

KIGALI INDEPENDENT UNIVERSITY ULK
SCHOOL OF ECONOMICS AND BUSINESS STUDIES
DEPARTMENT OF ACCOUNTING
P.O.BOX 2280 KIGALI

**CONTRIBUTION OF ACCOUNTING INFORMATION SYSTEM
SOFTWARE TO THE
PERFORMANCE OF TELECOMMUNICATION INDUSTRIES!
CASE STUDY: MTN Rwanda-cell Plc (Headquarters)**

Dissertation submitted to the School of Economics and Business Studies in partial fulfillment of requirements for the award of Bachelor's Degree with honors in Accounting.

Prepared by:

MAZIMPAKA James

Roll number: 202110008.

Supervisor: NYIRAKAGEME Alice

Kigali, September 2024

DEDICATION

To:

My family, whose unwavering support
and love have been my constant guide.

My friends, for their encouragement,
laughter, and kindness along the way.

DECLARATION

I declare that the work entitled “**Contribution of Accounting Information System software to The Performance of Telecommunication Industry!**” submitted to Kigali Independent University-ULK in partial fulfillment of the requirements for the award of the Bachelor’s Degree Honors in Accounting (BDH, Acc), is a research work carried out by me under the supervision of NYIRAKAGEME Alice, Kigali Independent University-ULK and has not been previously submitted to any other University for the award of any Degree or Diploma.

Supervisor: MAZIMPAKA James

Signature:

Date: /.... /.....

CERTIFICATION

This is to certify that this work entitled “**Contribution of Accounting Information System softwares to The Performance of Telecommunication Industry!**” is an original research work done by **MAZIMPAKA James**, Department of Accounting, Kigali Independent University-ULK under my supervision

Supervisor: NYIRAKAGEME Alice

Signature:

Date: /..... /.....

ACKNOWLEDGEMENT

It is a matter of great satisfaction to me that I have been able to complete the research work. It was indeed a long process and I always prayed to God to give me sufficient patience and courage to complete the work.

So, first and foremost I would like to offer my gratitude to God from the deepest core of my heart.

I would like to place my fervent feelings of gratitude to my honorable supervisor NYIRAKAGEME Alice, Head of Accounting Department, Kigali Independent University-ULK for her sincere guidance, untiring cooperation, valuable advice, and endless inspiration that enabled me to prepare this research proposal. In preparing this research proposal, I was fortunate enough to receive intellectual suggestions and guidelines from my supervisor, who encouraged me and helped me to complete my work. Her guidance and encouragement have paved the way for me to write the research proposal.

TABLE OF CONTENTS

DEDICATION	i
DECLARATION	ii
CERTIFICATION	iii
ACKNOWLEDGEMENT	iv
LIST OF TABLES	ix
LIST OF ABBREVIATIONS	xi
ABSTRACT	xii
CHAPTER ONE: GENERAL INTRODUCTION	1
1.1. Background to the study.....	1
1.2. Problem statement	2
1.3. Objectives of the study	2
1.3.1. General objective.....	3
1.3.2. Specific objectives.....	3
1.4. Research Questions	3
1.5. Hypothesis	3
1.6. Scope of the study	3
1.6.1. Scope in time	4
1.6.2. Scope in domain	4
1.6.3. Scope in space	4
1.7. Significance of the study	4
1.8. Structure of the Study	5
CHAPTER TWO: LITERATURE REVIEW	6
2.1. Definitions of key concepts	6
2.1.1. Accounting	6

2.1.2. Accounting information System software	7
2.1.3. Performance.....	7
2.1.4. Telecommunication Industry	8
2.2. Theoretical Review.....	8
2.2.1. Historical and Background of Accounting	8
2.2.1.1. Accounting Information System software.....	9
2.2.1.2. Accounting	10
2.2.1.3. Users of accounting information	11
2.2.1.4. Bases of accounting.....	12
2.2.1.5 Accounting principles.....	12
2.2.1.6. The System software of bookkeeping	14
2.2.1.7. Accounting books.....	15
2.2.1.8. Financial statements	18
2.2.1.9. The qualities of accounting information.....	19
2.2.1.10. The needs of an accounting System software.....	19
2.2.1.11. Effectiveness of Accounting Information System software.....	20
2.2.2. Performance.....	20
2.2.2.1. Profitability measures	21
2.2.2.2. Other key indicators of financial performance	22
2.2.2.3. Non-financial indicators	24
2.2.2.4. Review on Related Studies	25
2.3. Empirical Review	25
2.3.1. Introduction	25
2.3.2. Theoretical Framework	26
2.3.5. The Role of AIS in Telecommunications	26
2.3.5. Empirical Evidence from MTN Rwandacell Plc (2020-2023).....	26

2.4. Relationship Between Accounting Information System softwares (AIS) and Performance.....	27
2.5. Conceptual Framework	27
CHAPTER THREE: RESEARCH METHODOLOGY	30
3.1. Research Design	30
3.2. Population of the study.....	30
3.3. Sampling size.....	30
3.4. Data Collection Techniques	31
3.4.1. Questionnaire Method	31
3.4.2. Primary data.....	31
3.4.3. Secondary data.....	31
3.4.5. Research Methods	31
3.4.5.1. Analytical method	32
3.4.5.2. Synthetic method.....	32
3.4.5.3. Quantitative or statistics method	32
3.5. Data Processing	32
3.5.1. Editing	32
3.5.2. Tabulation.....	32
3.5.3. Coding	32
3.6. Analytical Model.....	34
3.7. Limitations for the Study.....	34
3.8. Ethical Consideration	35
CHAPTER FOUR: PRESENTATION OF FINDINGS AND ANALYSIS	36
4.1. Background of MTN RWANDACELL PLC	36
4.1.1. Geographical Coverage	36
4.1.2. Vision	37
4.1.3. Belief	37

4.1.4. Values	37
4.1.5. Key for achievements	37
4.2. Demographic characteristics of the respondents	38
4.2.1. Presentation of characteristics of respondents	38
4.3. Types of Accounting Information System softwares used by MTN Rwandacell Plc.	40
4.3.1. Analysis of effectiveness of Accounting Information System software of MTN Rwandacell Plc ...	41
4.4. Contribution of A.I.S to the Performance of MTN Rwandacell Plc	42
4.4.1. Profitability measures	42
4.4.1.4. Liquidity ratio	45
GENERAL CONCLUSION	47
REFERENCES	54
APPENDICES.....	57

LIST OF TABLES

TABLE 2. 1:Journal and its Source document of data transaction.	17
TABLE 3. 2: Coding of items	33
TABLE 4. 1: Gender of Respondents.....	38
TABLE 4. 2: Education Level of Respondents	38
TABLE 4. 3:Working Experience of Respondents	39
TABLE 4. 4: Positions held by Respondents	39
TABLE 4. 5: Accounting software.....	40
TABLE 4. 6: Views of respondents on characteristics of accounting information System software	40
TABLE 4. 7: Descriptive statistics	41
TABLE 4. 8: Return on Assets.....	43
TABLE 4. 9: Return on Equity.....	43
TABLE 4. 10: Return on Capital Employed	44
TABLE 4. 11: Liquidity ratios	45

LIST OF FUGURE

Figure 1:Conceptual framework..... 29

LIST OF ABBREVIATIONS

AIS	Accounting Information System software
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization
GAAP	Generally Accepted Accounting Principles
GSM	Global System software for Mobile Communications
ICPAR	Institute of Certified Public Accountants Rwanda
MIS	Management Information System software
PLC	Public Limited Company
MOMO	Mobile Money
MTN	Mobile Telephone Network
RWF	Rwandan Franc
ULK	Kigali Independent University

ABSTRACT

Mobile telecommunication companies have emerged as an important economic sector in present time, and it is adding a lot in boosting up the economy of Rwanda. The mobile telecommunication companies in Rwanda are aiming at providing cost effective and quality services to the customer as customer satisfaction is most important for the survival and success of any company. For this purpose, the mobile telecommunication companies need an efficient AIS for providing necessary information to its various users. The user group includes creditors, investors, lenders, regulators, trade union and management and many others who take their necessary decisions based on the information by the annual reports of the companies. Appropriate and efficient AIS is needed by the companies to provide relevant and reliable information to the interested users in time. The appropriate AIS depends on the relevant accounting policies, principles and most importantly the standards set by both national and international bodies. Legal framework of a country gives clues to framing appropriate AIS for an organization. The objectives of the study are to know the major characteristics of AIS, analyze the opinions of the respondents regarding the application of legal framework and compliance with accounting standards, judge the efficiency of AIS through selected indicators, identify the factors influencing the efficiency of AIS and analyze the opinions of the respondents regarding the qualitative characteristics of accounting information produced by AIS. There are three mobile telecommunication companies in Rwanda and I have selected one mobile telecommunication company MTN Rwandacell PLC. The AIS of the selected company is fully computerized and accounting software are used for recording transactions, processing of transactions and preparing the financial statements to the interested users. The financial statements are prepared on going concern basis under the historical cost convention using Generally Accepted Accounting Principles (GAAP) in accordance with accounting standards.

The accountants who are responsible for performing the various activities of AIS should be trained properly so that AIS can deliver relevant information for all concerned. Accounting information should be timelier, and well-structured for various interested users so that they can make effective, dynamic decisions. Internal control activities, functions of audit committee, management control activities and corporate governance etc. should be coordinated. ICPAR may try to organize more seminars for developing AIS, MIS, Decision Support System softwares, Executive Information System software and Expert System software .

CHAPTER ONE: GENERAL INTRODUCTION

This chapter presents the background, significance of the study, scope of the study, problem statement, research hypotheses, and objective of the study, research methodology and structure of the dissertation

1.1. Background to the study.

Every business organization that has economic resources, such as money, machinery, and buildings, uses accounting information. For this reason, accounting is called the language of business. Accounting also serves as the language providing financial information about none profit pursuing organizations such as governments, churches, fraternities, and hospitals. However, these entities are not businesses because they do not operate in a for-profit manner. In this course researcher will focus on accounting for business firms.

This information is primarily financial stated in money terms. Accounting, then, is a measurement and communication process used to report on the activities of profit-seeing business organizations. As a measurement and communication process for business, accounting supplies information that permits informed judgements and decisions by users of the data.

Users of accounting information are separated into two groups, internal and external. Internal users are individuals within a business organization who use accounting information. External users are people outside the business entity that use accounting information. Accounting information is valuable because decision makers both internally and externally can use it to evaluate the financial consequences of various alternatives. Accountants reduce uncertainty by using professional judgments to quantify the future financial impact of taking action or delaying action. Although accounting information plays a pivotal role in reducing uncertainty within an organization, it also provides financial data for individuals outside of the company. (JAQUELINE, 2022)

In this study, researcher will put emphasis on the accounting information System software applicable in Telecommunication industry and how its effective use and misuse affect differently the performance of this industry. Telecommunication industry present the same features in the developing countries.

