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## **E-Payment System Affect Hotel Performance. Implication of Network Coverage in Hospitality Sector**

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**ABSTRACT:** *The study focused on e-payment system and hotel performance. Implication of network coverage in hospitality sector. To achieve the objective of the study, survey research design was adopted. The researcher adopted primary data in getting the required information through the use of structured questionnaire. The population for this study is made up of 672 hotel employees in Umuahia Metropolis, Abia State, Nigeria. However, the sample size of the study is 250 after adopting Taro Yamane formula. The data generated from questionnaire administration were analyzed using frequencies, percentages and mean deviation while the hypotheses were tested using multiple regression analysis. The findings revealed that E-payment (Automated teller machine (ATM), Point of sales (POS) and mobile banking) has significant influence on hotel performance in form of customer patronage and sales volume. This study also concludes that electronic payment technology is essential for the hotel to have a global presence in terms of market expansion. This study concludes that electronic payment enhances cost reduction in the organization. Based on the conclusion, the study recommends that online receipting services mechanism should be adopted throughout the entire organization to allow effective payment process that will generate more revenues for the hotel chain. This study also recommends that hotels should allow the use of various electronic payment systems that are used in major hotels in the world including union pay, master card, visa and mobile money services, therefore, the hotel will be able to enhance its revenues streams.*

**KEYWORDS:** E-payment system, ATM transactions, POS transactions, Mobile banking transactions, hotel performance and customer patronage.

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## INTRODUCTION

Technology and e-payments have been one of the most significant obstacles every company faces in the internet age. Simplicity of payment helps consumers to buy, saving effort and time. Today, most companies, government departments and corporations have embraced electronic transactions to improve their profitability or efficiency in selling goods or services in areas such as credit card, banking, health insurance, automobile insurance, online auction, etc. E-payment systems allow financial institutions, businesses and the government to offer a diversity of payment options to their customers (Rozario, 2016). Electronic payment systems are replacing the old methods of payment that involved personal contact between buyers and sellers. E-payment systems help cut costs for businesses and consumers alike. Businesses save on production and manufacturing costs mostly due to a decrease in technical costs. The e-payment system is considered to be the foundation of e-commerce and one of its most important aspects. The viability of e-payment system depends on how it overcomes the practical and theoretical challenges facing various online payment methods (Otusanya and Lanwo, 2019).

Realization of effective and efficient retail payment system is dependent on among others; choice of payment method for consumers and businesses; convenience, reliability and security of the payment method, service quality, the level and structure of fees charged by financial institutions; taste and demographic; and technological advances which have improved the speed, convenience and flexibility of different payment systems (Zekos, 2014). E-payment is therefore considered convenient, safe as well as a secure method for payment of bills and other transactions by electronic means like card, telephone, the Internet, Electronic Mobile banking. Electronic payment are alternatives to consumers when it comes to paying bills and debts by cash, cheque and money order (Urumsah, 2015).

Survival of e-payment system in Nigeria is dependent on how available and resilient bank network that can carry large volume of electronic transaction is. The challenge is whether the Information and Communication Technology (ICT) systems and services on ground can effectively support successful realization of the set objectives. The availability of the systems must be guaranteed in case of failures and network disconnections. Results have shown that network failure caused inconveniences for users trying to make e-transactions (Babajide, Chinedu, & Ahmed, 2022). The reasons for the failure are due to, bank subscription to shared bandwidth, Internet Service Providers (ISP) link failure, human error, hardware failure, software failures, terrorism and natural disaster.

ISP outages are a reality today, and they will certainly continue into the future. Therefore, the reliability of a e-transaction cannot be left only in the hands of ISP instead banks should perform an accurate assessment of the current environment and a gap analysis to determine if the infrastructure, sites and production environment can scale to include a new, resilient infrastructure (Potharaju, & Jain, 2023).

Nonetheless, the introduction of information technology and the internet, payment systems have given rise to a new direction as electronic money is slowly substituting paper money as well as coins (Nguyen & Gopalaswamy, 2018). Andrieu (2016), acknowledges that bank notes and coins are slowly running out given the various modes of payment for transactions are viable systems perceived as better alternatives across the world. For instance, Nigeria's quest for transitioning from cash to cashless economy has been on the front burner. This is based on the principle that, for Nigeria to be among the world leading economies in the world, by 2020 electronic payment systems must be fully embraced. The transition of business from the ancient where there was need for physical contact to that of e-commerce is due to globalization and emerging technology (Esoimeme, 2018).

The options available to people when making electronic payments include: cheques, Electronic Funds Transfer (EFT), Automated Teller Machine (ATM), cards (debit, credit and smart), Electronic Purses/Wallets, Mobile Banking and Money Transfer Services, Telephone Banking, Personal Computer Banking, Digitized 'E-Cash' Systems, Electronic Cheque, Online/Internet Payments and Digital Person to Person (P2P) Payments. P2P exchange entails digital financial instrument like encrypted credit card numbers, electronic cheques, or digital cash backed by a bank or an intermediary, or by a legal tender (Pogodaeva & Baburina, 2018).

Performance is deemed as the heart of strategic thinking for every manager of hotels hoping to define and measure performance (Cao & Wang, 2014). The most critical question lingering in the business sector is why certain hotels post impressive performance while others dwindle in their performance, this has attributed to a research on the drivers of organizational performance as noted by Moser (2015) thus making the study to dwell on the drivers of outstanding performance in some hotels. Adewoye (2013), notes that performance measurement is one of the notable tools that accelerate firms when it comes to monitoring performance, identifying the areas in need of attention, promote motivation, refining communication as well as solidification accountability. A firm needs changes to conform to the information systems capabilities to gain competitive edge (Asongu, 2015). It is presumed that in order for a company to be successful for it to record high

returns and recognize propellers of performance from the top to the bottom of the company. Thus it is on this ground that this study aimed to examine how e-payment system affect hotel performance.

