UGANDA MANAGEMENT INSTITUTE

THE EFFECTIVENESS OF BILLING SYSTEMS IN PUBLIC UTILITIES AND BUSINESS PERFORMANCE: A CASE OF UMEME NATETE BRANCH

BY

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DECLARATION

I, the undersigned, do declare that this dissertation is my original work and has never been published or submitted in any other university or institution of higher learning for any award. The dissertation is a result of my own research and where other people's work was cited, they have been dully acknowledged.

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APPROVAL

This is to satisfy that this dissertation has been submitted for examination in partial fulfillment of the requirement for the award of a Master's Degree in Business Administration We hereby approve as the candidate's institute supervisors who oversaw the entire research process.

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DEDICATION

I devote this piece of work to the Almighty God, my aunt Ms. Nakibuuka Rebecca, Edwin, Joan, Patrick Nsubuga and Kenneth Mukalazi.

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LIST OF ACRONYMS/ABBREVIATION

AMR   Automated Meter Reading

BEC   Bundibugyo Electricity Co-operative Society Limited

BSC   Balanced Score Card

DV   Dependent Variable

ERA   Electricity Regulatory Authority

IV   Independent Variable

KIL   Kilembe Investment Limited

KIS   Kalangala Infrastructure Services

KRECS   Kyegegwa Rural Energy Co-Operative Society

MV   Moderating Variable

OBA   Out-Based Aid

PALMECS   Pader-Abim Community Multi-Purpose Electric Co- Operative Society Limited

UEB   Uganda Electricity Board

UEDCL   Uganda Electricity Distribution Company Limited

WENRECO   West Nile Rural Electricity Company Limited

ABSTARCT

The study focused on examining how billing systems effectively influence business performance in public utilities; a case of Umeme Limited. Specifically the study sought to: examine the effectiveness of prepaid billing; postpaid billing system, and finally to examine the effectiveness of employee performance on billing systems in influencing business performance at Umeme Ltd. The study used a cross sectional survey research design adopting both quantitative and qualitative approaches. The researcher sampled 381 respondents. Simple random sampling and purposive sampling techniques were used. Methods of data collection included; questionnaire survey, interview guide and documentary review. Data analysis was both quantitative and qualitative, quantitative data analysis was carried out by the use of predictive modeling which included Pearson's correlation co-efficient and regression models to determine the relationship between billing system (IV), business performance (DV) and employee performance (MV). Qualitative data was analyzed through quoting and paraphrasing of statements.

Findings of the study revealed that billing systems positively influence business performance at Umeme. Similarly the findings revealed that prepaid billing system has a strong positive influence; postpaid billing system has a moderate positive influence and employee performance has a moderate positive influence on business performance at Umeme Ltd.

The study recommended that; Umeme management should ensure employee training especially those in billing technologies, set up a policy to improve complaint resolution so that customer complaints are resolved faster. Similarly, study findings revealed that Umeme should increase awareness of payment alternatives since most of the respondents only know a few. Finally, the researcher recommended that Umeme should convert most of the customers to prepaid since its benefits are more compared to postpaid.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter presents the background to the study, historical background, theoretical, conceptual and contextual background of the study, the study also presents the statement of the problem, purpose of the study, objectives, questions and the study hypothesis. Furthermore, this chapter presents the significance, justification, scope, and the conceptual framework of the study. Not only limited to those, the study shows how the researcher operationalized the definitions of the study (Amin, 2005).

1.2 Background to the Study

The study focused on billing systems in public utilities and business performance at Umeme limited. This involved an analysis of the two billing systems; the prepaid and postpaid billing systems. The prepaid billing system requires consumers to pay for energy before it can be used (Gitman, 1983) whereas the postpaid billing system necessitates customers to pay for energy after consumption (Gitman, 1986).

This study examined the influence of billing systems on business performance at Umeme limited. The balanced score card model views performance in four perspective; the financial, internal business, learning and growth and the customer perspective (Kaplan and Norton, 2001). Kaplan and Norton (2001) believe that if all these perspectives are catered for and realized the organization gains competitive advantage. Competitive advantage fends off competitors which in turn increases the profitability of the organization.

1.2.1 Historical Background

Initially at the inception of hydroelectricity throughout the entire world postpaid billing was used to meter power consumption. To some extent this practice was successful; however, it has not prevented payment elusion, revenue outflows and a number of problems that customers face: failure to deliver customers' bills and providing error prone bills to customers. (Mensah et al, 2012).

The prepaid billing system started in South Africa during the late 1980s. The purpose here was to distribute power to people with poor incomes. The ideology was welcomed by low income earners who had challenges of paying electricity bills. (Estache et al., 2000)

The payment of power bills in Africa has been predominated by the postpaid for many years. Recently most town councils and power companies are shifting toyakain order to dough on the paybacks of this model which include; loss reduction, customer loyalty and improved cash flows (Harvey, 2005).

Umeme LTD was formed in 2004 under the privatization agreements to be the leading power distributor in Uganda. Throughout the years Uganda has been on postpaid billing systems, Uganda Electricity Board (UEB) used postpaid meters such as ferrante to meter customers' consumption. This trend continued throughout the reign of Uganda Electricity Distribution Company Limited (UEDCL). When Umeme took over in March 2005 continued with postpaid billing system which had some advantages as well as demerits that prompted new innovation with a view of improving business performance.

In 2011, Umeme introduced the prepaid billing system called "Yaka". The first prepaid meter was installed on 28th /July/ 2011 in Kintitale a Kampala suburb aimed at improving customer satisfaction. Mr. SSemwangu Benard noted that "I will be able to monitor my finances since I will

know how much I have consumed "(The New Vision, 17th April 2011). Today Umeme has over 200,000 customers on Yaka billing system

1.2.2 Theoretical Background

The study was underpinned by the "**balanced score card model**" by (Kaplan and Norton, 2001). Kaplan and Norton's balanced scorecard model airs at planning and controlling structures as the main methods for performance. These systems align corporate doings to the vision and approach of the institute, advance inside and external communication and oversee organizational performance (Wisley et al., 1998).

It undertakes that institutes are observed in four standpoints, and should create metrics, assemble data and evaluate it to these outlooks. They include learning and growth which includes individuals who should be skilled and capable. It's the people who will make the customer satisfied and ensure sustainability and business growth, internal business perspective helps managers know how well the organisation is running and should conform to customer requirements like billing expectations, power reliability and excellent customer experience. The other perspective is the customer perspective that focuses on client gratification. If customers are not gratified they will find other suppliers eventually leading to the decline of the organisation. Lastly the financial perspective focuses on the income stream of the business. Managers should focus on schemes that increase the owners profit bearing in mind financial related data such as risk assessment and cost-benefit analysis.

Therefore, it's upon this background that Umeme should focus on satisfying customers, improve financial and revenue streams, enhance learning and innovations, and improve its internal business processes since they all have a positive influence on organizational performance.

1.2.3 Conceptual Background

A performance metric is used in strategic management to classify and advance several core roles of a commercial and their subsequent outside results. This background analyses the variables being considered; the dependent variable "business performance", independent variable "billing systems" and the moderating variable "employee performance"

"Performance" encompasses the tangible output or outcomes of an institute as gauged against its projected output—objectives and points. In relation to Richard et al (2009), managerial performance incorporates three exact parts of an organization's results: financial recital; proceeds, return on assets, return on stock; product market performance; sales and market size; and owner's return. (Gary & John, 2009). Business performance is broken into customer satisfaction, revenue growth, cost management, customer growth and loss reduction at Umeme Ltd

In this study a "customer" is an individual who buys merchandises or services from someone else (dictionary.com, 2016), and "satisfaction" is the worth of a specific product or service (Oh, 1999). Umeme has also embarked on improving its revenue, revenue growth which means the rise in the firm's sales over time typically stated in percentages. Furthermore, the company understands performance as reducing cost, cost reduction encompasses the procedures of reducing the amount of cash a company spends on wages, production and other operational expenses in order to make it more lucrative. Another performance indicator at Umeme is customer growth which means an increase in the number of people who buy a specific product or service or number of products And finally loss reduction are management approaches to reduce energy that is not metered. Losses are divided into two types at Umeme; technical and commercial losses as a result of power theft (Umeme Annual, Report 2015)

On the other hand, the independent variable is responsible for the disparities in the dependent variable. In this study, the independent variable is denoted as 'billing systems'. Umeme's billing is twofold; the prepaid and postpaid billing system. "Prepaid billing" is where a customer pays for a service or good before he can use it (Gitman, 1983). Baptista (2013) noted that prepaid electricity billing structure provides consumers with authority over electricity consumed and divisibility of energy purchases. "Postpaid billing" is where a customer pays for a good and service after using it (Gitman, 1986). Therefore, if these models are carefully managed and used, business performance shall be achieved.

Furthermore, the researcher reviewed a moderating variable "employee performance", alongside billing systems; there are others factors that influence business performance at Umeme. In that context the researcher analyzed employee performance amongst all because of the significance it pertains on organization performance. Boddy (2008) defines employee performance as the capacity of an employee to complete a task centered on the prospects of an organization. According to Umeme, employee performance is broken down into three parameters, namely; job knowledge, quality meter readings and timely meters audits in billing (Umeme Annual Report, 2015). Umeme Annual Report (2015) understands "job knowledge" as the ability of employees to express essential skills required to execute a task like customer service, practical and technical skills; "quality meter readings" as the employees ability to read customers' meters on time, record and submit accurate readings that are free from errors, and "timely meter audit" is the process of ensuring routine meter inspections aimed checking the functionality of the meter so that all the energy used by a client is metered.

1.2.4 Contextual Background

The power distribution industry in Uganda is controlled by the Electricity Regulatory Authority (ERA) to oversee a drop in distribution losses, advance the quality of service and supply, rise customer numbers on the power network, progress revenue collection rates, announce technologies in the business like prepaid billing systems, increase energy sales, increase power admittance to Ugandans. Presently the distribution industry in Uganda has nine actors namely; Umeme limited as the biggest player, Ferdsult Engineering Services Ltd, Bundibugyo Electricity Cooperative Society Limited (BECS), Pader-Abim Community Multi-Purpose Electric Co-operative Society Limited (PACMECS), Kilembe Investment Limited (KIL), Uganda Electricity Distribution Company Limited (UDECL), Kyegegwa Rural Energy Cooperative Society (KRECS), West Nile Rural Electrification Company Limited (WENRECO) and Kalangala Infrastructure Services (KIS)

Umeme limited is the largest power distribution company in Uganda. It is listed on the Uganda Securities Exchange; similarly the power company is cross listed on the Nairobi Exchanges. The power company won a concession to operate, maintain, upgrade and expand the electricity network for twenty years from the Government of Uganda.

The table below shows a five year trend in revenue growth, cost management, customer growth and loss reduction.

Business performance						
	2010	**2011**	**2012**	**2013**	**2014**	**2015**
customer satisfaction	40%	43.9%	53%	53%	59%	68.9%
Revenue growth	463 billion	457 billion	860 billion	966 billion	978 billion	1.161 billion
Cost management/expenses	123,106 million	123,106 million	139,106 million	139,106 Million	181,667 million	188,866 million
Customer growth	405,000	458,000	513,000	574,000	651,000	794,000
Loss reduction	30%	27%	26%	24%	21%	19.5%

Source: Umeme Annual Report 2015

Table 1: Umeme Annual Report 2015

Since its transformation from UEDCL in 2005, Umeme has steadily worked towards improving its performance and more concentrating on customer satisfaction. It has worked tirelessly to ensure that services are brought closer to customers by creating 25 offices across the country. In its efforts to improve performance Umeme has put more efforts in customer satisfaction, revenue growth, cost management, customer growth that demonstrate Umeme's objectives. In terms of customer satisfaction Umeme has introduced a number of digital platforms that ensure self-service of customers which include; the Umeme App, Facebook, twitter, Whats App and the E-billing system that avail customers with timely billing notifications. These platforms have ensured communication and feedback between the company and the customers that has seen quick complaint resolution (Umeme Report, 2013). However, despite the customer service interventions, customer complaints have continuously increased.

In its efforts to improve revenue growth from 978 billion in 2014 to 1.161 billion in 2015 Umeme has converted 55% of the domestic customers to prepayment, increased the energy tariff by 17% in 2015 (Annual Report 2015) increased the unit sales due to power availability and loss reduction. Revenues have increased partly due to the improvements in the revenue management cycle but

still the company has not yet collected 100% of revenues. Improved management and the strategic initiatives have seen customer numbers rise from 651,000 in 2014 to 794,000 in 2015. This increase is majorly due to the World Based Aid project (OBA) that was implemented to increase power connections in rural areas and also customer growth increased partly because of prepayment conversions that make it hard for a customer to share one meter with many houses.

The operational strategies have reduced losses from 30% (2010) to 19.5% (2015), losses define the performance of Umeme in terms of revenue and sustainability. This achievement has been guided by the heavy investment in the network to reduce both technical and commercial losses, rollout of the Automated Meter Reading (AMR) system for industrial consumers and the increasing conversion of postpaid customers to prepayment. Despite of the efforts to reduce power losses, the company is yet to reduce losses to 16% the acceptable rate. Therefore, the researcher conducted this study to examine how billing systems influence business performance at Umeme Ltd.

1.3 Statement of the Problem

Effective business performance ensures cost reduction, customer satisfaction, revenue growth and market growth (Umeme Annual Report, 2013). However, billing systems have not enhanced business performance since the company has continued to suffer from high operating costs. The company energy losses still remain above the expected rate of 16% and in addition to that, Umeme has gone ahead to register an increase in the number of customer complaints (Umeme Annual Report, 2016).

In its attempt to improve business performance, Umeme has introduced a number of digital platforms such as the Umeme App, Whats App, E-billing, Facebook and twitter. The company has also increased the number of offices aimed at bringing the services closer to customers.

Furthermore, Umeme has converted over 50% of the domestic customers to prepaid metering aimed at increasing cash flows. Continuously the company introduced Automated Meter Reading systems to large power users in order to reduce power losses.

Despite all the interventions, losses still persist at 18.5% a hindrance to capital expenditures. Losses have a direct impact to the end user tariffs, therefore, whenever losses raise the tariffs also increase and hence the burden is carried to the final consumer. Similarly, the company has registered an increase in customer complaints majorly because of power unreliability and error prone bills. Surprisingly, with all the technologies in existence like Yaka and AMR, operating costs are still high.

If these gaps continue to exist, Umeme may lose some of its customers to the growing solar companies or at worse the concession may be awarded to another player. Therefore, it's against this background that the researcher carried out this study to examine how billing systems influence business performance at Umeme Ltd.

1.4 Purpose of the Study

The study aimed at examining how billing systems influence business performance at Umeme ltd.

1.5 Objectives of the Study

The study was guided by the following objectives;

1. To examine the effectiveness of prepaid billing system in influencing business performance at Umeme Ltd.

2. To examine the effectiveness of postpaid billing system in influencing business performance at Umeme Ltd.

3. To examine the effectiveness of employee performance on billing systems in influencing business performance at Umeme Ltd.

