge and optimal resource allocation. The types of delivery channels in this study include. Electronic Mobile (Mobile

Pay), Electronic Direct (Web Pay). According to Yang et al (2005), the banking industry believes that by adopting the new technology e-payment, the banks will be able to improve customer service level and tie them closer to the banks.

Figure 1: Operational Conceptual Framework of Electronic Payment and quoted Financial Performance of Deposit Money Banks in Nigeria.

Empirical Review

Rabiu, Ladan, Usman and Garba (2019) evaluated the impact of E-banking on the operational efficiency of Banks in Nigeria, A case of Diamond Bank Plc, Bauchi branch, Nigeria. The study used primary sources of data collection. Questionnaires were used to obtained data. 138 questionnaires were distributed among customers of the Bank and the data collected where using regression analysis analysed. It is clear from the findings that, the use of E-banking (Internet and Mobile banking) by the banks has improved the efficiency of these Banks, in terms of providing efficient services to customers electronically, reduces time taken to serve customers, allows new customers to open an account online, customers have easy access to their account at all the time 24/7. Furthermore, E-banking provides access to customer's information from the data base and cost of cheque and postage was eliminated using E-banking. The study recommends that banks should try to update and improve their internet banking platform, as it has significant positive impact on the operational.

Gerpott (2018) in his study on the influence of e-payment on bank performance in South Africa over the period 2005 to 2015 using secondary data and ordinary least square estimation technique, found that attitude towards financial services and its usage is significantly affected by prior technological experience, personal banking experience and reference group influence. The study is further corroborated by Han, Keys and Li (2015), by noting that web benefits (information quality, information accessibility, information sharing, and transaction benefit) and web barriers (organisation barrier, trust, and legal support) are key factors influencing e-payment adoption by customers. Viewing financial services from the customer's point of view is an important step on the way towards a lasting solution (Saarijärvi, Mitronen & Yrjölä, 2014). He adds that the ease of use is the most important

aspect and adds that unfulfilled identified needs within clear consumer segments must form the basis upon which financial services must be built.

Theophilus, Ifionu and Nnamdi (2018) evaluated the influence of e-payment via Information and communication technology correlates on economic growth in Nigeria over the period of 2007 to 2016. The study employs the Stationarity test, Autoregressive Distributive Lag Model, Bond test and the causality test on data from 2017 World Bank Report. The results indicate that in the long run, all variables had elements of influence on Economic performance in Nigeria overtime. However, only Mobile Cellular phone Subscription showed a causal relationship with GDP per Capita Growth. In order to derive the full benefits of ICT, the issues of cyber security, electricity, cost of internet connectivity and ICT infrastructure must be addressed.

Mustapha (2018) evaluated the influence of E-payment technology on bank performance in Nigeria. The study adopts a new measure of bank performance—the sortino index; second, it relates market risk exposure of banks to electronic payment technologies; and third, it controls for “without effects” of these innovations on bank performance using interacting dummies. Based on the time dimensional and panel least square models, it finds that bank performance increased after the adoption of electronic payment technologies. Finally, its findings show that bank performance contradicts autoregressive and random walk processes and thus implies that investors should not be disturbed about previous bank performances but concerned about current bank resources.

Research Question and Hypotheses Development

The major question and hypotheses development of this empirical study is a derivative of the foregoing discourse, leading us predict a priori a positive relationship between e-payment and financial performance in Nigeria.

This empirical study provides answer to the following research question.

RQ₁: How does e-payment relate to financial performance of quoted banks in Nigeria?

However, the above research question give rise to two strong hypotheses stated in the null form that:

H₀₁: There is no significant relationship between web payment and return on equity of quoted banks in Nigeria.

H₀₂: Mobile payment does not significantly relate to return on equity of quoted banks in Nigeria.

Methodological Foundation

This section indicates the methodological foundation adopted to explore the relationship between e-payment and performance of quoted Deposit Money Banks in Nigeria. This study utilizes a cross sectional research design which is a combination of both cross-sectional and time-series design properties. Panel analysis permits the study of dynamics of change with short time series. We employed the simple random sampling technique and selected 16 banks due to lack of uniformity in inception of many e-payment in some of the excluded banks and the mergers and acquisition exercise in the others, the study only captures these activities for the period of 2007 – 2018.

Panel data regarding the variables of the study were source from Central Bank of Nigeria statistical bulletin, annual Central bank of Nigeria reports, Federal Inland Revenue Service, Financial annual reports and e-business units report of the quoted Deposit Money Banks. We utilized the Ordinary Least Square (OLS) of multivariate regression based Auto-Regressive Distributed Lag (ARDL), unit root test, panel co-integration, Granger causality test and panel dynamic error correction model (Banes jee et al 1993; Granges 1987; Abdullahi et al, 2012; Awe, 2012) with the aid of e-view version 10.