### **Objectives of the Study**

The general objective of the study is to examine how e-payment system affect hotel performance. Implication of network coverage in hospitality sector. The specific objectives of the study are to;

- (i) examine the effect of automated teller machine (ATM) on customer patronage in hospitality sector.
- (ii) determine the effect of point of sales (POS) on customer patronage in hospitality sector.
- (iii) ascertain the effect of mobile banking on customer patronage in hospitality sector.

## **LITERATURE REVIEW**

### **Conceptual Framework**

#### **E-Payment Systems in Nigeria**

E-payment systems are the instruments, organizations, operating procedures, information and communication systems employed to initiate and transmit payments from a payer to a payee and for settling payments that is, transfer money (Imafidon, 2013). The E-payments channels are the apparatus used to safely and efficiently transfer monetary value in exchange for goods and services as well as financial assets (Oloruntoyin and Olanloye, 2012).

In 2007, a survey conducted on Nigerian e-banking customers provided accurate and credible feedbacks on the performance of banks and their ratings in electronic banking; that is, first hands knowledge of banks performance across e-banking channels in different regions of the country. Firsthand knowledge of performance of the competition, information on the key drivers of excellent performance in e-banking channels that is ATM, Point of Sale, and cards; direct customers feedback on e-banking services and products in Nigeria. Okafor (2018), perceives the ATM as an electronic device which allows a financial institution's customer to use a secured method of communication to access their accounts, make cash withdrawals or cash advances using credit cards and checking their account balances without need for human teller or cashier.

E-payments systems are becoming popular among banks and non-bank financial institutions in Nigeria (Ebulu, 2018). ATM Point of sales (POS), are still evolving and that various banking services rendered by Nigerian banks is mostly limited to the traditional services. Ebulu (2018)

asserts that in the banking industry, customers are gradually coming to terms with the arrays of products vaunted by banks in their bid to offer convenient banking services to their customers. On daily basis depositors are inundated with an array of service options which they are encouraged to embrace as they canvass ease access to cash as well as deepen their relationship with the banks and of course the fad is paying off. Through the e-banking payment channels customers may deposit cash, transfer money, recharge GSM prepaid account, credit postage stamp and so on and so forth. According to Atteh (2012), payment systems are related collection of structure of instruments for settling payments and transactions or part thereof. Although the system work together but each of the instruments share attributes of being exchangeable with one another through substitution and convertibility mechanisms.

### **Channels of E-payment**

Some outstanding e-payment channels recognized by different scholars include mobile banking, internet banking, telephone banking, Automated Teller Machine (ATM) and Point of Sales (POS). For this study, however, mobile banking, internet banking, telephone banking and Point of Sales (POS) are adopted.

#### **i. Point of Sale (POS) Terminal**

Point of Sale terminals are deployed to merchant locations where users slot their electronic cards through POS in order to make payments for purchases or services instead of using raw cash. As the POS terminals are online real-time, the customer's bank account is debited immediately for value of purchases made or services enjoyed. The Point of Sale (POS) terminals which allow merchants access to card payments for sale of products and services e.g recharge cards, bill payments, lottery tickets etc and finally there is electronic mobile banking through which hotel customer can transfer money electronically from his account to other account. Some hotels also allow an instant electronic mobile banking service. However, most of these e-payment channels require customers to have an ATM/Debit card (Eiya and Otor, as cited in Kim and Koo, 2022). You find it in supermarkets, hotels, filling stations, shops etc. A charge known as Merchant Service Charge (MSC) is charged on all transactions done on POS terminals; this charge is borne by the merchant. POS machines are central to a store's operation. These days, there are also virtual POS interfaces that allow micro and small business owners to make use of all the functions of a POS machine without having to invest in a physical register (Ozuomba, Ofor and Okoye, 2016).

## **ii Automated Teller Machine (ATM)**

This is an automated teller machine that dispenses cash and basically performs all other functions done by physical cash. A personal identification number (PIN) has to be entered along with credit or debit card to access cash. Some ATMs will allow for cash deposits and bill payments.

It is a cash point that can be used to withdraw cash or do Transfers. A debit card or credit card is used at the machine to withdraw cash. The CBN has stipulated 72 hours for responding to ATM complaints by banks should there be any error in transactions, failing which the customer can escalate to the CBN. The CBN is also trying to establish a card arbitration panel that will act as a payments system ombudsman to fast track resolution of disputes. We should also note that card fraud particularly at the ATM have reduced drastically with the migration of cards to adopt the chip and PIN technology.

ATM services have become a great facilitator of quick small cash withdrawals and transfers. Hotels today accept payment made through ATM transactions. It has brought a lot of ease in business operations, especially for the small businesses which hotel is part of (Onyekwelu & Nnabugwu, 2018). In Nigeria, Ali & Kalu, (2016) reported a positive impact of ATMs on easy service delivery in hotels (Omotayo and Dahunsi, 2015).

Fraudsters often dupe the less-educated customers via their ATM cards. Banks need to ensure that ATM services balance the quality of customer services on the one hand and accessibility, convenience, innovation, speed, and security. Customers still worry about online banking and ATM insecurity based on what they hear and read in the tabloids about cybercrimes (Agwu & Agumadu, 2016). This study focused on onsite ATM, offsite ATM, and bio-metric ATM to understand the effect of ATM services on entrepreneurship development. Onsite ATM is the ATM installed within the bank premises. Onsite ATM is always helpful for the customers who frequently visit the branch. Offsite ATM refers to the installation of ATM facilities at places that are the center of business, railway stations, hospitals, markets, and big institutions located far away from the bank branch. Some hotels today have ATM machines installed in the business premises. Bio-metric ATMs accommodate illiterate persons who cannot read the instructions on the ATM screen and use their thumb or fingerprints in place of a PIN for availing hotel businesses (Aremu, Olusoga, and Egbekul, 2015).

### **iii. Mobile Banking**

Mobile banking refers to the provision of banking and financial services with the help of mobile telecommunication devices. It is a system that allows customers of financial institutions to conduct a number of financial transactions through a mobile device such a mobile phone. It involves the use of mobile phone for settlement of financial transactions. Services covered by this product include account enquiry, funds transfer, phone vending, changing password, and bill payments (Siyabola, as cited in Kumar, 2020). The major transaction in hotel industry today takes part using mobile banking. Customers use their phones to transfer money or make payment for goods and services purchased. Due to the cashless policy, most hotel customers do not bother going to hotel with physical cash. Once there is money in their account, they can offset their bills using mobile banking.