The role of accounting is concerned with classifying, recording, interpreting and reporting to external and internal users of accounting data that used to evaluate the performance of any business. The business organizations to have better development, an effective accounting System software is very critical, hence the topic of the researcher. Effective accounting System software should have appropriate measure of control, standard implementation methods, qualified accounting personnel,

updated information technology control and should comply with Generally Accepted Accounting Principles. This assists in one way or the other to achieve the overall objectives of the organization. The business organization to be more successful and accountable for their daily activities, it is not against this Contribution of Accounting Information System software to the performance of Telecommunication Industry.

1.2. Problem statement

Worldwide, an effective accounting information System software affects business's performance positively, while weak accounting information System softwares affects negatively business's performance. Telecommunication industry owners or private sector are playing a major role in Rwanda's economy, and they suffer from the following problems:

The most problem of this research project is to identify the most suitable problems, normal the problem is the axial around which the whole effort turn, now, especially in Rwanda a great number of companies are facing the problem of management, Limited financial resources to adopt effective accounting information System software and its relevant applications in business, Lack of updated accounting information System software and even when updated, its installation and use are not perfect, Poor technologies used to the System software, Lack of software designs necessary to the System software. Inefficiency mainly due to the internal inadequate accounting information System software with a wide range of activities not well planned and not coordinated, so sometimes they operates in loss without identifying the causes and more companies have poor management because they have unprofessional accountants and lack of knowledge and, awareness about accounting as they are working in the environment which is very competitive, these are serious troubles that lead to mis-allocation of resources and poor decision making resulting into poor performance.

All those have led to the researcher to conduct a study on accounting information System softwares used in Telecommunication Industry in Rwanda. After the assessment of those problems facing the Telecommunication Industry in relation to the uses of accounting information System software in their daily operations, the recommendations will be available for better decisions to be adopted, the researcher is interested to do the research to MTN Rwandacell Plc in order to find out if really Accounting Information System software contributes to its performance.

1.3. Objectives of the study

Any work to be scientific can present a range of objectives such as a valued aspect rather than another. In the context of the direction of our work, the investigation aspect is privileged. It will be using the comments amounted to verify the existence of links to state and suppose their shape.

The objectives of this study are divided into two parts, General and Specific objectives:

1.3.1. General objective

The general objective of this study is to investigate the contribution of accounting information System software and its performance in Telecommunication Industry.

1.3.2. Specific objectives

1. To assess the effectiveness of accounting information System software in MTN Rwandacell Plc.
2. To analyze if the application of accounting information System software contributes to the performance of MTN Rwandacell Plc.

1.4. Research Questions

For all the reasons developed above I must conduct this research basis on the following two questions:

1. Does MTN Rwandacell Plc have an effective accounting information System software in its activities?
2. Does accounting information System software used by MTN Rwandacell Plc contribute to its performance?

1.5. Hypothesis

According to GRAWITZ (2001-271) the hypothesis is defined as a response to questions asked up and, defined it in clear terms such that a response may be provided through observation and analysis in taking into account the question that pre-occupied.

Hypothesis of the study is the predetermined answer to the problem statement given before in order that the analysis, verifying and observation done during the research will offer answer P.Rongere (1971:21). Therefore, the following positive hypothesis are advanced and shall be tested in the course of the study:

1. MTN Rwandacell Plc has an effective accounting information System software.
2. Accounting information System software used by MTN Rwandacell Plc contributes to its performance.

1.6. Scope of the study

This research is limited in terms of period, domain and, space in order to discover relevant findings, although so many constraints related to time and financial means.

1.6.1. Scope in time

The scope of the present study is restricted to the public sector, service provider in Rwanda and the consumer of these services. The study covers data for a period ranging from 2020-2023, the period has chosen into consideration to the relevant and accuracy information.

1.6.2. Scope in domain

This study encompasses all ideas as far as accounting information System software concerns in relation to the performance of Telecommunication Industry particularly MTN Rwandacell Plc, basically in accounting field. This study is related to accounting domain.

1.6.3. Scope in space

The study will be conducted in Rwanda specifically in Kigali city, in the case study of private organization chosen among different organizations operating in Rwanda as a convenient area for the study.

This study deals with examining contribution of accounting information System software affects performance of nature of the business entity. The target population and respondents are all employees of MTN Rwandacell Plc. The sampled respondents were only those employees who had worked for the business for a minimum period of one year. The study only focused on the variables stated in the objectives. This study was conducted in the year of 2024. The company that was studied is MTN Rwandacell Plc.

Operating out of multiple offices in Rwanda, the firm has established itself as a respected professional service center.

1.7. Significance of the study

This research is of paramount importance to the researcher, to accountants in business enterprises, to the ULK community and to Telecommunication Industry.

Personal interest

It will enable me to acquire and increase knowledge and skills on how accounting information System software can be applied effectively to improve development and enable me to be awarded a Bachelor's Degree honors in Accounting.

Academic interest

This research is very important while it will help the students in academic environment to gain skills when conducting research. It will be an asset in the ULK library, and its students may use it in their work assignment during their classroom applications.

It will also help other who want to carry out in similar field and at the same time fulfill the academic requirements in department of accounting in order to be awarded a Bachelor's degree.

Scientific interest

The report of this study will serve as basis and guidance for future reference by other researcher's, who will need to be involved to the same research.

To MTN Rwandacell Plc

It will provide recommendations on how to improve performance based on the use of effective accounting information System software and they will get different ways to improve their accounting processes.

1.8. Structure of the Study

The first chapter: Includes the introduction of the project in order to have a clear understanding of what was researched about. It gives also the objectives, significance of the study, scope, questions and structure of the study.

The second chapter: Concerned the existing literature about the research topic to make the research more objective oriented. The researcher visited the libraries, read relevant textbooks, and made research on internet.

The third chapter: Gives and explains the methodology used to collect data and sampling techniques. The researcher used questionnaires and interpretation method to collect primary data and literature review for the secondary data.

The fourth chapter: This referred on the analysis and interpretation of the collected data to put them into meaningful information about the research topic in a view of getting to interpret it basing on real facts.

CHAPTER TWO: LITERATURE REVIEW

This chapter consists in giving definitions and general theories related to this topic, Contribution of Accounting Information System software to the performance of Telecommunication Industry.

An economic or financial decision involve making the best allocation of available resources.

Accounting plays a vital role in providing information needed to make knowledgeable financial decisions.

It provides and interprets economic data for economic units within the society. The information supplied by accounting is in the form of quantitative data. Primarily financial in nature relates to specific economic entities. An economic entity may be individually, a business enterprise or a non-profit organization.

2.1. Definitions of key concepts

The researcher defines the key concepts of the work understudy and presents some related theories.

2.1.1. Accounting

The America Accounting Association defines accounting as “the process of identifying, recording, measuring, summarizing, and communicating economic information to permit informed judgments and decisions by the users of the information”. (association, a statement of basic accounting theory, 1966) Accounting is defined by American Institute of Certified Public Accountants (AICPA) as “the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are in part at least of financial character and interpreting the results thereof” Bhat (2011:1), defined accounting as the process by which the data generated in booking are processed, analyzed and interpreted, to be used as guideline by the management in framing future policies of the business. Records are maintained and updated by the company soon after their occurrence e.g. cashbook, day books, journals, memoranda books. This helps the company ensure that not only all the transactions and events of financial character are recorded, but also, they are done in an orderly manner.

Summers (1989:14) defined accounting as a collection of principles and rules that govern the transformation of data into information used in management process. In addition, Moore et el (1980:496) defined accounting as a System software for keeping track of financial events of an organization so that the organization may report its financial activities to any interest.

Accounting is the process of identifying transaction from source documents (invoices, receipts, cheques, deposit slips, payment vouchers, delivery notes, etc.), record in book of original entry such as journal (purchase sale daybook, general journal) & cash book, classifying into ledger, then

summarize financial statement and analyze & reporting financial information.

2.1.2. Accounting information System software

An accounting information System software is a System software that is employed in a company to organize financial information. It can be either manual or computerized. The main reason why you should be using an accounting information System software is to keep track of expenses, income, and other activities. Basically keep an eye on all data that affect the finances of a business organization.

Accounting information System software track the income and expenses of an organization or company. However, the accounting methods are modified to fit the specific accounting needs of a company. Accounting for a construction firm is vastly different from the accounting System software for a retailer.

A manager has to define the specific accounting needs of his company and industry, to select a System software that meets these requirements.

Some businesses require robust inventory tracking while other companies need detailed reports of accounts receivables and work-in-progress. A good accounting information System software should provide managerial reports, financial statements, reports prepared for outsiders and adequate information to file tax returns. (Woodruff & Jim, 2022)

In summary, it is convenient to conceptualize an AIS as a set of components that collect accounting data, store it for future uses, and process it for end users. This abstract model of data inputs, storage, processing, and outputs applies to almost all the traditional accounting cycles with which you are familiar for example, the payroll, revenue, and expenditure cycles and is thus a useful way of conceptualizing an AIS. Again, we stress that many of the ‘end users’ of the information of an AIS are not accountants, but include customers, investors, suppliers, financial analysts, and government agencies (Mark, Carolyn, & Jake, 2022).

2.1.3. Performance

Performance management System software is a solution to the respected scenario. Human resource remains neglected in the traditional scheme of management System software, but it has gained its due share in performance management System software, because of its infinite potential for managing and improving performance. It was realized that all other resources are equally available to all such competitors.

HR is the only resource which, if made committed, and make the difference and help an organization

to gain a competitive edge over others.

According to Koontz (1971), the emperors of the Wei Dynasty (AD 221-265) in China had an 'Imperial Rater' whose task was to evaluate the performance of the official family. Centuries later, Ignatius Loyola (1491-1556) established a System software for formal rating of the members of the Society of Jesus. A revised form of results-oriented performance appraisal emerged in the 1970s, which still exists today. The term performance management was first used in 1970s, but it was not known as a recognized process until the latter half of 1980s.

According to Du Plessis (2021), the implementation of performance management System softwares encounters resistances at various points throughout the organization.

But in order to overcome the resistance, one has to focus on the implementation of its sub projects which includes the culture and environmental issues in concern so that PMS can be carefully implemented.

2.1.4. Telecommunication Industry

Campbell (2011) defines a Telecommunications, also known as telecom, is the exchange of information over significant distances by electronic means and refers to all types of voice, data and video transmission. The telecommunication industry is made up of companies that make communication possible on a global scale, whether through the phone, the internet, over airwaves, or cables. These companies create the infrastructure that allows data as text, voice, audio, or video to be sent anywhere in the world.

