THE ADOPTION OF POINT OF SALE (POS) TECHNOLOGY IN OSOGBO, SOUTH-WESTERN PART OF NIGERIA

SUBMITTED BY:

GROUP 5

TO:

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20	OLATUNJI TITILOPE	CSC/2015/088
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PERFORMANCE (Absent: 0, Present: 1)

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TABLE OF CONTENT

EXECUTIVE SUMMARY

Point of Sale (POS) terminals has become necessary machines at any store or business that accepts electronic cards. The POS system was introduced by the Central Bank of Nigeria in 2012 as part of its plan to enforce the cashless policy in financial transactions across the country. A POS (Point Of Sale) terminal, more commonly called a "POS machine" in Nigeria is a portable device that allows businesses to accept bank card payments for transactions, most POS terminals are issued by the bank. This study examined the adoption of POS technology in Osogbo. The population of the study consisted of individual SMEs who are users of POS and business organizations in Osogbo, Osun state with a sample size of 150. A validated questionnaire was used, 150 copies of questionnaires were administered with a response of 82.66% response rate.

The findings revealed that the adoption of POS in Osogbo is mostly recent due to the high amount of new businesses and a large percentage transacted their daily income using POS. Also, the qualification of operators of POS in Osogbo is high as 55% have HND or Bsc. and above, 33% are SSCE holders and 14% are OND holders. The study concluded that customers had positive and significant relationships with the adoption of POS in Osogbo, Osun State, Nigeria.

CHAPTER ONE

INTRODUCTION

1.0 Background of Study

In the global advancement of technological development; Nigeria is not left out of this advancement. Information and Communications Technology (ICT) has evolved and has become a vehicle for technological growth in the economy of many societies as it has unarguably made life easier. Therefore, the global acceptance of Information and Communications Technology as well as its usage have attracted and received the interest of researchers who are on a regular basis out to proffer solutions for problems related to technology development for decades. This development had encouraged further research on the utilization and benefits of ICT to several nations in order to improve their economic development. Technology acceptance is about how people accept and adopt some technology for use. The user acceptance of technology has further been explained as the willingness within a user group to employ IT for the tasks it is designed to support.

Over the years, Nigeria showed tenacity to develop and implement some strategic economic policies that could bring about a radical paradigm shift from cash-based to a cashless economy. This sustained tenacity gained a boost with the emergence of the Internet and globalization and their associated new retail transaction channels such as the mobile and other internet-based businesses such as e-commerce and e-business which brought about the need for new payment instruments. These new payment instruments which are different from the existing traditional payment methods have not only been found to serve the purpose of consumers to make micropayments for their ordinary and micro-transactions but also are imperative for global

competitiveness. The actual action started when in 2007 the Nigerian government enunciated a payment system geared toward an economic management policy intended to stimulate and drive e-commerce/e-business activities.

In Nigeria, SMEs are estimated to comprise 87% of all firms operating in Nigeria (Babatunde and Laoye, 2011). In an earlier study, Ihua (2009) reported that the percentage contribution by SMEs to the total number of enterprises in Nigeria is about 97 percent. SMEs are also reported to employ over 60 percent of the labour force, produce up to 50 percent of industrial output (Ihua, 2009), and absorb about 70 percent of industrial employment (Aina, 2007). These statistics are manifestations of the importance of SMEs in Nigeria as in other economies. These statistics also justify why the SMEs in Nigeria deserves a closer look in this study. The argument is that given the massive contributions of SMEs to the Nigerian economy, it is believed that providing information that will make them buy in and support the cashless policy will undoubtedly portend a huge success rate for the cashless policy programme as SMEs still remain a veritable force for policy achievement (Onugu, 2005).

Therefore, this research work ventures into the adoption level of this technology with regard to government policy. The Federal government of Nigeria through the Central bank of Nigeria (CBN) initiated this payment system in 2006 as part of the payment system strategy 2020, E-payment has been defined to refer to the transaction of goods and services using an electronic payment means such as computer networks, the internet, and digital systems to transfer money electronically or digitally between two parties (Wyllie *et al*, 2010). The overall intention of the e-Payment system (EPS) project was to benchmark the Nigerian payments systems in line with global best practices (CBN, 2010) and to ensuring national utilization and international recognition applicable in Nigeria with the aims of making the payments system

effective, efficient, technology-driven and in line with emerging global trends (FRN, 2006). At the initial stage of implementation, the policy's focus was on the operations of the commercial banks and other financial institutions in relation to payments of federal government ministries, agencies, and departments (MDAs). At that stage, the intention was to eliminate the delays in paying for government contracts caused by payments through cheques and cash which were causing disaffection among contractors and encumbering government businesses (Igudia, 2016).

The success recorded encouraged the extension of the scope of operation of the policy to cover all facets of financial transactions involving individuals and merchants and all tiers of government (federal, states, and local) in Nigeria beginning from 1st January 2012. As the policy is currently being implemented throughout the country, there are some concerns from several quarters regarding how the new payment systems policy is to be implemented and sustained in view of the serious physical infrastructural deficiency (Onwuka, 2009), high degree of fraud (Adeoti, 2011; Kyari, 2009), legal and probably attitudinal challenges (Akintola et al, 2011) among others in the country. They also wondered how the EPS policy would succeed in a country with high illiteracy level (Uzor, 2011), inadequate enlightenment on the likely benefits of the technology (Odumeru, 2013; Ayo and Ukpere, 2010), and poor and inadequate physical and telecommunication infrastructures such as irregular electricity supply and poor and slow internet connectivity (Irefin *et al*, 2012; Ifinedo, 2011; Gholami *et al*, 2010).

Point of sale [POS] terminal has emerged as a promising new application of this generation e-payment system. The role and importance of an efficient payment system has been closely monitored and promoted by monetary authorities in all countries. The success of this new payment channel for products and services depends on customer adoption and usage of the service. For us to accept that e-payments like the POS are gaining traction in Nigeria, customer's

acceptance, attitude, and confidence in the system need to be validated. Small businesses usually have smaller amounts of resources as well as accessible money and technical proficiency with which to make their business electronically secure (Mills & McCarthy, 2014; Business Security Information, 2013). This suggests that Point of sale (POS) Systems for SMEs face a great threat of security breaches. The majority of Information Systems (IS) controls, which can also be applied to POS Systems, are built upon two fundamental ideologies of the need to protect against loss or damage and the need to ensure data accuracy (Hardcastle, 2011). According to Abu-Musa (2008) technology has been, more often than not, advanced faster than the progression in control practices and this technological advancement has not been combined with similar improvement of the employees' knowledge, skills, awareness, and compliance.

1.1 Statement of Research Problem

SMEs play some pivotal roles in national development; there is little or no evidence in the literature on the adoption and use of POS systems by them in Osogbo, Osun State, Nigeria. As a result, it is difficult to determine whether or not SMEs in this area are adopting the use of this payment system. Conducting this study with a focus on its level and factors influencing the adoption of this payment system by the SMEs in either already established business or just coming up a business mostly in the semi–urban South-Western region of Nigeria will give us an intending overview of how important it's business owners value the technology and its usage.

1.2 Aim and Objectives of the Study

The aim of this study is to assess the factors influencing the adoption and usage of Point of Sale (POS) among Small and Medium-scale Enterprises (SMEs) in Osogbo.

The specific objectives of this project are to:

- Conduct a survey on the adoption level of POS in Osogbo by collecting relevant data;
- Establish how SMEs establishment influence the adoption level of the technology in the town;
- Evaluate the future result on its adoption level and progress.

1.3 Methodology

The following methods will be adapted to achieve the aforementioned objectives:

Relevant data will be collected using a survey model by distribution of questionnaires to the SME investors or owners. The analysis employs the qualitative technique using conceptual clustered matrix.

1.4 Justification of the Project

The research project will determine the level of adoption of POS by SME owners and also evaluate the benefits, challenges, and factors influencing its usage.

1.5 Scope of the Study

This research project is limited to the adoption and usage level of POS technology in Osogbo, Osun State, Nigeria.

Research Questions

The following questions will guide the study:

a) How effective is the implementation of the POS payment system in Osogbo, Osun state?

b) What are the perceived obstacles inherent with the implementation of the POS payment system?