1.6 Research Questions

The study sought to answer the following questions;

1. To what extent does prepaid billing system effectively influence business performance at Umeme Ltd?

2. To what extent does postpaid billing system effectively influence business performance at Umeme Ltd?

3. To what extent does employee performance on billing systems effectively influence business performance at Umeme Ltd?

1.7 Research Hypothesis

1. The effectiveness of prepaid billing system positively influences business performance at Umeme Ltd.

2. The effectiveness of postpaid billing system positively influences business performance at Umeme Ltd.

3. The effectiveness of employee performance on billing systems positively influences business performance at Umeme Ltd

1.8 Conceptual Framework

Independent variable   **Dependent variable**

Billing Systems   **Business Performance**

Prepaid billing system
• Systems efficiency • Payment alternatives • Control of energy consumption

Postpaid billing system
• Meter reading • Revenue collection • Bill delivery

Business Performance
• Customer satisfaction • Revenue growth • Cost management • Customer growth • Loss reduction

Moderating variable

Employee performance
• Quality meter readings • Timely meter audit • Job knowledge/skills

Source: Umeme Annual Report 2016

.**Figure 1: The conceptual Framework diagram.**

The diagram above explains the relationship between the independent, dependent and the moderating variables, the dependent variable is denoted by business performance and it has the following constructs; customer satisfaction, revenue growth, cost management, market share growth and loss reduction. The dependent variable is affected by the independent variable which is denoted by billing systems. Billing in public utilities is discussed by two dimensions and these include postpaid billing system and prepaid billing system. Postpaid billing system in this study

has three constructs and these are meter reading, revenue collection and bill delivery. Similarly, prepaid billing system has three constructs that include systems efficiency, payment alternatives and control of energy consumption. The moderating variable employee performance is served by three constructs namely; quality of meter readings, timely meter audits and job knowledge/ skills The conceptual diagrams predicts a positive relationship between the independent, moderating and dependent variables as indicated by an arrow from the independent variable to the dependent variable and an arrow from the moderating variable to the dependent variable.

1.9 Significance of the Study

Business performance is a necessity to every company in the world; therefore, the study findings are helpful to the management team of Umeme Ltd in determining the right choice of billing. Similarly the study examined the effectiveness of employee performance on business performance which informs management on how to improve performance.

Furthermore, this study provided new knowledge to add to the already existing literature which will assist other scholars, future researchers and other utility companies fill the gaps in the existing literature and also ensure effective performance in their organizations.

Similarly to the above, the study paved a baseline for the researcher to complete his master's degree as a requirement of all master's students to write and complete research at Uganda Management Institute.

1.10 Justification of the Study

There have been a number of studies on billing systems but they have focused on perception of customer, attitudes and revenue collection. Ronald Ontomwa (2014) conducted a study on the effects of billing on revenue collection costs at Kenya Power.

Similarly, ERA conducted a study on distribution system losses and collection rates by Umeme Limited in 2011. None of these studies focused on how billing systems influence business performance especially in the Ugandan context.

Therefore, this study focused on examining how billing systems influence business performance in areas of customer satisfaction, revenue growth, cost management, market share growth and loss reduction at Umeme Ltd.

1.11 Scope of the Study (content, geographical and time scope)

The researcher handled the geographical, content and the time scope as discussed below.

1.11.1 Geographical Scope

The study was conducted from Natete distribution area. The selected area has a number of customers both on prepaid and postpaid.

1.11.2 The Content Scope

The researcher examined how billing systems effectively influence business performance at Umeme, and hence illustrated the system with the strongest significance on business performance. The two billing systems studied are prepaid and postpaid billing system. Business performance is perceived differently by different individuals; therefore, the researcher examined a number of respondents to find out which system enhances the following aspects: customer satisfaction, market share growth, cost management, loss reduction and revenue growth.

1.11.3 The Time Scope

The study investigated a period from 2011-2015, this period constitute the introduction of 'Yaka' in Uganda, Umeme has carried out Yaka sensitization, therefore, customers can operate Yaka by

themselves, hence, the researcher expected to get relevant   literature and informed answers from the respondents.

1.12 Operational Definition of Terms

In this study, the researcher operationalized the following definitions:

Billing system: this is the method of distributing a bill to clients for goods or services used.

Postpaid: Is a system where a customer consumes a product or service and then pays for it after.

Meter reading; this is the act whereby an individual visits a customer's meter to take a monthly reading that are used to bill the consumption

Prepaid: Is a system where a customer first pays for the service before he/she can use it.

Payment alternative; these include other payment options outside the Umeme cash offices, they include mobile money platforms, ezee money, pay way vending systems, bank payments

Business performance; this is an approach by management that determines how a business can better reach their goals and objectives.

Customer satisfaction: Is the degree to which products and services distributed to customers meet their expectations.

Cost management; this is process of planning and controlling the budget of a business with an intention of minimizing operational costs.

Market share growth; this is an increase of customers on the Umeme electricity grid with valid accounts.

1.13 Summary of Chapter One

This chapter has highlighted the background to the study, problem statement, and purpose of the study, study objectives, research questions, hypothesis, and conceptual framework, significance of the study, justification of the study, scope of the study and definition of key terms.

The following chapter presents a detailed review of related literature on billing systems in public utilities and business performance. The literature is presented as outlined in journals, textbooks, and newspaper articles.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of related literature on billing systems in public utilities and business performance as presented in textbooks, journals, magazines and newspaper articles. It contains the theoretical review, the actual literature review and the summary of literature review. The literature is reviewed in the order of study objectives.

2.2 Theoretical Review

The study used the **"balanced scorecard model"** to guide the study on billing systems in public utilities and business performance at Umeme Ltd

Kaplan and Norton's balanced scorecard model (2001) looks at planning and administration classifications as the core methods of performance. These systems align commercial actions to the vision and approach of the institute, expand inner and outside communication and oversee organization performance (Wisley et al., 1998).

It assumes that businesses are perceived in four viewpoints, and should advance metrics, gather information and evaluate it in line with these perspectives.

They comprise of learning and growth which involves people who should be educated and skilled. It's the people who will make the customer satisfied and ensure sustainability and business growth. Kaplan and Norton (1996) argue that the learning perspective starts with developing a value cable which classifies current and upcoming customer needs. These needs are characterised into three namely; recognising employee abilities, information system competences and incentives. Kaplan and Norton (2004) argue that these categories will develop the competitive advantage of the firm.

Kaplan and Norton highlight that learning is more than training; it consists of counsellors and tutors within the firm. This perspective implies that if an organisation focuses on continuously learning, company objectives will be realised

Kaplan and Norton furthermore, highlights the business perspective, metrics based on this performance help supervisors understand how well the firm is running and whether its products and services are in line with the company's objective. This implies that these metrics are supposed to be collected by senior officials who understand the business very well. Kaplan and Norton (2004) contend that this perspective assists to complete two major roles; to convey worth proposition to clients and to advance business systems and cut costs of manufacturing. Kaplan and Norton (1992) posit that advancing core systems assist the firm lessen its production time, improve quality, and improve manufacturing. Kaplan and Norton advise firms to adopt modern machineries to safe guard its market share. This explains why Umeme Limited adopted a number of technologies such as Yaka and Automated Reading systems.

The customer perspective focuses on customer satisfaction. If customers are not satisfied they will find other suppliers which will eventually lead to the decline of the organisation. Kaplan and Norton (1996) argue that the customer perspective is gauged by results namely; customer gratification, devotion, retention, attainment and success. Kaplan and Norton further argue that while implementing the balanced score card, supervisors must transform the task, approach and exact market into customer goals

Lastly, the financial perspective which focuses on the financial flow of the organization, Managers should focus on missions that rise the owners return' bearing in mind financial connected information such as risk assessment and cost-benefit analysis. Furthermore, Kaplan and Norton (1996) contend that the financial perspective considers the value of services and products, skilled

and motivated staff in order to gratify customers. It therefore, implies that the company must direct resources to motivating, training staff and ensuring quality. Therefore, Umeme Ltd officials should improve revenue tools; in deed the prepayment model was introduced to improve the cash flows of the organisation.

The balanced score card model gazes at the organisation in all angles, it benefits the multi-dimensional outlook of the firm in four perspectives. It gives the leaders a chance to address all key parts of the business in order to accomplish total quality. The BSC model is a process of finding the discrete parts of the firm that are important for organisational success.

The BSC model increases open communication since it includes everyone and therefore, commitment is supreme in order to realise its objectives. It provides data in a pertinent way hence reducing management time. However, the BSC model requires a lot of resources to train employees on how the tool works. If the employees do not take time to understand the tool, the company strategic objective will never be realized, therefore, training is paramount for this model

Umeme limited is a profit oriented organisation, therefore focusing on profitability is paramount, for profits to be realized the company must concentrate on the four perspectives since they all impact on the returns. This assertion clearly indicates that billing systems positively influence business performance.

2.3 Billing systems in public utilities and business performance

Umeme limited uses a two-fold billing system namely; the prepaid and post-paid billing system. The prepaid billing system is where customers pay for power before consumption while the post-paid system is where customers pay their bills after consumption of power.

2.3.1 Prepaid billing system and business performance

Prepayment in electricity was proposed as an innovative solution to aid affordability and lessen the cost of power (Davila et al, 2006). At Umeme the users pay before their consumption as they hold credit to use the service until the units are drained. As far as the yaka meter is concerned, a client must buy credit and load the units onto it. The yaka meter allows a client to use power up to the number of units bought (Tewari & Shah, 2003). Prepayment meters deliver better elasticity to consumers than regular post-paid meters. Consumers control and regulate their energy consumption and avoid huge bills by disbursing more regular smaller payments. Prepayment offers proficient ways of responding to customer grievances (Aryeetey et al, 2000).

Jain (2011) contends that prepaid billing system help customers from meter readers who always visit their homes to read meters, face challenges of weather changes and at worst intrusion in customers' privacy. However, these challenges do not connect with the researcher's understanding of business performance. Microthink (2014) in a study of converting customers from postpaid to prepaid found out that the majority of the respondents supported the conversion due to the convenience from prepaid.

Omijeh and Ighalo (2012), in their study of a vigorous prepaid energy metering and billing system in Nigeria, recommended an automated system as opposed to one involving human handling, since it can be cost effective. Omijeh and Ighalo argued that automated billing systems enhance savings

in terms of time and money. In their paper, Maheswari and Sivakumar (2009) aimed to develop an energy proficient and squat cost solution for street lighting system using Global System for Mobile communication and General Packet Radio Service found out that automated systems are so effective at reducing costs since the set-up provides the remote operator to turn off the lights when not required, control the voltage supplied to the streetlights and prepare daily reports on glowing hours. The researcher intended to explore which system enhances business performance at Umeme.

Prepaid billing system gives consumers authority of electricity divisibility and consumption in relations of procurements (Baptista, 2013). Baptista (2013), was also supported by Blore et al (2004) who argues that prepaid system helps customers to control and plan their expenditures, these studies only focused on prepaid systems only, hence they did not discover the advantages of postpaid. Furthermore, these scholars were supported by Macrothink (2014) following its study on perception of customers on prepaid by averring that prepaid systems increase decision making. However, Macrothink (2014) contradicted by contending that prepaid was not same at all payment channels, each selling at unlike prices and hence giving nonstandard units at the same amounts. This contention was also supported by Eden et al (2015) who found out that clients whined about spending more on power after being converted. Such inconsistences among the scholars gave the researcher an opportunity to explore the two billing system and find out which one largely contributes to customer satisfaction.

Prepayment billing was first advanced in South Africa in mid 1980s. The major reason was to distribute electricity to stumpy income communities at inexpensive rates (Stoner, 2009). The concerns for general service in power motivated firms and regulatory bodies to find innovations and regulatory alternatives intended at increasing access, and making it easier for clients to

purchase and as well as pay for their consumption (Casarin and Nicollier, 2009). This explains why there is a great increase in customer numbers since the introduction of Yaka in 2011. In 2015 Umeme reached 794,000 customers because of the introduction prepayment where tenants find it hard to share one meter (Umeme annual report, 2015). Furthermore, Buzzell and Wiersema (1981) contend that a connection amid customer gratification and the market exit. The same connection might be predictable for customer fulfilment; for example, great customer consummation should help in fascinating as well as holding customers. Therefore it remains imperative for Umeme to clearly select the right billing system.

The Uganda power sector has been faced with a problem of collecting 100%, power theft and losses related to the power system. It is known that the power companies in Uganda have meter related challenges, which has to improve if revenue collection is to be increased (Nwaoko, 2006). Lately, faced with big customer debt profile and revenue collection problems, Power Holding Company of Nigeria and National Power Authority of Sierra Leone introduced the pre-paid electric meters in 2006 and 2007 respectively. Ogujor, (2007) asserts that prepaid billing system was announced to increase revenue collection in order to excellently manage defaulters. Since Umeme is still struggling to collect 100% revenues, the researcher anticipated to find out whether these findings can be adopted by Umeme.

Tewari and Shah (2003) believe that prepaid system benefits both the energy provider and customers. For instance, prepaid systems have a substantial effect on metering, billing systems and disconnection and reconnection charges to power distributors. They further posit that since consumption is after payment, revenue collection should improve. From the consumers' angle, it gives the consumer power over electricity consumption inducing more control of energy use and

budget control. From the Umeme point of view, revenue collection has been boosted by the 55% conversion of customers to prepayment (Umeme annual report, 2015)

2.3.2 Postpaid billing system and business performance

Mensah et al (2012) contends that postpaid billing system has a number of drawbacks which comprise delivering billings to wrong clients, crediting of bills paid to customers' accounts, problems of travelling long distances to effect payments. Furthermore, Macrothink (2014) reported in a study conducted in Botswana in 2011 that customers used to whine about over estimated bills or at times not even receiving them. Ontomwa (2014) in his study about the effects of prepaid billing system on revenue collection in Kenya stressed that some meter readers do not read all meters in the itinerary due to locked homes or they are merely lazy, therefore, end up guessing customers' bills in order to meet their goals. Such activities challenge customer satisfaction, hence customer satisfaction does have a positive effect on an organization's profitability. According to Hoyer & Maclnnis (2001), gratified customers form the basis of any efficacious firm as customer gratification leads to continued purchases. Therefore, if Umeme manages to provide exception customer experience through billing systems, revenues will increase due to repeated purchases.

Misra and kingdom (2012) contend that meter reading and billing blunders should be eradicated by restraining human handling of data through embracing automated billing systems. However, Oracle (2009) was of a view that clients are not in favor of the prepaid billing system since of its sprite and health and safety concerns. Therefore, the researcher intended to explore the postpaid billing system to check out whether the customers really face the challenges mentioned. Therefore, the study focused on finding out which billing system largely enhances business performance.

It is known that some consumers resist prepaid meters because of their sprite and health related issues. The clients noted that prepaid meters move very fast than anticipated. (Tewari and Shah,

2003). This has a big inference to customer consummation since for a client to be gratified, he must perceive the service as necessary and truthful (Baker-Prewitt, 2000) For example, the primer of prepaid billing system in Argentina was received with much cynicism, with many saying that it was introduced to cheat clients.

