
A CRITICAL ANALYSIS OF POINT OF SALES (POS) TYPES AND THEIR EFFICIENCY FOR BUSINESS

Sakiru Abiola LAWAL, *Ph.D*
Department of Banking and Finance
Lagos State Polytechnic

ABSTRACT

This paper carefully assessed point of sale (POS) types and their efficiency for business. A point of sale, or POS, is used to record sales and funds collected in a store. It can be a physical space (like a counter) or a virtual checkout page. In this paper, point-of-sale systems (POS) represent the computerization of the cash register and its linking to databases, thus providing businesses with more digital data and the ability to know them. POS systems give businesses the ability to retain and analyse a wide variety of inventory and transaction data on a continuous basis. They have been touted as valuable tools for a wide variety of business purposes, including refining target marketing strategies; tracking supplier purchases; determining customer purchasing patterns; analysing sales (on a daily, monthly, or annual basis) of each inventory item, department, or supplier; and creating reports for use in making purchases, reorders, etc. It was on this basis that the paper concluded that evaluations have been conducted and found some benefits of the system for a safe and sound business operation in today's world, including allowing customers to swipe their cards, input the amount to be paid, and pay electronically for a transaction within seconds after the transaction is sent for authorisation. One of the recommendations was that management should effectively make consistent, reliable, and timely determinations with the assistance of the records in their business operations and transactions.

KEYWORDS: Point of Sales, Efficiency and Business

Introduction

A point of sale, or POS, is used to record sales and funds collected in a store. It can be a physical space (like a counter) or a virtual checkout page. These systems were first invented in 1879 by salon owner James Ritty in Ohio. This type of POS was much different from the ones we use now: it was just a cash register that recorded sales and kept track of payments. Point-of-sale systems (POS) represent the computerization of the cash register and its linking to databases, thus providing businesses with more digital data and the ability to know them. POS systems give businesses the ability to retain and analyse a wide variety of inventory and transaction data on a continuous basis (Abu-Musa, 2004). They have been touted as valuable tools for a wide variety of business purposes, including refining target marketing strategies; tracking supplier purchases; determining customer purchasing patterns; analysing sales (on a daily, monthly, or annual basis) of each inventory item, department, or supplier; and creating reports for use in making purchases, reorders, etc. Basic point-of-sale systems currently in use include stand-alone electronic cash registers, also known as ECRs; ECR-based network systems; and controller-based systems. All of these function essentially as sales and cash management tools, but each has unique features.

Points of sale (POSs) are an important focus for marketers because consumers tend to make purchasing decisions on high-margin products or services at these strategic locations. Traditionally, businesses set up POSs near store exits to increase the rate of impulse purchases as customers leave (Hayes, Estevez, & Jaspersen, 2020).

Modern Monetary Theory (MMT) by Randall Wray (1998)

This paper is anchored by the modern monetary theory (MMT). MMT is a collection of thoughts about the origins of money, the source of money's value, and the nature of the financial constraint on government and non-governmental enterprise. The Modern Monetary Theory (MMT) was propounded by Randall Wray in 1998. MMT is also significantly associated with economists Stephanie Kelton and Mathew Forstater of the University of Missouri at Kansas City, along with financier Warren Mosler. But Wray (1998) provides the most comprehensive statement of MMT. The MMT is a policy framework for both government and business expenditure. While MMT is not a new concept, it has lately gained a lot of traction, especially since individual business and government expenditure has expanded rapidly. According to Fullwiler, Kelton and Wray (2012), the MMT synthesises ideas from the *State Theory of Money* of Georg Friedrich Knapp (also known as chartalism) and the *Credit Theory of Money* of Alfred Mitchell-Innes; the *functional finance proposals* of Abba Lerner; Hyman Minsky's views on the banking system (Minsky, 1986); and Wynne Godley's *Sectoral Balances* approach.