2.2. Theoretical Review

2.2.1. Historical and Background of Accounting

Accounting is as old as the exchange processes that gradually developed with civilization. It is neither a discovery of science nor the inspiration of a happy moment, but the outcome of the continued efforts to meet the changing necessities of trade.

The origin of keeping accounting has been traced as far back as 8500 B.C, the date archeologists have established for certain clay tokens-cones, disks spheres, and pellets-found in Mesopotamia (Modern Iraq). These tokens represented such commodities as sheep, jugs of oil, bread, or clothing and were used in the Middle East to keep records. Later, symbols impressed on wet clay tablets replaced tokens. Some experts consider this stage of record keeping as the beginning of the art of writing, which spread rapidly along the trade routes and took hold throughout the known civilized world. Development of more formal accounts keeping methods is attributed to the merchants and

bankers of Florence, Venice and Genoa (ITALY) during 13m-15 centuries. The earliest of these methods consisted of accounts kept by a Florence banker in 1211 A.D.

The first known treatment of the subject was written in 1494 by an Italian monk and mathematician, Luca Piccioli (real name: Fra Luca Bartolomeo de Piccioli), described an approach earlier developed by merchants to account for their activities as owner managers of business venture.

Piccioli laid the foundation of the basic accounting model that is used today. As economic activities progressed from the feudal System software to the industrial revolution, accounting continued to adapt to the needs of society. As business units became complex and broader in scope, accounting evolved in response to the increased planning control responsibilities of management. As governments grew in size and became more centralized, accounting was developed to meet accountabilities in the 17m and 18m centuries. (Hussey, 1996)

2.2.1.1. Accounting Information System software

Accounting information System software is a computer-based System software that increases the control and enhances the corporation in an organization. In managing an organization and implementing an internal control System software, the role of accounting information System software is very crucial (Nicolaou, 2021).

According to Wilkinson et al (2020), the main function of accounting information System software is to assign quantitative value of the past, present, and future economics events. AIS through its computerized accounting System software produces the financial statement namely, the statement of comprehensive income, the statement of financial position, and the statement of cash flows.

Normally, the System software will process the data and transform them into accounting information during input, processing and output stages that can be used by a variety of users like the internal and external users. Therefore, if companies are able to adjust their computerized techniques of internal control mechanism according to AIS, they will be able to ensure the reliability of financial information processing and boost the control measures of effectiveness of the financial information reliability (Wilkinson et al, 2019).

The findings of the study show that there exists a relationship between AIS and organizational performance. However, the author highlighted challenges faced by automobile organizations like lack of proper training, high staff turnover, and lack of proper System software documentation.

Examined the relationship of accounting information System softwares on the performance of telecom industry and found that accounting information System softwares has a significant impact on

administrative decisions taken by managers in selected entities. Therefore, there is need for continuous improvement in accounting information System softwares because of its positive role in the decision-making and investment. (Ahmad & Alrjoub,2014)

2.2.1.2. Accounting

Accounting is the process of whereby the effects of the economic activities of an enterprise are accumulated, analyzed, quantified in money terms, classified in related groups, recorded in books of accounts, summarized in financial statements and reported as information which can be used in making better decisions for the enterprise.

Accounting is the process by which financial information about a business is recorded classified, summarized, interpreted, and communicated to owners, managers, and other interested parties. The effects of economic changes or activities or events are known as transactions. These are in form of exchange of goods or services using money as the medium of exchange.

Both the above definitions identify the various aspects that make up the accounting processes involving the following key procedures that are repeated in the same sequence every year:

1. Accumulating, analyzing, and recording day by day money worth of every transaction in the books of accounts which are traditionally referred to as books of original entries or journals or day books. This operation is termed as journalizing.
2. Classifying the journal entries by sorting them into related categories (accounts) in the ledger book. This exercise is technically known as posting.
3. Testing the accuracy of the records of the financial data by the preparation of a trial balance.
4. Summarizing data from the trial balance in financial report or statements which are traditionally:
5. The statement of comprehensive income or trading, profit and loss account, which is the statement in which income (revenue) earned by the business venture is matched with the costs (expenses) associated with that revenue to ascertain the net increase (profit) or decrease (loss) in the owner's wealth during a particular accounting period.
6. The statement of financial position which shows a photo image of the financial position of the business as at a given point in time listing the property of the business known as assets, and the claims of the creditors (debts) known as liabilities and the business owner's claim to that property known as capital or equity of the owner.
7. The statement of sources and application of funds.

8. Interpreting of financial statements to various interested parties through an exercise commonly referred to as financial statement analysis.

2.2.1.3. Users of accounting information

Accounting is often described as the language of business because it is the medium of communication between a business firm and the various parties interested in its financial activities.

These parties include:

Owners and shareholders

They rely on accounting information in fact that it is their money invested in the firm. They would like to ensure that they are getting a good return on their investments. This is assessed by how much profit the firm is making and whether their investment is increasing in value. For shareholders in companies this means they will get good dividends and the market value of their shares will increase and they can make profit if these were sold.

Management

Board of Directors and Managers use accounting information for making decisions and in planning of the business operations.

Banks and loan companies

They are interested not only in the firm's profitability but also in its ability to repay its loans. They rely on the financial reports as the basis of assessing the firm's liquidity or long term solvency.

Employees

They rely on accounting information in claiming bonuses and salary increases.

Suppliers

They rely on accounting information to be sure that the firm has sufficient funds to pay its maturing obligations.

Customers

They are interested to know if the firm is able to continue in its operations on a long-term basis and is capable of meeting its customers demand for goods.

Prospective investors

They are interested in a firm's profitability and potential for growth. They rely on accounting information in making their investment decisions.

Government

Various ministries and departments are interested in a firm's accounting reports as the basis for taxation, enactment of laws for the industry, provision of social services to the people. It also wants to ensure that firms comply with laws on wage payments and employee benefits. (Wamy, RL, &Radhas,1999)

2.2.1.4. Bases of accounting

The two main method of computerization in accounting which dictate how the company's transactions are recorded in the company's financial books are cash basis accounting and accrual basis accounting.

Cash-basis accounting: Ama (2018), states that cash basis of accounting revenue is recognized and recorded only when the cash is received. Expenses are recognized in the period when payment is made. Recording of revenue and expenses during an accounting period is based on an inflow and outflow of cash. A matching of cash receipts and cash disbursement is done to determine operating results during the period. This method is simple in application.

Accrual-basis Accounting: The accrual basis of accounting is based on the principle that all revenue earned during a period and the related incurred expenses of earnings that revenue assignable to the period must be determined. These then are matched against each other to determine net income or net loss. Revenue is recognized at a time of sales of services or merchandise and expenses are usually recognized at the time the service is received and used in the production of revenue.

2.2.1.5 Accounting principles

Certain fundamental concepts provide a framework for recording and reporting business activities, the reason for these rules is connected with the fact that different groups may make use of accounts and these groups all need to be convinced that financial statements presented by a firm are an accurate reflection of that business. Furthermore, it allows users of these financial statements to make comparisons between different firms relying on that all accounts have been drawn following General Accepted Accounting Principles. Some of these concepts and principles are as follows:

ACCOUNTING CONCEPTS:

Accounting entity

This concept states that the business firm is separate and distinct from its owners. Its books of

accounts and records should reflect only those transactions that pertain to the firm and should not include personal transactions of the owners.

Going concern

The business firm is assumed to continue its operations indefinitely unless there is evidence that indicate otherwise. In this aspect the business should continue to value all its resources at the original costs.

Unit of measure

All financial records, reports and statements are prepared using money as the unit of measurement. The specific money currency used must be clearly indicated.

Accrual basis

In determining the net income (revenue-expenses) revenue is recognized when earned rather than when cash is collected, and expenses are recognized when goods and services are used rather than when are paid for.

Consistency

When there are alternative methods or policies that a business firm may use, it is important that whichever method or policy is adopted, it should be used consistently from one accounting period to another as well as within one accounting period.

If for unavoidable reasons the method has to be changed, this should be clearly stated so that those users are aware of the reason for the change.

Prudence

The business firm is encouraged to take approach in treatment of profits and losses. If the accountant is faced with a choice of figures which are both acceptable to use in the financial statements, he should use a figure that will produce a smaller profit. This is also known as the conservatism principle.

Materiality

Only significant items should be considered when preparing financial statements. These are items whose omission or non-disclosure will result in a distorted view of the financial statements and will mislead the users of the same. Items may be considered significant in amount or importance depending on the nature and size of the firm.

Duality

Every transaction has two aspects and both aspects should be recognized by the business firm. This is the basis of the double entry System software of bookkeeping or accounting.

ACCOUNTING PRINCIPLES:

Accounting period

The life of a business can be broken into periods of time usually twelve months during which results can be measured. The significance of this concept is that users do not have to wait until cessation of the business to determine profits or losses.

Matching principle

In determining the profit or loss from operations at all times, revenues should be matched against expenses incurred in the process of generating that revenue in the same income statement. This is related to the accrual principle.

Cost principle

Assets of a business must be recorded at their original cost. Cost is determined through an arms-length transaction and in most cases, this is the most objective figure to use as long as the going concern assumption holds.

Realization concept

According to this concept, revenue is recognized when a sale is made. Sale was considered to be made at the point when the property in goods passes to the buyer and he becomes legally liable to pay this. (POPLI, Rajeshwari, & R,1994)

2.2.1.6. The System software of bookkeeping

Double entry bookkeeping

It is the most efficient and effective method for recording financial transactions in a way which allows the easy preparation of financial statements. In double entry bookkeeping System software, every transaction is recorded twice.

This reflects the dual nature of transactions and provides an arithmetical check. In order to understand the principle of double entry bookkeeping, you need to remember that the business is a separate entity from its owner when carries out its activities. Therefore, I can enter into transactions with the owner. All businesses need resources, and these are known as assets. Examples include, cash, stock, office furniture and equipment, vehicles, plant and machinery and premises. But before the business can acquire any assets, it must have funds. In a new business the most likely source of

funding is the owner.

The amount invested by the owner is known as capital. Capital is the liability of the business because the business owes money to the owner. If no one else has funded the business the assets of the business are equal to the capital, and this can be shown in form of equation;

Assets=Capital.

However, the business may have also received funding from the bank or other lenders in the form of a loan in which case the equation becomes; **Assets = Capital + liabilities**. This is known as the accounting equation, and it is important note that the equation must always balance.

Single entry System software

An incomplete double entry System software can be termed as a single-entry System software. According to Kotler, it is a System software of bookkeeping in which as a rule only records of cash and personal accounts are maintained. This System software has been developed by some business houses who for their convenience keep only some essential records.

Since all records are not kept, the System software is not reliable and can be used only by small business firms. (Anthony, R, & J, Management accounting principles, 1975)

2.2.1.7. Accounting books

Journals or books of prime entry

The primary function of the journals is to serve as formal connecting link between the source document of a transaction and the appropriate ledger accounts. The journals provide a chronological history of the transactions engaged in by a business firm.