Tanvier et.al, (2011) argues that a postpaid system is better than prepaid meter, in their study in Bangladesh, they recommended AMR meters since they are cost effective. Automatic meter reading using Wi-Max technology is an excellent idea for Bangladesh perspective. They went ahead to propose a cost efficient AMR system. If it is implemented in our country the corruption of electricity sector will be reduced as well as the losses will also be reduced. It was recommended that the Bangladesh government should take necessary steps to implement Automatic meter reading system (Tanvier et.al, 2011). Their findings explain why Umeme considered to leave commercial and industrial customers under postpaid but while using AMR. Does that really prove that postpaid metering is more efficient than prepayment? The study sought to answer such questions.

The connection of yaka meters assist in reducing frequent visits by the power suppliers to consumers' homes (USAID, 2004). This has forced a number of customers to cheat power because they are much aware that Umeme officials will not come for the monthly audit. Here in Uganda, many accounts of unlawful installations of electricity and other public utility such as water in towns have been observed. Umeme officials have been forced to hire police officers to disconnect unlawful installations. However, a number of attempts for disconnections have proved pointless as community members under the protection of criminal groups often reconnect the power as soon as Umeme officials leave the premises. What is not clear is whether Umeme has considered town slums, loss areas, especially those that have stubbornly raided them of revenue through prohibited

connections. Recently Umeme challenged the Electricity Regulatory Authority to amend the electricity Act to enable the utility company to prosecute persons who engage themselves in power theft and vandalism.

While in other nations the goals for yaka billing system were to rise access to electricity by squat income households and to increase revenue collection, the same may not be said of Umeme Ltd. But even with countries where the initiation of prepayment had clear motives, it has never been recognized whether such goals have ever been attained, and if not, why? The unrelenting use of postpaid power meters in nations like South Africa twenty five years after the invention of prepayment may point to possible problems in the implementation of prepay meters (American international journal of complimentary research, 2013). This made it inevitable for the researcher to conduct this study in the Ugandan context to examine whether prepayment has been effective. Recently it is known that many consumers have continued to use Yaka without purchasing any tokens which has high implications to the commercial losses.

2.3.3 The effectiveness of employee performance on billing systems and business performance

According to Wright & Geroy (2001), staff skills change through effective training sessions. Job training not only improves the current skills of employees but also future skills thereby running the organization in a promising direction to achieve the set target. Therefore, this means that for billing to secure business performance Umeme staff must be effectively trained in billing and metering technologies. Through training, staff skills are advanced and permit them to contrivance the work associated tasks competently, and meet firm objectives in a modest manner. In addition, discontent complaints, nonattendance and turnover can be seriously abridged when staff are so

well trained that can experience the direct gratification connected with the sense of accomplishment and awareness that they are increasing their intrinsic skills (Pigors & Myers 1989).

A number of studies have been conducted to find out whether a very high skilled workforce leads to organizational performance. These studies have realized a strong connection between a high skilled work force and organization performance commonly measured by the level of work output. For example Haskel and Hawkes (2003) have shown that the great performers in UK manufacturing hired staff with, a regular, and extra qualification level related to the under performers. They further found out that high skilled employees come up with more innovations compared to low skilled staff and that the product output is better compared to those with limited skills.

Pennsylvania public utility (2013) asserts that frequent meter reading is so necessary in order to yield accurate bills for consumers who assume to receive bills in line with the energy they have utilized. Accurate bills are attained by meter readers who physically visit the meter and use their eyes and gadgets to capture readings. Similarly wrong readings may result into over bills or under bills that may affect the company. The commission realized that lack of actual readings increase the number of complaints. Therefore the commission realized that actual reading must be taken seriously since it has strong consequences to the organization.

In today's business environment, organizations are focusing on delivering exceptional service quality (Chiara G., 2007), this results into competitive advantage which is used to win customers over other service providers. For this, nowadays marketers, according to R. Ladhari (2011), are trying to focus more on a continuous observing and appraisal of service quality, this involves

various innovations that have a direct connection with customer service, better service quality leads to better service and product worth and gratification. This in the end leads to customer retention and improves brand and corporate image of the organization. (Nguyen and Leblanc, 1998).

A power company must provide a bill at the end of each billing period (Pennsylvania public utility, 2013). A bill is used as the only means of communication between the customer and the organization, therefore the organization should always deliver this document at the end of each billing period. Failure to deliver bills to the customer often results into increased complaints, this not only increases complaints but also affects collections of the firm. It against this background that Umeme needs devoted meter readers and people who are passionate at delivering billings to the respectful customers.

2.4 Summary of the literature review

The concept of billing systems is purely carried out using two billing models; postpaid and prepaid billing models. A number of studies have been carried out on effects of billing systems. However, there is no research carried out on billings systems in public utilities and business performance. Many of the studies have concentrated on finding perceptions of customers of both systems and most of them argue that prepaid system contribute more than postpaid systems on customers satisfaction, hence the study opted to examine which billing system largely enhances business performance at Umeme limited.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the research methodology in conducting the study of billing systems in public utilities and business performance at Umeme Ltd. It presents the study design, study population, sample size, sampling techniques, data collection methods, data collection tools,Validity and Reliability, data collection procedure, data analysis ethical considerations and measurement of variables.

Research methodology is a framework in which facts are placed so that the connotations can be attached from them. (Leedy, 1993)

3.2 Research Design.

A research design is a way to achieve the research objectives through empirical evidence that is acquired economically (chandran.2004). The researcher used a cross sectional research design. Babbie (2007) asserts that a cross sectional research design encompasses serious evaluation of a sample of a population which is made at given point in time. A cross sectional design enhances flexibility since it captures a specific point in time.

The researcher used a mixed research approach, a qualitative approach which involves presenting data in non-numerical terms (Amin, 1983) while a quantitative approach is a research approach that presents research finding in numbers (Amin. 1983). The researcher opted to elaborate or expand on the findings by using a triangulation method.

3.3 Research Population.

Population is the complete gathering of all the individuals that are of great importance in a particular thesis (Amin, 2005). The population included customers on both postpaid and prepaid electricity billing systems; it consisted of key respondents such as the district manager, prepayment manager and the commercial officer. The researcher chose this population because all categories selected have keen interests in business performance and the sustainability of the company. Furthermore, the total population of both prepaid and postpaid customers under Natete distribution area is 80,000 customers according to the district data base, however, only 40,000 Yaka and 20,000 postpaid customers are accessible.

3.4 Determination of Sample Size

Sampling is the process of choosing individuals to take part in the research from a defined population with the intent that the samples signify the population (Mubaazi. 2008).

Category of respondent	Population	Sample size	Sampling technique
Prepaid customers	40,000	253	Simple random sampling
Post-paid customers	20,000	125	Simple random sampling
Key respondents			
District manager	1	1	Purposive sampling
Manager prepayment	1	1	Purposive sampling
Commercial officer	1	1	Purposive sampling
Total	**60,003**	**381**	

Source: Umeme Annual Report, Krejcie and Morgan 1970.

Table 2: Showing the sample by Krejcie and Morgan 1970(Amin, 2005)

The researcher used the Krejcie and Morgan 1970 model to determine the sample size however; the researcher accompanied it with a formula to ensure that the sample is more meaningful and accurate.

The Formula: =   <u>Population in Category</u>   x   Sample Size

Total Population

Therefore, the researcher collected data from three (3) key respondents, 253 prepaid customers and 125 post-paid customers. The formula was only applied to the prepaid and postpaid customers. According to Krejcie and Morgan, 40,000 prepaid customers equate to 380 responds, however, after applying the formula, the sample came to 253 respondents.

Similarly the postpaid customers from the accessible population are 20,000 and therefore, Krejcie and Morgan model recommend a sample size of 377, but after applying the formula the sample reduced to 125 respondents

The total sample was maintained from the Krejcie and Morgan, the total accessible population is 60,003 respondents, therefore, the total sample size was 381 respondents according to Krejcie and Morgan.

3.5 Sampling Techniques and procedure

The researcher used two sampling techniques; the purposive sampling technique and the simple random sampling technique.

3.5.1 Purposive Sampling Technique

Purposive sampling technique is one where the investigator uses his/her own ruling or common sense concerning the participant from whom facts will be gathered (Amin, 2005). The researcher used this sample because the respondents selected had the experience, knowledge and were well versed with billing systems and business performance at Umeme Ltd.

3.5.2 Simple Random Sampling Technique

In simple random sampling, a sample is got from the population whereby samples of the same size have the same odds of being nominated (Amin, 2005). In simple random sampling, samples can easily be gathered and each participant has identical odds of being chosen.

3.6 Methods of Data Collection.

The researcher used three data collection methods; questionnaire survey, interview method and documentary review.

3.6.1 Questionnaire Survey

A questionnaire is a form in which persons respond to printed items. It is the biggest used method of data gathering according to Das (1993). The researcher used this method because it was convenient for the participants and offered greater guarantee of confidentiality. The other advantages included fewer mistakes because respondents supplied information and originality since informants were openly involved in the supply of data.

The questionnaire survey method was applied to both prepaid and postpaid customer in Natete distribution area.

3.6.2 Interviews

According to Lokesh (1997), an interview is a method of interaction whereby the interviewee provides the desired information orally in a face to face condition with the interviewer. Das (1993) states that interviews are appropriate where the area of investigation is limited and where weight is upon transparency and where originality of data is to be kept confidential. The researcher interviewed key respondents namely; district manager, commercial officer and prepayment manager. This increased the originality; accuracy and elasticity of the study since the investigator was able to include changes were deemed necessary.

3.6.3 Documentary Review

This method comprises of delivering facts by prudently reviewing printed documents, or visual data from sources known as documents (Amin, 2005). These could be textbooks, newspapers, articles, speeches, advertisements and pictures. Documentary reviews help in evaluating trustworthiness, whether the evidence is free from error, alteration and genuineness of the documents reviewed (Scott, 1990). Furthermore, the researcher reviewed the Umeme Annual Reports of 2013, 2014, 2015 and 2016 in his study.

3.7 Data Collection Instruments

The researcher used a questionnaire, interview guide and a documentary checklist to collect data.

3.7.1 Questionnaire

A questionnaire is a carefully designed tool for gathering information in line with the stipulations of the research questions and hypothesis (Amin, 2005). Since the researcher had to sample a big number of respondents, questionnaires covered a wide geographical area and hence facilitated large samples. It also offered greater assurance of anonymity (Amin, 2005).

The researcher used structured questions and scaled questions while collecting data from prepaid and postpaid customers. Structured questions are close ended in nature and easier in terms of coding and evaluating information.

The researcher gave scaled questions to customers. A scaled question is a question that is within a questionnaire, in that the answer is got from a range values. Scaled questions can easily be measured and are subjective to arithmetical examination hence conclusions can easily be generalized.

3.7.2 Interview Guide

An interview guide is a data collection instrument where the researcher gathers information in form of questions through straight oral communication with respondents (Amin, 2005). The researcher used this tool when interviewing key respondents so that he would pursue in-depth information around the topic being studied.

The researcher used semi-structured interviews when interviewing key respondents. These type of interviews allowed flexibility that helped the researcher to compliment the study. Open ended questions were also used in the process of interviewing key respondents. Open ended questions were designed to inspire a full and meaningful answer using the subject's own facts. These form of questions enabled the researcher access the respondents' true feelings.

3.7.3 Documentary Checklist.

A documentary review checklist was used to acquire unobtrusive evidence at the desire of the researcher. The researcher reviewed archived histories at the organization offices and these included journals, Umeme Annual reports, strategic plans, brochures and magazines among others.

The researcher read primary and secondary data related to billing systems in public utilities and business performance. Using this tool enabled the research compare prevailing literature to examine whether there is a gap that should be closed by adding to the existing knowledge in the field being studied

3.8 Data Quality Control

The researcher ensured data quality control by carrying out reliability and validity tests aimed at finding out the appropriateness of the data collection instruments

3.8.1 Validity of the Instrument

Validity is the degree to which results got from the analysis of the data really signify the phenomenon under study. Validity therefore, presents how correctly the statistics to be acquired in the study signifies the variables in the study (Mugenda & Mugenda, 2003). The researcher used professionals in the field to assess whether the tools have been precisely measured. The specialists calculated and analyzed whether all the objects in the questionnaires and checklists were exactly designed to meet the variables in the topic under study.

3.8.2 Reliability of the Instrument

The Dependability of the research tools was put into concern using consistency analysis of questionnaires. Reliability examination was done on all questions under the ten variables as demonstrated in the table 3.2, using Cronbach Alpha Coefficient and Content Validity Index. Results of the Analysis hereunder

Table 3: Reliability

Variable	Cronbach's Alpha
Meter reading	.880
Bill delivery	.890
Revenue collection	.880
Systems efficiency	.885
Payment alternatives	.892
Control of energy consumption	.868
Quality meter readings	.889
Job knowledge/skills	.877
Timely meter audit	.879
Business Performance	.888

Source: Primary data

Results from the table above revealed that all the reliability statistics were measured well (Julie Pallant, 2016). Following the research objectives, the researcher made a draft copy of the questionnaire which was handed to the research supervisor for assistance after which essential

modifications were made. The questionnaires were printed in the English language for user understandability. The researcher circulated questionnaires to the respondents to guarantee that information was acquired from the right foundation.

3.9 Procedure for Data Collection.

The researcher acquired an introductory letter from Uganda Management Institute which he offered to Umeme Ltd afore to conducting the study. This involved writing a letter seeking for approval from the company authorities. The researcher also sought for permission from the respondents before he started gathering data. Data collection activities were conducted by the researcher with the help of a few research assistants. All information from the participants was handled with discretion without revelation of respondents' personality. Moreover, no data was changed or altered, hence facts were presented as gathered and all the literatures quoted were incorporated in the references.

3.10 Data Analysis.

Data analysis involves attaching meaning to the data collected. (Matshall and Rossman.1999). The researcher analyzed both qualitative and quantitative data.

3.10.1 Qualitative Data Analysis

Upon collecting qualitative data from the field, the researcher analyzed it by using a descriptive narrative to deliver the results (Amin, 2005). The researcher pronounced the data in non-numerical terms so that meaning is devoted. The findings were provided in a summary form whereby the researcher showed the relationship of the variables in the analysis as well as comparing the data with the hypothesis.

Qualitative data analysis comprised of examining, categorizing, tabulating and recombining of the data. The data was used to gain facts from the research; the researcher then interpreted facts so as to ascertain underlying patterns and facts.

3.10.2 Quantitative Data Analysis

The first step in quantitative data analysis is to pronounce or recapitulate the data using descriptive statistics. The purpose of descriptive statistics is to guide the researcher show the distribution of scores of each item in the questionnaire under study (Mugenda & Mugenda, 2003).

Therefore, the researcher used statistical tools which included tables and graphs. This was guided by the use of excel spreadsheets and SPSS systems to order and analyze the data.

Similarly, the researcher used the predicative model to analyze quantitative data, this included correlation and regression analysis to attach meaning to variables hence drawing conclusions.