1.6 Definition of Terms

I. **Research:** A careful study of something, especially to discover new facts or information about it.

II. **Information:** Information is that which informs, i.e. an answer to a question, as well as that from which knowledge and data can be derived (as data represents values attributed to parameters, and knowledge signifies understanding of real things or abstract concepts).

1.7 Project Organization

The project write-up will be carried out based on the following chapters:

This study has been arranged into five sections with this section as section one. Section two is the theoretical framework and review of the relevant empirical literature. Section three research methodology while section four discusses the data analysis and the results from the questionnaires. Section five is conclusion and recommendation.

I. **Section one:** This section introduces the brief description of the project, gives the background of the study, and covers issues such as the Aims and Objectives of the project, the Statement of Problem, and the Significance of the study.

II. **Section two:** This gives a highlight on the Literature Review of this project and also research on related works. Evaluation is also done on previous research work of similar nature enumerating possible features which the current project had identified.

III. **Section three:** This discusses the methodology used to implement the project, system analysis tools, and techniques as well as a description of the mechanisms.

IV. **Section four:** This section discusses the processing, reporting, and analysis of the collected field data.

V. **Section five:** It consists of the conclusion of the research project and also summarizes the challenges encountered.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

In order to assess the implications of POS adoption, it is required to look at how consumer trust and POS security are related to the adoption of POS by a sample of businesses in Osun State, Nigeria. Academic research journals, dissertations & reports were the major pieces of literature consulted as the basis for the review, as they provide the most accurate source of information, considering that they publish original research (Naoum, 2007).

The original intention of the inventors of the cash register was to create a system for recording cash transactions in order to prevent employees from tampering with the company's profit. However, this device quickly evolved into a tool for financial transactions, as it issues receipts and keeps records and reports generated from it. Technology advancements over time gave rise to what is now known as point-of-sale (POS).

2.1 The evolution of the Nigerian payment system

With the introduction of banknotes, payment orders, and cheques, the contemporary payment system became fully paper-based. The payments system was changed in 1996 to allow for card-based e-payments. The pay card was introduced in 1997 as a result of this. By 1999, card-based payment products had become an open platform, thanks to the CBN's approval of a consortium of over 20 banks' flotation of two card service businesses. The CBN, along with the Bankers Committee, launched the first significant push to modernize the payment system in 2003, approving a handful of banks to offer international money transfer services, telephone

banking, and limited online banking over the internet. Almost all banks have now implemented electronic financial transfers (EFT), debit and credit cards, internet banking, mobile banking, and automated teller machines (ATMs). The Payments System Vision 2020 was created in 2007 to support a greater range of electronic payment methods, such as POS terminals, facilitated by a wider number of service providers.

By 2007, the payment system had evolved from a cash-heavy to a bulk payer status, consisting of a mix of cash and electronic instruments, primarily Automated Teller Machines (ATM). Nigeria has continued to take steps to boost the usage of electronic channels in its quest to become a cashless society with efficient payment systems since 2007. In 2011, the CBN implemented a cash strategy to modernize Nigeria's payment system (in line with the country's Vision 2020), lower banking costs, promote economic growth, and increase monetary policy efficacy. The goal of the cash policy is to slow down the physical movement of cash throughout the country. According to NIBSS (2015), the cashless economy aims to reduce rather than eliminate the supply of paper currency circulating in the economy. It does not imply a complete lack of cash transactions in the economy, but rather that the volume of cash-based transactions is maintained to a minimal minimum.

POS is one of the e-payment technologies that Nigeria has implemented to help the country move toward a paperless society. A point of sale (POS) is an electronic payment device that allows people to make transactions using electronic cards. For payment of products and services, POS accepts ATM cards. Microchips in this card hold account information. The microchip has an electronic purse that stores monetary value.

The card can be used to buy goods and services online, as well as in supermarkets, shopping malls, and other markets. Through debit or cash cards, POS allows cardholders to have

real-time online access to funds and information in their bank accounts. The number of POS terminals deployed in 2014 is expected to reach 350,000, up from 120,191 in 2013, demonstrating the increased popularity of POS and electronic card payments. This is because the volume of transactions made via POS surged by 183 percent compound annual growth rate (CAGR) between 2012 and 2014, indicating widespread adoption and usage of POS (NIBSS, 2015).

2.1 Point of Sale (POS)

The point of sale (POS) is a concept that describes the time and place where a retail transaction is completed. At the point of sale, 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. 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 (Wikipedia, 2021).

To calculate the amount the customer has to pay, different devices like the barcode scanner, cash registers, or using the traditional method of using a calculator are used and payment is also collected in different ways. Payment could be recorded in terms of collection of cash or through a bank transfer to the merchant's bank account or through a deposit to the bank and then giving the receipt to the merchant. Recently, the point of sale terminals, popularly called the POS terminals have been used to record details of a sale, as well as the collection of payment

and issuance of receipts. POS terminal software may also include features for additional functionality, such as inventory management, CRM, financials, or warehousing.

Businesses are increasingly adopting POS systems, and one of the most obvious and compelling reasons is that a POS system makes transaction recording easier. Other advantages include the ability to implement various types of discounts, a loyalty scheme for customers, and more effective stock control, amongst others.

2.2 Point of Sale (POS) Terminals

Point of sale terminals, according to Rose *et al* (2008), are computer facilities in stores that allow customers to pay for goods and services electronically by deducting the cost of each purchase straight from their account. The customer hands over an encoded debit card to store workers, who swipe it through a computer terminal linked to the banking firm's computer system. The purchase is charged to the customer's account, and the money is automatically deposited into the store's bank account. A POS machine is a terminal, which is a box that allows a merchant to take card payments from his clients (Adeoti *et al*., 2012). It functions similarly to an ATM machine, with the exception that the machine is designed to collect payments only on behalf of the merchant, who is typically a registered firm with a bank account.

According to Rose and Hudgins (2008), the present POS network is separated into online and offline POS systems. The offline adds up all of the customer's transactions until the end of the day, then subtracts the amount of all transactions from the customer's account. The online system, on the other hand, deducts each purchase from the customer's account as it is made. Customers and financial institutions prefer offline POS systems, however, online systems appear to lower client overdrafts and hence may be less expensive in the long term.

Gilaninia *et al*. defined POS as a device that is installed in the center of the sale of goods and services instead of paying cash by physical transportation of money, the transaction amount from an account holder i.e. customer is deducted from their account electronically using an electronic card, while the card acceptor(seller) is paid. As a result, in this study, a point-of-sale (POS) device is defined as a device installed in a merchant site where customers swipe their electronic cards instead of using cash to pay for items or services.

According to the World Bank, the use of electronic payment systems was critical for countries all over the world to accelerate growth in their financial sectors. The following benefits are predicted to be derived through the use of this platform, as indicated by a world body such as the World Bank. Faster transactions, i.e., fewer lines at the point of sale; improved site hygiene, i.e., preventing the transmission of disease through the use of notes and coins; increased sales; simplified cash collection; and management of employee entitlements. Stakeholders, for example, will profit from the use of electronic payment methods. For consumers, it will reduce the risk of carrying large amounts of cash, increase convenience, provide more service options, and lower the cost of banking services; for businesses, it will result in faster access to capital, reduced revenue leakage, and lower the cost of handling cash; for governments, it will increase tax collections and economic development; and for banks, it will increase efficiency through electronic payments.

According to Okechi and Kepeghom (2013), a point-of-sale (POS) is an electronic device that is used to authenticate and execute credit transactions and is typically connected via a high-speed network. A retail point of sale system often contains a computer, monitor, cash drawer, and receipt printer, as well as a customer display and barcode scanner, and a debit/credit card reader in the majority of cases. A weight scale, integrated payment processing system,

signature capture device, and customer pin pad device are all possible additions. For the convenience of usage, more POS monitors are using touchscreen technology, and a computer is embedded into the monitor chassis for what is known as an all-in-one unibody.

2.3 Benefits of POS terminals

POS is one of the e-payment systems introduced in Nigeria to further the course of cashless policy. POS accepts ATM cards for payment of goods and services. POS allows cardholders to have real-time online access to funds and information in their bank account through debit or cash cards.