Knapp argued in 1905 that "money is a creation of law" rather than a commodity. Knapp contrasted his state theory of money with "metallism," which holds that the value of a unit of currency is determined by the amount of precious metal it contains or can be traded for. He said that the government may manufacture pure paper money and make it exchangeable by recognising it as legal tender, with the criterion for a state's money being "that which is recognised at the public pay offices" (Knapp, 1905). The prevailing view of money was that it evolved from barter systems to become a medium of exchange because it represented a durable commodity with some use value (Marx, 1867), but MMT proponents like Randall Wray and Mathew Forstater claimed that more general statements appearing to support a chartalist view of tax-driven paper money can be found in the earlier writings of many classical economists (Wray, 2000), including Adam Smith, Jean-Baptiste Say, J.S. Mill, Karl Marx, and William Stanley Jevons (Forstater, 2004).

However, in the sovereign financial systems, banks can create money, but these "horizontal" transactions do not increase net financial assets because assets are offset by liabilities. According to Wray (1998), "the balance sheet of the government does not include any domestic monetary instrument on its asset side; it owns no money." All monetary instruments issued by the government are on its liability side and are created and destroyed with spending and taxing or bond offerings (Tymoigne & Wray, 2013).

This theory relates with this research work as it is an embodiment of policy that advocate both the government and business expenditures due to the fact that both expenditures incorporate rapid expansion which the operators of point of sales (POS) are much expectant of. It is believed that this theory will aid them in their quest to business success, growth and expansion.

History of Point of Sale

The history of POS systems dates back to 1879, when saloon-owner James Ritty of Ohio invented the cash register. Since then, it has gone through several technological

advancements. The cash register allowed users to accurately record transactions, allowing for improved bookkeeping and capital management. Ritty eventually sold his invention to John H. Patterson of the National Cash Register Corporation (NCR) in 1884 (Heinig, 2020). The NCR installed a cash drawer and a receipt paper roll on the Ritty POS system at the turn of the century. The cash register had evolved into a digital system by the mid-1900s, according to NCR Corporation, with a liquid crystal display (LCD) screen, credit card magnetic strips, and thermal printing. As a result, a growing number of companies began to use the system, making it easier to record transactions and manage capital. In 1973, however, IBM produced the first POS system for restaurants, known as the electronic cash register (ECR). The electronic cash register (ECR) revolutionised the service sector as the first computer-based point-of-sale device. This system was the first to integrate client-server technology, peer-to-peer connections, LAN simultaneous backup, and remote setup in a commercial setting. It was deployed at Pathmark supermarkets in New Jersey and Dillard's department stores by the middle of 1974 (Wikipedia, 2022).

On the 16-bit Atari 520ST colour computer, Eugene "Gene" Mosher launched the first graphical point-of-sale software with a touchscreen interface under the ViewTouch brand in 1986 (Bisson, 2008). It had a colour touchscreen widget-driven interface that allowed widgets to represent menu items to be configured without requiring low-level programming. The ViewTouch point of sale software was originally exhibited in front of a huge crowd at the Atari Computer booth at Fall Comdex in Las Vegas, Nevada in 1986 (Wikipedia, 2022). This was the first commercially available point-of-sale system featuring a widget-driven colour graphic touch screen interface, and it was installed in a number of restaurants across the United States and Canada. Microsoft, on the other hand, capitalised on Mosher's innovation by launching the first commercial POS client for businesses in 1990. This software became the new standard for business operators, serving as a financial database as well as a catalyst for client relationships (Heinig, 2020). The internet also made it possible for businesses to accept credit cards at a reasonable pace. Businesses could now compile a detailed record of all transactions, whether by check, cash, or credit, because credit processing was incorporated into the POS system. POS systems are currently available in a variety of formats and are widely used by enterprises.

