**Point of Sales: CHALLENGES AND THE WAY FORWARD IN OUR SOCIETY**

**HUDU ISAH BELLO**

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**A SEMINAR REPRESENTED TO THE DEPARTMENT OF COMPUTER SCIENCE, SCHOOL OF SCIENCE AND TECHNOLOGY, FEDERAL POLYTECHNIC MUBI, ADAMAWA STATE, NIGERIA**

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# Abstract

*The availability of an efficient payment system in an economy cannot be over emphasized. One of such payment platforms is Point of Sale (POS). POS e-payment system has emerged as a powerful provider of fast and efficient payment platform in Nigeria. The quest for survival, global relevance, maintenance of existing market share and sustainable development have made the exploitation of many advantages of information and communication technology through the use of Point of Sale (POS) terminals. New platforms and protocols are being developed to be able to create and support a seamless and truly global service platform. This study examines some relevant standards and protocols for Point of Sale (POS) terminals and discusses POS services and their adoption within a conceptual framework. Data for the study were collected from general merchants (traders) business centers, restaurants/ eatery, supermarkets and others. The finding of this study showed that in spite of having POS terminals, most merchants still accept cash above POS. This is because according to the finding, POS deployment was involuntary as they were deployed by banks unsolicited. There should be increased awareness of consumers which will accelerate adoption of the POS terminals and card payment system.*

**Keywords**: Point of sales, Payment, Challenges, Information technology.

# Introduction

The use of electronic payment (e-payment) system in carrying out financial services and transactions has taken a centre stage in the world economy with developing countries such as Nigeria harnessing it for growing their economic financial inclusiveness. These systems make use of Information and Communication Technology (ICT) network facilities. E-payment systems, as automated processes, are used to exchange monetary value among stakeholders doing business transactions and transferring this amount of money over ICT network (Ayo & Ukpere, 2010). E-payment can be done using Debit or credit cards, online portals, Point of Sales (PoS) terminals, Automated Teller Machines (ATMs), direct debit/deposit, and Real Time Gross Settlement (RTGS) system (Adam, 2013).

This paper considers the PoS e-payment channels as a growing financial system that is gaining widespread acceptance in making payment in virtually all business locations in Nigeria today. According to online report by Kingston (2018), the use of PoS terminals for payments has made Nigerians to use less cash for financial transactions more than ever. For instance, a record of 1.4 trillion naira was achieved in Nigeria using PoS for making transaction in 2017 (Achebe, 2018).

The use of PoS terminals to make financial payment in Nigeria was introduced by the Central Bank of Nigeria (CBN) in 2012 to promote its cashless policy with the aim of improving payment system. Ever since the introduction, there has been increasingly growth in the number of active PoS terminals provided by banks to mobile money merchants. In the first three months of 2018, for example, it was reported that a total of 17,193 PoS terminals were registered by banks for carrying out cashless transactions in Nigeria (Ogunfuwa, 2018). Statistical figures from the Nigeria Inter-Bank Settlement Scheeme (NIBSS) indicated that as of 2018, the number of active PoS terminals in Nigeria was 164,607. Also, in addition to this development, a record of 66.6% rise in transactions using PoS across the country was registered as at January, 2018 compared to the value registered using PoS for transaction in January, 2017. These trends were maintained in February, 2018 where an increase of 60.61% was registered compared to February, 2017. The attribution to this growth can be acceptance of PoS terminals for making payment and increasing ICT network penetration in Nigeria. However, the gain recorded, this paper examines the prospects and challenges of PoS terminals in Nigeria.

# Literature review

Guba and Lincoln (2014), examines the role of e-payment systems in financial institutions. The research focused on savings bank in Zimbabwe. The authors found that the acceptance and use of e-payment systems had great impact on respondents concerns such as convenience, product and service variety, cost reduction, speedy payment, security and acceptability. However, the study revealed that respondents stated that issues such as high set up costs, internet fraud, and long query solving time as well as auditing challenges.

Achebe (2018), investigates the prospects and challenges of e-finance in Nigeria. The study indicated that a good number of the respondents have high level of trust in e-payment systems and accepted that it is fast and convenient.

Kabir (2015), carried out a literature review of e-payment system adoption from 2010-2015. It analyzed various methods that have been used by researchers. The authors stated that most of the works on e-payment adoption were done in developing countries especially in Africa, and the most engaged method was survey technique. The study revealed that past studies have most frequently use questionnaire for data collection with respondents usually bank customers and staff. It suggested that further studies should use different data collection instruments such as the structured interview and observation and a shift be made from banking sector.