3.11 Measurement of Variables

The researcher measured variables using a Licket scale. The researcher used the Likert scales' interval since it involves examining whether the study population strongly Disagrees, Disagrees, Not sure, agrees or Strongly Agrees with statements on the 5 point scale. Lickert scales are very elastic and can be made more simply than other types of attitude scales (Amin, 2005)

3.12 Ethical Consideration.

All the information given by the respondents was kept as confidential and therefore the study did not harm any individuals either physically or psychologically.

Similarly to the above, the researcher ensured informed consent of respondents. The researcher ensured that all respondents understood and contributed to the study freely, this enabled the participants to understand the purpose and procedure of the study.

The findings were used for their intended purposes not for any other purpose. The researcher denoted that he works with Umeme Ltd; therefore, he maintained integrity throughout the entire study.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This Chapter presents the results of data analysis. The results are presented per the literature review and hypotheses statements. The terminologies are guided by the specified objectives of the study.

4.2 Response Rate

Three hundred and eighty one (381) instruments were distributed to the targeted sample. Out of the 381administered, 378 were Questionnaires, and 3 were Interview guides. Three hundred and seventy eight (381) responses were received, and these constituted the realized sample. The totality response rate was 100%.

Table 4: Response Rate.

DESCRIPTION	NUMBER	PERCENTAGE
Questionnaires Sent	378	99.2
Questionnaires returned	378	99.2
Questionnaires not returned	0	0
Interview guides	3	0.8
Totality sample realized	381	100
Answer Rate	381	100

Source: Field research 2017

4.3 Demographic profile

At the set off of this unit are the sampled descriptions of the respondents such as Gender, Age group, Education and Employee Status. Statistical tools such as percentages and frequencies are presented in the figures as hereunder:-

These were investigated to enable the researcher ensure that the sample had all the characteristics of the entire population under study.

4.3.1   Gender of the Sampled Population

Figure 2: Gender of the Sampled Population
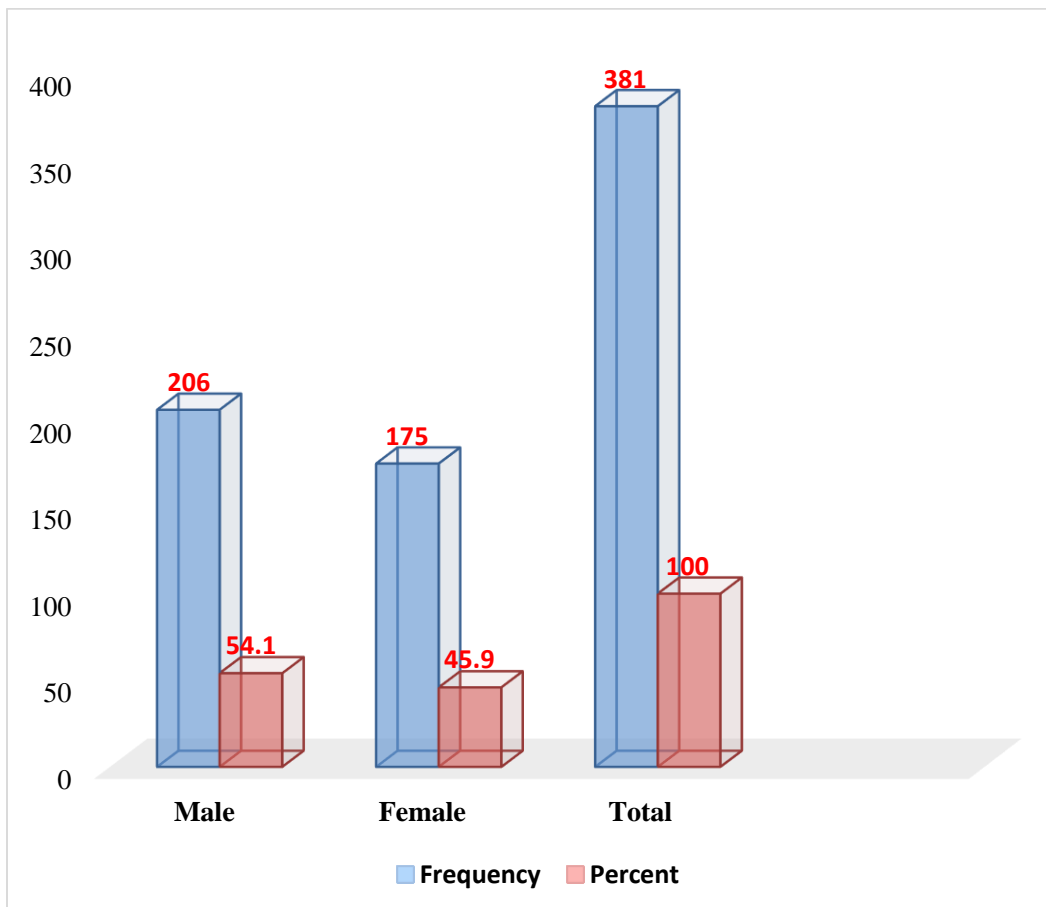
Source: Primary Data

The findings from the Fig.2 expressed that most of the respondents were Males 206 representing 54.1% and Females 175; constituting a percentage of 45.9%. This suggests that the thoughts of the sampled population were from both male and female under study.

4.3.2   Age group of the Sampled Population

Figure 3: Age group of the sampled population
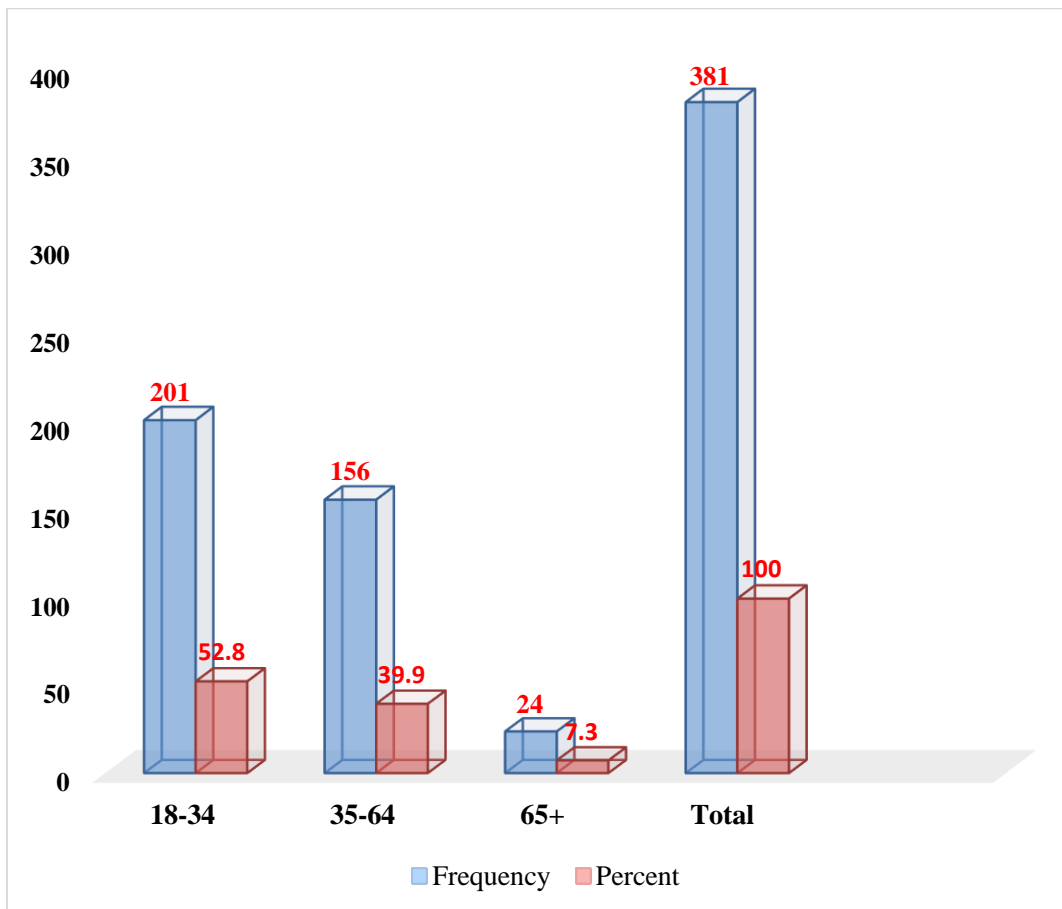
The Results from the Fig 3 revealed that the majority of respondents are between 18-34 years (52.8%), those between 35-64 years (39.9%), with those between 60 and above years (7.3%).

4.3.3   Education Level of the sample population

Figure 4: Education Level of the sample population
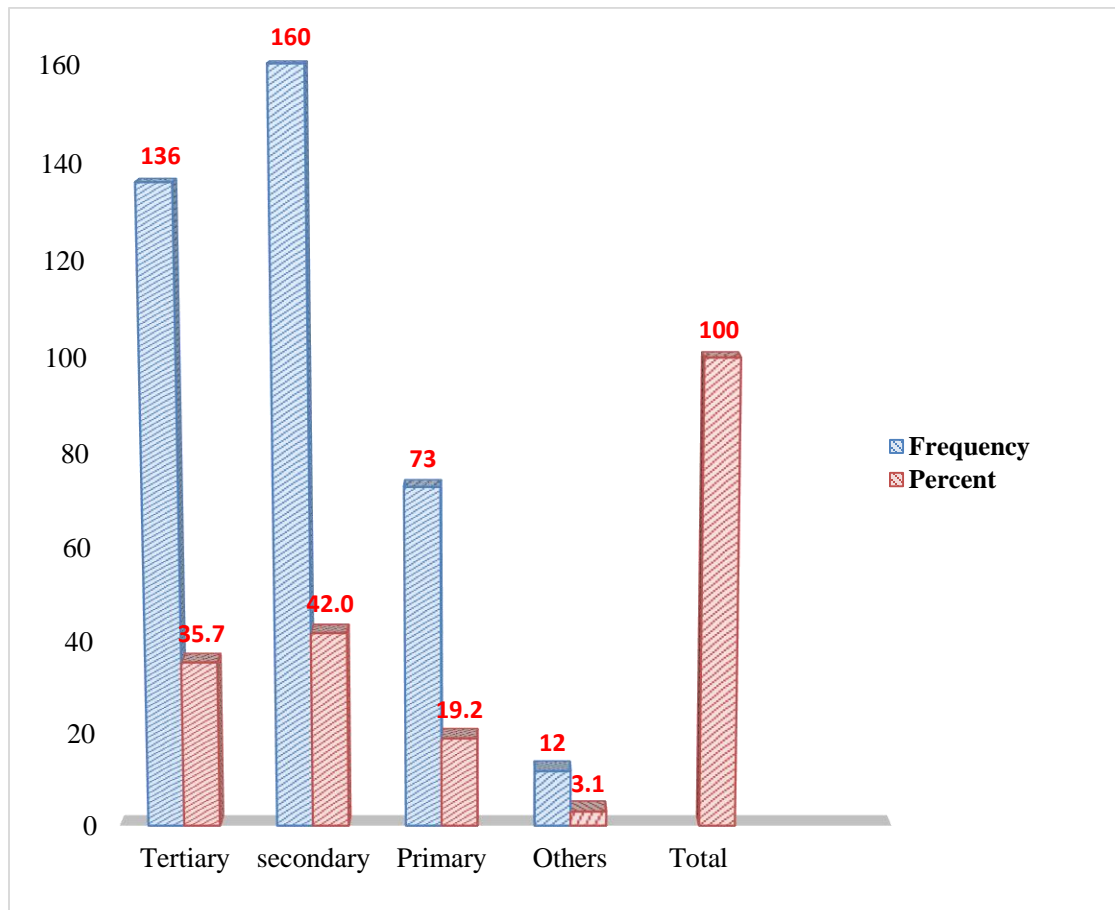
Source: Primary Data

Figure 4 revealed that the majority of respondents attained Secondary education (42%), those with

Tertiary (35.7%), Primary (19.2%) and others (3.1%). The results revealed that the sampled

population were educated enough to make good and informed decisions in relation to the research

study.

4.3.4   Employment Status of respondents

Figure 5: Employee Status
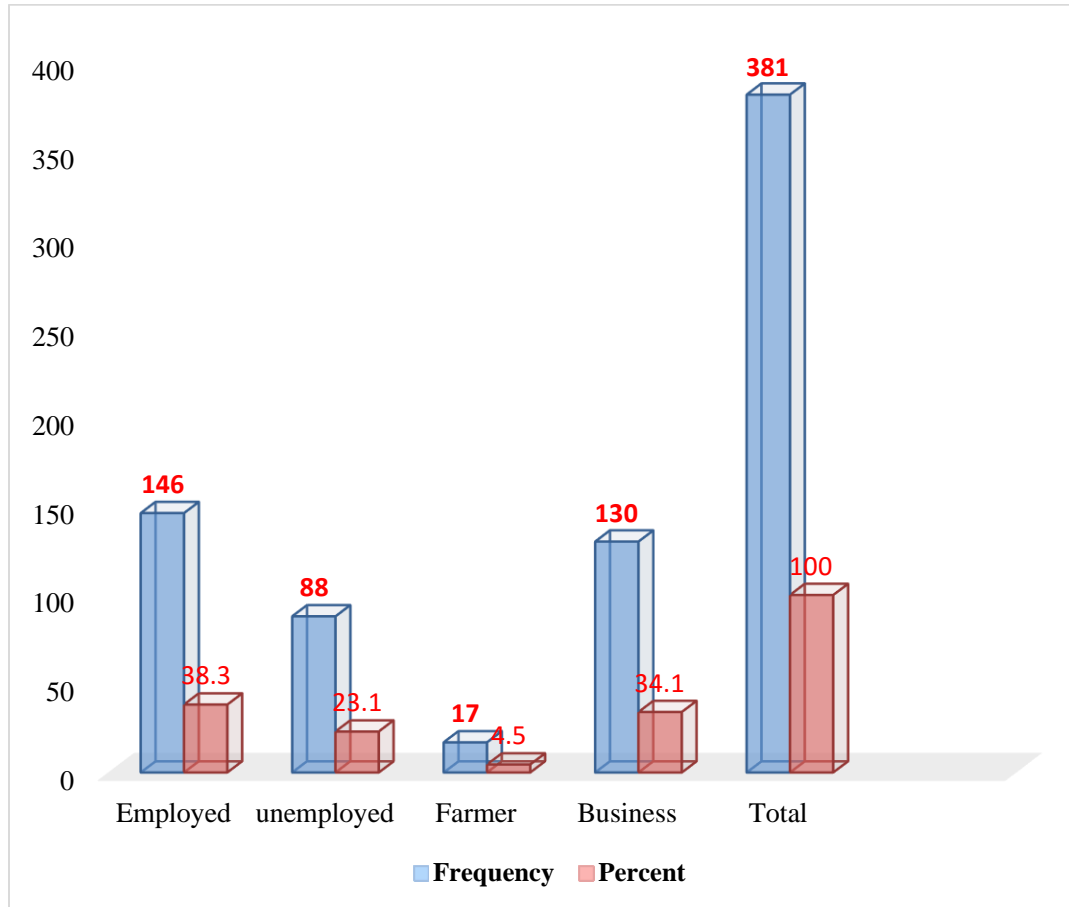
Source: Primary Data

 Figure 5 above, revealed that the most of participants are employed (38.3%), Business (34.1%), unemployed (23.1%) and Farmers (4.5%) of the sampled population.   The results attained expressed that the respondents were all workers and could take thoughtful decisions on the research subject under investigation.