They provide more information regarding a transaction more than the ledger accounts and they show clearly the dual effect of each transaction. Journals are sometimes referred as daybooks.

The journal is used to describe the process of recording the various aspects of a transaction in one or more books of primary entry. A journal entry or the recorded transaction in a journal should include the following information:

1. Date of the transaction
2. Name of the account to debited and credited Amount to be debited and credited
3. A brief narration or explanation of the transaction

4. The journal will also contain a column for posting references or folio. This column will show which account numbers in the ledger the various entries have been posted.

A general journal or journal proper is illustrated below. It is the simplest form of journal which uses two column formats. In a small business organization, a general journal serves the purpose of recording all accounting transactions.

General journal format

As shown above, the general journal contains the following columns:

Date column: The date of the transaction is entered in this column, the year, month and date. It is not necessary to repeat the year and the month on the same journal page.

Description column: This column contains the debit and credit accounts and the brief explanation of the transaction. The account debited is written first and the account credited is written on the following line intended a little bit so as to distinguish it from the debit account. On the next line a concise explanation of the journal entry is written.

Folio column: This is posting reference column. It contains the ledger page or code number of the account into which the journal entry has been transferred or posted.

This column is left blank at the time of journalizing and is filled in only when the posting is done from the journal to the ledger accounts.

Debit column: This column is for the amount debited.

Credit column: This column is for the amount credited.

Subsidiary journals or daybooks

These are journal which contain daily records or voluminous transactions of highly routine and respective nature such as credit sales, credit purchases, returns of goods, cash receipts, and cash disbursements. E.g. each special journal is reserved for a particular type of document transactions data as it is shown below:

TABLE 2. 1:Journal and its Source document of data transaction.

Special or subsidiary journal	Source document transaction data
1.cash payment journal	Payment of cash
2. cash receipt journal	Receipt of cash.
3.Petty cash book	Petty or minor cash disbursement.
4.Three column cash book	Receipts and payments of cash, cheques including a record of each discount allowed and received.
5. Analysis cash book	Multi columnar record of receipts and payments of cash and cheques.
6.Sales journal	Sale of merchandise or goods on credit.
7.Sales return journal	Return of goods previously sold on credit.
8.Purchase journal	Purchase of merchandise or goods on credit.
9.Purchase return journal	Return of goods to supplies previously bought on credit.

Source: Researcher 2023

The ledger

A ledger is the book of accounts where in the entry's transactions recorded in the journal are summarized. The process of transferring the entries in a journal to the appropriate accounts in the ledger is called posting. The two kinds of ledger are general ledger and subsidiary ledger as in the case of the journal classification of accounts in the ledger.

All accounts are classified either as personal accounts or as impersonal accounts. Personal accounts are those of debtors and creditors. Impersonal accounts are divided into real accounts and nominal accounts.

Real accounts: Refer to accounts in which properties are recorded and they remain open. They include assets like building and machinery, liabilities and owner's equity.

Nominal accounts: Are concerned with revenues and expenses and they are closed at the end of each accounting period, for example salaries expenses and sales.

Mixed accounts: These are accounts containing both real and nominal components, which are separated in adjusted entries at the end of the accounting period, for example, office supplies, inventory and stationeries.

After the ledger, the trial balance is prepared. A trial balance is listing, in ledger accounts order, of the individual ledger accounts and their respective balances and adding together the debit balance at the same time adding all the credit balances.

A trial balance has two purposes in the accounting information processing cycle. It provides a check on the equality of the debits and credits as shown in the ledger accounts at the end of the period. It provides financial data in a convenient form to help in preparing financial statements. (Anthony, R, & J, Management accounting principles,1975,)

2.2.1.8. Financial statements

A firm communicates financial information to the users through financial statements and reports. The financial statements contain summarized information of the firm's financial affairs, organized systematically. They are means to present the firm's financial position to users. The preparation of financial statements is the responsibility of top management.

As these statements are used by investors and financial analysts to examine the firm's performance in order to make investment decisions, they should be carefully prepared and contain as much information as possible.

There are four types of financial statements to be prepared by the firm for the users of accounting information. These statements are:

Statement of comprehensive income (income statement)

Statement of financial position (balance sheet)

Statement of cash flow

Statement of changes in equity (fund flow statement)

Statement of notes and explanation

These statements are contained in the company's annual report. A typical annual report also includes the chairman's speech, the director's report, the auditor's report and accounting policy changes. For internal management purposes, i.e. planning and controlling, much more information than contained in the published financial statements is needed. Therefore, the financial accounting information is presented in different statements and reports in such a way as to serve the internal needs of management and external decision making.

2.2.1.9. The qualities of accounting information

The accounting information must have some qualities to present to its users. Those qualities will help to avoid the misleading. The qualities are:

Relevance: the information should be relevant enough to the needs of the users, so that it helps them to evaluate the financial performance of the business and to draw conclusions from it.

Reliability: the information should be of a standard that can be relied upon by external users, so that it is free from errors and can be depended upon by the users in their decisions.

Comparability: accounts should be comparable with those of other similar organizations and from one period to the next.

Understandability: the information should be in a form that is understandable to the user groups.

Completeness: accounting System softwares should show all aspects of the organization.

Lack of bias: accounting statements should not be biased towards the needs of one user; they should be objective oriented.

Timeliness: accounting information should be published as soon as possible on a periodic basis. (POPLI, Rajeshwar, &R,1994)

2.2.1.10. The needs of an accounting System software

An accounting System software is an important tool whose existence is undoubtedly important. Accounting is termed as the language of business. The basic function of the language is to serve as a mean of communication. Accounting also communicates the results of organization's operations to various parties who have some stake in the business, i.e. the proprietor, creditors, investors, government and other agencies. Though accounting is generally associated with business, it is not only the business that makes use of accounting.

The need of an accounting System software is all the greater for the person who is running a business or any other organization. He must know what he owns, what he owes, whether he has earned a profit or suffered a loss on account of running a business, what his financial position is i.e. whether he will be in a position to meet all his commitments in the future or whether he is in the process of becoming bankrupt. Thus, an accounting System software is designed to accumulate data about an organization's financial affairs, classify the data in a meaningful way and summarize it in periodic reports called financial statements. (Accounting principles board (APB), 1870)

2.2.1.11. Effectiveness of Accounting Information System software

The AIS design can be defined in terms of the information characteristics that it provides (Chenhall and Morris,1986). Chenhall and Morris (1986) described AIS according to the perceived usefulness of four information attributes, namely scope, timeliness, level of aggregation, and integration. Scope refers to the measures being used and to the extension of AIS in time and space.

The study by Topash (2014) also found that the following criteria or indicators are supposed to be present in any accounting information System software for it to be efficient in any organization which is, cost effectiveness, good documentation, existence of proper security measures, independent internal and external audit, separation of other operation from accounting, and effective internal control.

Accounting information System software is considered as important organizational mechanism that is critical for effectiveness of decision management and control in organizations.

Daft (1983) defined organizational effectiveness as the degree to which organization realized its goals.

Effectiveness of Accounting Information System software also depends on the perception of decision makers on the usefulness of information generated by the System software to satisfy informational needs for operation processes, managerial reports, budgeting and control within the organization. Some research indicate that the effectiveness of Accounting Information System softwares depends on the quality of output information that satisfy the users (Cameron, 1986; Lewin and Minton, 1986; Quinn and Rohrbaugh, 1983; Delone and Mclean,1992 and Kim,1989).

2.2.2. Performance

This section aims to present the theory related to the financial performance in private companies, key indicators and ratios.

According to MINER et al (1985:114), performance is one does within of position created by an organization to achieve goals. This definition seems to be narrow and ignores the fact that performance varies from person to person. Some people may do things within the limits of position and fail to achieve goals. The idea of performance as what one does within the limits of a position creates some doubts.

Whatever one does, whether outside the limits of a position, but aimed at achieving organizational goals, should also be considered as performance.

According to DAFF (1991:11), performance is organizational ability to attain its goals by using resources in an efficient and effective manner. He further stresses that the manager's responsibility is to coordinate resources in the most effective and efficient manner to accomplish the organization's goals.

According to WHEELEN and HUNGER (1998), define performance as the end result of activity. They assert that, which measures to select to assess the performance will depend on the organizational unit to be appraised and the objectives to be achieved.

To CERTO (1992) stipulates that before managers can determine what must be done to make organization more effective and efficient; they must measure current organizational performance.

2.2.2.1. Profitability measures

One of the most important areas of your finances you should review is your profitability. Most growing businesses ultimately target increased profits, so it's important to know how to measure profitability. according to MATAN FELDMAN and ARKADYN LIBMAN (2007:267) profitability ratios measure a firm's ability to generate profits. The key standard measures are: **Return on capital employed**-this calculates net profit as a percentage of the total capital employed in a business. This allows you to see how well the money invested in your business is performing compared with other investments you could make with it, like putting it in the bank.

$$ROCE = \frac{NET\ INCOME}{CAPITAL\ EMPLOYED} \times 100$$

Return on assets

Return on assets (ROA) measures the efficiency with a company is utilizing its assets to generate net income.

$$RETURN\ ON\ ASSET = \frac{NET\ INCOME}{TOTAL\ ASSETS} \times 100$$

Return on equity

Return on equity (ROE) measures the profits generated for each dollar on equity investment.

$$\text{RETURN ON EQUITY} = \frac{\text{NET INCOME}}{\text{SHAREHOLDER'S EQUITY}}$$

Earnings per share

Earnings per share (EPS) are a popular profitability ratio, measuring the portion of a company's earnings to allocate to each outstanding share of common stock.

$$\text{EARNINGS PER SHARE} = \frac{\text{NET INCOME}}{\text{Share Outstanding}}$$

2.2.2.2. Other key indicators of financial performance

There are a number of other commonly used accounting ratios that provide useful measures of business performance. These include:

Liquidity ratios or cash flow position, the main reason why companies fail is poor cash management rather than profitability, so it is vital that liquidity is managed. Liquidity ratio tells you about your ability to meet your short-term financial obligations.

According to MATAN FELDMAN and ARKADYN LIBMAN, (2007:261) it is also called as short-term ratio. This ratio helps to understand the liquidity in a business which is the potential ability to meet obligations. This ratio expresses the relationship between current liabilities and current assets of the business concern during a specific period.