Tijani and Ilugbemi (2015), examines the e-payment channels in the Nigeria banking sector and the impacts on national growth. The authors asserted that significant number of persons have access to the services provided through ATM, PoS, internet, mobile money and other channels of e-payment, and are safe, convenience and reliable. The authors maintained that due to the reliability of these electronic systems in supporting customers in carrying out transactions, e-payment channels have contributed to national development.

Adeoti (2018) examines the challenges to the efficient use of PoS terminals in Nigeria. The study indicated that the efficient use of PoS terminals in Nigeria is affected by issues such as unreliable network, power outage, limited number of PoS per merchant store, security of communication over transaction network.

Okeke (2017), examines the use of Extended Technology Acceptance Mode in predicting consumer adoption of PoS e-payment system in Nigeria. The study revealed that the perception of the usefulness and the perception of the ease of use have significant effect on the adoption (acceptance) of POS terminals in Nigeria. Also, operational security reasonably impacts on perceive ease of use (PEOU) with less effect on perceive usefulness (PU). On the customer awareness (CA), PU and PEOU are significantly and positively impacted.

Khan (2017), carried out a comprehensive research on all areas of e-payment system. It considered the services provided by e-payment systems, associated security challenges and other factors that hinder the acceptance, and the way forward. The authors also analysed technical and organization issues that can arise in the cause of internal operation.

**Challenges of Point of Sales**

The importance of effective and efficient payment systems has been closely monitored and promoted by monetary authorities in all countries of the world because the development of a national economy relies on encouraging a payment system that is secure, convenient and affordable. The economy of many nations has encountered challenges as to ensure security, convenience, and affordability of the payment system. Therefore, nations have developed effective and efficient payment systems that guarantee transactions required for a sustainable economic development. However, the Nigerian payment system has been said to be cash-driven. Majority of the citizens keep cash at home which make them vulnerable to security risks. This situation is also found in most developing countries in Africa as the society still depend largely on physical cash for monetary transactions. This makes these countries to be heavily cash-based economy.

### Network issues

This is a common situation in every POS terminal, 20 out of 30 Nigerians have experienced this. One would have to wait for over 15 minutes looking for a network to process the information to carry out the transaction. This can cause frustration for both parties especially the operator when there are many customers to attend to.

### Customer’s information is at risk

Your private personal information is at risk. It is advisable to enter your PIN with caution as it could be eavesdropped on by someone behind or beside you, and there is a very good tendency for that information to be used against you. Although the majority of service system suppliers have taken precautions to conceal the terminal’s keypad, none are totally risk-free.

### Adaptation of bad spending habits

Since you’re card is always handy, there will surely be an increase in money lavishness, due to the quick access to funds, coupled with the over populated POS stand around

### Fraudulent machines

This is a personal experience, I’ve seen of a case where a POS machine was set to save the PIN of a card, with that done, the POS agent can redraw from your bank account, anytime and any amount. So using the POS machine is a big disadvantage cause fraudulent machine can be used to copy card details.

### Increase in crime rate

There are high chances of your ATM card, being stolen. The robbing of POS agent is also another crime factor.

### Expensive web-based fees

On the part of the POS agents, he or she will have to continuously pay a monthly subscription fee, which will reduce your long-term return on investment. Also, he or she wants to be sure to figure these monthly expenses into the budget when considering the purchase of this type of POS system.

### Delay in the reversal of money

This occurs frequently when the card of the person making the withdrawal is debited and the return is delayed. Although this problem use to happen more to the banks, especially back in the days when you had to fill out a form and wait a few days for the ATM to be deducted from your account when the transaction didn’t go through. The story has changed for the good from the ATM side of the matter, but however, POS operators are still dealing with this problem. Many customers have stopped patronizing POS agents In Nigeria as a result of the failure in the system in reversing the wrongly debited amount.

### High cost of service

POS terminals or system is costlier compared to old cash registers or manual methods.

### Virus & malware

The POS machine can even be infected with Malware, although this is in rare cases

### Hardware-related issues

It’s tough to repair the hardware in web-based POS systems. Despite the fact that you may be able to contact the manufacturer for assistance in troubleshooting the problem, you may still need a costly and time-consuming visit from a service technician to resolve the issue and resume business as usual.

### Difficult customers

Based on the POS agent, dealing with and handling customers alone is difficult. Many customers believe that because customers are always right, they can do anything. Many people will show up with malfunctioning cards or cards with insufficient funds, claiming to have credit, resulting in a waste of time.

### Poor revenue due to oversaturation

Due to the mass population of POS agents, locating an area with a low level of competition can be difficult because you don’t want to cite your firm in an area with a lot of POS businesses. The lesser the competition, the more transactions will be made and the revenue from those transactions will be higher.