The POS system was introduced in Nigeria by the central bank of Nigeria in 2012 as a plan to encourage the cashless policy in financial transactions across the country. There are many benefits of purchasing a POS system, notably making it easier to manage your retail business. It is a secured method of payment compared to swipe and contactless methods. It requires the owner of the card to enter a PIN during a transaction with the bank. Due to quick payment, it saves time spent on POS (Point of Sale) locations compared to previous traditional methods. It eliminates user errors found in traditional payment methods. It has become very convenient to pay using the digital mode of payment with the availability of POS terminals at retail shops, petrol bunks, shopping malls, etc. It does not require a person to carry the cash while going for purchase, with a point-of-sale, waiting time is greatly reduced for consumers, and employees can be more efficient in completing transactions.

2.4 Vulnerabilities of the POS terminal system

Despite the more advanced technology of a POS system as compared to a simple cash register, the POS system is still as vulnerable to employee theft through the sale window. A dishonest cashier at a retail outlet can collude with a friend who pretends to be just another customer. During checkout, the cashier can bypass scanning certain items or enter a lower quantity for some items thus profiting thereby from the free goods. The ability of a POS system to void a closed sale receipt for refund purposes without needing a password from an authorized superior also represents a security loophole. Even a function to issue a receipt with a negative amount which can be useful under certain circumstances can be exploited by a cashier to easily lift money from the cash drawer.

This security issue is one reason why business owners may avoid the use of POS terminals. In order to prevent such employee theft, it is crucial for a POS system to provide an administrator window for the boss or administrator to generate and inspect a daily list of sale receipts, especially pertaining to the frequency of canceled receipts before completion, refunded receipts, and negative receipts. This is one effective way to alert the company to any suspicious activity — such as a high number of cancelled sales by a certain cashier — that may be going on and to take monitoring action. To further deter employee theft, the sale counter should also be equipped with a closed-circuit television camera (CCTV) pointed at the POS system to monitor and record all the activities. At the back end, price and other changes like discounts to inventory items through the administration module should also be secured with passwords provided only to trusted administrators. Any changes made should also be logged and capable of being subsequently retrieved for inspection.

2.4 Related Works

In 2018, Akerejola *et al.* worked on Customer trust and Adoption of Point of Sales of Selected Business Organizations in Lagos State, Nigeria. The study was based on finding how much adoption of technological development, customer trust and security affected the adoption of POS in businesses in Lagos. According to them, the reasons CBN gave for low adoption of POS included but were not limited to lack of trust and security of transactions. Other factors include lack of adequate infrastructure required to run POS, irregular network connectivity, and lack of security of network communications. The importance of security over the network is of immense importance as well as security on the smart card that is used on the POS terminal. Theories that have evolved to explain the adoption of POS in an organization include Technology acceptance theory, Theory of Reasoned Action, and Theory of Planned Behaviour. The study tested the following hypothesis:

a. There is no significant relationship between customer trust and adoption of POS of selected business organizations in Lagos State, Nigeria.
b. There is no significant relationship between POS security and the adoption of POS of selected business organizations in Lagos State, Nigeria.

Their study revealed that a high level of confidentiality in POS is a measure of customer trust and will enhance the adoption of POS in selected organizations in Lagos State. The hypothesis proved wrong as it was realized that there was a significant relationship between customer trust and the adoption of the POS in selected businesses in Lagos State. Furthermore, it was noted that there was a significant relationship between POS security and the adoption of POS by selected businesses in Lagos State. From this, it is seen that customer trust and POS security are strong factors that affect the adoption of POS in Lagos state.

In 2015, Omotayo and Dahunsi worked on the Factors Affecting Adoption of Point of Sale Terminals by Business Organisations in Nigeria. Their study could serve as a motivation for banks to intensify efforts to deploy more POS to organizations in the locations of study as well as other parts of the country to further promote the adoption of POS among organizations that are yet to adopt. And also as a critical factor for success, the necessary infrastructure, such as internet access, that would make the cashless policy to work in Nigeria should be made available.

In 2016, Onyebuchi *et al.* examined the study Point of Sale (POS) - Adoption and Challenges in Nigeria. The studied area used was Enugu state. The study observed some relevant standards and protocols for the POS terminals and discussed POS and their adoption within a conceptual framework. It showed that obstacles to using POS ranged from unavailability of network and no knowledge of POS machines, low internet bandwidth, and frequent power interruptions.

In 2019, Akerejola *et al.* worked on the Availability of Infrastructure and Adoption of Point of Sales of Selected Small and Medium Enterprises in Lagos State, Nigeria. This study aims to make further contributions to the ongoing research and to focus specifically on how the availability of infrastructure enhances the adoption of POS in selected organizations in Lagos state.

CHAPTER THREE

METHODOLOGY

3.0 Overview

This study employed a cross-sectional survey research design, employing well-validated questionnaires as the main research instrument. This is consistent with the view of Mann (2003) who noted that many cross-sectional studies are completed with questionnaires and few others employ interviews to collect data. Similar studies on the adoption of POS have employed a cross-sectional research design (Akerejola *et al.*, 2018).

The justification for the use of this method is based on the need for Small and Medium-scale business operators to understand the requirement of the study as the use of questionnaires simplified the extraction of opinions from the respondents.

Furthermore, the focus on Small and Medium scale enterprises hinges on the fact that over 70% of businesses in Nigeria are of the SME type. (Akerejola *et al.*, 2019).

3.1 Sources of Data

Primary data were collected through survey design which involves the use of a well-defined set of questions and the resultant questionnaires were vetted and deployed to capture data on the key research issues about the effective implementation of the Point of Sale (POS) payment system in the Osogbo axis of Osun State, Nigeria. The questionnaire was also designed to capture possible deterrents to the implementation of the said payment system as well as deducible solutions to the perceived obstacles highlighted in the research.

The secondary data for this work was obtained from a studious review of journal articles and materials gotten from the internet.

3.2 Area of Study, Population of Study, and Sample Size

Areas covered in this study include Merchants/Traders, Restaurants and food vendors, Filling stations, Supermarkets, Boutiques/Fashion stores, Business Centers, and Salon operators as well as a set of consumers. The population of the study was 150 and the respondents were shared across the sample size in the ratio 80:20 among business establishments and consumers respectively. Out of 150 questionnaires that were administered, 124 respondents were involved in the survey giving a response rate of 82.66% gathered across Alekuwodo, Fakunle, Oke Fia areas of the said local government, and this result was used in our analysis.

CHAPTER FOUR

DATA ANALYSIS, RESULTS, AND DISCUSSION OF FINDINGS

4.0 Demographic data

4.0.1 Socio-Economic Characteristics

1. Employment Status and Level of Education: 96.8% of the participants had used the service of a POS but those who had not used it before were unemployed and mostly secondary school certificate holders with an exception of a self-employed BSc holder who is considered an outlier.

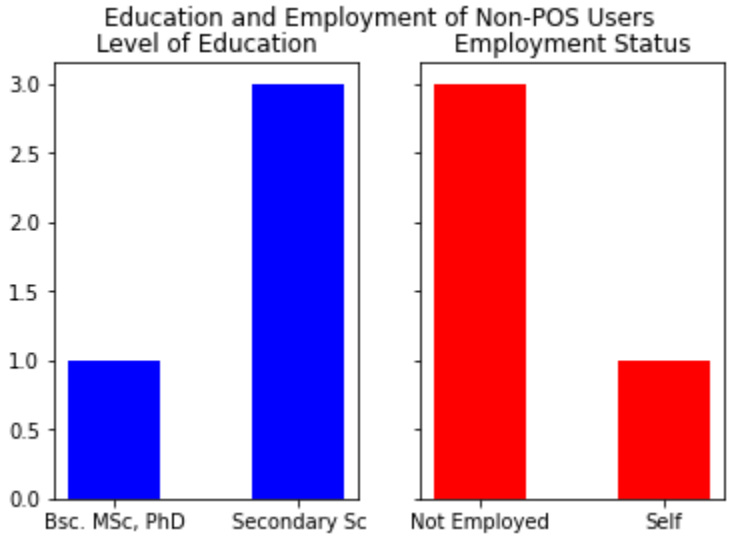


Figure 4.1: Respondents Education Level and Employment

2. Gender and Marital Status: 59% of POS users were Female with the remaining 41% being male, this revealed that females were slightly more involved in POS services.

   59% of POS users were single, 40% were married and just 1% were divorced, this revealed again a slightly higher usage of POS services by single.