Common liquidity ratios include:

Current ratio: the current ratio measure a company's current assets against its current liabilities. The current ratio indicates if the company can pay off its short-term obligations in an emergency by liquidating its current assets.

$$\text{CURRENT RATIO} = \frac{\text{CURRENT ASSETS}}{\text{CURRENT LIABILITES}}$$

Quick ratio: is a liquidity ratio that is more stringent than the current ratio. This ratio compares the cash, short-term marketable securities and accounts receivable to current liabilities. The thought behind the quick ratio is that certain line items, such as prepaid expenses, have already been paid out for future use and cannot be quickly and easily converted back to cash for liquidity purposes. The

major line item excluded in the quick ratio is inventory, which can make up a large portion of current assets but may not easily be converted to cash. During times of stress, high inventories across all companies in the industry may make selling inventory difficult.

In addition, if company stockpiles are overly specialized or nearly obsolete, they may be significantly less to a potential buyer.

$$\text{QUICK (ACID)TEST} = \frac{\text{Current Assets} - \text{Inventories}}{\text{Current Liabilities}}$$

Efficiency ratios, which tell you how well you are using your business assets

According to MATAN FELDMAN and ARKADYN LIBMAN (2007:273), it is also called as turnover ratio. This ratio measures the efficiency of the current assets and liabilities in the business concern during a particular period. This ratio is helpful to understand the performance of the business concern. Some of the activity ratios are given below:

Fixed Assets Turnover: The fixed or capital turnover ratio measures how intensively a firm's fixed assets such as land, buildings, and equipment are used to generate sales. A low fixed assets turnover implies that a firm has too much investment in fixed assets relative to sales; it is basically a measure of productivity.

$$\text{FIXED ASSET TURN OVER} = \frac{\text{Net Sales}}{\text{Average Net Assets}}$$

Receivable turnover: The receivables turnover ratio is calculated by dividing net revenue by average receivables. This ratio is a measure of how quickly and efficiently a company collects on its outstanding bills.

The receivables turnover indicates how many times per period the company collects and turns into cash its customers' accounts receivable. The receivable turnover ratio measures a company's efficiency in managing and collecting its amount receivable.

$$\text{Receivable turnover} = \frac{\text{Net Sales}}{\text{Average accounts receivable}}$$

Financial leverage or gearing ratios, which tell you how sustainable your exposure to long-term debt is. According to MATAN FELDMAN and ARKADYN LIBMAN (2007:277), leverage ratios measure a firm's cash-generating ability to meet its debt and other obligations. Common leverage ratios include:

Return on investment (ROI): The return on investment measures the gain or loss generated on an

investment relative to the amount of money invested. The return on investment is usually expressed in terms of percentage and its typically used for personal financial decisions, to compare a company's profitability or efficiency of different investments.

$$ROI = \frac{\text{Earnings} - \text{Initial Investment}}{\text{Initial Investment}}$$

2.2.2.3. Non-financial indicators

A reconciliation of the literature showed that there are four non-financial indicators that can be used as a performance measurement for companies: customer satisfaction, product or service quality, market shares and employee efficiency (Zaman 2004; CIMA 1993; Fitzgerald et al. 1991; Haskett et al. 1994; Cho and Pucik 2005).

According to Sun and Scott (2003:28), the critical success factors in current dynamic and competitive business environment are vastly different from those of the past. Askenas, Ulrich, Jick and Herr (1995:45) argued that today's critical success factors are governed by speed, flexibility, integration and innovation.

This represents a paradigm shift from the old success factors such as size, role, clarity, specialization and control.

The following are non-financial indicators:

Customer satisfaction measure: the business entity needs to measure customer satisfaction, what about customer acquisition and retention rates? If you fail to meet their expectations, they will go to your competitors.

Employee performance goal: the employees are greatest asset without them, the business would not be able to run smoothly, meet customers' needs and ultimately, generate sales, make sure you have a System software in place to measure employee performance and productivity. For example, you can monitor their work efficiency, quality and quantity. Good employees neither waste time nor efforts. They make sure to meet deadlines without sacrificing work quality. They also develop creative solutions to mitigate risks, cut costs and improve customer satisfaction.

Internal operating goals: your business operations have a direct impact on the company's overall health. Depending on your industry, consider measuring production volume, material usage, machine productivity, new product adoption rates and other metrics. These factors can help you determine what you are doing well and what can be improved.

Product or service quality: As business industry, you may have to assess the product or service

quality provided whether meet well to your clients and make sure that you are in competitive industry so you will get a true picture and improve your expectations.

2.2.2.4. Review on Related Studies

Existing literature offers little evidence of the relationship between these accounting Information System software and performance measures; through it is important to highlight the study made by Ismail and King (2005) which positive association relationship between accounting information System software and performance measures.

In the Spanish case Naranjo-Gil (2004) posits and indirect relationship between accounting information System software and firms' performance via the varying strategies that may be adopted by companies.

Thanks to investment AIS the scope for action is expanded, thus providing time saving in trips to and dealings with telecom companies, the administration etc, this reduces firm's cost. Productivity increase when innovation is properly used.

In so far as a firm's culture is open to the introduction of new accounting information System software this will lead to a more holistic view of it and make for greater flexibility and dynamism in organization search for improved results.

Despite of some authors who postulate that the direction of the cause-effect relationship is only that companies achieve a high performance when they can afford the implantation of certain technological development. Dema pours and Gopalakrishnan, (2005)

Other indicates that firm performance drops just after the implementation, taking several years to realize the benefits from IT adoptions, Wahs, S (2000).

Given that accounting information System softwares are a basic component derived from technologies in general, the main issue in the next chapter is to determine whether applying accounting information System software contributes to MTN Rwandacell Plc to improve its results.

2.3. Empirical Review

Contribution of Accounting Information System softwares to the Performance of Telecommunication Industries – A Case Study of MTN Rwandacell Plc (2020-2023)

2.3.1. Introduction

The role of Accounting Information System softwares (AIS) has evolved considerably in the digital era, especially in sectors like telecommunications, where high volumes of transactions, data, and

financial operations are handled daily. The telecommunication industry relies heavily on robust and efficient accounting System softwares to streamline processes, improve decision-making, and enhance overall business performance. In this empirical review, we examine the contribution of AIS to the performance of MTN Rwandacell Plc, Rwanda's leading telecommunications provider, during the period of 2020-2023.

2.3.2. Theoretical Framework

The use of Accounting Information System softwares can be framed using several theoretical models that link AIS with organizational performance. According to System softwares theory, organizations function as complex System softwares where information flows contribute to efficiency and effectiveness. Information System softwares, particularly accounting System softwares, are seen as critical components in enhancing organizational decision-making, resource allocation, and operational efficiency.

2.3.5. The Role of AIS in Telecommunications

In the telecommunications sector, the integration of AIS is particularly significant due to the vast and complex nature of financial transactions and regulatory compliance requirements. Telecommunications firms like MTN Rwandacell Plc manage massive volumes of customer data, revenue streams from diverse sources, and significant capital investments. AIS supports the organization in the following ways:

1. **Data Accuracy and Timeliness:** AIS enables accurate financial reporting and timely access to financial data, which is critical for making strategic decisions in a fast-paced industry like telecommunications.
2. **Cost Control:** Through AIS, MTN Rwandacell Plc can effectively monitor operational costs, allocate resources more efficiently, and identify areas where cost savings can be achieved.
3. **Regulatory Compliance:** Telecommunications companies are subject to stringent regulatory standards. AIS ensures that MTN Rwandacell Plc complies with financial reporting standards, tax laws, and other legal requirements, reducing the risk of non-compliance.
4. **Revenue Management:** AIS helps in managing the revenue cycle more efficiently, allowing the company to track its earnings from services, subscriptions, and partnerships with ease.

2.3.5. Empirical Evidence from MTN Rwandacell Plc (2020-2023)

During the period from 2022 to 2023, MTN Rwandacell Plc invested in upgrading its accounting information System softwares to support its growing customer base and evolving operational needs.

The key empirical findings from this case study include:

1. **Improved Financial Reporting:** MTN Rwandacell Plc reported a significant improvement in the accuracy and timeliness of its financial reporting. This was made possible by the automated features of the new AIS that reduced manual entry errors and provided real-time financial data.
2. **Increased Operational Efficiency:** The company noted a marked increase in operational efficiency. By integrating various departments through the AIS, MTN Rwandacell Plc was able to streamline its accounting, procurement, and customer service functions, resulting in faster processing times and reduced administrative overheads.
3. **Enhanced Decision-Making:** With improved access to accurate and timely financial data, MTN Rwandacell Plc's management was able to make better-informed decisions regarding capital expenditures, resource allocation, and pricing strategies. This led to more strategic investments in infrastructure and marketing campaigns, which, in turn, enhanced the company's market share.
4. **Regulatory Compliance and Risk Management:** The AIS upgrades enabled MTN Rwandacell Plc to stay compliant with local and international financial regulations more effectively. The System software also provided tools for risk management, allowing the company to anticipate and mitigate potential financial risks.
5. **Cost Savings and Revenue Growth:** One of the most notable outcomes of the AIS implementation was the cost savings MTN Rwandacell Plc experienced due to enhanced process automation. Furthermore, the company recorded a growth in revenue, attributed to better billing processes, efficient resource management, and data-driven marketing initiatives.

2.4. Relationship Between Accounting Information System softwares (AIS) and Performance

The relationship between AIS and performance is multi-dimensional, with AIS directly influencing financial accuracy, operational efficiency, decision-making, cost control, and regulatory compliance. For telecommunication companies like MTN Rwandacell Plc, this relationship is particularly crucial, given the scale of operations and the regulatory demands of the industry. By leveraging AIS effectively, MTN Rwandacell Plc can enhance its financial performance, streamline operations, and achieve sustained business growth. In summary, AIS is a strategic tool that not only supports the day-to-day financial activities of an organization but also acts as a key enabler of long-term performance improvements.

2.5. Conceptual Framework

The concept of Accounting Information System software effectiveness is very comprehensive and thus multivariate; hence it will not be possible to study all the variables which came from AIS

variety. The variable of interest to this research is the dependent variable of Effectiveness of accounting information System software. Three independent variables are used in attempt to explain the variance of use for decision making to public sector performance. These are Participant, Information and Technology.

The greater the AIS effectiveness of an organization the higher is the chances that it will be able to make decision with ease. Where various stakeholders like employees, managers, customers, suppliers and telecommunication companies know that the organization is having a good AIS will increase their level of contribution to the decision making hence increasing the organizations performance. Ineffective AIS can contribute to tardiness, unfaithful acts such as pilferage, theft, cheating and absenteeism, high production costs due to lack of accounting data in time in competitiveness of firms' products and high labor turnover especially employees who had expected to fulfill their individual needs within the organization all to the harm of organizations performance.

The study assumes that the effectiveness of an accounting information System software for decision making is a function of skills of participants, accuracy of information and technology.