### **iv. Internet Banking**

It is an electronic payment system that enables customers of hotels to conduct a range of financial transactions through the financial institution's website via electronic devices like mobile phones, I pads, laptops, Desktops e.t.c right at the comfort of their homes, offices and other places of convenience. It enables enterprises to access their accounts and general information on bank products and services through banks websites (Onyekwelu & Nnabugwu, 2018; Nwankwo & Ifejiolor, 2018). In Kenya, Kombe & Wafula (2015) found a positive impact of internet banking on the financial performance of financial institutions. A study by Ohiani (2020) shows that innovation adoption, service quality, and cybercrime have a significant relationship with the competitiveness of hotels and the perception of customers towards online services in Nigeria. New technologies transform how hotels operate and add value to both existing and new markets (Nwankwo, Kanyangale, and Abugu, 2019). It is also crucial in creating opportunities that expand the firms beyond the current size of operation, range of activities and geography. However, educated and uneducated customers in Nigeria still fear that cybercrime is predominantly committed via e-banking platforms (Ohiani, 2020). Insecurity is a significant threat to e-transactions because of its potential to cause financial risks, illegitimate access to customers' identity details and losses to banks (Onyekwelu & Nnabugwu, 2018).

Internet banking is also referred to as online banking. It involves conducting banking transaction on the internet using electronic tools such as the computer without visiting the banking hall. Internet banking, like mobile banking, uses the electronic card infrastructure for executing payment instructions and final settlement of goods and services over the internet between the hotel merchant and the customers (Siyabola, 2013).

### **Benefits of E-Payment on Hotel Performance**

The notable benefits highlighted include: global customer presence and convenience, cost reduction and internal revenue control mechanisms.

#### **Global customer presence and Convenience**

Wonglimpiyarat (2017) reckons that investment in electronic payment system is not in vain. The hospitality institutions and banks which both fall under service industry being able to realize global reach where they are no longer limited to clients who can reach them physically. This culminates into high revenue stream. Exchange of emails and other electronic messages to customers ensure better customer service since complaints and inquiries are quickly handled. The service industry is also spared office space booking and hiring shop assistants hence low capital cost. Mass customization is also possible through online transaction systems (Greenwood, 2014). Frequent customer communication makes it possible to come up with mass customize products or services with reduced time to market reach. It is also easy to pick on a specific target group and direct marketing towards them. Thus it is possible to have add-on services to basic services, or add-on options to products that they are supporting (Kaushik & Rahman, 2014).

Likewise, customers enjoy convenience given that they need not visit service institutions like hotels physically in order to seek service instead they can place their orders online and pay electronically. This saves a lot of time. Furthermore, the institutions would be available 24/7. The internet and World Wide Web are communication media containing a lot of financial related information (Idun & Aboagye, Bank competition, financial innovations and economic growth in Ghana, 2014). Some sites, like Amazon.com, carry product reviews and mode of payment that could help customers get a better picture of themselves and what they need. Competitive pricing has benefited customers because many charges on online transactions were dropped. The various financial bouquet offered to customers can easily be customized to meet customers' individual needs as compared to physical products (Rozario, 2016).

### **Theoretical Framework**

#### **Innovation Diffusion Theory**

This theory developed by Roger in 1983 explains individuals' intention to adopt a technology as a modality to perform a traditional activity. The critical factors that determine the adoption of an innovation at the general level are the following: relative advantage, compatibility, complexity, trialability and observability. It is concerned with the manner in which a new technological idea, artefact or technique, or a new use of an old one, migrates from creation to use. According to (IDT)



theory, technological innovation is communicated through particular channels, over time, among the members of a social system. The stages through which a technological innovation passes are: knowledge (exposure to its existence, and understanding of its functions); persuasion (the forming of a favourable attitude to it); decision (commitment to its adoption); implementation (putting it to use); and confirmation (reinforcement based on positive outcomes from it) (Steve, 1996).

Important characteristics of an innovation include: relative advantage (the degree to which it is perceived to be better than what it supersedes); compatibility (consistency with existing values, past experiences and needs); complexity (difficulty of understanding and use); trialability (the degree to which it can be experimented with on a limited basis); observability (the visibility of its results). Different adopter categories are identified as: innovators (venturesome); early adopters (respectable); early majority (deliberate); late majority (skeptical); laggards (traditional).

Important roles in the innovation process include: opinion leaders (who have relatively frequent informal influence over the behavior of others); change agents (who positively influence innovation decisions, by mediating between the change agency and the relevant social system); change aides (who complement the change agent, by having more intensive contact with clients, and who have less competence credibility but more correctness or trustworthiness credibility).

Studies on E-payment used this theory to explain the adoption of e-payment by businesses and customers and how it affects business performance.

### **Technology Acceptance Model (TAM)**

Mobile payment service is essentially information technology. The intention to use mobile payment services will be partly explained by TAM (Technology Acceptance Theories) as introduced by Davis (Davis, 1989). Therefore, this model was selected as the appropriate basic model in this study. Many experiments have shown that this model strongly explains the adoption of information technology. The TAM model proposes two factors that influence consumers' intention to use new tools; they are considered easy to use and useful. The mobile payment procedure applied by information technology proves that the higher the usefulness, the easier it is to use, the more users will be. Both factors affect a person's attitude towards using the system, influencing the intention to use behavior (intent to use, IU). TAM model is aided in resolving key challenges in relation to the field of information technology. To make a decision in the adoption of any new technology by an individual or group is complicated and end results are the adoption or rejection of the technology (Surendran, 2012). The important factors underlying the acceptance

of technology are determined by the attitude and intention of using the product. This, in turn, depends on the use as well as the ease to use the product and thus the satisfaction of customers.