Model Specification

The model specification is based on the theory that e-payment contribute to financial performance. Specifically, the model from related empirical studies used by was adopted. The model specification was formulated in the following functional form as thus:

$$ROE_t = f(\lambda_1 WPAY_t, \lambda_2 MPAY_t) \text{-----(i)}$$

Expanding the functional form into mathematical model as thus:

$$ROE_t = \beta_0 + \beta_1 WPAY_t + \beta_2 MPAY_t \text{----- (ii)}$$

Introducing error term into mathematical model to arrive at econometric model as thus;

$$ROE_t = \lambda_0 + \lambda_1 WPAY_t + \lambda_2 MPAY_t + u_t \text{----- (iii)}$$

Where: ROEt = Return on Equity for the index of time periods

WPA_t = Web pay for the Index of time period

MPAY_t = Mobile pay for the Index of time period

λ_0 = Intercept term for the index of time period.

$\lambda_1 - \lambda_2$ = Regression shaped for the index of time period

t = The index of time period

u_t = Error term for the index of time period

Empirical Results and discussion

Descriptive Statistics

Table 2: Descriptive Statistics

	MPAY	WPAY	ROE
Mean	51.37500	54.55208	0.119786
Median	55.00000	55.00000	0.063500
Maximum	85.00000	90.00000	2.360000
Minimum	5.000000	5.000000	-0.050000
Std. Dev.	19.75518	20.77069	0.226252
Skewness	-0.382184	-0.346938	6.585106
Kurtosis	2.451820	2.268823	57.25791
Jarque-Bera	7.078065	8.128660	2.493900
Probability	0.029041	0.017174	0.495721
Sum	9864.000	10474.00	22.99900
Sum Sq. Dev.	74541.00	82401.48	9.777278
Observations	192	192	192

The study observes on the average that MPAY is the most patronized electronic payment outlet among sampled dimensions of outlets, followed closely by WPAY with an average value of 54.55 and MPAY with a mean score of 51.38. All Payment outlets show negative skewness. A negatively skewed data set has its tail extended towards the left. It is an

indication that both the mean and the median are less than the mode of the data set. The most volatile outlet based on standard deviation is the WPAY channel based on its standard deviation score of 20.77, followed by the MPAY (19.76). This implies that WPAY is riskiest e-product and could make negative or unpredictable contribution to the financial performance of the listed DMBs in Nigeria.

Jarque-Bera Test: Calculates kurtosis and skewness of the asymptotic data. Their values suggest that data obtained for all variables are normal. This implies the normality of the data and substantiates the validity of the regression results.

Panel Error Correction Model

To adjust for discrepancies between the long and short run equilibrium, the study carries out the error correction model as follows;

Table 3. Error Correction Model Estimate Test output

Cointegrating Eq:	CointEq1		
MPAY(-1)	-2.097182 (1.24324) [-1.01838]		
WPAY(-1)	-213.9876 (19.3554) [-11.2796]		
C	-7483621		
Error Correction:	D(ROE)	D(MPAY)	D(WPAY)
CointEq1	-0.412711 (0.08759) [-4.71185]	0.003830 (0.00254) [1.50567]	-0.000530 (0.00026) [-2.01938]
D(ROE(-1))	-0.738032 (0.17085) [-4.31983]	0.012249 (0.01871) [0.65483]	-0.006313 (0.00193) [-3.27178]
D(MPAY(-1))	-0.376805 (0.93647) [-0.40237]	-0.183610 (0.10253) [-1.79079]	-0.004476 (0.01058) [-0.42323]
D(MPAY(-2))	-0.962440 (0.64899) [-1.48299]	-0.000890 (0.07106) [-0.01252]	0.027464 (0.00733) [3.74715]
D(WPAY(-1))	4.214196 (7.75551)	0.944029 (0.84912)	-0.412711 (0.08759)

	[0.54338]	[1.11177]	[-2.31752]
D(WPAY(-2))	9.217044 (7.18244) [1.28327]	1.066824 (0.78638) [1.35663]	-0.007748 (0.08111) [-0.09552]
C	1960109. (2708725) [0.72363]	230578.0 (296567.) [0.77749]	-76127.18 (30590.6) [-2.48858]
R-squared	0.650621	0.705742	0.677967
Adj. R-squared	0.501805	0.423725	0.581251
Sum sq. residues	9.18E+15	1.10E+14	1.17E+12
S.E. equation	13828578	1514035.	156171.2
F-statistic	2.356069	1.130345	5.975926
Log likelihood	-1064.977	-932.2593	-795.9645
Akaike AIC	35.89923	31.47531	26.93215
Schwarz SC	36.31810	31.89418	27.35102
Mean dependent	-645097.9	75301.96	-92092.00
S.D. dependent	15478290	1532321.	216831.4
Determinant resid covariance (dof adj.)			
Determinant resid covariance			
Log likelihood			
Akaike information criterion			
Schwarz criterion			