   However 55% of POS users were between the ages of 21 and 30, this showed very high adoption of POS usage by the youths compared to that of the other age ranges (<20: 9%, 31-40: 26%, 41-50: 9%, 51-60: 2%).

   64% of POS users came from a household of a size of 1 to 4 members, this shows a high adoption of POS usage from people coming from a small household.

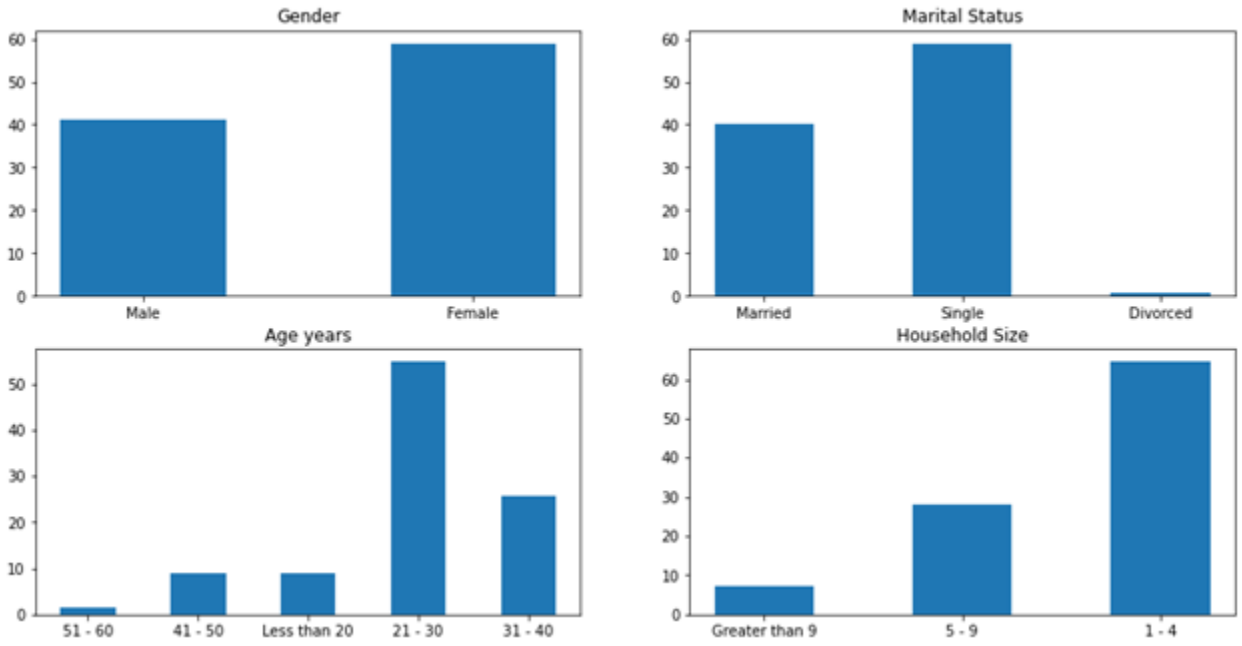


Figure 4.2: Respondents Persona

4.0.2 Characteristics And Structure

I. Age of Business and Age of Adoption of POS: According to the data, 46% of businesses are between 2 to 11 years old while a close number, 42% are only just 2 years old.

42% of businesses started using POS between 1 to 3 years and 33% of businesses started in less than a year.

This data indicates that the adoption of POS is mostly just recent in Osogbo, the high amount of new businesses seems to indicate that they are the source of the recent influx of POS operations.

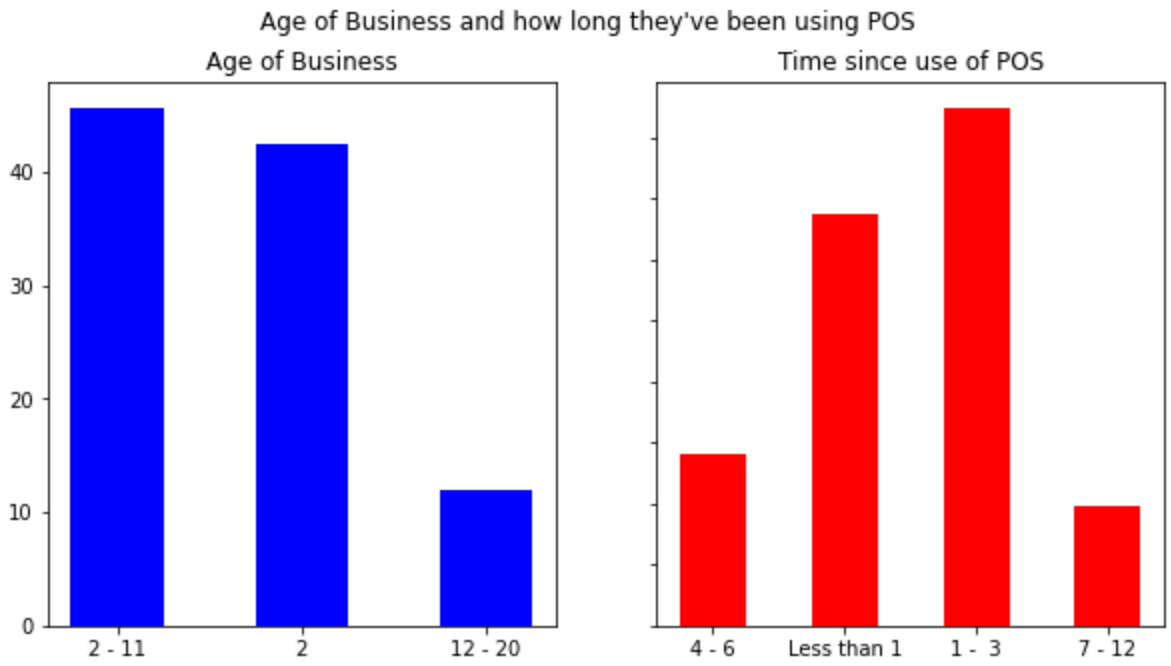


Figure 4.3: Respondents Business Age

II. Qualifications of Operator: 55% of POS operators have a qualification of HND/B.Sc. and above, 33% are SSCE holders and 14% are OND holders.

This might indicate that the qualification required to operate and maintain a POS is high.

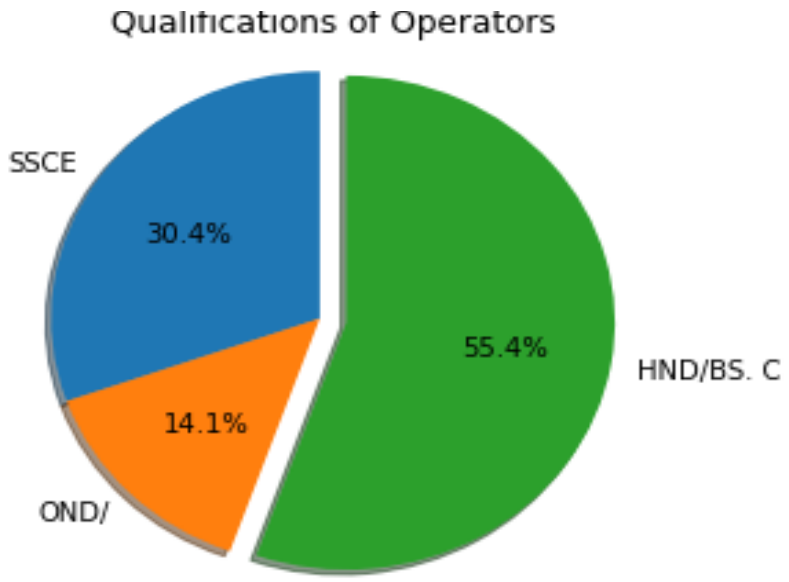


Figure 4.4: POS Operator education level

III. Estimated Number of Customers and Number Using POS: According to the data, 62% of businesses have between 11 and 50 customers daily and out of these set of businesses that have 11-50 customers, 88% of them use almost only POS to attend to all 11-50, while the remaining 12% attend to less than 10 customers with POS.

This shows the high adoption of POS in the majority of businesses, even in businesses that get greater than 100 customers daily. 40% of these businesses have more than 100 customers using POS daily, while 33% have 51 to 100 customers using POS daily.