The usage of cashless payment services is still a challenge for most of the consumers in Nigeria due to lack of knowledge and learning about the usage or application of such services. As per the survey conducted by (Surendran, 2012), about 44% of the urban population is using cashless payment services while only about 16% of the rural population is using cashless services in Nigeria. Hence, it could be cited that lack of understanding about the applicability of the cashless services many individuals especially in rural areas is not able to adopt cashless services. Another major challenge is the development of trust. Many people do have faith and trust that the payments done by using cashless services. The consumers still feel that they might get cheated, experience theft or lose their money to hackers or other security threats while using cashless payment services.

### **Empirical Studies**

Taiwo, Ayo, Afieroho, and Agwu (2017) in their study appraised the implementation of the cashless policy since its introduction into the Nigerian financial system in 2012 and also to examine the persistent challenges facing its implementation. In view of the above-stated objective, primary data were collected with the aid of the questionnaire, which was randomly administered to 120 respondents ranging from First Bank, Zenith Bank and United Bank for Africa. The banks were selected based on their total assets and the information collected covered the activities of the CBN and that of these banks towards implementation of the cashless policy from 2012 to date. The data collected were presented and analyzed with the aid of the Statistical Package for Social Sciences (SPSS) using descriptive statistics and one-sample t-test. The results led to the conclusion that despite the need to operate cashless transactions dominating the modern Nigerian economy, the cashless policy will have the desired impact only if a lot is done to ensure the implementation of an effective cashless system. This study is related to the present study since both studies focused on cashless policy. However, this study centered on implementation and challenges of cashless policy in Nigeria whereas the present study focused on how cashless policy affect t hotel business operation.

Obiekwe and Anyanwaokoro (2017) in their study investigated the effect of Electronic Payment Methods (EPM) on the profitability of commercial banks in Nigeria. In order to achieve the broad objective, the study specifically investigated the effect of Automated Teller Machine (ATM), Point of Sale (POS) and Mobile Payment (MPAY) on the profitability of commercial banks in Nigeria. A total sample of five (5) banks was considered for the period 2009 to 2015 and the study adopted the Panel Least Squares (PLS) estimating technique as the analytical tool. Data were

collected from Central bank of Nigeria (CBN) Statistical Bulletin and Annual Reports and Statements of Accounts of the five banks used in the study. Findings revealed that Automated Teller Machine (ATM) and Mobile Phone payment have a significant effect on the profitability of commercial banks in Nigeria. However, Point of Sale (POS) has an insignificant effect on commercial banks' profitability in Nigeria. This study is related to the present study since both studies focused on electronic payment (cashless policy). However, this study centered on commercial banks while the present study focused on hotel business operation.

Ewa and Inah (2016), investigated 'Evaluating Nigeria Cashless Policy Implementation using Simple percentages and Relative Important Index (R.I.I), found using a four-point Likert scale questionnaire administered to six hundred respondents. The results of the study show that the twin policy objectives investigated were partially achieved. Also, the study reveals that social infrastructures in power and telecommunications need improvement and expansion and the need to create more awareness to encourage the unbanked to embrace banking culture. This study is related to the present study since both studies focused on cashless policy. However, this study majored on the implementation of the cashless policy while the present study focused on customer usage of cashless policy and how it affects their patronage.

Morufu (2016) in their study examined the impact of four (ATM, POS, web/Internet and mobile) e-payments adoption and banks specific variables on the profitability of the Nigerian Deposits Money Banks (DMBs). Secondary data were obtained from the annual report and accounts often quoted(DMBs) between 2005 and 2012. Data were analyzed using panel logistic regression. The overall result from data analysis shows that when bank adopts e-payment systems, their performance level, such as gross margin, profits after tax, return on assets and return on equity changes. This is reflected in the positive association between adoption and gross earning of banks. Further, adoption of the four epayment instruments like ATM, WEB, POS and Mobile banking influenced performance indices measured by return on assets (ROA), gross margin and profits after tax (PAT) of the sampled banks. This study is related to the present study because both studies focused on cashless policy. However, this study focused on bank profitability while the present study focused on hotel business operation and guest patronage.

Umanhonlen, Umanhonlen, and Omoruyi (2015) appraised the impact of e- banking and cashless society in the Nigerian economy. The study explores various aspects of e-banking and cashless economy using the banking sector of the Nigerian economy as a focal point. Specifically, the paper articulates empirical opinions that highlight the possible ways these policy measures have

direct links to beneficiaries and the weighted outcomes when divergence is noticed and how to bring back the soundness, sustainable and rebranding policy that ensures economic growth. The paper holds that for a sustainable cashless society to emerge all hands must be on deck; banks should de-emphasize all odds and ensure that efficiencies of e-banking mechanisms are of utmost priority. This study is related to the present study since both studies focused on cashless policy. The difference is this study focused on how the cashless policy affects Nigeria economy whereas the present study focused on how the cashless policy will affect both guest patronage and hotel business operation.

## **METHODOLOGY**

### **Philosophical Assumption**

This research aims to explain the relationship between two variables (e-payment system and hotel performance), evaluate the variables, and draw conclusions based on the findings. The positivist paradigm is used. During this research work, a deductive approach was adopted. The quantitative research method was used to gather and analyze data in this study. Because this research involved testing hypotheses and the data acquired was tested using statistical techniques, quantitative research was used.

### **Research Approach and Strategy.**

A positivistic method to quantitative research typically posits that hypotheses/assumptions are derived from some theoretical or imaginary concept, making it deductive in nature, which is occasionally referred to as theory testing. Because the goal is to see if current theoretical frameworks can be applied to our empirical study data, deductive research approach was adopted on this article titled “E-payment system and hotel performance.

### **Research Hypotheses**

The following null hypotheses were be tested in the course of this study

For the purpose of the study, the following hypotheses stated in null form will be tested

**H0<sub>1</sub>:** Automated teller machine (ATM) has no significant influence on customer patronage in hospitality sector.