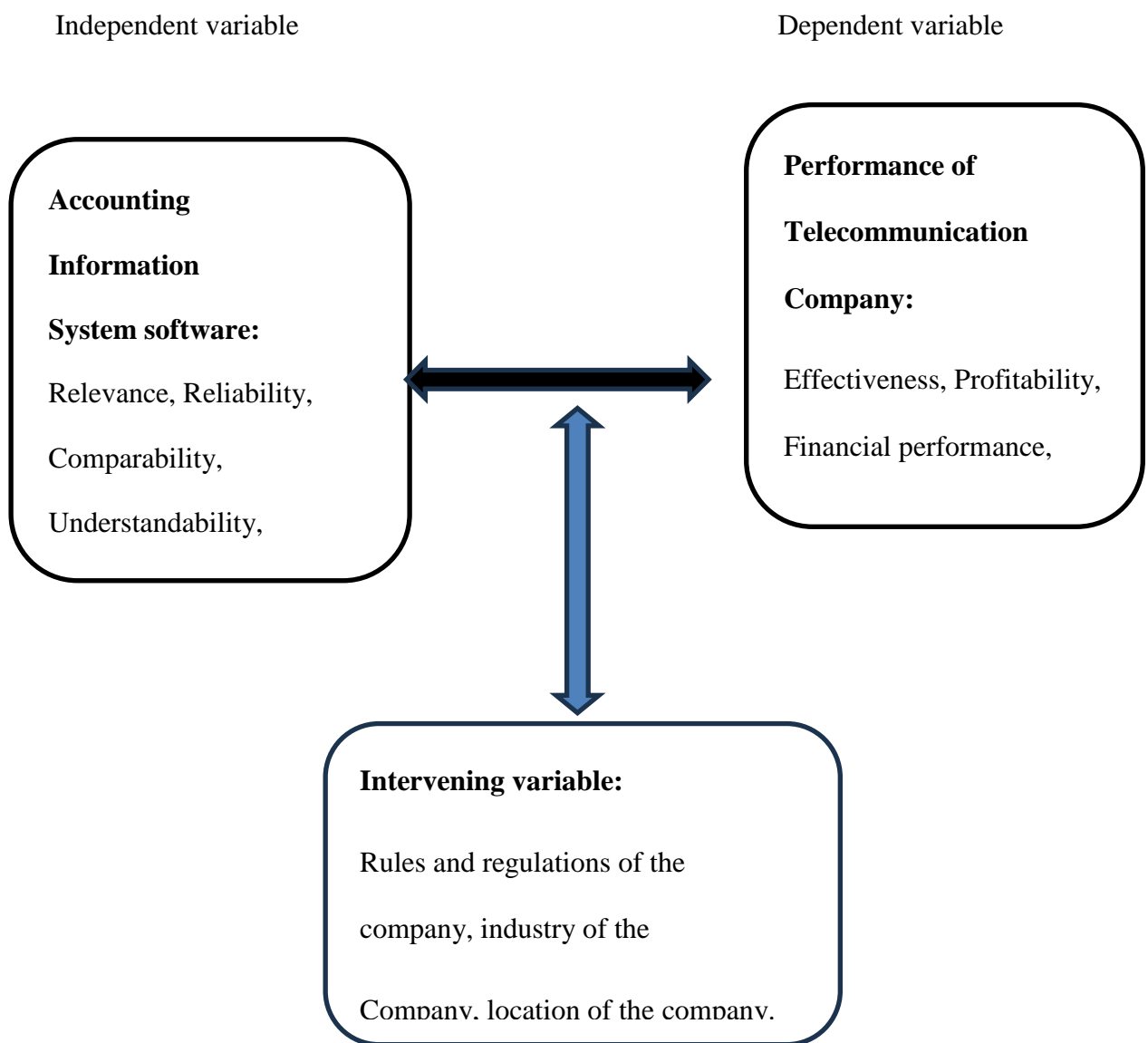
Thus, the use of AIS will be negatively affected if either of the above factors negatively attributes to organization effectiveness. Data collected by various methods will be used to carry on the measurement of effective use of AIS for decision making. Effectiveness and Efficiency are the major performance measurement of any organization functioning System software.

This research had mainly investigated the contribution of accounting information System software on Telecom companies' performance. In this research the dependent variable is performance of Telecom company, and the independent variable is contribution of accounting information System software.

Independent variables, on the basis of Accounting Information System software The study looked at the following key parameters that contribute significantly to organizational performance: Relevance, Reliability, Comparability, Understandability, Completeness, Unbiased, and Timeliness As for the measure of dependent variable, profitability, financial performance are perceived as organizational performance indicators by researchers.

There is another variable that can affect the findings from company to company, country to country. This variable is known as control variable which includes government policies, rules and regulations of organization. The relationship between Accounting Information System software and organizational performance is enormously affected by this variable which can result in changes in this research conducted in this field.

Figure 1: Conceptual framework



Source: Researcher, 2024

CHAPTER THREE: RESEARCH METHODOLOGY

According to Richard M. Hassler, Research Methodology is the science of how to make a research decisions and it includes the practice of evaluating the goodness and the badness of decisions made in the course of doing the research.

In this part of the study, researchers presented the methodology that was used to investigate the accounting information System software used in Rwanda of which the MTN Rwandacell Plc was selected as the case study for the research.

3.1. Research Design

Kothari (2005) defined research design as the general plan of how the research questions would be answered. The research design is descriptive in nature, because it seeks to describe Contribution of accounting information System software to the performance of Telecommunication Industry. Descriptive research design was used to obtain information concerning the current status of phenomena and purpose of this method is to describe “what exists” with respect to situational variables i.e. it looks at relationship between independent and dependent variables. The study used quantitative method in data collection and analysis.

After the data collection, the researcher edited and code the raw data so that they should be entered in the software for being processed to the outputs. The researcher analyzed primary data by using Statistical Package for Social Sciences (SPSS).

3.2. Population of the study

This is the totality of the persons or objects to which the research is concerned. A properly designed population must be well defined in terms of elements, sampling units, and extent of time. This research considered some of the employees and staff of MTN Rwandacell Plc in different departments. MTN Rwandacell Plc has 40 employees and they operate in 3 key departments; Finance and Accounting department, IT department, and Sales department among others. The company’s headquarters are located at MTN Center in Nyarutarama, Kigali, Rwanda.

3.3. Sampling size

The target population for this study is the employees of MTN Rwandacell Plc. A sample size was calculated. Probability sampling scheme was employed where every unit in the sampling frame has a chance (greater than zero) of being selected. This probability can be accurately determined through self-weighting by the researcher. Simple-random sampling was applied, it gives equal chance to all units in the population for being selected.

As the population of the study was the different staff and employees of MTN Rwandacell Plc in different departments.

Therefore, the sample size used was 40

$n=40$

Therefore, for the case of this study, the sample size is 40 staffs (employees) of MTN Rwandacell Plc, Headquarter, then the current researcher has chosen the sample size of population to be questioned through simple random sampling technique, for collecting the information related to Accounting Information System software.

3.4. Data Collection Techniques

The researcher proposes to use primary and secondary data for this study in order to get clear and concrete information.

3.4.1. Questionnaire Method

This is a written form of questions “close ended” prepared by the researcher to be answered by the respondent about the study to achieve its set goals and objectives. A draft of questions was provided different interested respondents for answers.

3.4.2. Primary data

The study gathered primary data. Primary data was obtained through questionnaires to randomly selected employees from the selected company. The use of questionnaires was ideal since it guaranteed confidentiality to the respondents thus, they acted without any fear or embarrassment. Questionnaires were circulated and filled by the respondents. Primary data enhances reliability since it's conducted by the investigator conducting the research. Respondents were selected randomly in each stratum; hence the researcher employed probability sampling technique to obtain the desired number of respondents (Mugenda, 2003).

3.4.3. Secondary data

Those were collected from previous researcher's records or documents like newspapers, magazines, journals, and other documents from the library for example.

3.4.5. Research Methods

In the process of conducting this research or in other studies it needs to set some methods to be used in acquiring information, a person who runs this research will obtain relevant information from another by asking series of questions as an effect of future response to the trigger questions.

3.4.5.1. Analytical method

Analysis is the process of breaking a complex topic or substance into smaller parts in order to gain a better understanding of it. The technique has been applied in the study of mathematics and logic since before Aristotle (384-322 B.C.), though analysis as a formal concept is a relatively recent development.

3.4.5.2. Synthetic method

The word ‘synthetic’ is derived from the word ‘synthesis’ which means to combine together. In this method we combine together a number of facts, perform certain mathematical operations and arrive at the solution. In this method we start with the known data and connect it with the unknown part.

3.4.5.3. Quantitative or statistics method

Quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques.

3.5. Data Processing

This is the link between the data collection and the data analysis. It requires that information gathered from the field to be processed into a clearer and more meaningful format for interpretation and analysis. It comprises with editing and tabulation.

3.5.1. Editing

The activity to be performed after data collection. It is a process of reevaluation and correction of errors either in fact or judgment it involves correction of spellings, punctuation and capitalization. This was used to examine relationship between the responses from respondents and the questions asked to them.

3.5.2. Tabulation

This deals with putting data into some kind of statistical tables or format showing the number of occurrence of responses to particular questions. After editing and tabulation the researcher interpreted the data to show the relationship between variables.

3.5.3. Coding

According to (Kakooza , 2006), coding refers to the «assigning of symbol or a number to a response for identification purpose». This method was used in order to summarize data by classifying different responses, which were made into categories for easy interpretation and analysis.

After the data collection, the researcher edited and coded the raw data so that they should be entered in the software for being processed to the outputs. The researchers analyzed primary data by using Statistical Package for Social Sciences (SPSS). The following are codes given to some items in questionnaire:

SECTION 1:

TABLE 3. 1: Coding of items

SN	ITEMS	CODE
1.	Gender	1 = <i>Male</i> 2 = <i>Female</i>
2.	Age group	1 = 18 – 25 2 = 26 – 33 3 = 34 – 41 4 = 40 – 49 5 = 50 +
3.	Educational level	1=Primary school certificate 2=Secondary school certificate 3=Diploma 4=Bachelor degree 5=Master's degree 6=PhD 7=Doctorate 8 = <i>CPA</i>
4.	Work experience	1 = 5 years and less 2 = 6 – 10years 3 = 11 – 15years 4 = 16 years and above

Source: researcher 2024

SECTION 2:

Five-point Likert scale used in questionnaire are to be given the following codes 1= strongly disagree, 2 = disagree, 3 = not sure, 4 = agree and 5 = strongly agree.

3.6. Analytical Model

The efficiency of accounting information System software increases, then organizational performance would increase, Qualitative information is usually analyzed through statistical procedures namely descriptive statistics.

Although some methods are computationally formidable, the underlying logic of statistical tests is relatively easy to grasp, and computers have eliminated the need to get bogged down with detailed mathematical operations (Polit & Beck,2003).