4.4 Assessment of Billing Systems (IV)

Assessment of billing system was done by the use of descriptive statistic; this involved the assessment of prepaid and postpaid billing system

4.4.1 Descriptive Statistics Assessing Research Objective 1

Research objective one intended to examine the effectiveness of prepaid billing system in influencing business performance at Umeme Ltd. In order to evaluate Prepaid Billing systems, Descriptive statistics were utilized and the results regarding the effectiveness of prepaid billing systems in influencing business performance at Umeme Ltd are portrayed in the table 5. The outputs are ordered to present percentages for easy understandability of the contribution of each of the variables (questions) under the research study.

Table 5: Prepaid Billing Systems

S/NO	ITEMS ON PREPAID BILLING SYSTEMS (N=378)	LIKERT SCALE				
	Systems efficiency	SD (%)	D (%)	N (%)	A (%)	SA (%)
1	I can easily purchase a token whenever I need it	2	5	4	87	2
2	I can easily load the token on my interface	2	3	22	71	2
3	Umeme systems are reliable	6	9	31	21	33
	Payment alternatives					
4	I know all the Yaka payment options			31.8	46.2	22
5	All the Yaka payment options are easy to use	6.7	13	28	45.6	6.7
6	All the Yaka payment options are reliable 24/7	11.7	29.3	24	27	8
7	I am happy with the Yaka billing system	5.9	8.4	29.4	50.4	5.9
	Control of energy consumption					
8	I have control over power consumption	4	10	1	70	15
9	I purchase Yaka tokens whenever I want and freely			16	26	58
10	I use less power since I was converted to Yaka			11.8	46.2	42
11	Umeme staff regularly visit my home	11.8	30	41	11.2	6
12	I would not advise anyone to cheat power on Yaka			1.7	34.2	64.1

Note: SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

4.4.2 Assessing Systems efficiency on Prepaid Billing Systems

In order to assess Systems efficiency, respondents were asked whether they can easily purchase a token whenever they need it. Statistical results revealed that, 2% strongly disagreed, 5% disagreed, 4% Neutral,   87% agreed and 2% strongly agreed. Overall, majority of the respondents agreed on this statement. Respondents were queried whether they can easily load the token on their interface. Results revealed that, 2% strongly disagreed, 3% disagreed 22% neutral, 71% agreed and 2% strongly agreed. This means that majority of the respondents agreed on this statement. Respondents were further asked whether Umeme systems are reliable. Results revealed that, 6% strongly disagreed, 9% disagreed, 31% were neutral, 21% agreed and 33% strongly agreed. Majority of the respondents agreed and also had neutral view on this statement.

One of the respondents interviewed noted; ''…*customers can purchase Yaka token from many alternatives and most of the times the systems are available and reliable, this alternatives include mobile money, Airtel money, Payway, Ezee money and most of the commercial banks* ''.

4.4.3 Assessing Payment alternatives on Prepaid Billing Systems

To assess Payment alternatives respondents were asked whether they know all the Yaka payment options. Results revealed that; 31.8% were neutral, 46.2% agreed and 22% strongly agreed. Results revealed that majority agreed with the statement. They were asked whether all the Yaka payment options are easy to use. The descriptive statistics revealed that, 6.7% strongly disagreed, 13% disagreed, 28% Neutral, 45.6% agreed and 6.7% strongly agreed. Results revealed that majority agreed with the statement. The respondents were further queried whether All the Yaka payment options are reliable 24/7. Results revealed that; 11.7% strongly disagreed, 29.3% disagreed, 24% Neutral, 27% agreed and 8% strongly agreed. Majority of the respondents strongly agreed with the statement. The respondents were further queried whether they are happy with the Yaka billing

system. Results revealed that; 5.9% strongly agreed, 8.4% disagreed, 29.4% Neutral, 50.4% agreed and 5.9% strongly agreed. Results generated revealed that most of the respondents agreed with the statement.

4.4.4 Assessing Control of energy consumption on Prepaid Billing Systems

To assess Control of energy consumption, respondents were queried whether they have control over power consumption. Results revealed that, 4% strongly disagreed, 10% disagreed, 1 neutral, 70% agreed, and 15% strongly agreed. Most of the respondents agreed that they have control over power consumption. Respondent were also asked whether they purchase Yaka tokens whenever they want and freely. Results revealed that, 16% were neutral, 26% agreed and 58% strongly agreed. The majority strongly agreed with this statement. Respondents were queried whether they use less power since they were converted to Yaka. Results revealed that, 11.8% were neutral, 46.2% agreed and 42% strongly agreed. Majority agreed with this statement. Furthermore, Respondents were queried whether Umeme staff regularly visit their home. Results revealed that, 11.8% strongly disagreed, 30% disagreed, 41% Neutral, 11.2% agreed and 6% strongly agreed. Majority were Neutral on this point. Respondents were also asked whether they would not advise anyone to cheat power on Yaka. Results revealed that, 1.7% neutral, 34.2% agreed and 64.1% strongly agreed.

While interview one respondent noted *''...customers have visibility of units remaining making them more cautious and responsible. Visibility of units on the customer interface make customers like yaka. Through this customers can control their energy consumption easily.''*

4.4.5 Assessing Research objective one by Predictive Modeling

Predictive Modeling using Regression Analysis was employed to define the level of prediction of

the independent variable; Billing System and the dependent variable Business performance.

Furthermore, the researcher used correlation and regression methods to test the hypothesis.

4.4.6 Research Objective 1: To Examine the Effectiveness of Prepaid Billing System In

Influencing Business Performance at Umeme Ltd.

Table 6: Model Summary

Model	R	R Square	Adjusted R Square
1	.962[a]	.926	.925

Dependent Variable: Business Performance

Source: Primary data

Results from the Table 9 provides the **R v**alue which revealed the correlation (r=0.962[a]) which

expresses a very high degree of correlation. The **R^2** value revealed how much of the total variation

in the dependent variable, Business Performance can be explained by the independent variable

Billing System. For this matter, 92.6% is explained by this model.

Table 7: Regression Analysis for Prepaid Billing System & Business Performance

Model		Unstandardized Coefficients		Standardized Coefficients	
		B	Std. Error	Beta	Sig.
1	(Constant)	.162	.059		.007
	Control of energy consumption	.411	.017	.507	.000
	System Efficiency	.221	.015	.307	.000
	Payment alternatives	.289	.017	.363	.000

    a. Dependent Variable: Business Performance

Source: Primary data

The Regression analysis model revealed the influence to which the independent variable Billing System predicts the dependent variable Business Performance. The motivation of this Regression Model is to compare and define the contribution of each of the objects of the independent variables.

The model reveals that Control of energy consumption , System Efficiency and Payment Alternatives are significant predicators of Business Performance; (Control of energy consumption = 0.507, System Efficiency=0.307 and Payment Alternatives =0.363)

The model revealed that; one unit change in Control of energy consumption leads to (Beata =0.507), System efficiency leads to (Beta = 0.307) and Payment alternatives leads to (Beta = b0.363).

The results of the Model revealed that Control of energy consumption (50.7%) makes the strongest unique contribution to explaining the dependent variable Business Performance. This is followed by Payment alternatives (36.3%), and System efficiency (30.7.8%) respectively. The model is supported by the Sig. Value (0.000) which is less than the Alpha Value (0.05) proposing that the Model was statistically substantial at Sig = 0.000.

4.4.7 Research Hypothesis 1: The effectiveness of prepaid billing system positively influences business performance at Umeme Ltd

Correlations analysis was utilized to find out the associations between the Prepaid Billing Systems and Business Performance.

Table 8: Relationship between Prepaid Billing system & Business Performance

Pre-Paid Billing	Pearson Correlation	1	$.995^{**}$
Business Performance	Pearson Correlation	$.995^{**}$	1

There was a statistically strong positive relationship between Pre paid Billing systems and Business Performance (r=0.995, P<0.001). This means that if Prepaid Billing is systematically carried out perfectly well, UMEME will realize Business Performance. The analysis further reveals that Pre-paid billing system contributed 99.5% on Business Performance of UMEME (U) Ltd, leaving 0.5% to other exogenous factors not included in this study

4.4.8 Coefficient of Determination (R2)

The degree of Coefficient of Determination (R^2) was 99% revealing the shared variance. This implies that Pre-Paid Billing helps to explain 99% of the variance in respondents' scores on Business Performance. This is quite a respectable amount of variance explained.

4.4.9 Documentary review findings

The Umeme annual report (2015) posits that prepaid billing system reduced losses from 19.5% to 18.5% in the year 2016. The same report further stressed that this system increases electricity divisibility. Therefore, the study findings are another evidence of existing literatures related to billing systems.

4.5 Descriptive Statistics Assessing Research Objective 2

Research objective two was to examine the effectiveness of post-paid billing system in influencing business performance at Umeme Ltd. In order to examine the effectiveness of post-paid billing system in influencing business performance, descriptive statistics were applied and the results regarding the effectiveness of post billing systems on Business Performance in Umeme are

reported in the table 6. The outputs were displayed in the Percentages for understandability of the various contributions of each of the variables (questions) under the research study.

Table 9:Post-paid billing system

S/NO	ITEMS ON POST-PAID BILLING SYSTEM (N=378)	LIKERT SCALE				
		SD (%)	D (%)	N (%)	A (%)	SA (%)
	Meter reading					
1	My meter is read every month	1.7	6.6	3	38.7	50
2	I always agree with the monthly meter readings		4	3	50	43
3	Umeme meter readers are very disciplined	20	18	18.4	33.6	10
	Revenue collection					
4	I pay my bills in time	2	3.5		71	23.5
5	I don't wait to be forced to pay my bills	1.7	1.1	1.2	40	56
6	Umeme staff always disconnect me when I don't pay my bills	1.3	3	1	62.7	32
	Bill delivery					
7	I always receive my bill at the end of the month	3	30	33.6	30	3.4
8	I can read and interpret my bill	1.3	25	48	24	1.7
9	I receive bills on my email every month	13	30	30.3	20	6.7
10	I receive paper bills every month	1.9	20	24.4	10	43.7
11	My monthly bill is always accurate	4.9	30	29.2	30	5.9

Note: SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

4.5.1 Assessing Meter reading on Post-paid billing system.

To assess meter reading, respondents were asked whether their meters are read every month. Results revealed that, 1.7% strongly disagreed, 6.6% disagreed, 3% were neutral, 38.7% agreed and 50% strongly agreed. Majority agreed with the statement. When asked whether, they always agree with the monthly meter readings, the results revealed that, 4% disagreed, 3% Neutral, 50% Agreed and 43% strongly agreed. Results revealed that majority agreed with the statement.

Respondents were also asked whether Umeme meter readers are disciplined. Results revealed that, 20% strongly disagreed, 18% disagreed, 18.4% Neutral, 33.6% agreed and 10% strongly agreed. Results revealed that most of the respondents agreed with this statement.

In an interview, one respondent said that; ''*sometimes meter readers bring wrong reading. At times meter readers do what is known as 'mango reading' whereby they sit in a mango tree and starting forging readings. Or at times they visit the customers' premises and accidentally capture wrong reading. Such errors increase the number of customer complaints''*.

4.5.2 Assessing Revenue collection on Post-Paid Billing systems

In order to assess Revenue collection, respondents were asked whether they pay their bills in time. Results revealed that, 2% strongly disagreed, 3.5% disagreed, 71% agreed and 23.5% strongly agreed. Statistics revealed that majority of the respondents agreed on this statement. When asked whether Umeme staff always disconnect them when they don't pay their bills, respondents revealed that 1.3% strongly disagreed, 3% disagreed, 1% neutral, 62.7% agreed and 32% strongly agreed. They were asked whether, they don't wait to be forced to pay their bills. Results revealed that, 1.7% strongly disagreed, 1.1% disagreed, 1.2% Neutral, 40% agreed and 56% strongly agreed.

One respondent said that; ''… *revenue collection is achieved through timely billing which caters for losses through sales and bill delivery and over 70% of revenue is collected. Revenue collection is very important for Umeme since the money collected is used to run the company. The company must ensure that all postpaid customers receive bills either in the form of paper or electronic bills. Unfortunately not all customers receive their bill, others receive them past their due date*''.

4.5.3 Assessing Bill delivery on Post-Paid Billing systems

To assess bill delivery on postpaid billing system, respondents were asked whether they always receive their bills at the end of the month. Results revealed that 3% strongly disagreed, 30% disagreed, 33.6% Neutral, 30% agreed and 3.4% strongly agreed, meaning that majority of the respondents were neutral on this statement. Respondents were also asked whether they receive paper bills every month. Results revealed that, 1.3% strongly disagreed, 25% disagreed, 48% Neutral, 24% agreed and 1.7% strongly agreed. This revealed that majority of the respondents were neutral with this statement. The respondents were also queried whether they can read and interpret their bills. Results from the descriptive statistics revealed that 13% strongly disagreed, 30% disagreed, 30.3% Neutral, 20% agreed and 6.7% strongly agreed. Majority of the respondents disagreed with this statement. They were further asked whether their monthly bills are always accurate. Results revealed that, 4.9% strongly disagreed, 30% disagreed, 29.2% neutral, 30% agreed and 5.9% strongly agreed. Results revealed that majority of the respondents agreed with this statement. They were further queried whether they receive paper bills every month. Results revealed that, 1.9% strongly disagreed, 20% disagreed, 24.4% Neutral, 10% agreed and 43.7% strongly agreed.

One respondent when being interviewed said that; *''...not all bills are produced and other are at times delivered late. Some bills are not printed, some are not delivered and others are printed with errors. However the bill delivery system has improved with minimal errors unlike in the past were errors were too much''.*

4.5.4 Assessing Research Objective Two Using Predictive Modeling

Predictive Modeling using Regression Analysis was employed to define the level of prediction of

the independent variable; Billing System and the dependent variable Business performance.

Furthermore, the researcher used correlation and regression methods to test the hypothesis.

4.5.5 Research Objective 2: To examine the Effectiveness of Post-Paid Billing System in Influencing Business Performance at Umeme Ltd

Table 10: Model Summary

Model	R	R Square	Adjusted R Square
1	.492[a]	.242	.233

Predictors: (Constant), Revenue Collection, Meter Reading, Bill Delivery
Source: Primary data

The statistical findings revealed that the R value tells the correlation coefficient (r=0.492[a]), which

demonstrates a positive and moderate degree of correlation between the independent and the

dependent variable. The R^2 value revealed how much of the total variation in the dependent

variable, Business performance can be explained by the independent variable Billing System. In

line with the research study, 24.2% could be explained by this model.