**H0<sub>2</sub>:** Point of sales (POS) has no significant influence on customer patronage in hospitality sector.

**H0<sub>3</sub>:** Mobile banking has no significant influence on customer patronage in hospitality sector.

### **Data Collection**

The survey research design was used in this study. This is a quantitative approach of data collection from a group of people by asking them question relating to e-payment system and hotel performance. The usage of a survey in data gathering is focused toward answering the research questions inherent in the project in order to meet the research's goals and objectives. This helped in the development of remedies to the identified issue. To generate data from respondents, questionnaire instrument was used. Closed ended questions on a four -point scale was used to create the questionnaire. In addition, the questions are well-structured. The close ended includes; Strongly Agreed (SA) = 4, Agreed (A) = 3, Disagreed (D) = 2 and Strongly Disagreed (SD) =1.

### **Sample Size**

The sample size of the study is 250 selected staff of selected hotels in Umuahia, Abia State, Nigeria. Only available staff were evaluated, and convenient sampling method were used.

### **Data Analysis Techniques and Procedures**

Descriptive statistics was used to summarize the gathered data in a clear and understandable manner using a numerical technique. To test hypotheses, multiple regression analysis was used.

### **Regression model**

$$CP_{it} = \beta_0 + \beta_1 ATM_{it} + \beta_2 POS_{it} + \beta_3 MB_{it} + u_{it} \dots\dots\dots(i)$$

Where:

CP= Customer patronage

ATM = Number of ATM transactions

POS = Number of POS transactions

MB = Number of mobile banking transactions

## **DATA ANALYSIS AND DISCUSSIONS**

### **Data Presentation**

This study focused on e-payment system and hotel performance: the implication of network coverage in hospitality sector. ATM transactions, POS transactions and mobile banking were used as measures for E-payment which represents the independent variable while customer patronage was used to measure hotel performance which represents the dependent variable. The data were analyzed using multiple regression analysis.

## Data Analysis

This section analyzed the data presented in the previous section with the aid of statistical package for social sciences (SPSS, version 22). The analysis of data is presented in the subsequent sections:

### Descriptive statistics

The descriptive statistics for both the dependent and independent variables are presented in table 4.1 below:

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ATM	250	1.00	4.00	3.3398	.85601
POS	250	1.00	4.00	3.3495	.91288
MB	250	1.00	4.00	3.4563	.80579
CP	250	1.00	4.00	3.2330	.79270
Valid N (listwise)	250				

**Source: SPSS Version 22 Output (Appendix 2A)**

Table 4.1 presents the descriptive statistics of all the variables. N represents the number of observations and therefore the number of observation for the study is 206.

ATM transaction has a mean of 3.3398 with a deviation of 0.85601. The ATM transactions also revealed a minimum and maximum value of 1.0 and 4.0 respectively. The result revealed the value of 3.3495 and 0.91288 as mean and standard deviation values for POS transactions. It also revealed a minimum and maximum value of 1.0 and 4.0 respectively for POS transactions. Mobile banking transactions (MB) has the minimum value is 1.0 while the reported maximum value is 4.0. Again the mean value recorded is 3.4563 with a standard deviation is 0.80579 which explains that mobile banking transactions can influence the level of customer patronage. Finally, customer patronage (CP) revealed a minimum and maximum value of 1.0 and 4.0 while its' mean and standard deviation is 3.2330 and 0.79270.

**Research Question 1:** What is the effect of automated teller machine (ATM) on customer patronage in hospitality sector?

**Table 4.2:** Mean responses on the effect of automated teller machine (ATM) on customer patronage in hospitality sector.

S/ N		SA	A	D	SD	Total No	Total score	Mean	Remark
1	Automated teller machine (ATM) affect customer patronage in hospitality sector	100	80	20	6	206	686	3.33	Accept
2	Easy transaction through ATM enhances customer patronage in hospitality sector	90	90	26	0	206	682	3.31	Accept
3	Convenient transaction using ATM guarantees customer patronage in hospitality sector	112	84	24	6	206	754	3.66	Accept
4	Speedy transaction using ATM guarantees customer patronage in hospitality sector	94	86	26	0	206	686	3.33	Accept
						Grand	Mean	<b>3.41</b>	
						d			

Note: SA=strongly agreed, A= agreed, D=disagreed, SD= strongly disagreed

It was shown above that automated teller machine (ATM) affect customer patronage in hospitality sector, easy transaction through ATM enhances customer patronage in hospitality sector, convenient transaction using ATM guarantees customer patronage in hospitality sector, Speedy transaction using ATM guarantees customer patronage in hospitality sector. This is because all the items have mean greater than 2.5 which is the criterion mean. The grand mean of 3.39 implies that automated teller machine (ATM) influences customer patronage in hospitality sector.

**Research Question 2:** What is the effect of point of sales (POS) on customer patronage in hospitality sector?

**Table 4.3** mean responses on the effect of point of sales (POS) on customer patronage in hospitality sector.

S/ N		SA	A	D	SD	Total No	Total score	Mean	Remark
1	Point of sales (POS) affect customer patronage in hospitality sector	100(48.5%)	80(38.8%)	20(9.7%)	6(2.9%)	206	686	3.33	Accept
2	Easy transaction through POS enhances customer patronage in hospitality sector	90(43.7%)	90(43.7%)	26(12.6%)	0	206	682	3.31	Accept
3	Convenient transaction using POS guarantees customer patronage in hospitality sector	112(54.4%)	84(40.8%)	24(11.7%)	6(2.9%)	206	754	3.66	Accept

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4	Speedy transaction using POS guarantees customer patronage in hospitality sector	94(45.6%)	86(41.7%)	26(12.6%)	0	206	686	3.33	Accept
<b>Grand Mean</b>								<b>3.41</b>	

Note: SA=strongly agreed, A= agreed, D=disagreed, SD= strongly disagreed

The table above shows that point of sales (POS) affect customer patronage in hospitality sector, easy transaction through POS enhances customer patronage in hospitality sector, convenient transaction using POS guarantees customer patronage in hospitality sector, Speedy transaction using POS guarantees customer patronage in hospitality sector. This is because all the items have mean greater than 2.5 which is the criterion mean. The grand mean of 3.41 implies that point of sales influences customer patronage in hospitality sector.