Concept of Point of Sale (POS)

The point of sale (POS) is the location where a customer makes a payment for goods or services and where sales taxes may become payable. It can be in a physical store where POS terminals and systems are used to process card payments, or a virtual sales point such as a computer or mobile electronic device (Hayes, et al., 2020). After receiving payment, the merchant may issue a receipt for the transaction, which is usually printed but can also be dispensed with or sent electronically. However, the merchant calculates the amount owed by the customer, indicates that amount, may prepare an invoice for the customer (which may be a cash register printout), and indicates the options for the customer to make payment. It is also the point at which a customer makes a payment to the merchant in exchange for goods or after the provision of a service (Wikipedia, 2020). Accordingly, the Electronic Transmission of Prescriptions (2015) stresses that the points of sale are an important focus for marketers because consumers tend to make purchasing decisions on high-margin products or services at these strategic locations. Traditionally, businesses set up POSs near store exits to increase the rate of impulse purchases as customers leave.

However, varying POS locations can give retailers more opportunities to micro-market specific product categories and influence consumers at earlier points in the sales funnel. For example, department stores often have POSs for individual product groups, such as appliances, electronics, and apparel. The designated staff can actively promote products and guide consumers through purchase decisions rather than simply processing transactions. Similarly, the format of a POS can affect profit or buying behavior, as it gives consumers flexible options for making a purchase (Berinato, 2003). Similarly, the Encyclopedia (2019) noted that the POS serves as the central component where everything like sales, inventory management, payment processing, and customer management is merged. It is a system that, like many other computer-based innovations, continues to change and develop at a rapid pace. In addition, the demand for POS systems has spawned many new manufacturers, each of which offers a dizzying array of standard and optional POS features to their customers. For example, some electronic POS systems now cover hand-held scanning devices, customer promotions, credit-card confirmations, counterfeit money checks, and staff scheduling (Encyclopedia, 2019).

Types of Point of Sales

There is more than one type of POS and they all serve different purposes (Connect Pos 2020).

Mobile POS System: A mobile POS, in contrast to a desktop POS, is much smaller in size but just as helpful. It mainly consists of a phone app that attaches to a card reader. That being so, all you have to do is turn on the POS software and start selling. Other accessories, like barcode scanners and receipt printers, are optional. Since a mobile POS does not take much space, it has the advantage of being portable and allows you to ring up sales right on the spot. It is highly popular with small-scale businesses, for instance, street vendors, fair/event vendors, and freelance workers (Kim & Kim, 2007).

Tablet POS Systems: A tablet POS works just about the same as a mobile POS; both are installed on the devices with any optional attachments (card swiper/receipt printer). The only difference is that tablets are usually much bigger than phones; their screens are larger so that images are displayed more sharply with more vivid colors. These types of POS should come in handy for businesses with larger inventories. It makes ordering and purchasing tasks easier for both your staff and customers. Suggested places for tablet POS are small businesses with more controlled resources: coffee shops, gift shops, art galleries, etc. (Ellram, La Londe, & Weber, 1999).

Self-service Kiosk POS Systems: This type of self-service POS allows customers to make purchases by themselves without the need for an employee. The main purpose of this system is to make operations more efficient while saving on manpower for businesses. A self-service kiosk POS setup is usually similar to a desktop POS, but with additional security functions. In this way, all transactions are closed and risks are prevented.

Online Point-of-sale System: With an online POS, you can use your own hardware, which might be a PC or tablet. Another advantage is the minimal startup costs. PC solutions cannot replace the convenience of a touch screen. However, if your business has low-volume, big-ticket sales, it may prove speedy enough to suit your needs. Low-volume business also makes the use of a standard printer feasible. You can log in to online solutions from anywhere, using any device.

Terminal POS Systems: Terminal point-of-sale systems are the types you are used to seeing at the counter. While they are hardware and software-based, most still require access to the internet and might even use cloud-based software. They are often sold as all-in-one solutions that include barcode scanners, cash drawers, and such. Many of these services provide support and cloud backup. These systems make it easy to restrict employee internet access since they can be configured to run only the POS software. Restaurant solutions can integrate with tableside Wi-Fi portable devices, kitchen printers, patron tablet ordering systems, and online ordering. Retail versions can include extensive inventory tools, label printing, and e-commerce integration. Some are "free" in exchange for paying for credit card processing (Mills & McCarthy, 2014).