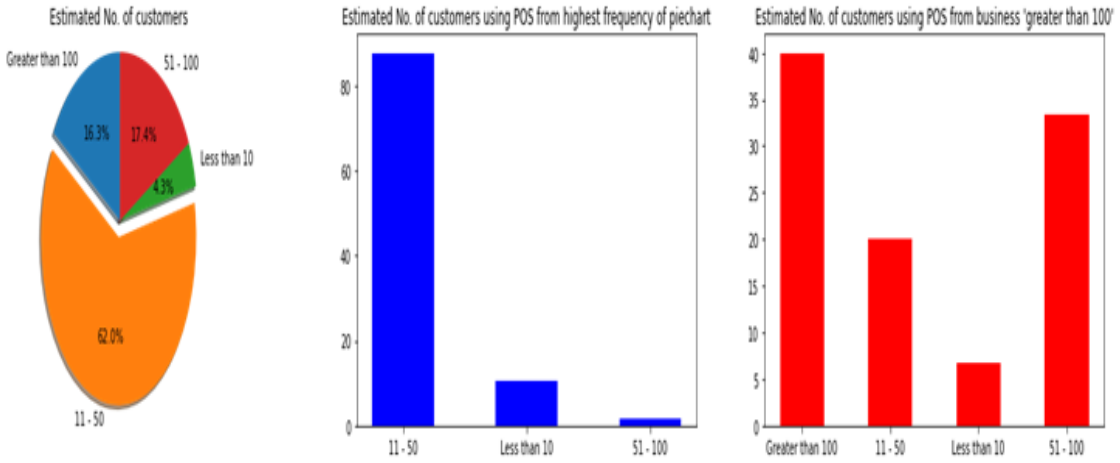


Figure 4.5: Customers characteristics

IV. Estimated Daily Income and Income with POS: 34% of businesses made 50,000 naira to 100,000 naira daily while 21.7% made less than 50,000, 29.3% made between 100,0001 naira to 500,000 naira, the remaining businesses made more than 500,000 naira daily.

A large percentage of these businesses transacted a large percentage of their daily income using POS as can be seen in the bar charts.

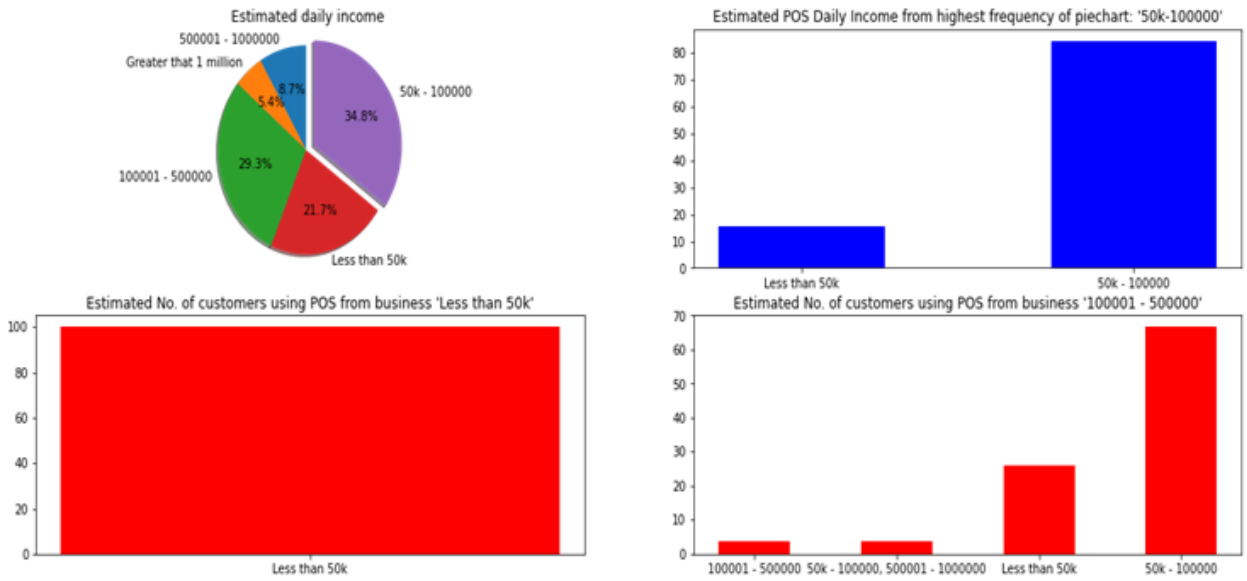


Figure 4.6: POS operator income level

4.1 Customer's Level Of Satisfaction

Most of the participants were satisfied with their experience in using the POS as the percentage of those satisfied was high in the questions asked as seen in the charts below.