**Research Question 3:** What is the effect of mobile banking on customer patronage in hospitality sector?

Table 4.4: mean responses on the effect of mobile banking on customer patronage in hospitality sector

S/N		SA	A	D	SD	Total No	Total	Mean	Remark
1	Mobile banking affect customer patronage in hospitality sector	84(41%)	95(46)	25 (12%)	2(1%)	206	698	3.39	Accept
2	Easy transaction through mobile banking enhances customer patronage in hospitality sector	76 (37%)	91 (44%)	39(19 %)	-	206	655	3.18	Accept
3	Convenient transaction using mobile banking guarantees customer patronage in hospitality sector	84(41%)	95(46)	25 (12%)	2(1%)	206	698	3.39	Accept
4	Speedy transaction through mobile banking guarantees customer patronage in hospitality sector	70 (34%)	120 (58%)	10 (5%)	6 (3%)	206	666	3.23	Accept
<b>Grand mean</b>								<b>3.30</b>	

Note: SA=strongly agreed, A= agreed, D=disagreed, SD= strongly disagreed

The result in question three shows that mobile banking affect customer patronage in hospitality sector, easy transaction through mobile banking enhances customer patronage in hospitality sector, convenient transaction using mobile banking guarantees customer patronage in hospitality sector, speedy transaction through mobile banking guarantees customer patronage in hospitality sector. This is so because the items have mean value greater than 2.5 which is the criterion mean. It is also



supported by grand mean which has the value of 3.30. This implies that unemployment rate influences customer patronage in hotels.

## DATA ANALYSIS

### Effect of E-payments on customer patronage in hospitality sector.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.886 <sup>a</sup>	.850	.815	.19798

a. Predictors: (Constant), ATM, POS, Mobile Banking

**ANOVA<sup>a</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	126.296	3	42.099	979.047	.000 <sup>b</sup>
	Residual	10.556	247	.043		
	Total	136.852	250			

a. Dependent Variable: PROFITABILITY

b. Predictors: (Constant), ATM, POS, Mobile Banking

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.074	.069		-1.082	.281
	ATM	.987	.051	.940	19.340	.000
	POS	.020	.083	.017	5.236	.003
	MOBILE BANKING	.019	.073	.016	5.256	.010

a. Dependent Variable: PROFITABILITY

The study analyzed the influence of economic recession on customer patronage in hotels. The coefficient of determination R-square of 0.850 implied that 85.0% of the sample variation in the dependent variable (customer patronage) is explained or caused by the explanatory variables (ATM transactions, POS transactions and mobile banking transactions) while 15.0% is unexplained. This remaining 15.0% could be caused by other factors or variables not built into the model. The value of R-square is an indication of a relationship between the dependent variable (customer patronage) and independent variable (ATM transactions, POS transactions and mobile banking transactions). The value of the adjusted R<sup>2</sup> is 0.815. This shows that the regression line which captures 81.5 per cent of the total variation in customer patronage is caused by variation in the explanatory variable (ATM transactions, POS transactions and mobile banking transactions) specified in the model with less than 18.5 per cent accounted for the stochastic error term. The F-statistic was also used to test the overall significant of the model. The F-value of 979.047 is an indication that the model is statistically significant at 5 percent level of significant.

## TEST OF HYPOTHESES

### Hypothesis One

**H0<sub>1</sub>:** Automated teller machine (ATM) has no significant influence on customer patronage in hospitality sector.

The T-statistic has the value of 19.340 with the probability of 0.00% level of significance. Since the probability of the T-statistics is below 5% level of significance, we would reject the null hypothesis, H<sub>0</sub> and therefore conclude that automated teller machine (ATM) has a significant influence on customer patronage in hospitality sector.

### Hypothesis two

**H0<sub>2</sub>:** Point of sales (POS) has no significant influence on customer patronage in hospitality sector.

The T-Statistic with 5.236 has probability of 0.003% level of significance. Since the probability of the T-statistics is below 5% level of significance, we would reject the null hypothesis, H<sub>0</sub> and therefore conclude that point of sales (POS) has a significant influence on customer patronage in hospitality sector.

### Hypothesis three

**H0<sub>3</sub>:** Mobile banking has no significant influence on customer patronage in hospitality sector.

The T-statistic with 5.256 has probability of 0.010% level of significance. Since the probability of the T-statistics is below 5% level of significance, we would reject the null hypothesis, H<sub>0</sub> and

therefore conclude that mobile banking has a significant influence on customer patronage in hospitality sector.

## **DISCUSSION ON FINDINGS**

The findings revealed that E-payment (ATM, POS and mobile banking) has significant influence on hotel performance in form of customer patronage and sales volume. The finding is consistent to the findings of Oyewole, Abba, Gambo and Arikpo (2013) who investigated the impact of electronic hotel performance in Nigeria. The result from pooled OLS estimations indicate that e-banking begins to contribute positively to hotel performance in terms of profitability. Obiekwe and Anyanwaokoro (2017) in their study investigated the effect of Electronic Payment Methods (EPM) on the profitability of commercial banks in Nigeria. Findings revealed that Automated Teller Machine (ATM) and Mobile Phone payment have a significant effect on the profitability of commercial banks in Nigeria. However, Point of Sale (POS) has an insignificant effect on commercial banks' profitability in Nigeria. This study is related to the present study since both studies focused on electronic payment (cashless policy). Ewa and Inah (2016), investigated 'Evaluating Nigeria Cashless Policy Implementation using Simple percentages and Relative Important Index (R.I.I), found using a four-point Likert scale questionnaire administered to six hundred respondents. The results of the study show that the twin policy objectives investigated were partially achieved. Also, the study reveals that social infrastructures in power and telecommunications need improvement and expansion and the need to create more awareness to encourage the unbanked to embrace banking culture.

Morufu (2016) in their study examined the impact of four (ATM, POS, web/Internet and mobile) e-payments adoption and banks specific variables on the profitability of the Nigerian Deposits Money Banks (DMBs). The overall result from data analysis shows that when bank adopts e-payment systems, their performance level, such as gross margin, profits after tax, return on assets and return on equity changes. This is reflected in the positive association between adoption and gross earning of banks. Further, adoption of the four epayment instruments like ATM, WEB, POS and Mobile banking influenced performance indices measured by return on assets (ROA), gross margin and profits after tax (PAT) of the sampled banks.