The above Error Correction estimate shows that the out of equilibrium model can be adjusted back to equilibrium by 41.27% (-0.412711). This is upheld based on the anticipated negative assigned coefficient of the Error Correction estimate (CointEq1). Which is seen to be significant as the t-statistics of -4.71185 is greater than ± 1.98 or 2. The long run coefficient shows that subject to variations, only Web Pay (WPAY) showed significant t-statistics of -11.2796 respectively. This shows that in the long run, Web pay (WPAY) represents fundamental e-payment dimensions that significantly stimulate the ROE ratio of Deposit Money banks in Nigeria, whereas Mobile Pay (MPAY) showed no significant influence on profitability (ROE).

In summary; the study discovers an inverse but insignificant influence of Mobile Pay (MPAY) expenditure on Price to earnings ratio in the selected financial institutions. The study also discovers a negative and significant influence of Web Pay (WPAY) on Return on Equity in the selected financial institutions and it is seen that there existed a positive and significant relationship between Mobile Pay and ROE in the selected financial institutions. The implication of this, the researcher reasoned, is that, ROE does not reactive positively to the level of e-payment, especially in terms of the Mobile and Web pay since they have negative coefficients.

Hypotheses Testing

H₀₁: There is no significant relationship between Mobile Pay (MPAY) and Return on equity of deposit money banks in Nigeria.

The Error correction Model coefficient of -2.283537 shows a negative sign and its t-statistics of -1.83676 which is seen to be less than the standard tabulated value of ± 1.98 or 2 leads to the study not rejecting the null hypothesis. The study thus concludes that there is no significant relationship between Mobile Pay (MPAY) and Return on equity of deposit money banks in Nigeria. However, these findings discussed were not in conformity with results of Abaenewe., Ogbulu & Melugba (2013), Aranyossy (2018). But justified the findings of Barngetuny and Kimuton (2015) that examined the significant relationship mobile pay and return on equity of deposit money banks in Nigeria.

H₀₂: There is no significant relationship between Web Pay (WPAY) and Return on equity of deposit money banks in Nigeria.

The Error correction Model coefficient of -325.8053 shows a negative sign and its t-statistics of -16.8328 which is seen to be greater than the standard tabulated value of ± 1.98 or 2 leads to the rejection of the null hypothesis. The study thus concludes that there is a significant relationship between Web Pay (WPAY) and Return on equity of deposit money banks in Nigeria. The viewpoint learnt credence to the findings of Roy and Sinha (2014), Kaur and Pathak (2015) who justified with empirical evidence that E-payment relate positively and significantly to financial performance. Also, the finding is consistent with the finding of Premchand and Chandby (2015), Sani (2015), Antwi., Hamza and Bavoh (2015).

Concluding Remark and Recommendations

Despite the importance of the performance resources variable and e-payment, stakeholders also explained several major issues that worsened the implementation issues and hinder them from coordinating their e-payment implementation with business partners. We conclude that electronic payment have strongly, positively and significantly relate to financial performance quoted banks in Nigeria. Increased investments in e-payment lead to increased profitability and vice-versa.

However, based on this empirical findings and conclusion, the following recommendations are made for further follow up:

- i) Central Bank of Nigeria should provide adequate regulatory framework that will ensure customer protection and security of their transactions from cyber crimes and hackers.
- ii) The use of established information systems models in IS and technology related researches so that the needed factors to be examined would be properly investigated and addressed.
- iii) Commercial banks should improve and modernize its policies by ensuring that communication equipment, computer and other infrastructure to a large extent are managed by qualified staff to ensure that customer enjoy better internet experience.
- iv) The banks should perform more education and education and advertisement on electronic payments so that the Nigerian population will appreciate and use electronic products available. Cash and cheques must go through several processes which increases their risk of being lost or stolen. Such processes include transportation and counting. Most Nigerians are not aware of the benefits of e-payment, are therefore slow to adopt it. The banks should also be educated to

promote e-payments; training programme for senior management of the banks will assist in achieving this.

Limitation and Suggestion for Further Study

While this empirical study has produced interesting findings, it also has interesting limitation. This empirical study is based on country – specific data sets with findings that are more appropriate for developing countries with social and economic environments that are quite similar to Nigeria. Although targeting specific research subjects to precisely underpin the research factors that contribute to a situation, this fact may nevertheless limit the findings generalisability. Further comparability studies should be conducted between developed and less developing countries.

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