Table 11: Standard Regression Analysis for Post-Paid Billing System & Business Performance

Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	1.849	.165		.000
	Meter Reading	.129	.033	.224	.000
	Bill Delivery	.096	.032	.169	.003

	Revenue Collection	.191	.034	.309		.000

a. Dependent Variable: Business Performance

Source: Primary data

The Model revealed how the independent variable; Billing System predicts the dependent variable Business Performance. The Predictive Model Coefficients compared and found out the contribution of each of the objects in the group (revenue collection, Meter Reading and Bill delivery). The results of the model revealed that Bill Delivery, Meter Reading and Revenue Collection are all significant predicators of Business Performance; (Bill delivery)=0.169, Meter Readings= 0.224 and Revenue Collection=0.309. The Model further revealed that; one unit change in Bill delivery leads to Beta=0.169, Meter Reading leads to (Beta = 0.224 and Revenue Collection=0.309.

The Model results revealed that, Revenue Collection (30.9%) makes the strongest unique contribution to explaining the dependent variable Business Performance. This is followed by Meter Reading (22.4%), then Bill delivery (16.9%) in that respectively. This is sustained by the Sig. Value (0.000) and the Alpha Value (0.05) suggesting that the Model was statistically substantial at Sig = 0.000.

4.5.6 Research Hypothesis 2: The effectiveness of Post-paid billing system positively influences business performance at Umeme Ltd.

Correlations analysis was employed to find out the associations between Post-paid billing Systems and dependent variable Business Performance.

Table 12: Relationship between Post-paid Billing system & Business Performance

Business Performance	Pearson Correlation	1	.460[**]

| Postpaid Billing | Pearson Correlation | .460** | 1 |
| | | | |

. Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data

Results from the table 4.14 revealed that there was a statistically moderate positive relationship between Post-paid Billing systems and Business Performance (r=0.460, P<0.01). This means that if Post-paid Billing is carried out, UMEME will realize Business Performance Moderately. The analysis further reveals that post-paid billing system contributed 46% on Business Performance of UMEME (U) Ltd, leaving 54% to other exogenous factors not included in this study.

4.5.7 Coefficient of Determination (R^2)

The degree of Coefficient of Determination (R^2) was 21.2% revealing the shared variance. This implies that Post-Paid Billing helps to explain 21.2% of the variance in respondents' scores on Business Performance.

4.5.8 Documentary review findings

The introduction of yaka will enable us control our energy consumption easily hence saving us from the unfair and irregular bills delivered by Umeme (The New Vision 17.April.2011). That statement was made by a customer after the introduction of Yaka in Kitintale a Kampala surbub. That statement explains why postpaid billing system contributed only 21.2% on business performance.

4.6 Descriptive Statistics for assessing Research Objective 3 (Moderating variable)

Research objective three as a moderating variable intended to examine the effectiveness of employee performance on billing systems in influencing business performance at Umeme Ltd.

Descriptive statistics were utilized and the results regarding the effectiveness of employee performance on billing systems in influencing business performance at Umeme Ltd are showed in table 7. The outputs are displayed in Percentages for easy interpretation and understandability of the various contributions of each of the variables (questions) under the research study.

Table 13: Employee performance

S/NO	ITEMS ON EMPLOYEE PERFORMANCE (N=378)	LIKERT SCALE				
		SD (%)	D (%)	N (%)	A (%)	SA (%)
	Job knowledge/skills					
1	Umeme staff are skilled in whatever they do	1.7	3.4	12.6	52.9	29.4
2	Umeme employees are skilled in what they do	1.7	2	1.7	57.1	37.5
	Quality meter readings					
3	Umeme employees deliver my bills in time	21	25	12	15	27
4	Umeme employees read my meter before the month ends	26	14.5	5	24.4	30.1
	Timely meter audit					
5	Umeme staff regularly audit my Yaka meter	29	15	15	16	25
6	Every month Umeme employees check my meter	36	11	4	24	25
7	Whenever my Yaka gets a problem, Umeme staff quickly responds	1	59	10	12	18

Note: SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

4.6.1 Assessing Job knowledge/skills on Employee Performance

In order to assess Job knowledge/skills on employee Performance, respondents were asked whether Umeme staff are skilled in whatever they do. Results revealed that, 1.7% strongly disagreed, 3.4% disagreed, 12.6% Neutral, 52.9% agreed and 29.4% strongly agreed. Statistics revealed that majority agreed with the statement. They were asked whether Umeme employees are

skilled in what they do. Results revealed that, 1.7% strongly disagreed, 2% disagreed, 1.7% Neutral, 57.1% agreed and 37.5% strongly disagreed.

4.6.2 Assessing Quality meter readings on Employee Performance

In order to assess Quality Meter reading, on employee Performance, respondents were asked whether Umeme employees deliver their bills in time. Results revealed that, 21% strongly disagreed, 25% disagreed, 12% Neutral, 15% agreed and 27% strongly agreed. Statistics revealed that majority strongly agreed with the statement. Furthermore, they were asked whether Umeme employees read their meters before the month ends, Results revealed that, 26% strongly agreed, 14.5%disagreed, 5% Neutral, 24.4% Agreed and 30.1% Strongly agreed. Statistics revealed that majority strongly agreed that their meters are read before the month ends.

One of the respondents said that; ''…*employee performance is important for the success of Umeme. For the company to secure business performance all staff must have enough job knowledge. The heart of Umeme is billing, the company collects revenue from billing and losses are greatly affected by billing. Timely delivery of services is very important since it impacts on losses in new connections. Staff must ensure actual meter readings and timely bill delivery if billing is to positively influence business performance''.*

4.6.3 Assessing Timely meter audit on Employee Performance

In order to assess Timely meter audit, on employee Performance, respondents were asked whether Umeme staff regularly audit their Yaka meter. Statistical results revealed that, 29% strongly disagreed, 15% disagreed, 15% Neutral, 16% agreed and 25% strongly agreed. Statistics revealed that majority strongly disagreed with the statement. Respondents were asked whether every month Umeme employees check their meters. Results revealed that, 36% strongly disagreed, 11%

disagreed, 4% Neutral, 24% agreed and 25% strongly agreed. Statistics revealed that majority

strongly disagreed with the statement. They were further asked whether whenever their Yaka gets

a problem, Umeme staff quickly responds. Results revealed that, 1% strongly disagreed, 59%

disagreed, 10% Neutral, 12% agreed and 18% strongly agreed.

While interview one respondent noted that ''…*the practice is of auditing meters is very important,*

this the customer understand which meters are working and those that are not working effectively.

Some customers tamper with the meters deliberately thereby increasing losses. Usually meters that

are found faulty are replaced by the company…''

4.6.4 Assessing Research objective Three Using Predictive Modeling

Predictive Modeling using Regression Analysis was employed to define the level of prediction of

the independent variable; Billing System and the dependent variable Business performance.

Furthermore, the researcher used correlation and regression methods to test the hypothesis.

4.6.5 Research Objective 3: To examine the effectiveness of employee performance on

billing systems in influencing business performance at Umeme Ltd.

Table 14: Model Summary

Model	R	R Square	Adjusted R Square
1	.583[a]	.340	.335

    a. Predictors: (Constant), Timely Meter Reading, Job Knowledge, Quality Meter Reading
    b. Dependent Variable: Business Performance
 Source: Primary data

In this model, the R value expresses the correlation coefficient (r= 0.583[a]). It shows a Positive and

moderate degree of correlation between the Business Performance and Employee performance.

The R^2 value revealed how much of the total variation in the dependent variable, Business

Performance can be explained by employee performance. In line with the research study, 34% could be explained by this model.

Table 15: Standard Regression Analysis for employee performance on billing systems and business performance at Umeme Ltd.

Model		Unstandardized Coefficients		Standardized Coefficients	
		B	Std. Error	Beta	Sig.
1	(Constant)	2.062	.095		.000
	Job Knowledge	.198	.024	.359	.000
	Quality Meter Reading	.122	.025	.234	.000
	Timely Meter Reading	.102	.026	.190	.000

a. Dependent Variable: Business Performance

Source: Primary data

The Coefficient Model Table 16 revealed the influence to which employee performance predicted Business Performance. The results revealed that; the Predictors are three, (Job Knowledge=0.359, Quality Meter reading=0.234, and Timely meter reading=0.190). From the Statistical Model above, it's revealed that; one unit change in Job Knowledge leads to beta=0.359, while one unit change in Quality Meter reading leads to Beta=0.234 and finally one unit change in Timely meter reading leads to Beta=0.190).

Further analysis of the Predictive Model revealed that, Job knowledge makes the strongest unique contribution to explain the dependent variable (employee performance). This is followed by Quality Meter Reading (23.4%) and the least in the order is Timely meter reading with (19%).

In terms of the effectiveness of employee performance on billing systems in public utilities and how it influences business performance at Umeme, the model reveals that, the more Job knowledge one has, the better or higher the billing systems which results in business performance. When Quality meter reading is carried out it results in business performance at Umeme. The least in the group is Timely meter reading. The implication of this analogy to Umeme, is that much resources should be set aside to ensure that training is done to ensure Job knowledge for its employees.

The model was reliable and sustainable because of the Sig. Value (0.000) and the Alpha Value (0.05) hence suggesting that the Model was statistically substantial.

4.6.6 Research Hypothesis 3: The effectiveness of employee performance on billing systems positively influences business performance at Umeme Ltd

Table 16: Relationship between employee performance and business performance

Business Performance	Pearson Correlation	1	.478[**]
Employee Performance	Pearson Correlation	.478[**]	1

Correlation is significant at the 0.01 level (2-tailed).

The statistical results revealed that there is a positively moderate relationship between Employee Performance and Business performance (r=0.478, p=0.001). The model revealed that employee performance contributed 47.8% on Business Performance of Umeme Ltd, leaving 52.2% to other exogenous factors not included in this study.

4.6.7 Coefficient of Determination (R^2)

The degree of Coefficient of Determination (R^2) for the above model was 22.8% which revealed the shared variance. This suggests that employee performance helps to explain 22.8% of the variance in respondents' scores on Business Performance.

4.7 Business performance of Umeme (DV)

In order to assess Business performance, descriptive statistics were utilized and the findings regarding Business Performance in Umeme (U) Ltd are depicted in the table 8.

Table 17: Business performance of Umeme

S/NO	ITEMS ON BUSINESS PERFROMANCE	LIKERT SCALE				
	Customer satisfaction	SD (%)	D (%)	N (%)	A (%)	SA (%)
1	You are satisfied with the overall billing system of Umeme	10	15.6	20.2	50	4.2
2	You are satisfied with prepaid billing system than post-paid billing system	1.7	2	1.7	57.1	37.5
	Revenue growth					
3	Your prompt payment has increased Umeme' revenues	7.6	30.4	9	7.6	45.4
4	Umeme revenues have improved due to the good billing system	26	14.5	5	24.4	30.1
	Cost management					
5	Umeme has registered a reduction in its expenditure due to the good billing systems	7.6	30.4	9	7.6	45.4
6	Prepaid billing system reduced operating costs at Umeme	26	14.5	5	24.4	30.1
	Customer growth					
7	Umeme's customer numbers have increased because of the effective billing system	21	25	12	15	27
8	Customer numbers of Umeme have increased because of prepaid billing	1.3	25	48	24	1.7
	Loss reduction					
9	Pre-payment billing is responsible for the reduction in loses.	1.7	1.1	1.2	40	56
10	Umeme loses have reduced because you do not cheat power	1.3	3	1	62.7	32

Note: SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

4.7.1 Assessing Customer satisfaction on Business Performance

To assess Customer satisfaction, respondents were asked whether they are satisfied with the overall billing system of Umeme. Results revealed that, 10% strongly disagreed, 15.6% disagreed, 20.2% Neutral, 50% agreed and 4.2% strongly disagreed. Descriptive statistics revealed that majority of the respondents agreed on this statement. Respondents were asked whether they are satisfied with prepaid billing system than post-paid billing system. Results revealed that, 1.7% strongly disagreed, 2% disagreed, 1.7% Neutral, 57.1% agreed and 37.5% strongly agreed.

While interviewing, one respondent said that; ''…*prepaid billing has greatly improved cash flows since most of the domestic customers were converted to Yaka. Customers are more satisfied with the system since their bills are no longer estimated and do not have to worry about disconnections''.*

4.7.2 Assessing Revenue growth on Business Performance

To evaluate Revenue growth, respondents were asked whether their prompt payment has increased Umeme' revenues. Results revealed that, 7.6% strongly agreed, 30.4% disagreed, 9% Neutral, 7.6% agreed and 45.4% strongly agreed. Descriptive statistics revealed that majority of the respondents strongly agreed on this statement. Respondents were further questioned whether Umeme revenues have improved due to the good billing system. Results revealed that, 26% strongly agreed, 14.5% disagreed, 5% Neutral, 24.4% agreed and 30.1% strongly agreed. Descriptive statistics revealed that majority of the respondents strongly agreed on this statement.

While interviewing respondents, one noted that; ''…*postpaid is important for business performance but not very influential as before. For domestic customers there are many issues that must be dealt with for example meter reading errors, nonpayment and bill delivery. Postpaid billing has some contribution to business performance in terms of revenue collection through billing which caters for losses and bill delivery of commercial customer''.*

4.7.3 Assessing Cost Management on Business Performance

To evaluate Cost management, respondents were asked whether Umeme has registered a reduction in its expenditure due to the good billing systems. Results revealed that, 7.6% strongly disagree, 30.4% disagree, 9% Neutral, 7.6% agreed and 45.4% strongly agreed. Descriptive statistics revealed that majority of the respondents strongly agreed on this statement. Respondents were further asked whether Prepaid billing system reduced operating costs at Umeme. Results revealed that, 26% strongly disagreed, 14.5%

disagreed, 5% Neutral, 24.4% agreed and 30.1% strongly agreed. Majority of the respondents strongly agreed on this statement.

One respondents said that; ''…*postpaid has a number of costs associated for example; stationary and labor costs to pick readings and as well as delivering bills. These costs reduce on the profits of the customer, therefore, it explains why the company introduced yaka to reduce such costs…*''

4.7.4 Assessing Customer growth on Business Performance

To evaluate customer growth, respondents were asked whether Umeme's customer numbers have increased because of the effective billing system. The results revealed that, 21% strongly disagreed, 25% disagreed, 12% neutral, 15% agreed and 27% strongly agreed. Majority of the respondents strongly agreed on this statement. Respondents were further queried whether Customer numbers of Umeme have increased because of prepaid billing. The results revealed that, 1.3% strongly agreed, 25% disagreed, 48% Neutral, 24% agreed and 1.7% strongly agreed. Majority of the respondents decided to be neutral on this statement.