## **CONCLUSION AND RECOMMENDATION**

### **Conclusion**

The study focused on e-payment system and hotel performance. Implication of network coverage in hospitality sector. The specific objectives are: examine the effect of automated teller machine (ATM) on customer patronage in hospitality sector, to determine the effect of point of sales (POS) on customer patronage in hospitality sector, to ascertain the effect of mobile banking on customer patronage in hospitality sector, to examine the effect of automated teller machine (ATM) on sales volume in hospitality sector and to determine the effect of point of sales (POS) on sales volume in hospitality sector and to ascertain the effect of mobile banking on sales volume in hospitality sector. Chapter two is grouped into three subheadings; conceptual framework, theoretical framework and empirical review. Data were collected through the use of structured questionnaire from the selected hotels. Data collected were analyzed using frequencies, percentages, and multiple regression analysis. The result revealed that e-payment (ATM, POS and mobile banking) has significant influence on hotel performance in form of customer patronage and sales volume.

E-payment systems allow financial institutions, businesses and the government to offer a diversity of payment options to their customers. Electronic payment systems are replacing the old methods of payment that involved personal contact between buyers and sellers. E-payment systems help cut costs for businesses and consumers alike. Businesses save on production and manufacturing costs mostly due to a decrease in technical costs. The e-payment system is considered to be the foundation of e-commerce and one of its most important aspects. The viability of e-payment system depends on how it overcomes the practical and theoretical challenges facing various online payment methods. This study concludes that e-payment technology enhances convenience. This is crucial for the hotel to influence more sales from various markets since it allows customers to make payment of services at their own comfort. This study also concludes that electronic payment technology is essential for the hotel to have a global presence in terms of market expansion. This study concludes that electronic payment enhances cost reduction in the organization.

### **Recommendations**

Based on the study, the following recommendations were made:

- (i) This study recommends that online receipting services mechanism should be adopted throughout the entire organization to allow effective payment process that will generate more revenues for the hotel chain.

- (ii) This study also recommends that Hotels should allow the use of various electronic payment systems that are used in major hotels in the world including union pay, master card, visa and mobile money services, therefore, the hotel will be able to enhance its revenues streams.
- (iii) Security concerns is a major concern for an effective adoption of electronic payment services and it has a serious impact on the company revenues. Therefore, Hotels should offer a secure option that is highly protected from fraud for customers to make payments electronically. Also, hotels should offer security guidelines and instructions that will protect customers when making electronic payments in the hotel.
- (iv) Hotel should integrate payments into the booking engine to allow an effective payment process for customers to take place. Hotels should also offer multiple payment options to customers including: - PayPal, Skrill, iPay, PesaPal, Jambo Pay, among others.
- (v) Finally, the study recommends that hotels should make available good network coverage that would speed up e-payment transactions. This is because poor network coverage has always been a challenge to e-payment transactions.

## REFERENCES

- Adewoye, J. O. (2013). Impact of mobile banking on service delivery in the Nigerian commercial banks. *International Review of Management and Business Research*, 17(4), 6-14.
- Alexander E. (2022). The End of Cash? <http://online.barrons.com/article/SB50001424052748704723404578199742128875044.html>
- Al-Hawar, M. (2014). The effect of automated service quality on bank financial performance and the mediating role of customer retention. *Journal of Financial Services Marketing*, 4(2), 1-9.
- Altendorf, A., & Schreiber, J. (2015). Assistive technology in dementia care: methodological issues in research design. *Journal of Assistive Technologies*, 5(1), 1-6.
- Andrieu, M. (2016). The future of e- money: main trends and driving forces. *Foresight*, 3(5), 79-111.
- Asongu, S. (2015). The impact of mobile phone penetration on African inequality. *International Journal of Social Economics*, 26(1), 113-145.
- Azam, S. (2015). *Diffusion of ICT and SME Performance*. London: SAGE Publications .
- Babajide, K., Chinedu, I. and Ahmed, I. (2022). Cashlite Lagos stumbles as network failure grounds PoS transactions vanguard Monday, 12:34
- Barnes, & Corbitt, B. (2013). Mobile banking: concept and potential. *International Journal of Mobile Communications*.

- Bisi, O. (2022). Bombing: Over N3.9trillion telecoms infrastructure under threat. Daily Sun September 11, 2022
- Cao, J., & Wang, W. (2014). A hybrid model using analytic network process and gray relational analysis for bank's IT outsourcing vendor selection. *International Journal of Bank Marketing*, 17(3), 1-10.
- Charles, B., Seth, K., & Darmoe, J. (2017). The role of positioning in the retail banking industry of Sub-Saharan Africa. *International Journal of Bank Marketing*.
- Cisco (2018). How CAPNet Achieved High Availability, Cisco IT Best Practices.
- Cooper, D., & Schindler, P. (2014). *Business Research Methods*. New York: Mc Graw-Hill Education.
- Dasgupta, S. (2014). Factors affecting behavioral intentions towards mobile banking usage. *Empirical evidence from India. Romanian journal of marketing*, 17(2), 8-21.
- Eromosele, A. and Obina C. (2022). Cashless Policy: A Burden or Relief? April 25, 2022 <http://www.thisdaylive.com/articles/cashless-policy-a-burden-or-relief-/114483>
- Esoimeme, E. E. (2018). A comparative analysis of the prepaid card laws/regulations in Nigeria, the UK, the USA and India. *Journal of Money Laundering Control*, 21(4), 13-45.
- Gill, P. Jain, N. and Nagappan, N. (2021). Understanding Network Failures in Datacenters: Measurement, Analysis, and Implications. In Proceedings of SIGCOMM.
- Giuseppe, L. and George R. (2021). Nigeria 2021: Assessment of the Investment Climate in 26 States.
- Greenwood, J. (2014). The information-technology revolution and the stock market. *American Economic Review*, 14(1), 229-241.
- Idun, A. A.-A., & Aboagye, A. (2014). Bank competition, financial innovations and economic growth in Ghana. *African Journal of Economic and Management Studies*, 22(3), 78-110.
- James, P., David, H., Egeme, K., Abdul, J., Justin, P., Marcus S., and Paul S. (2020). Resilience and survivability in communication networks: Strategies, principles, and survey of disciplines.
- John, O., Hope, A. and Ben U. (2023). Customers groan as banks grapple with IT challenges. BusinessDay January 22, 2013. <http://businessdayonline.com/2013/10/customers-groan-as-banks-grapplewith-it-challenges> Accessed on 27/02/14.
- Juniper Networks (2022) Building Highly Available Enterprise Networks with EX Series Ethernet Switches Carrier-Class Reliability for High-Performance Businesses.
- Kaushik, A. K., & Rahman, Z. (2014). Innovation adoption across self-service banking technologies in India. *International Journal of Banking Marketing*, 5(1), 9-45.
- Lee, K. (2015). Understanding factors affecting trust in and satisfaction with mob A modified DeLone and McLean's. *model perspective. Interacting with computers*, 4(1), 5-13.
- Lok, C. K. (2015). *Adoption of Smart Card-Based E-Payment System for Retailing in Hong Kong Using an Extended Technology Acceptance Model*. London: SAGE Publications.