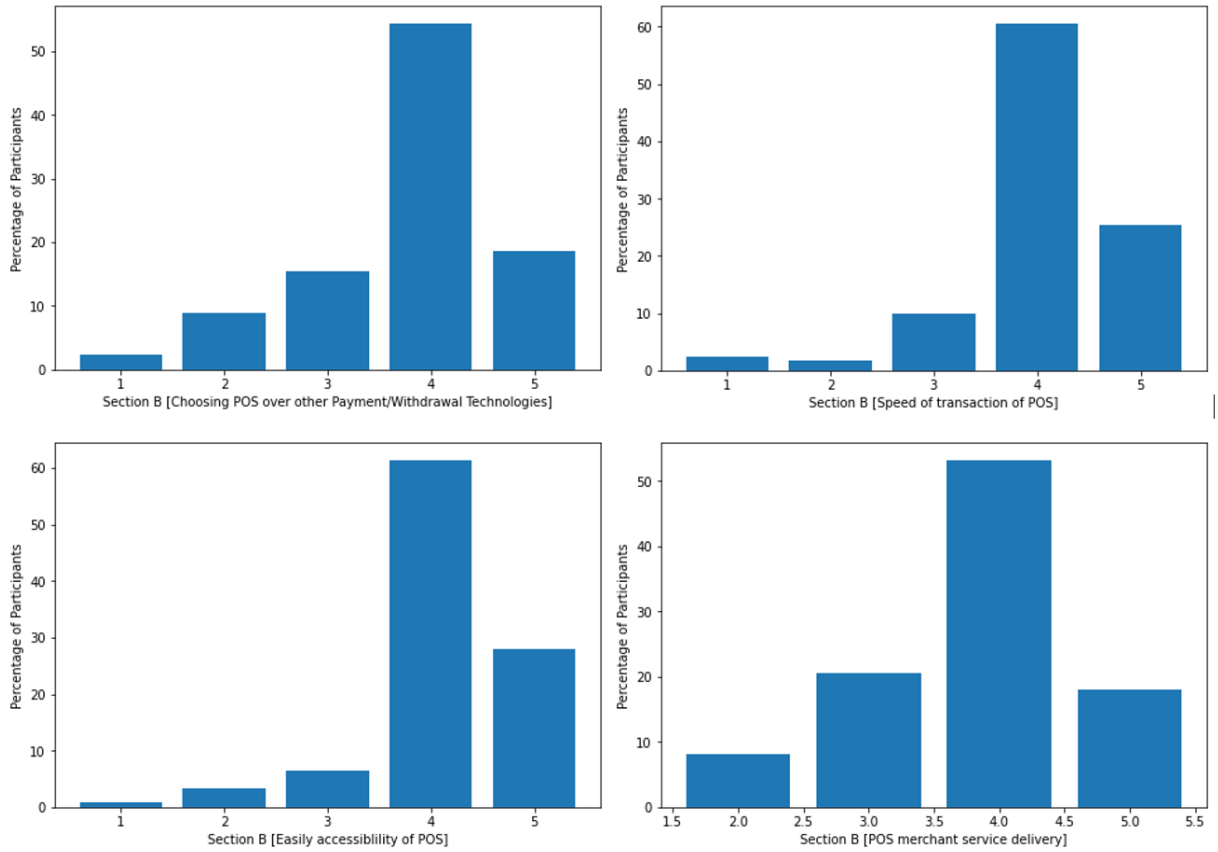
Chart Legend: 1 - Strongly Dissatisfied

2 - Dissatisfied

3 - Neutral

4 - Satisfied

5 - Very Satisfied



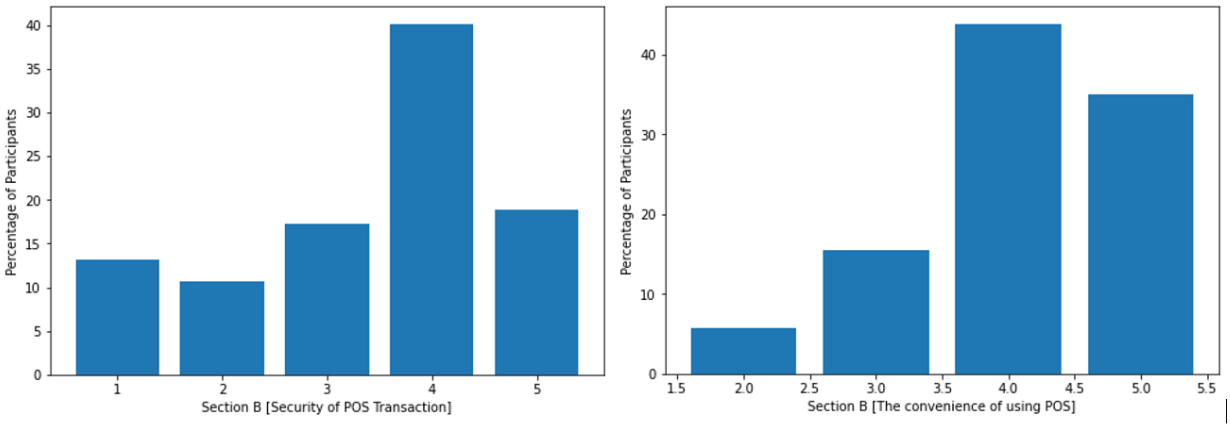


Figure 4.7: Respondents Perceived Ease of Use

4.2 Challenges Faced while using the Technology

Chart Legend: 0 - No

1 - Not Applicable

2 - Yes

For the challenges facing the use of POS, 60% of the participants agreed that "there is often a network problem" and only 25% disagreed with it. In a similar manner, 62% of the participants agreed that "Unreliable Service" was a challenge leaving just 30% to disagree with the claim. According to the data, this revealed that Network Issues and Unreliable Service are the biggest threats facing the adoption or USE of POS.

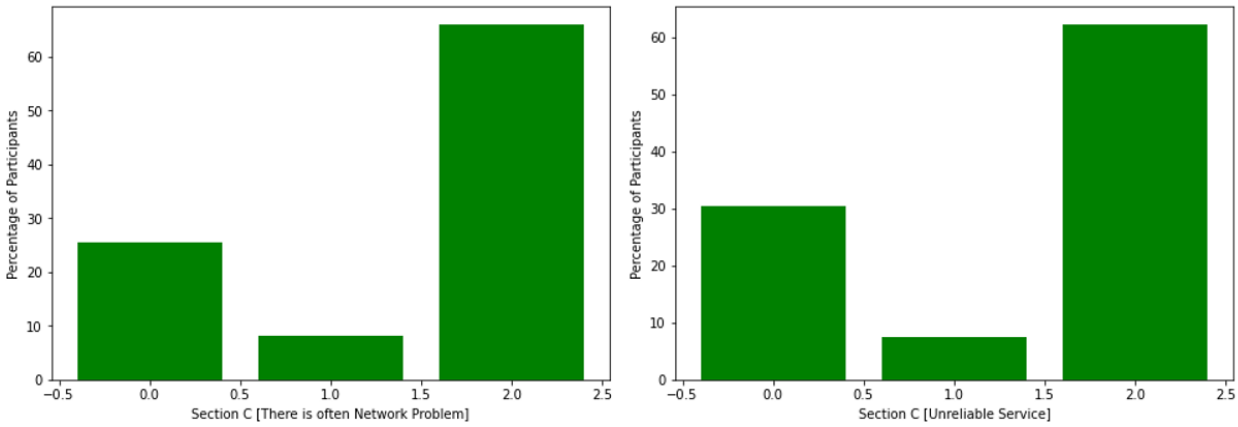


Figure 4.8: Issues With POS

For other challenges listed, the majority of the participants claimed to not face those challenges as shown in the charts below.

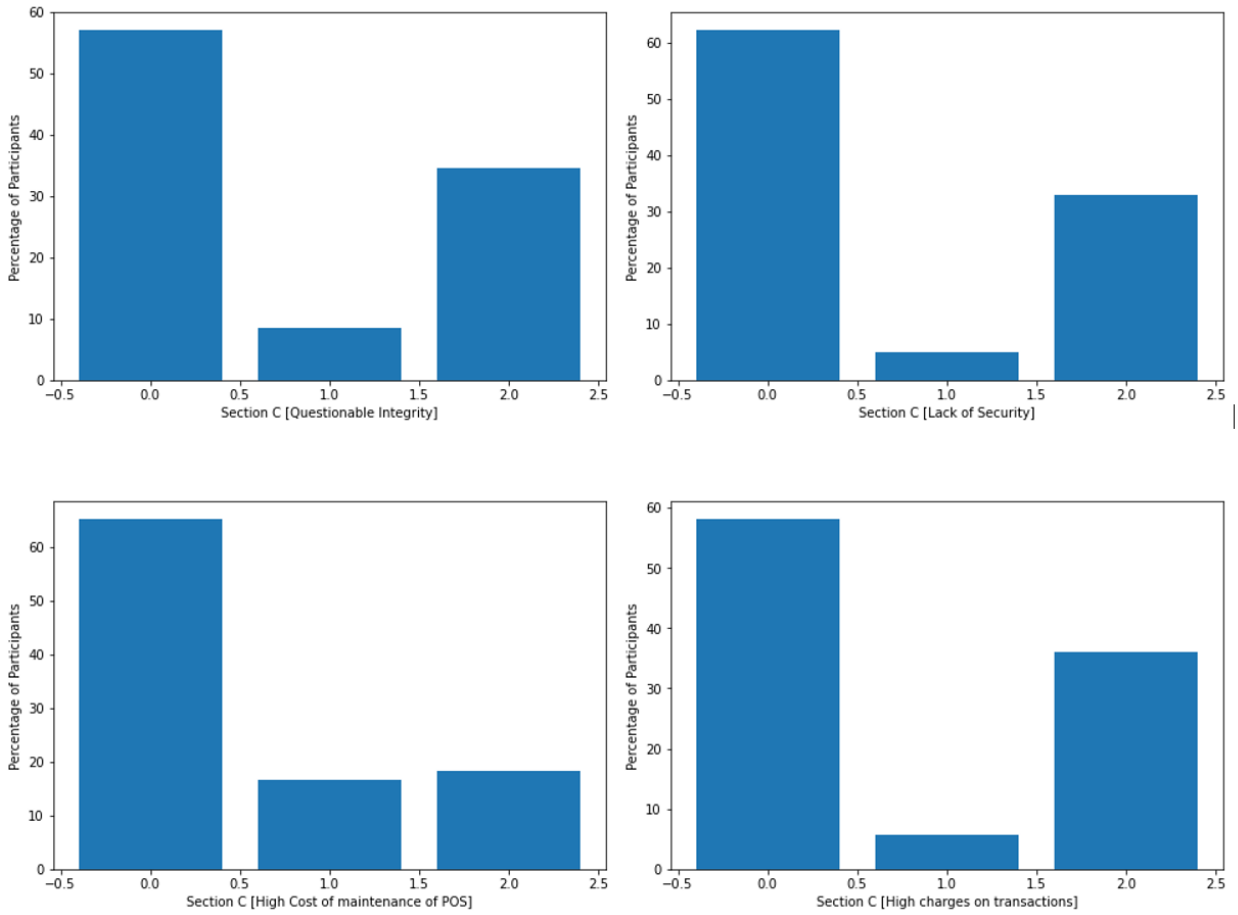


Figure 4.9: Issues That Don't Affect The Use of POS

4.3 Factors influencing the Use/Adoption of POS

Chart Legend: 1 - Strongly Disagreed

2 - Disagreed

3 - Undecided

4 - Agreed

5 - Strongly Agreed

40% of the participants disagreed that "People having no knowledge of POS" is a factor influencing the adoption of POS, with 18% of them STRONGLY disagreeing, this left 25% agreeing with the fact and 4% STRONGLY agreeing, this goes to show that lack of knowledge of POS is most likely not an issue when it comes to POS usage.