4.7.5 Assessing Loss reduction on Business Performance

To evaluate Loss reduction, respondents were asked whether Pre-payment billing is responsible for a reduction in loses. Results revealed that, 1.7% strongly agreed, 1.1% disagreed, 1.2% Neutral, 40% agreed and 56% strongly agreed. Majority of the respondents strongly agreed on this statement. Respondents were further asked whether they are satisfied with the overall billing system of Umeme. Results showed that, 1.3% strongly disagreed, 3% disagreed, 1% Neutral, 62.7% agreed and 32% strongly agreed. Majority of the respondents agreed on this statement.

During interview, respondents revealed that ''...*the company suffers both commercial and technical losses, commercial losses are associated with power theft while technical are associated with network related issues. Most of the large customers were connected to AMR while over 55% of the domestic customers are on yaka. Since these customers were converted to yaka, commercial losses started reducing…*''

4.8 Conclusion

From the Descriptive and inferential statistical findings attained, it was revealed that Billing systems have a significant effect on Business Performance at Umeme Ltd. The research findings revealed that each variable under consideration in the billing systems (Prepaid billing system and Post-Paid billing system) has a contribution to business performance. Employee performance on billing systems as a moderating variable also has a positive moderate contribution on business performance at Umeme limited, therefore, it should not be undermined. The Predictive Models, the Degrees of Coefficient of Determination (R^2) all revealed that; prepaid billing systems greatly influence business performance at Umeme limited. Hypotheses testing have also strongly and positively predicted well of prepaid billing systems.

The study findings confirmed the relevancy of the Billing Systems and the implication this has for all the players in the field of Business Performance at Umeme; they should endeavor to work with the Prepaid billing model and strengthen it further in order to address business strategy concerns at Umeme Ltd.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of findings, discussion, conclusion, contribution to knowledge, implication for theory, implication for policy and practice, and recommendations of the study. The research thesis intended to examine the influence of billing systems on business performance at Umeme limited. In this research study, 'billing systems' was preserved as the independent variable, whilst the dependent variable was 'Business performance' and 'employee performance' as the moderating variable. Business performance was assumed to depend on billing systems and employee performance. The findings are presented in chapter four. All of these are presented in agreement with the research objectives.

5.2 Summary of findings

The findings of the study are summarized as below;

5.2.1 To examine the Effectiveness of Prepaid Billing System in Influencing Business Performance at Umeme Ltd

The study showed that there was a statistically strong positive relationship between Pre paid Billing systems and Business Performance (r=0.995, P<0.001). The analysis further revealed that Pre-paid billing system contributed 99.5% on Business Performance of Umeme Ltd, leaving 0.5% to other exogenous factors not included in this study.

5.2.2 To Examine the Effectiveness of Post-Paid Billing System in influencing Business Performance at Umeme Ltd.

The study discovered that there was a statistically moderate positive relationship between post-paid billing systems and business performance (r=0.460, P<0.01). The analysis further revealed that post-paid billing system contributed 46% on Business Performance of Umeme Ltd, leaving 54% to other exogenous factors not included in this study.

5.2.3 To examine the Effectiveness of Employee Performance on billing systems in influencing business performance at Umeme Ltd

The study findings revealed that there was a statistically moderate positive relationship between Employee Performance and Business performance (r=0.478, p=0.001). The model revealed that employee performance contributed 47.8% on Business Performance of Umeme Ltd, leaving 52.2% to other exogenous factors not included in this study.

5.3 Discussion of findings

The discussion of findings is presented below using objective by objective model.

5.3.1 Research Objective 1: To Examine the Effectiveness of Prepaid Billing System in Influencing Business Performance at Umeme Ltd.

Just in agreement with the findings of; Jain (*2011*), Aryeetey et al, (2000), Omijeh and Ighalo (2012) and Microthink (2014), findings of the research study revealed that the effectiveness of Prepaid billing system in influences Business Performance at Umeme Ltd. Findings from the model revealed that; Control of energy consumption , System Efficiency and Payment Alternatives are significant predicators of Business Performance; (Control of energy consumption=0.507), Payment Alternatives =0.363) and System Efficiency=0.307) respectively.

The findings revealed that customers purchase Yaka tokens whenever they want and freely. This is in line with the findings of; The New Vision, 17th April 2011, Casarin and Nicollier, (2009) and Umeme annual report, (2015). Respondents strongly agreed that they can easily purchase tokens whenever they need them. In addition, customers agreed strongly that they have control over power consumption as indicated by the Umeme annual report, (2015).

Furthermore, the findings from the model revealed that; one unit change in Control of energy consumption leads to (Beata =0.507), System efficiency leads to (Beta = 0.307) and Payment alternatives leads to (Beta = 0.363). The findings from the Model revealed that Control of energy consumption (50.7%) makes the strongest unique contribution to explaining the dependent variable Business Performance. This is followed by Payment alternatives (36.3%), and System efficiency (30.7.8%) respectively. The model was supported by the Sig. Value (0.000) and the Alpha Value (0.05) proposing that the Model was statistically significant.

5.3.2 Research Hypothesis 1. The effectiveness of prepaid billing system positively influences business performance at Umeme Ltd

Findings from Correlations analysis revealed that there was a statistically strong positive relationship between Pre paid Billing systems and Business Performance (r=0.995, P<0.001). This is in line with; Aryeetey et al, (2000), Omijeh and Ighalo, (2012).This suggested that if Prepaid Billing is carried out perfectly well, Umeme will realize Business Performance. The findings further revealed that Pre-paid billing system contributed 99.5% on Business Performance of Umeme Ltd, leaving 0.5% to other exogenous factors not included in this study.

5.3.3 Research Objective 2: To Examine the Effectiveness of Post-Paid Billing System in influencing Business Performance at Umeme Ltd

Based on the findings of; Mensah et al (2012), Macrothink (2014), Ontomwa (2014) and Hoyer & Maclnnis (2001), results provided by the model revealed that business performance can be explained by the Post-paid billing system by only 24.2%.

The findings from the model revealed that Bill Delivery, Meter Reading and Revenue Collection are all significant predicators of Business Performance; (Bill delivery)=0.169, Meter Readings= 0.224 and Revenue Collection=0.309. The findings further revealed that, Revenue Collection (30.9%) makes the strongest unique contribution to explaining the dependent variable Business Performance. This is followed by Meter Reading (22.4%), then Bill delivery (16.9%) respectively. This was sustained by the Sig. Value (0.000) and the Alpha Value (0.05) suggesting that the Model was statistically significant at Sig = 0.000.

Similarly, just in line with the findings of; Macrothink (2014), Ontomwa (2014) and Hoyer & Maclnnis (2001), findings also revealed that respondents strongly agreed that they always receive their bills at the end of the month,

Results further revealed that respondents don't wait to be forced to pay their bills. They further agreed that they would not advise anymore to cheat power on Yaka. This is in line with USAID, (2004). Results further revealed that, customers can read and interpret their bills. They also agreed that they pay their bills in time as posited by; Davila et al, (2006).

5.3.4 Research Hypothesis 2: The effectiveness of Post-paid billing system positively influences business performance at Umeme Ltd.

Findings from Correlations analysis revealed that there is a statistically moderate positive relationship between Post-paid Billing systems and Business Performance (r=0.460, P<0.01). This

calls for better management of the Post-paid Billing system. Findings further revealed that post-paid billing system contributed 46% on Business Performance of Umeme Ltd, leaving 54% to other exogenous factors not included in this study.

5.3.5 Research Objective 3: To examine the Effectiveness of Employee Performance on billing systems in influencing business performance at Umeme Ltd

Just in line with the findings of Wright & Geroy (2001), findings provided by the model revealed that, Business performance can be explained by employee performance by a percentage of 34 (34%). The findings from the model revealed that; the Predictors to Business Performance are three, (Job Knowledge=0.359, Quality Meter reading=0.234, and Timely meter reading=0.190). Findings from the Statistical Model revealed that; one unit change in Job Knowledge leads to beta=0.359, while one unit change in Quality Meter reading leads to Beta=0.234 and finally one unit change in Timely meter reading leads to Beta=0.190). This is followed by Quality Meter Reading (23.4%) and the least in the order is Timely meter reading with (19%).

The model suggests that, Job knowledge (35.9%) makes the biggest exclusive influence to enlightening the dependent variable (Business performance). In agreement with the findings of; Wright & Geroy (2001) and (Pigors & Myers 1989). In terms of the effectiveness of employee performance on billing systems and how it influences business performance at Umeme, the model revealed that for billing to secure business performance, Umeme staff must be effectively trained in billing and metering technologies (Job knowledge). This suggests that Job knowledge can be attained through training in which the employee competencies are developed to enable them implement job related work efficiently, and achieve firm objectives in a competitive manner (Pigors & Myers 1989). Generally, the model was reliable and sustainable because of the

Sig. Value (0.000) and the Alpha Value (0.05) suggesting that the Model was statistically significant.

5.3.6 Research Hypothesis 3: The Effectiveness of Employee Performance on Billing Systems positively influences business performance at Umeme Ltd

Findings from the statistics of association revealed that, there was a positively moderate relationship between Employee Performance and Business performance (r=0.478, p=0.001). The model revealed that employee performance contributed 47.8% on Business Performance of Umeme Ltd, leaving 52.2% to other exogenous factors not included in this study.

5.4 Conclusion

Generally, the study examined three objectives; prepaid billing system, Post-paid billing system and employee performance on how each effectively influences business performance at Umeme. The greatest influencer was Pre-paid billing system (85.7%), followed by Employee Performance (34%) respectively and Post-paid billing system with 24.5% respectively.

5.4.1 Conclusion about Research Objective 1 (To Examine the Effectiveness of Prepaid Billing System in Influencing Business Performance at Umeme Ltd.

The discoveries generated from the research study objective one were statistically significant. The researcher based on these results to draw a conclusion that the contribution of Prepaid Billing System on Business Performance at Umeme Ltd. was 85.7% leaving 14.3% not included. However, the findings of inferential statistics of association also revealed that, Pre-paid billing system contributed 99.5% on Business Performance of UMEME (U) Ltd, leaving 0.5% to other aspects outside this study. This implies that Umeme should convert most of its customers to prepaid metering since it contributes a significant percentage on business performance

5.4.2 Conclusion about Research Objective 2 (To Examine the Effectiveness of Post-Paid Billing System in Influencing Business Performance at Umeme Ltd).

The findings that were generated from the research objective two (2) were statistically significant. The researcher based on these results to draw a conclusion that, the influence of post-paid billing system on performance was only 24**.**2% leaving 75.8% exogenous factors not included in this study. Furthermore the degree of coefficient of determination also revealed that Post-paid billing system contributed 46% on Business Performance of UMEME (U) Ltd, leaving 54 to other exogenous factors not included in this study. Postpaid billing is not the biggest contributor amongst the billing systems on business performance but the few customers on postpaid system must be carefully handled since they also moderately contribute to business performance at Umeme.

5.4.3 Conclusion about Research Objective 3 (To examine the effectiveness of Employee Performance on billing systems in influencing business performance at Umeme Ltd)

In agreement with the findings of the research objective three, Job knowledge (35.9%) made the strongest unique contribution to the dependent variable (Business performance). In terms of the effectiveness of employee performance on billing systems in public utilities and how it influences business performance at Umeme, it was revealed that for billing to secure business performance, Umeme staff must be effectively trained in billing and metering technologies. This suggests that Job knowledge can be attained through training in which the employee competencies are developed.

5.5 Contribution to Knowledge

The study contributed to knowledge by filling the gaps in the existing literature in areas of billing systems and business performance.

In addition to the provision of some direction for future research, this study made two major contributions to the literature on billing systems and business performance.

Firstly, this study revealed that prepaid billing system makes the greatest contribution to business performance indicating that customers' ability to control their energy consumption with a standard coefficient of 0.507 followed by systems efficiency with 0.307 standard coefficient. This implies that all customers should be converted to prepayment since the visibility of units remaining through the customer interface unit makes them more satisfied

Secondly, the study examined a moderating variable ''employee performance'' to assess its role on the billing systems used by Umeme. Findings revealed that employee performance is very vital if billing systems are to secure business performance. Previously a number of studies have been conducted in this area but none examined the importance of employee performance on business performance. The study revealed that employee performance on billing systems has a positive moderate influence on business performance at Umeme. The assessment of employee performance revealed some interesting literature that job knowledge is very important for any organization to achieve its objectives.

5.6 Implication for Theory

The study was guided by the ''balanced scorecard model'' which assumes that organisations are viewed from four perspectives namely, the customer, financial, internal business, and learning and innovation perspectives (Kaplan and Norton, 2001). The dependent variable 'business performance' had five dimensions namely; customer satisfaction, revenue growth, cost management, customer growth and loss reduction. All this dimensions fall under Kaplan and Norton BSC matrix. The financial perspective covers revenue growth and cost management;

customer perspective covered customer satisfaction; internal business perspective covered loss reduction, and finally learning and innovation covered customer growth.

The study findings are in alignment with the BSC matrix because respondents revealed that effective billing systems ensure error free bills and accurate bills which makes customers satisfied, therefore, Umeme should ensure effective billing. Similarly respondents revealed that effective billing systems have increased Umeme's revenue. This was attributed to the prepaid billing system which calls for payment before consumption. Furthermore, the financial perspective calls upon managers to reduce costs and the study findings revealed that the prepaid system reduced cost associated with printing and delivering bills to customer, labour, and fuel costs

In addition the internal business perspective focuses on improving the internal processes and systems to improve performance. The study revealed that customer numbers of Umeme have increased. This was attributed to the introduction of prepayment and the conversion of post-paid domestic customers to Yaka since it deters more than one customer from sharing one meter.

Finally the findings revealed that electricity losses have reduced majorly because of the innovativeness of the company officials. Umeme introduced AMR which has made it hard for commercial customers to cheat. The questionnaire findings revealed that 57.1% agreed that they do not cheat power because of the billing systems. Similarly, 37.5% also strongly agreed that they cannot cheat power.

Generally, the findings were another evidence of the theory. The study findings revealed that revenue growth is very important for the financial stability of the organisation; customer satisfaction is very necessary as stated by Kaplan and Norton; internal business growth was

evidenced by loss reduction in this study, and finally learning and innovation was associated by the importance to increase the customer base at Umeme Ltd

5.7 Implication for Policy and Practice

Research findings proved that effective management of billing systems effectively improves business performance in the utility industry.

The research findings showed that if well managed, billing systems can ensure customer satisfaction, revenue growth, reduce costs, increase customer number and finally reduce energy losses. Therefore, the company should ensure right polices in order to achieve business objectives

On the other hand, the study findings revealed that Umeme staff take long to respond to customer complains especially those on Yaka. This implies that Umeme officials should come up with an effective policy aimed at faster response time. Fixing a response time on restoration of power will greatly satisfy customers.

Similarly, most of the respondents revealed that Umeme staff take long to audit their meters. This was most evidenced from Yaka respondents. Meter audit is a practice aimed at checking whether meters are functioning as intended, in other wards if done adequately, it reduces on commercial and technical losses. This implies Umeme should set up a policy on meter audits so that employees audit customer meters regularly to reduce on power losses

The findings revealed that employee performance is very important if billing is to secure business performance. The assessment of employee performance revealed that job knowledge was the most contributing factor. This implies that Umeme should come up with a training policy so that the employees especially those in billing acquire the right skill required to secure business performance.