Qualitative modes of data analysis provide ways of discerning, examining, comparing and contrasting, and interpreting meaningful patterns or themes. Meaningfulness is determined by the particular goals and objectives of the project at hand: the same data can be analyzed and synthesized from multiple angles depending on the particular research or evaluation questions being addressed. Content analysis was used for qualitative data analysis since it involves discussion. The results were presented using tables to give a clear picture of the research findings at a glance

3.7. Limitations for the Study

The time provided for the study was not enough for the researcher to collect all the information necessary.

The financial means for the study was insufficient to provide all requirements as the prices for everything in the market was increasing day to day of typing and printing of the analyzed data. The study faces with the problem of limited time to undertake the comprehensive study in time. In addition, the study also faced with a problem of not finding all respondents in the time of the study due to them being too busy with the organization work.

The respondents had heavy work and do not provide the information on time. Some also did not understand the objective and the importance of the study and think otherwise.

Some might not give true information for their own reasons. Accounting records are kept secretly in many organizations and therefore the problem of not having access to important data for effective research.

3.8. Ethical Consideration

Ethical Considerations can be specified as one of the most important parts of the research. Dissertations may even be doomed to failure if this part is missing.

The following ten points represented the most important principles related to ethical considerations in dissertation:

1. Research participants were not subjected to harm in any ways during data collection.
2. Researcher prioritized respect for the dignity of research participants.
3. Full consent should be obtained from the participants prior to the study.
4. The researcher ensured the protection of the privacy of research participants.
5. Researcher ensured the adequate level of confidentiality of the research data collected.
6. Anonymity of individuals and organizations participating in the research were ensured.
7. Any deception or exaggeration about the aims and objectives of the research were avoided.
8. Affiliations in any forms, sources of funding, as well as any possible conflicts of interests must be declared.
9. Any type of communication in relation to the research was done with honesty and transparency.
10. Any type of misleading information, as well as representation of primary data findings in a biased way must be avoided.

CHAPTER FOUR: PRESENTATION OF FINDINGS AND ANALYSIS

This chapter analyses and presents the data in relation to the research objectives of the study. The findings are discussed and interpreted based on the research questions. The aim of the study was to analyze Contribution of Accounting Information System software to the Performance of Telecommunication company. The study was carried out in MTN RWANDACELL PLC.

Questionnaires were issued to 40 employees and managers, but all respondents returned the questionnaires. The collected data was edited and coded. Data analysis was done using descriptive statistics and where applicable presentations were done in form of table.

4.1. Background of MTN RWANDACELL PLC

MTN Rwanda cell PLC, commonly known as MTN Rwanda, is a telecommunications company operating in Rwanda. It is a subsidiary of MTN Group, a multinational mobile telecommunications company headquartered in South Africa. MTN Rwanda was established to provide mobile telecommunication services in Rwanda and has become a significant player in the country's telecom sector. MTN Rwanda started its operations in 1998 under the name MTN Rwanda cell Limited. It was one of the first mobile operators in Rwanda and has since grown to become one of the largest telecommunications providers in the country. The company offers a range of telecommunications services, including mobile voice, data, and digital services. MTN Rwanda has been at the forefront of expanding mobile connectivity and digital inclusion in Rwanda. Continuously invested in expanding and modernizing footprints and are the country's No 1 network. MTN Rwanda offers various innovative services to consumers and enterprises, including personalized voice, data, home and fixed connectivity solutions. The company is also the front runner in Mobile Financial Services in Rwanda delivered through its Fin Tech subsidiary, Mobile Money Rwanda Ltd.

MTN Rwanda cell Plc (MTN.rw) is listed on the Rwanda Stock Exchange under the Technology sector. For more information about MTN Rwanda cell Plc (MTN.rw) reports, abridged reports, interim earnings result and earnings presentations visit the MTN Rwanda cell Plc (MTN.rw) company page on African Financials.

4.1.1. Geographical Coverage

MTN Rwanda, as a major telecommunications provider in Rwanda, has extensive geographical coverage across the country. Here's an overview of its geographical coverage. MTN Rwanda provides mobile network coverage across all major cities, towns, and many rural areas throughout Rwanda. The network covers densely populated urban centers as well as more remote rural communities. The company has invested significantly in expanding its network infrastructure,

including base stations and towers, to ensure broad coverage and reliable service quality. This infrastructure supports both voice and data services. In urban areas such as Kigali (the capital city), Butare, Gisenyi, and others, MTN Rwanda's network coverage is comprehensive, providing high-speed data services like 4G LTE to meet the growing demand for mobile internet. MTN Rwanda has also made efforts to extend its network into rural areas, where access to telecommunications services can be more challenging. This expansion helps bridge the digital divide by bringing connectivity to underserved populations. With ongoing investments in technology, MTN Rwanda continues to improve its coverage and service quality. This includes upgrading to newer technologies like 4G LTE and potentially 5G in the future, depending on regulatory approvals and market demand.

4.1.2. Vision

To lead the delivery of a bold, new digital world to our customers.

4.1.3. Belief

We believe that everyone deserves the benefits of a modern connected life.

4.1.4. Values

Leadership.

Innovation.

Relationships.

Integrity.

Can do.

4.1.5. Key for achievements

In the year 2022, MTN Rwandacell Plc achieved significant progress so far especially in driving digital and leading financial inclusion and hope to continue working towards key objectives. MTN Rwanda was able to achieve noteworthy operational performance growth with GSM and Mobile Money (MoMo) subscribers increasing by 5.9% and 16.3% respectively. The company's total revenue increased by 19.2% to RWF 224.27 billion and EBITDA increased by 20.8% to RWF 108.39 billion. In 2011.

They expanded their network infrastructure further across Rwanda during the year, offering broader access to a modern connected life. They also rolled out 120 network new sites to bring coverage to an estimated 13 million people in the country. By the end of the 2022 fiscal year, they had achieved 98.7% population coverage.

4.2. Demographic characteristics of the respondents

The demographic characteristics of the respondents were gender, age group, years of experience and education level.

4.2.1. Presentation of characteristics of respondents

The study was carried out in MTN Rwandacell PLC, Headquarters. The population of the study is comprised by the employees of MTN Rwandacell PLC, Headquarters and a sample size of 40 employees has been used to respond to the questionnaire. Characteristics of the respondents are addressed in this section, and it contains data on Scientific Gender, Education level, Working Experience and Position they hold at MTN Rwandacell Plc Headquarters.

TABLE 4. 1: Gender of Respondents

Variables:	Observation
Sex of respondents	N=40(%)
Male	17(40.5%)
Female	23(57.5%)

Source: Field survey February 2024

The above output of table 4.2.1 revealed that 40.5% of respondents are male while 57.5% are female.

TABLE 4. 2: Education Level of Respondents

Variables:	Observation
Education Level of respondents	N=40(%)
Bachelor's degree	15(47%)
Master's degree	10(25%)
PhD	5(12%)
CPA	10(25%)

Source: Field survey February 2024

The above output of table 4.2.2 revealed that 47% of respondents are bachelor’s degree holders, 25% are master’s degree holders, 12% are PhD holders and 25% are certified public accountants.

TABLE 4. 3:Working Experience of Respondents

Variables:	Observation
Working Experience of respondents	N=40(%)
5 Years and less	5(12.5%)
6 to 10 Years	10(25%)
11 to 15 Years	25(62.5%)

Source: Field survey February 2024

The above output of table 4.2.3 revealed that 12.5% of respondents has 5 and less years of working experience, 25% has 6 to 10 years of working experience and 62.5% has 11 to 15 years of working experience.

TABLE 4. 4: Positions held by Respondents

Variables:	Observation
Positions held by respondents	N=40(%)
Finance Managers	4(10%)
Accountants	13(32.5%)
IT officers	8(20%)
Sales Representatives	10(25%)
Auditors	5(12.5%)

Source: Field survey February 2024

The above output of table 4.2.4 revealed that 10% of respondents are Finance Managers, 32.5% are Accountants, 20% are IT officers, 25% are Sales Representatives and 12.5% are Auditors.

4.3. Types of Accounting Information System softwares used by MTN Rwandacell Plc.

This part precise the types of software used by MTN Rwandacell Plc in tracking the data from various sources. Therefore, below are softwares used by MTN Rwandacell Plc that deals with deposit, sales and expenses and keep track of daily transaction.

TABLE 4. 5: Accounting software

Software	No of respondents	Percentage
Oracle Financials	20	50%
QuickBooks	10	25%
Xero	5	12%
FreshBooks	2	5%
SageBusiness Cloud Accounting	3	7.5%
KudiBooks	0	(0%)

Source: Field survey February 2024

As indicated in the table 4.3.1, 20(50%) respondents confirmed the use of Oracle financials, 10(25%) respondents confirmed the use of QuickBooks. 5(12%) respondents confirmed the use of Xero. 2(5%) respondents confirmed the use of FreshBook. 3(7.5%) respondents confirmed the use of Sage Business Cloud Accounting and finally 0(0%) respondents confirmed the use of KudiBooks. The explanation from the respondents revealed the list of system software programs used to manage sales and expenses and keep track of daily transactions.

TABLE 4.6: Views of respondents on characteristics of accounting information System software

Characteristics	frequency	Percentage
Relevance	38	95%
Reliability	38	95%
Comparability	37	92.5%
Understandability	35	87.5%
Completeness	37	92.5%
Lack of bias	39	97.5%

Timely	40	100%
--------	----	------

Source: Primary data field survey, February 2024

Table 4.6 illustrates that respondents between 35 and 40, that fell between 87% and 100% have positive views on the following listed characteristics; 1. Relevance 38(95%), 2. Reliability 38(95%), 3. Comparability 37(92.5), 4. Understandability 35(87.5%), 5. Completeness 37(92.5), 6. Lack of bias 39(97.5%), 7. System software timeliness 40(100%).

4.3.1. Analysis of effectiveness of Accounting Information System software of MTN Rwandacell Plc

This point focus on the effectiveness of accounting information System software of MTN Rwandacell Plc, therefore it takes into consideration on the analysis of this point below.

TABLE 4. 7: Descriptive statistics

Categorical variable	Likert scale	Observation n=40(%)
System software Reliability	Strongly agree	29(69%)
Easy to learn and to understand	Agree	24(57.1%)
Response time for fastness	Agree	25(59.5%)
Flexibility of System software	Strongly agree	29(69%)
Information Quality	Agree	25(59.5%)
Reports are reliable	Strongly agree	29(69%)
Outputs are clear	Agree	24(57.1%)
IT team support	Agree	25(59.5%)
Service Quality	Agree	22(52.4%)
IT team has technical skills	Agree	25(59.5%)

Source: Primary data field survey, February 2024

According to findings, it's clear that 69% of respondents strongly agree on System software reliability, 57.1% confirmed that A.I.S used in MTN Rwandacell is easy to learn and understand, 59.5% declared that the System software is faster in time response, 69% stated that they strongly

agree with the System software flexibility, 59% agree with information quality, 69% strongly agree with report reliability, 57.1% agree with System software output to be clear, 59.5% agree with service quality and last but not least 59.5% agreed with IT team being supportive and has technical skills.