Multichannel POS Systems: If your business sells its products in more than one online or in-person location, you will benefit greatly from multichannel POS systems. This type of POS system integrates all your sales across your online store, social media pages, and storefronts. As a result, you're less likely to run out of stock because your inventory for one sales route isn't synced with that of your other channels.

Point of Sales Efficiency for Business Operations

A POS system gives you a good overview of your business and keeps a record of its cash flow automatically. Data about a product range can be found easily. Another POS system benefit is its ability to save information about your financial status, your inventory status, and your sales status.

- ***Sales Reports:*** A POS system gives you a good overview of your business and keeps a record of its cash flow automatically. Data about a product range can be found easily. Another POS system benefit is its ability to save information about your financial status, your inventory status, and your sales status. Based on this information, you can plan the revenue that would statistically be expected for the month, the next two months, or the coming week. For a personal consultation on the right POS system for your business, fill in the form on this page and we will contact you. Our service is free, with no strings attached (Kim & Lim, 2011).
- ***Adapt the Product Offers:*** From advanced reports, you can clearly identify which product categories are the most and least profitable. Knowledge of which departments and items are not performing well can give you the opportunity to develop a sales strategy. Therefore, you can adapt your items in the store or your menu and much more, depending on your industry. Also, the system automatically provides in-depth analyses of customers' buying behaviour. This POS system benefit will allow your company to adapt to the group's needs without having to use costly hours of research work.
- ***Save Time:*** Another benefit of a POS system lies in keeping track of the delivery and all goods going out of your store. The system continually tells you how much a specific product has sold and exactly informs you of what you have in stock. This allows the POS system itself to submit orders to the suppliers when the inventory is nearly empty. Therefore, there is no need to have an employee spend time on doing it. Also, when a customer needs information about a specific product, the seller can check it quickly in the programme. Reducing the waiting time for the customer will improve the level of

customer service you can offer. Moreover, a POS system can help you automatically define margins and calculate taxes. Whether stationary or mobile POS systems, everyday tasks for your employees will become easier and faster.

- **Reduce Mistakes:** Prices can be changed for a product and they will automatically be updated throughout the entire system, so prices always look the same throughout the entire process. Therefore, the company ensures that prices always match the given customer price and avoids dissatisfied clients.
- **Loyalty Programme:** A POS system can save all the information about your customers that enables you to offer excellent customer service to your loyal buyers. In fact, it allows you to find out what the favourite products are for each of your customers. This benefit of POS systems can be really useful when you adapt your product offers and promotions for each of your customers. They will feel special and well treated, which can create a purchase intention.
- **Employee Management:** A POS software can be used to check the additional sales conducted by each employee. However, it can also be used as a managerial tool and as a reward criterion. By doing that, employees will become more motivated and more effective. Therefore, sales will increase and customer service will be improved. On the other hand, the employee can check his or her own sales statistics, which can help the individual employee become more aware of his or her personal objectives. Also, it allows them to see where the numbers can be improved. To summarise, we can say that a POS system makes your business more cost-focused, gives you a greater insight into revenues, makes you save time, improves relationships with customers, and uses previously recorded data to create economic objectives (Laudon & Laudon, 2006).

Proliferation of Point of Sales in Nigeria

With the increasing use of advanced electronic technologies for e-funds worldwide, the introduction of POS into the Nigerian economy has facilitated the ease of doing business without necessarily going about with a huge amount of cash in hand. The use of POS terminals to make financial payments in Nigeria was introduced by the Central Bank of Nigeria (CBN) in 2012 to promote its cashless policy with the aim of improving the payment system. Ever since its introduction, there has been an increasing 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 Scheme (NIBSS) indicated that as of 2018, the number of active POS terminals in Nigeria was 164,607. In addition to this development, a 66.6% increase in POS transactions across the country was recorded in January 2018 compared to the value registered using POS for transactions in January 2017. This trend was maintained in February, 2018, where an increase of 60.61% was registered compared to February, 2017. The attribution for this growth can be found in the acceptance of POS terminals for making payments and increasing ICT network penetration in Nigeria. A Point of Sale, also called a Point of Purchase, is a device that allows local debit cardholders to make withdrawals or make payments for products and services. This machine is mainly used in retail shops where customers pay for