5.8 Recommendations

Basing on the research findings, the following are the recommendations of the study:

5.8.1 Recommendations about Research Objective 1 (To Examine the Effectiveness of Prepaid Billing System in Influencing Business Performance at Umeme Ltd).

The company should increase its awareness on the payment options. The study revealed that a noticeable number of respondents were not aware of all the Yaka payment alternatives. This challenge has a negative implication on revenue growth because if one payment line goes off, respondents cannot opt for an alternative.

For the company to increase its customer base, it should convert all the domestic customers to Yaka since the study findings revealed that Umeme numbers have increased due to prepayment. The prepayment system deters a number of customers from sharing one meter. In the end the organization will reap benefits associated to revenue growth, loss reduction and cost reduction.

5.8.2 Recommendations about Research Objective 2 (To Examine the Effectiveness of Post-Paid Billing System in Influencing Business Performance at Umeme Ltd).

Umeme should educate their postpaid customers on how to read and interpret their bills. The study revealed that a number of respondents cannot read and understand their bills. This implies that some customers do not know exactly how much to pay. Bills intend to remind customers that they should pay for the energy consumed, and therefore, if they cannot understand the bill, it means they will not pay in time thus negatively affecting revenue collection.

Umeme should ensure accurate and timely delivery of bills, the study revealed that bill delivery is a strong predictor of business performance at Umeme. Bills inform customers how much they should pay as energy. Therefore, this implies that if bills are distributed to customers in time, Umeme's average collection period can improve thus funding other important projects

5.8.3 Recommendations about Research Objective 3 (To examine the effectiveness of Employee Performance on billing systems in influencing business performance at Umeme Ltd)

The models revealed that employee performance through (Job knowledge) contributed only 35.9% to business performance. This is a small percentage. In order to improve on Job knowledge, Umeme staff should be trained in billing and metering technologies to ensure that they get competencies required to meet organizational targets.

Umeme management team should set a guiding policy on meter audits. The study revealed that most of the Yaka meters are not regularly audited something that has a likelihood of increasing non-technical losses. Meter audit is an activity aimed at checking the appropriateness of the meter, therefore, if meters are not regularly audited, some customers may use tempered or faulty meters which may increases commercial losses.

Umeme should set up a policy to improve complaint response time; the study revealed that Umeme staff take long to respond to customer complaints especially when power goes off. This leaves some customers dissatisfied. However, to ensure business performance according to Norton and Kaplan (2001), customer satisfaction is key.

5.9 Limitations of the Study

The study adopted a cross sectional survey design which is done once meaning that there is no follow up survey in the future. A follow up a survey could help establish the sustainability of the research findings. The researcher thinks it would have been good as it facilitates comparison of the research findings and understanding the trends of objectives further.

In terms of coverage, the study was limited to Natete branch distribution area and the findings of this study portray the influence of billing systems on the business performance of Umeme in Natete, which should not be generalized to mean the national level status. The geographical limitation was hinged to financial and time constraints which could not allow the study to be conducted in more than one district.

5.10 Areas of further Research

The research findings from this study point out a number of areas for auxiliary exploration such as 'the role of Umeme Business Committee in sustainability of Business Performance. Generally, the research study concentrated in areas of Natete Umeme district, future research could be carried out among other districts in Uganda to assess the effectiveness of billing systems in public utilities and business performance.

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APPENDIX :1

QUESTIONNAIRE TO THE RESPONDENTS IN UMEME NATETE BRANCH

Dear respondent, I am Luswabi Martin Reg. No. 15/MBA/00/KLA/WKD/0065 A Graduate student of Uganda Management Institute pursuing a Master's Degree in Business Administration. This research is purely intended for academic reasons only. Please spare time and provide response to the questionnaire all submissions will be treated with utmost **confidentiality.**

DATA COLLECTION TOOL FOR UMEME CUSTOMER

Section A; Socio demographic (Tick the most appropriate response)	
Zone:	
Parish name:	
Interviewee Bio data	
1. Age of respondent, (years)	a) 18-34 b) 35-64 c)65 and above
2. Gender of respondent	a) Male b) Female
3. Level of education attained	a)Tertiary b)Secondary c)Primary c)others specify
4. Employment status of respondent	a)Employed b)Unemployed c)Farmer d)Business
Here tick where appropriate (**SD** Strongly Disagree **D** Disagree **NA** Not Aware **A** Agree **SA** Strongly Agree Based on Likert Scale **SD** 1 **D** 2 **NA** 3 **A** 4 **SA** 5)	

SECTION B:

Post-paid billing system in public utilities and business performance.

	Meter reading	1	2	3	4	5
1.	My meter is read every month					
2.	I always agree with the monthly meter readings					
3.	Umeme meter readers are very disciplined					
	Revenue collection					
4	I pay my bills in time					
5	I don't wait to be forced to pay my bills					
6	Umeme staff always disconnect me when I don't pay my bills					
	Bill delivery					
7	I always receive my bill at the end of the month					
8	I can read and interpret my bill					
9	I receive bills on my email every month					
10	I receive paper bills every month					
11	My monthly bill is always accurate					
	Employee performance					
12	Umeme employees are skilled in what they do					
13	Every month Umeme employees check my meter					
14	Umeme employees read my meter before the month ends					
15	Umeme employees deliver my bills in time					
16	If I got a chance, I would convert to Yaka					

SECTION C:

Prepaid billing systems in public utilities and business performance.

	Systems efficiency	1	2	3	4	5
1.	I can easily purchase a token whenever I need it					
2.	I can easily load the token on my interface					
3.	Umeme systems are reliable					
	Payment alternatives					
4	I know all the Yaka payment options					
5	All the Yaka payment options are easy to use					
6	All the Yaka payment options are reliable 24/7					
7	I am happy with the Yaka billing system					
	Control of energy consumption					
8	I have control over power consumption					
9	I purchase Yaka tokens whenever I want and freely					
10	I use less power since I was converted to Yaka					
11	Umeme staff regularly visit my home					
12	I would not advise anymore to cheat power on Yaka					
	Employee performance					
13	Umeme staff are skilled in whatever they do					
14	Umeme staff regularly audit my Yaka meter					
15	Whenever my Yaka gets a problem, Umeme staff quickly responds					

SECTION D

BUSINESS PERFORMANCE

S/NO	BUSINESS PERFROMANCE	LIKERT SCALE				
	Customer satisfaction	SD 1	D 2	N 3	A 4	SA 5
1	You are satisfied with the overall billing system of Umeme					
2	You are satisfied with prepaid billing system than post-paid billing system					
	Revenue growth					
3	Your prompt payment has increased Umeme' revenues					
4	Umeme revenues have improved due to the good billing system					
	Cost management					
5	Umeme has registered a reduction in its expenditure due to the good billing systems					
6	Prepaid billing system reduced operating costs at Umeme					
	Customer growth					
7	Umeme's customer numbers have increased because of the effective billing system					
8	Customer numbers of Umeme have increased because of prepaid billing					
	Loss reduction					
9	Pre-payment billing is responsible for the reduction in loses.					
10	Umeme loses have reduced because you do not cheat power					

DATA COLLECTION TOOL FOR UMEME EMPLOYEE.

BACKGROUND INFORMATION (Please tick as appropriate)

  a) **Highest Academic qualification of the respondent**

High School	Diploma	Degree	Masters	Professional	Other Specify

  b) **Age of respondent**

Below 23 years	23 – 35 years	36 – 45 years	46 – 55 years	Above 55 years

  c) **Sex of the respondent**

Male	Female

  d) **Number of years worked in the Umeme**

0-2	3-5	6-9	10-12	13 and above

  e) **Respective Department**

Customer service	Administration	Operations	Engineering

  f) **Number of employees in Department**

Below 4 employees	5 – 10 employees	More than 10 employees

APPENDIX II

INTERVIEW GUIDE FOR UMEME EMPLOYEES

Post billing system

1. Do you still think that post billing system enhance business performance at Umeme Ltd? Yes/No

2. If no, why……………………………………………………………………………….

3. How has postpaid billing system enhanced business performance at Umeme Ltd?

4. Do you think that meter readings are always accurate? Yes/No.

5. If No, why? ………………………………………………………………………….

6. Explain how postpaid billing system enhances revenue collection? ....

7. Do you think that all postpaid customers receive their bills in in time? Yes/No.

8. If no, why? ………………………………………………………………………….

9. Explain why some customer do not pay their bills promptly. …………………………….

10. Do you think that postpaid billing system is very cost effective? Yes/No

11. If no, why? …………………………………………………………………………

Prepaid billing system

12. Explain how prepaid billing system enhances business performance at Umeme Ltd?

13. Do you think that all the customers understand all the payment options for Yaka? Yes/NO

14. If no, why? …………………………………………………………………………

15. Are the Yaka payment alternatives reliable? Yes/No……………………………………….

16. Do they operate 24/7? ……………………………………………………………….

17. Can the customers access their tokens at any time? Yes/No ………………………………..

18. If no, why? ……………………………………………………… ………………………….

19. Do you think that customers have the power to control their energy consumption? Yes/No

20. If no, why? ………………………………………………………………………………..

21. Explain how Yaka ensures divisibility of energy consumption. …………………………………

Effectiveness of employee performance

22. Explain how the effectiveness of employee performance influence business performance at Umeme Ltd. …………………………………………………………………………………..

23. Do you think that the company has skilled staff to drive business at Umeme Ltd? Yes/No

24. If no, how do you intend to ensure skill development at Umeme Ltd? ....

25. In your opinion, what type of skills is required from staff to achieve business performance at Umeme Ltd? ………………………………………………………….

26. What do you understand by quality meter readings? …………………………………………..

27. Do your meter readers submit quality meter readings? Yes/No………………………………..

28. If no, why? ………………………………………………………………………………….

29. Every meter must be audited at least once a month, is that the case? Yes/ No

30. If no, why? ……………………………………………………………………………………

31. How does meter audit influence business performance at Umeme Ltd? ……………………...

32. Are they any other factors that influence business performance at Umeme? Yes/No

33. If yes, what could they be? …………………………………………………………………..

Your cooperation is highly appreciated

APPENDIX III:

DOCUMENTARY REVIEW CHECKLIST

The researcher anticipates reviewing related literature available on billing systems in public utilities and business performance. Documents related to billing systems, customer services, revenue collection, customer growth, cost management and loss reduction will be will be reviewed.

- Scholarly journals

- Publications

- Articles and papers

- Meeting minutes

- Training manuals for field officers

- Departmental reports

- Annual reports

- Financial reports.

- Internal customer feedback survey records

APPENDIX IV:

TABLE FOR DETERMINING SAMPLE SIZE BY KREJCIE AND MORGAN (1970)

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size   Source: Krejcie & Morgan, 1970

APPENDIX V:

THE BALANCED SCORECARD MATRIX
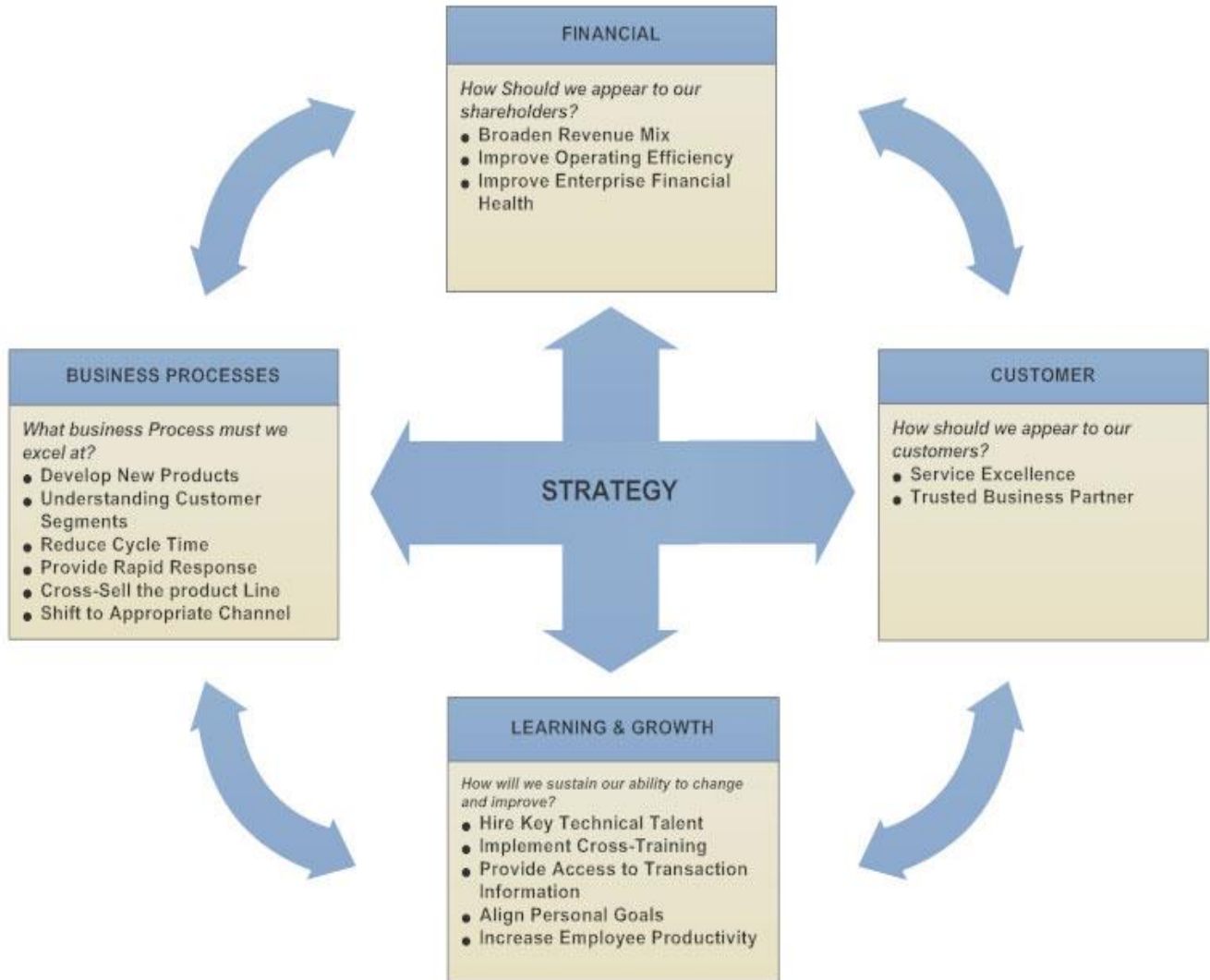
Adapted from the Balanced Scorecard by Robert S. Kaplan and Dave P. Norton. Harvard Business School Press. 1996.

Adopted from the Balanced Scorecard by Robert S Kaplan and Dave P Norton, Harvard Business Press 1996

APPENDIX VI: INTRODUCTION LETTER.

APPENDIX VII: FIELD RESARCH LETTER

APPENDIX VIII: ANTI-PLAGIARISM REPORT