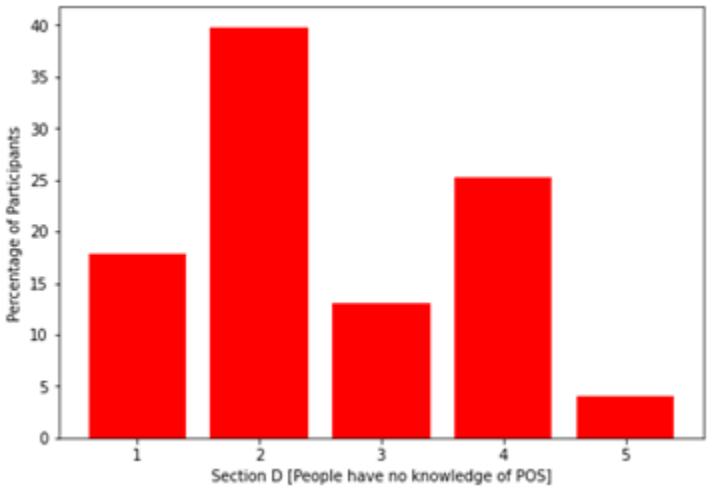


Figure 4.10: Knowledge of POS

Similarly, 32% of the participants disagreed that "limited number of POS" is a factor in the adoption or use of POS with 12% STRONGLY disagreeing, leaving 29% agreeing and 7% STRONGLY agreeing. The aggregate for those disagreeing was 42% and those agreeing was 36%, while 20% were undecided in their decision. Although a higher percent disagreed, the gap between those who agreed and those who disagreed is not wide enough to make a solid conclusion.

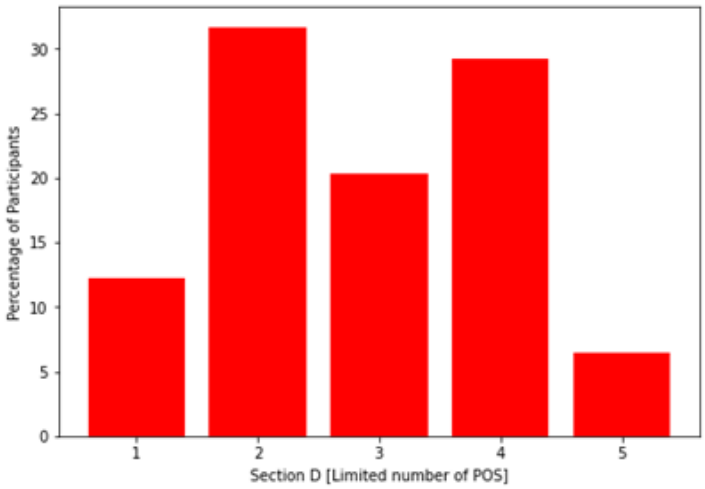
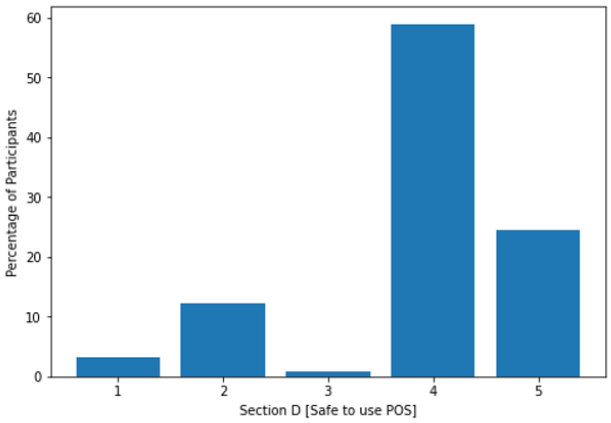
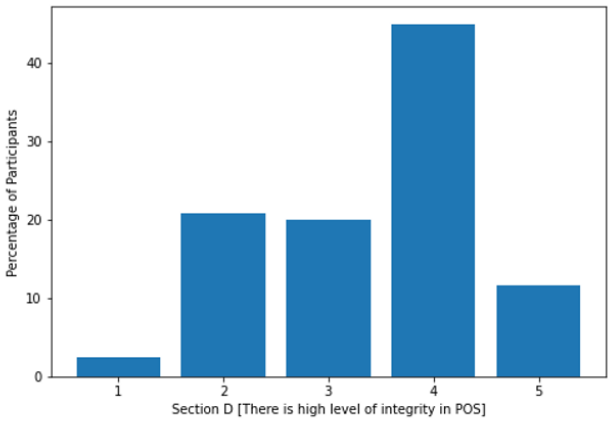
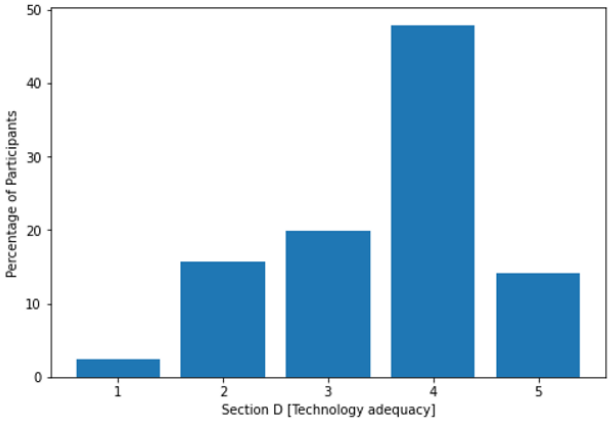


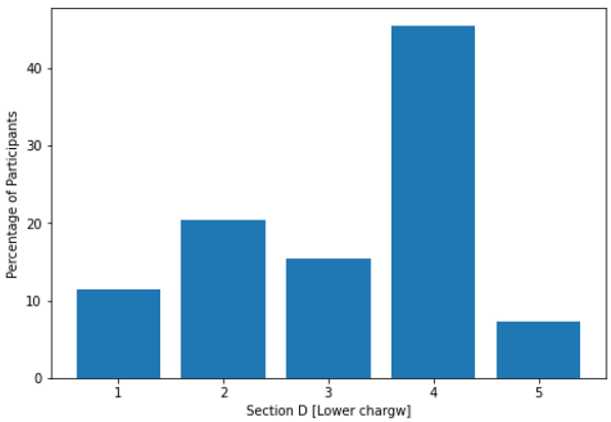
Figure 4.11: Number Plot of POS

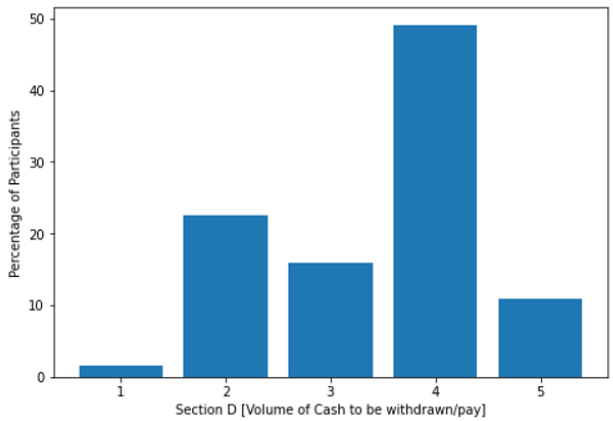
According to the data, asides from the two factors mentioned above, many of the participants agreed with the remaining listed factors that were influencing the use or adoption of POS

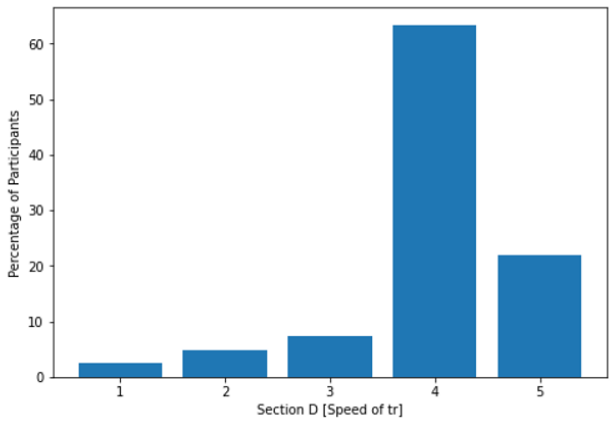

Percentage of Participants
Section D [Safe to use POS]