- Makanyeza, C. (2017). Determinants of consumers' intention to adopt mobile banking services in Zimbabwe. *International Journal of Bank Marketing*, 4(1), 12-45.
- Makrygiannakis, G., & Jack, L. (2018). Designing a conceptual methodology for structuration research. *Meditari Accountancy Research*.
- Mallat, N. R. (2014). Mobile banking services. *Communications of the ACM*, 6(1), 1-14. *Management Decision*, 16(2), 5-23.
- Matevu, R., & Kerongo, F. (2015). Effects of Technological innovations on performance. *Journal of change and business management*, 9(2), 17-39.
- Moser, F. (2015). Mobile Banking: A fashionable concept or an institutionalized channel in future retail banking? Analyzing patterns in the practical and academic mobile banking literature. *International Journal of Bank Marketing*, 19(4), 13-17.
- Mullan, J., Bradley, L., & Loane, S. (2017). Bank adoption of mobile banking: stakeholder perspective. *International Journal of Bank Marketing*, 16(3), 1-8.
- Mwiti, L. (2018). Equitel fuels dominance talk. *Standard Digital*.
- Nguyen, D., & Gopaldaswamy, K. (2018). The interface between electronic banking and accounting modules. *Journal of Advances in Management Research*, 15(3), 7-21.
- Otusanya, O. J., & Lauwo, S. (2019). Corruption and socio-political economic structures: a case of Nigeria. *Journal of Financial Crime*, 26(1), 34-68.
- Pogodaeva, T., & Baburina, N. (2018). Bank financing and innovative development of Russian circumpolar area: An empirical investigation. *International Journal of Social Economics*, 7(2), 1-10.
- Potharaju, R. and Jain, N. (2023). Demystifying the Dark Side of the Middle: A Field Study of Middlebox Failures in Datacenters. In Proceedings of the 13th ACM SIGCOMM Conference on Internet Measurement, 2023.
- Potharaju, R. and Jain, N. (2023). When the Network Crumbles: An Empirical Study of Cloud Network Failures and their Impact on Services. SoCC'13, 1-3 Feb. 2023, Santa Clara, California, USA.
- Rachel, A. (2021). State of Enterprise Disaster Recovery Preparedness, Q2 2011. Forrester Research, Inc. – May 18, 2021.
- Robinson, M. (2018). Using multi-item psychometric scales for research and practice in human resource management. *Human Resource Management*, 739-750.
- Rozario, P. d. (2016). The Innovation Dilemma in the Financial Industry: French Domestic Credit Institutions. *Critical Studies on Corporate Responsibility, Governance and Sustainability*, 45(5), 17-49.
- Salimath, M. S. (2014). Population ecology theory: implications for sustainability.
- Shankar, Jreisat, & Hassan. (2018). *Determinants of the Productivity Change for the Banking Sector in Egypt. In Global Tensions in Financial Markets (pp. 89-116). Emerald Publishing Limited.*

- Shrinivasa, K., Srinivasan, R., Amund, K., and Audun, F. (2020). Fast Recovery from Dual-Link or Single-Node Failures in IP Networks Using Tunneling. *IEEE/ACM Transactions on Networking*, vol. 18, No. 6.
- Singh, S., & Srivastava, R. (2018). Predicting the intention to use mobile banking in India. *International Journal of Bank Marketing*, 4(3), 89-111.
- Tiwari, R., & Stephan, B. (2017). *The Mobile Commerce Prospects: A Strategic Analysis of Opportunities in the Banking Sector*. London: Hamburg University Press.
- Torres, A. (2018). *Effects of brand attitude and eWOM on consumers' willingness to pay in the banking industry: Mediating role of consumer-brand identification and brand equity*. Mc Graw-Hill Education: New York.
- Urumsah, D. (2015). *Factors Influencing Consumers to Use e-services in Indonesian Airline Companies*. New York : Mc Graw-Hill.
- Vaidya, J. (2015). Catching the Technology Wave: Mobile Phone Banking and Text-A-Payment in the Philippines. *E-commerce journal*, 11(3), 11-49.
- Wheelock, & Wilson. (2017). The evolution of scale economies in US banking. *Journal of Applied Econometrics*. Wiley , 16-28.
- Wonglimpiyarat, J. (2017). FinTech banking industry: a systemic approach. *foresight*, 19(6), 123-144.
- Yonhap, H. (2023). Banks-Network Failure. March 20, 2023 06:31 <http://www.globalpost.com/dispatch/news/yonhap-news-agency/130320/banks-network-failure-0#>
- Zekos, G. I. (2014). MNEs, globalisation and digital economy: legal and economic aspects. *Managerial Law*, 45(2), 4-12.