goods or services using their ATM cards. The POS machine is also used to pay some utility bills like electricity, airtime, cable or decoder subscriptions, etc. However, because the services of the banks do not serve everybody in Nigeria, especially those in remote villages, Banks created the POS business as a terminal to bring financial services closer to the unbanked and underbanked segments of society. Hence, this is a huge relief to decongest the already crowded banks in the rural areas and the often crowded ATM spots, and also encourage entrepreneurs who would be interested in being bank agents while earning their own commission.

Effect of Point of Sales on Financial Business Operations in Nigeria

According to Hardcastle (2011), points of sale (POSs) are an important focus for marketers because consumers tend to make purchasing decisions on high-margin products or services at these strategic locations. Traditionally, businesses set up POSs near store exits to increase the rate of impulse purchases as customers leave. The rapid development of electronic banking has introduced several transformations in the way individual business organisations and governments operate their businesses 24 hours each day. With the introduction of mobile banking and Point of Sales terminals as an offshoot of electronic banking, financial transactions have been made easy and accessible. The increasing demand for a quick financial transaction without going to the bank has created business opportunities for open-minded entrepreneurs. It is worthwhile to note that most small and medium-scale businesses owned by entrepreneurs have a POS terminal in order to facilitate cashless business transactions. A Point of Sales (POS) Terminal is a portable machine used to accept bank cards as payment for goods and services. It allows you, as the cardholder, to have real-time online access to funds and information in your bank account through debit or cash cards. Other small business entrepreneurs go as far as offering their customers an opportunity to get cash back, which simply gives them an opportunity to make interest from the debit or credit transactions offered to their customers (Desmond, 2004). Cash back refers to a credit card benefit that rewards the card holder's account with a small percentage of the amount spent on purchases (Investopedia). Cash back reward percentages typically range from 1% to 3% of a transaction, but some can go up to 5%. However, whenever this cash back is done via a business POS terminal, the account terminal gets the reward, which gives the business operator an edge to make additional profits aside from that of the product (Ugwueke, 2014). However, the comfort of being able to pay for goods and services from any point of transaction using a mobile payment system has become a vital issue as this new terrain has created a business opportunity for business-minded entrepreneurs in Nigeria. Therefore, it is on this note that this study is set to examine the impact of POS on promoting entrepreneurship in Nigeria.

Challenges of Point of Sales Business in Nigeria

According to Adeoti (2013), when he examined the challenges to the efficient use of POS terminals in Nigeria, he indicated that the efficient use of POS terminals in Nigeria is challenged by issues such as unreliable network, power outages, and security of communication over transaction network. The role of e-payment has been examined and it was observed that although the use of POS has been beneficial in terms of convenience, product and service variety, easy access to funds and speedy payment, issues such as high cost of charges and security questions over fraud via e-banking remain.

1. Insecure POS System: One of the biggest challenges of managing a POS system is the potential for cyber-attacks. POS systems present a large attack surface, from the terminal itself to endpoints where data is stored.