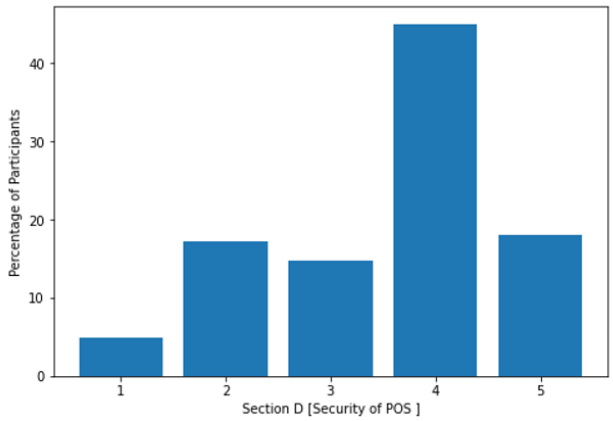

Percentage of Participants
Section D [There is high level of integrity in POS]

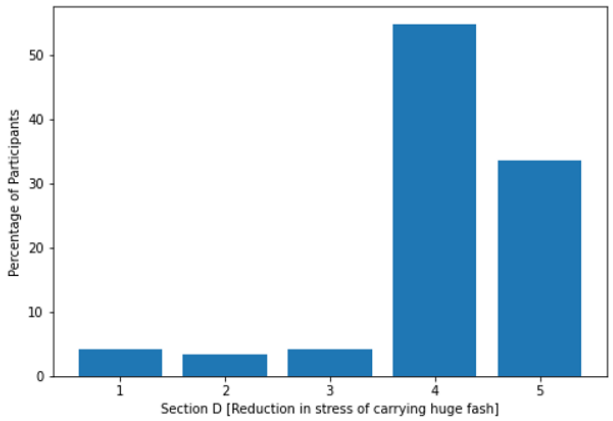

Percentage of Participants
Section D [Technology adequacy]


Percentage of Participants
Section D [Lower chargw]


Percentage of Participants
0
10
20
30
40
50
1
2
3
4
5
Section D [Volume of Cash to be withdrawn/pay]


Percentage of Participants
0
10
20
30
40
50
60
1
2
3
4
5
Section D [Speed of tr]


Percentage of Participants
0
10
20
30
40
1
2
3
4
5
Section D [Security of POS]


Percentage of Participants
0
10
20
30
40
50
1
2
3
4
5
Section D [Reduction in stress of carrying huge fash]

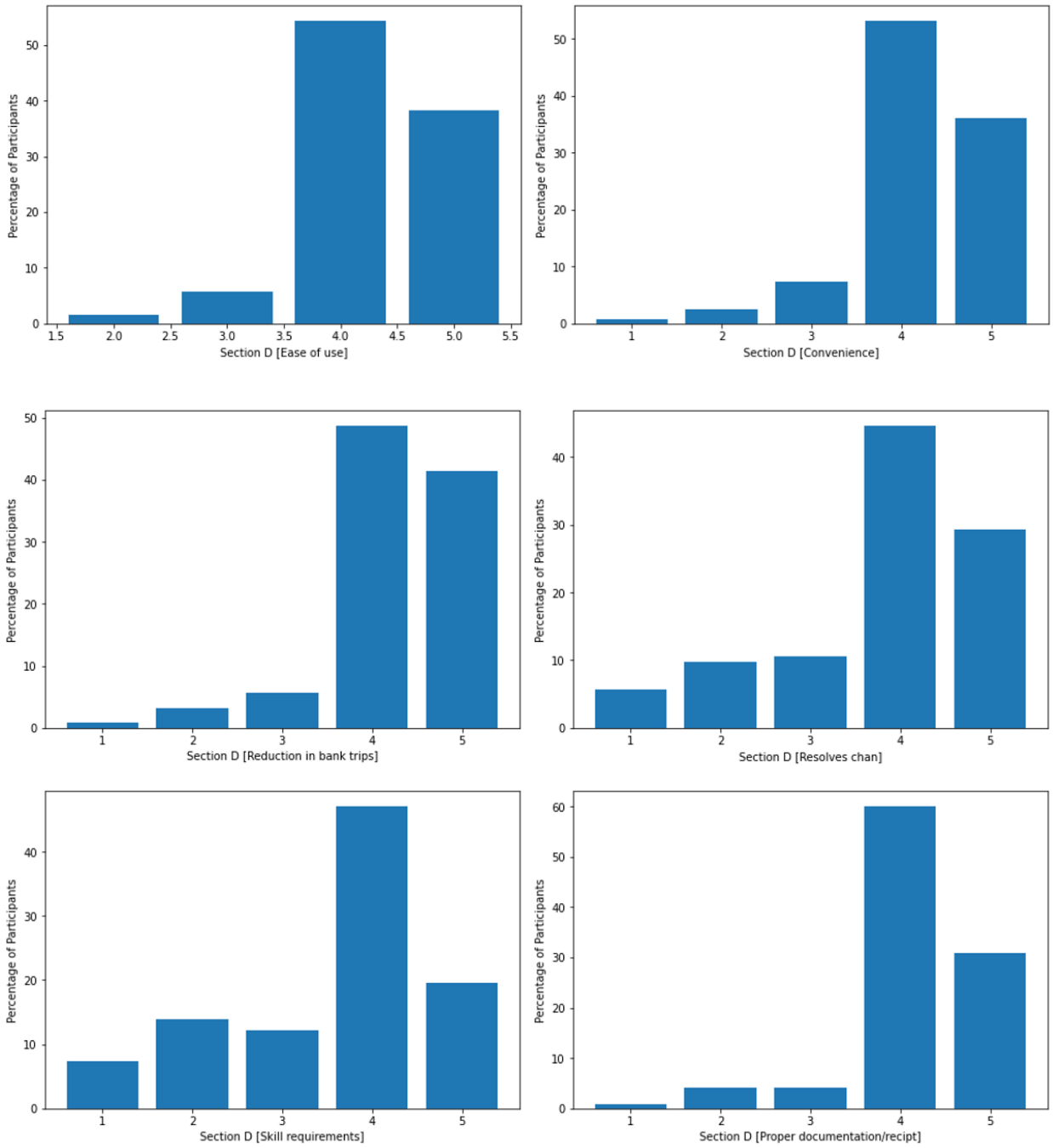


Figure 4.12: Ancillaries to POS Use

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.0 Conclusion

Conclusively, the aim of this research has been completed successfully. From the results drawn out, one can tell that the adoption of POS in Osogbo, Southern Western part of Nigeria is high.

The general observation from the sample population is that P.O.S is in use by most of the population, the few who don't use P.O.S mostly consist of those whose level of education is that of the secondary school level or lower with very few outliers.

Females are slightly more involved in the use of POS service compared to males, Youth makes the most use of this technology compared to other age ranges; these youths are usually from homes of small numbers. More businesses engaged in this technology earlier and there is a high probability that the number of POS will increase in little or no time based on the responses and analysis of the number of enterprises that have begun using POS in the past 3 years. This shows that usage of POS requires at least a Secondary School graduate but graduates are preferred in the hiring considerations. Another observation made was that those businesses which ventured into the use of this technology generated massive income daily with time.

5.1. Summary of challenges faced

Some participants who were not really keen to participate and filled in their questionnaire incompletely, we also had issues in locating possible participants and persuading them to feel comfortable to talk in answering the questionnaire honestly. Some businesses felt reluctant to disclose their data due to some reasons(security purposes), Some vividly requested money to

disclose their data. Some asked us for a favor in return for data. Some needed permission from higher authority (Manager's approval). The estimated distance between two POS stands is 6metres. We were able to assist some businesses in filling the data gotten from their response into the hardcopy due to lack of proficiency in English language.

5.2 Recommendation

The era of traditional cash registers is long behind us. POS technology solutions are flexible and offer a wide array of fantastic features. After all, the transaction benefits both the customer and the POS owner, while simultaneously making things as easy as possible for the business. With the increasing rate of businesses in the competition will be high as more businesses come on board due to the flexibility. The capabilities of POS systems today are seemingly limitless. POS features can help complete most transactions as long as the card is available. On average there is a higher number of people who are satisfied with the use of P.O.S in their business transactions.

In order to increase the rate of P.O.S penetration, the following factors should be adjusted

1. Increase the distribution of knowledge about the security of P.O.S among the uneducated.
2. Increased network stability in the country.
3. Troubleshooting the errors commonly

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