### Dishonest staff

Staff are the spine of most businesses. A dishonest staff is a cankerworm that is ready to eat deep into your investment, not minding whether or not you make a profit. Unfortunately, you are more likely to suffer from this when operating a POS business. If your stall is located in a place where the crime rates are high, you would need to be very careful whom you employ. Although, being careful is never enough, you’ll need good luck as well.

**Way forward to Point of Sales challenges**

**Secure Your Point of Sales System to Prevent Malicious Attacks**

Retailers have improved their endpoint security quite a bit in the past few years, but the potential for other POS problems related to cybersecurity still exist. Since many of the threats are due to malware, it’s important that retailers check that their POS systems and vendors are implementing secure remote access. Some of the many [benefits of remote access](https://www.imperosoftware.com/blog/benefits-of-pos-remote-access/) includes:

1. **Encryption**: Protects data as it’s transmitted through the POS system
2. **Multi-factor authentication practices**: Create security codes or tokens, password requirements, and login attempt limits to control who has access to the POS system.
3. **User controls**: If a retailer has multiple vendors and users, it’s crucial that each user is given specific permissions to specific devices or networks.
4. **Consolidated remote access solution**: One solution that can be applied to devices, vendors, platforms, and retailers to avoid confusion, streamline troubleshooting, and help identify potential risks.

**Vet Point of Sales Vendors Before Agreeing to Work with Them**

It’s always good to have a [vendor risk management program](https://www.imperosoftware.com/blog/vendor-access-risk-management/) in place when working with vendors, but it’s essential to make sure to vet them before agreeing to do business. When you’re seeking new vendors for any part of your retail business, but especially for POS systems, consider the following questions to help prevent POS problems:

1. What remote access security tools do they use and how do they monitor POS systems?
2. Are they compliant with local, national, and international regulations?
3. How long has a vendor been in business?
4. What is their reputation? Were they referred to you?
5. What type of agreement or contract do they offer and is it beneficial for your business?

**Choose a Point of Sales System to Match Your Business Needs**

Before you choose a POS system, vendor, or hardware, evaluate your business. Do you plan to grow, and if so, how much? How many devices do you have? What’s your revenue like? Locations? There are a number of questions to ask, but make sure you have a comprehensive view of your business and its goals to avoid common POS problems.

Once you know your business, consider these questions when choosing your POS:

1. What kind of training and support does the system offer?
2. Can it scale with your business?
3. What bank is the merchant tied to?
4. Are there fees associated with the partnership?
5. Is it compatible with all devices used by your business?
6. What kind of reporting and analysis does it offer and is it sufficient for your business?

**Properly Install and Check POS System Regularly**

POS systems are made of many parts, so there may be different people and teams setting up the various components. It’s important for clear communication between 3rd parties and your business IT department during install to ensure that and POS problems or questions are addressed. If POS system installation is handled by a 3rd party, make sure all aspects of their services align with your business needs and compliance issues. Common POS problems that you can quickly check are:

1. Wires and cables are properly installed and plugged in
2. Mobile POS devices are fully charged
3. Software is updated and compatible with devices
4. Secure remote access solutions are applied to all parts of the POS system
5. Ensure that the WiFi connection is secure and strong to support the level of POS activity
6. POS connection to the internet: is it in the store network or elsewhere?

**Be Prepared to Troubleshoot**

Whether it’s setting up your own IT team for success, properly training employees, or POS vendors are ready to support, you want to be ready when it comes time to troubleshoot to avoid common POS problems. Here are some tips for being prepared:

1. Proper training for anyone using a POS system
2. Find [secure, consolidated software solutions](https://www.imperosoftware.com/impero-connect/remote-control-platform-flexible-connectivity/) that allow you to do more with fewer applications and tools to streamline training and operations
3. Have secure remote access solutions setup for the IT department to easily troubleshoot from afar
4. Work closely with POS partners to establish a process for addressing POS problems

**Conclusion**

Whether you’re implementing a new POS system or starting with something new, ask a few questions about the needs of your business and its capacity to handle potential issues. POS problems can be a common occurrence, especially if you don’t carefully consider your options and changing business needs. Check out these 5 common POS problems and their solutions to make sure you have the most secure POS system possible. Completing safe, quick transactions is an essential part of any successful retail business. To do that effectively, businesses use point-of-sale (POS) systems to complete purchases, store information, and collect valuable reporting metrics that provide insight to assist with aspects of business development. Every purchase that’s made is essentially a POS transaction.

**Recommendations**

1. This paper recommends that there be a high-quality customer support as it is one of the most valuable services a POS provider can offer, especially 24/7 support.
2. When your POS system crashes, it is difficult to know exactly what the problem is. Make sure to try out all the tips reviewed in this paper in order to quickly solve your POS issues.

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