- **POS Systems:** Every time a customer swipes a card or enters a pin, data is transmitted through a POS system and its components. This advanced system may include a terminal in addition to keypads, chip readers, printers, inventory tracking systems, barcode scanning, and reporting functions. Unfortunately, older POS systems have weak security because they don't have proper encryption, leaving them vulnerable to attacks and other POS problems. POS terminals are also common attack surfaces because they don't meet PCI compliance. This makes them an attractive target for hackers.
- **Credit Card Terminal:** Credit card terminals conduct one primary function: to process credit card payments. Cards are swiped and, in some cases, the terminal may connect to a system for checks or gift cards, but generally, they do not serve as many functions as a POS system. While the credit card terminal doesn't do the same level of reporting and processing as a POS system does, it's important to make sure all components involved in the processing are compliant with regulations like PCI.
- **Internet Exposure:** It only takes one unsecured access point to give hackers access to an entire network of POS machines and systems, thus installing malware.
- **POS Endpoints:** After a transaction, that data gets stored somewhere, but is it secure? Malicious queries can be loaded into a database, thus exposing or manipulating information. Some of the most common POS problems are a result of malware, which gains access through one of the points shown above, then scrapes a system for unencrypted data. Whether you're a gas station, clothing outlet, or grocery store, if you are conducting transactions, you're susceptible to malware attacks.

2. Data Can Be Hacked Through a POS Vendor: Retailers often rely on vendors or third parties to manage aspects of their business, including POS systems. A vendor could simply be responsible for the POS device or terminal, or for an entire network. If you don't know how your vendors are managing parts of your POS systems or what tools they're using, POS problems like cyber threats, connectivity issues, or noncompliance may result.

3. Picking the Wrong POS System for Your Business: Every retail operation is different, which is why they require different POS support. Choosing the wrong POS system or vendor can be costly, especially if your business exceeds charge limits. This can be especially true for smaller businesses that use a cloud-based POS application that limits the number of transactions per month. If you are a growing business and you choose software or systems that can't scale, it may result in accidental violations that freeze your account or limit sales. If your POS partner has limited reporting capabilities, it will be difficult for your business to make accurate projections for marketing and revenue purposes.

4. Your POS System Isn't Correctly Installed: It may appear to be a minor detail, but all too often, POS issues are caused by installation issues. This can occur for a number of reasons, including:

- WiFi connectivity problems
- Wires or cables that aren't properly installed or malfunctioning
- Devices and software aren't compatible
- Software bugs and errors

5. Insufficient Troubleshooting Support: Since you'll be partnering with various POS vendors to manage your system, it's important that there is ample support when POS problems arise. Your IT department is equipped with internal knowledge about your network, but issues with software, hardware, and devices may require further support. You may encounter user errors as well, requiring that IT staff be available for support. If POS system vendors don't have ample tech support for IT staff and other employees, it can lead to a slow resolution process and lost business.

Conclusion

Based on the findings of this paper it was concluded that POS has evolve remarkably. From the invention of saloon-owner James Ritty of Ohio cash register to Mosher's first graphical point-of-sale touchscreen in 1986, POS system evolution has been an outstanding tool for both business owners and client relationship. This can also be seen with the help of the internet making it possible for businesses to accept credit cards at a reasonable pace. And businesses could now compile a detailed record of all transactions, whether by check, cash, or credit. Evaluations have been conducted and found some benefits of the system for a safe and sound business operation in today's world, including allowing customers to swipe their cards, input the amount to be paid, and pay electronically for a transaction within seconds after the transaction is sent for authorisation. In short, POS machines allow businesses to save costs and make transactions more efficient. As a result, manufacturers and outlets can both benefit from a comprehensive answer of single transaction entry records, quintessential client details, and purchased products.

Recommendations

1. Management should effectively make consistent, reliable, and timely determinations with the assistance of the records in their business operations and transactions.
2. The gadget should be used for the POS business since it serves as many customers as possible at a speedy tempo and helps to screen all kinds of data faster, less co conveniently. The Inventory Point of Sale System may be a computer and additional dependable than physically.
3. It is pertinent for regulatory agencies to carry out enlightenment programmes that will inform both customers and merchants on the benefits of adopting electronic payment systems, especially POS terminals, for doing business to increase their productivity. This is expected to further encourage its adoptability and usage.
4. Banks should intensify efforts to deploy more POS to organisations in their locations as well as other parts of the country to further promote the adoption of POS among organisations that are yet to adopt.
5. It is also pertinent for the government to provide infrastructure, such as stable internet access, that would make the cashless policy work in Nigeria easier for POS operators.

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