4.4. Contribution of A.I.S to the Performance of MTN Rwandacell Plc

This chapter also determines the contribution of accounting information System software towards to the performance of MTN Rwandacell Plc, carried out at Main branch. AIS are System softwares used to record the financial transactions of a business entity. This System software combines the methodologies, controls and accounting techniques with the technology of IT industry to track transactions provide internal reporting data, external report data, financial statements, and trend analysis capabilities to effect on organizational performance (Elene Urquia Grande, Raquel Perez Estebanez and Clara Munoz Colomina, 2010:122).

This chapter analyzes the Performance management includes activities ensures that goals are consistently being met in an effective and efficient manner. MTN Rwandacell Plc needs to rely on adequate quality and reliable information. The management of MTN Rwandacell Plc uses accounting information System softwares to procure adequate quality and reliable information that support management decisions. Performance is frequently in numbers, profitability to be achieved, but it's a more concept performance is series of improvement results and progress in a business that in numerical results.

A financial manager under this institution needs the financial and accounting data provided by accounting information System software to evaluate organizational past performance and planning for the future. Thus, the organizational performance is measured in terms of R.O.A and R.O.E these ratios are financial performance indicators.

MTN Rwandacell Plc used the above-mentioned ratios to measure its financial position, to determine the financial performance and decision making.

Under this chapter, the data collected are analyzed and interpreted to draw a conclusion based on the hypothesis to evaluate whether accounting information System software used by MTN Rwandacell Plc contribute to its financial performance, and it was done in accordance with the objectives of the study, the results were reported in tables and summarizing answers to major questions asked. The following are the measures of performance:

4.4.1. Profitability measures

The use of accounting information System software needs the introduction information technology into the organization. With the use of accounting information System software, MTN Rwandacell Plc became able to keep record of each of its profitability, as a corporation achievement considers its performance in terms of net income realized in specific period, those performances came from the speed of services offered due to the use of accounting information System software as well as to the incremental figure of customers observed period by period. The relationship between AIS and profitability will be explained and led to make the right decisions.

TABLE 4. 8: Return on Assets

Particulars	Return on Assets ^{Rwf(000)}
Formula/Periods	$ROA = \frac{\text{Net Income}}{\text{Total Assets}} \times 100$
2020	$\frac{20,226,772}{288,713,862} \times 100 = 7\%$
2021	$\frac{22,423,613}{329,600,309} \times 100 = 6.8\%$
2022	$\frac{19,024,201}{453,440,990} \times 100 = 4.19\%$
2023	$\frac{11,449,720}{567,239,184} \times 100 = 2\%$

Source: Secondary Data MTN Rwandacell Plc Annual Reports, 2020-2023

Return on Assets indicate how efficient a business entity's management is in generating earnings from their economic resources or assets on their balance sheet. The findings show the variation of return on assets.

TABLE 4. 9: Return on Equity

Particulars	Return on Equity ^{Rwf(000)}
Formula/Periods	$ROE = \frac{\text{Net Income}}{\text{Total Equity}} \times 100$
2020	$\frac{20,226,772}{48,730,288} \times 100 = 41.5\%$
2021	$\frac{22,423,013}{57,293,901} \times 100 = 39.1\%$
2022	$\frac{19,024,201}{69,591,018} \times 100 = 27.3\%$

2023	$\frac{11,449,720}{73,448,941} \times 100 = 15.5\%$
------	---

Source: Secondary Data MTN Rwandacell Plc Annual Reports, 2020-2023

Return on Equity show the return that the owners of common stock of a company receive on their shareholdings, this ratio is potential for investors to know the return for their capital,

MTN Rwandacell Plc has low return in both periods 2022 & 2023 with 27.3% and 15.5% respectively.

TABLE 4. 10: Return on Capital Employed

Particulars	Return on Capital Employed
Formula/Periods	$\text{ROCE} = \frac{\text{EBT}}{\text{Capital Employed}} \times 100$
2020	$\frac{22,609,231}{153,269,315} \times 100 = 14.7\%$
2021	$\frac{33,513,957}{221,958,315} \times 100 = 15\%$
2022	$\frac{28,830,475}{220,513,572} \times 100 = 13\%$
2023	$\frac{17,620,811}{244,255,122} \times 100 = 7.2\%$

Source: Secondary Data MTN Rwandacell Plc Annual Reports, 2020-2023

ROCE indicates how much that a company earn from its operations alone without regarding the interest or tax. Capital employed refers to the total amount of capital that a company has utilized to generate profit. Therefore, basing on the values under the table table 4.4.1.3, MTN Rwandacell Plc had a higher ROCE of 15% in 2021 indicates more efficient use of capital and has generated shareholder values and other stakeholders. In 2020 ROCE was 14.7%, 2022 was 13% whereas in

2023 it was 7.2 %.

4.4.1.4. Liquidity ratio

Liquidity ratio measure the relationship between current assets and current liabilities, liquidity ratio determines a company's ability to cover short obligations and its margin of safety through the computation of current ratio and quick ratio.

TABLE 4. 11: Liquidity ratios

Particulars	Current Ratio	Quick Ratio
Period/ years	CR = Current Assets / Current Liabilities	QR = (Cash + Accounts Receivable)/ Current Liabilities
2020	$\frac{134,385,865}{135,444,730} = 0.9$	$\frac{22,211,731+40,136,497}{135,444,730} = 0.4$
2021	$\frac{154,052,882}{194,411,062} = 0.79$	$\frac{12,184,937+39,052,882}{194,411,062} = 0.26$
2022	$\frac{167,978,071}{232,927,418} = 0.72$	$\frac{20,299,144+23,298,180}{232,927,418} = 0.18$
2023	$\frac{227,015,276}{322,984,062} = 0.7$	$\frac{20,297,068+37,616,054}{322,984,062} = 0.29$

Source: Secondary Data MTN Rwandacell Plc Annual Report, 2020-2023

Current ratio is an indication of firm's ability to meet its current obligation from its daily operations, the table:4.4.1.4 shows that the current ratio was 0.9 in 2020 and increasing in 2021 with 0.79, decreased to 0.72 in 2022 while in 2023 increased of 0.7.

Quick ratio, as is the ability of a company to meet its short term obligations immediately, the values under the above table:4.4.1.4 indicates that MTN Rwandacell Plc try to manage their assets as seen from 2020 up to 2023, their current assets are more quick paid in 2023 (0.29) comparing to previous years 2020 (0.4), 2021 (0.26) & 2022(0.29).

GENERAL CONCLUSION

Based on the analysis of data collected in the field study, survey results and their interpretations, it shows that the profitability of MTN Rwandacell Plc is successful as well as it is clear that the indicators found above proves that the performance of the business, profitability ratios and liquidity ratios, in order to know the financial situation of the previous and take future decisions and ensure effective control over the management of the company, this confirms the hypothesis.

Through ratio analysis and referring to the results of the investigations with the staff of the company, researchers found that accounting plays an important role in this company, which has enabled it to achieve an appreciable decision.

In addition, the analysis and interpretation of survey results lead us to conclude that the Organization MTN Rwandacell Plc, the decision of the previous is seen from the perspective of company viability, economic and financial as seen the above table that summarizes all the ratios calculated in advance. MTN Rwandacell Plc is therefore a good position after profitability ratios found. Moreover, and assuming results found, this allows researchers to test the second Question.

The tables above have provided in depth insights into the contribution and use of Accounting Information System software in decision-making strategies and manager's preferences on this use has been based on a rigorous analysis on the effect of various contextual factors managers' preferences, justification pressures, financial and strategic objectives and the important of intuition in decision-making. The influences of these factors are evaluated by taking into account the broader contextual and cultural environment such as specificities of the financial industry and company structure as well MTN Rwandacell Plc preferences.

Indeed, researchers provide evidence that the contribution and use of accounting information in decision-making strategies and process is the result of a complex interplay between specific endogenous and exogenous factors, pressures and influences that have direct and indirect influences on the contribution and use of accounting information, the case study provides evidence that manager's preferences influence the contribution and use of accounting information.

As shown in the table above, most of the respondents 52.4% supported that "prevention of errors" was the factor that was considered by the entity while choosing the information accounting System software, 47.6% support "high level of accuracy" and time saving were the other factors, 50% stressed that company policy, while 50% said that storage of information and effective communication were also important factors towards this cause. It must, however, be emphasized that the major factor considered by the entity before adopting their System softwares is largely in line

with what Waterfield et al., (1998) said their work that the use of computers in business is to ensure that all business and financial information is well organized effectively and efficiently. It is however contradictory with Raymond and Bergeron (1992) who argued that businesses implement CAS because of the advent of low-cost microcomputers among other reasons. The desire to positively influence business in favor of the shareholders of the entity led to the introduction of the computerized System software since with the presence of the System software, all the necessary accounting documents are processed in time and accurately which helps in improving the quality of the operations of the company and services to its customers. Some of the qualitative characteristics of financial information include accuracy, timeliness, comparability and understandability. It is noteworthy that, these reports are produced on time because it takes less time to process accounting transactions to generate a report.

Based on this study, entitled “contribution of accounting information System software to the performance of Telecommunication Industry” A case study of MTN Rwandacell Plc (2022-20223). The general objective of this study is to investigate the contribution of accounting information System software and its performance in Telecommunication Industry.

The specific objectives of this study are as below:

Specific objectives

- 1.To assess the effectiveness of accounting information System software in MTN Rwandacell Plc.
2. To analyze if the application of accounting information System software contributes to the performance of MTN Rwandacell Plc.

To reach on these objectives and based on problem statement of the study, two questions were formulated:

Research Questions

For all the reasons developed above we have to conduct this research basis on the following two questions:

- 1.Does MTN Rwandacell Plc have an effective accounting information System software in its activities?
- 2.Is accounting information System software used by MTN Rwandacell Plc contribute to its performance?

To answer these questions, again two responses have been anticipatively formulated:

1. Yes, MTN Rwandacell Plc has an effective accounting information System software.
2. Accounting information System software used by MTN Rwandacell Plc contribute to its performance.

In virtue of above objectives and hypotheses, the researcher has collected data through documentary techniques, questionnaires technique and sample technique as well as methods.

From first objective, the effectiveness of accounting information System software in MTN Rwandacell Plc was appreciated due to comply with these indicators. The accounting System softwares are fully computerized, the users' level of training on the usage of accounting information software is appropriate to have a good quality of the financial reports, the quality of the information fed on IAS are true and fair, the user's knowledge on using IAS are enough in errors minimizing, the users have enough experience due to the long time ago the IAS introduced in MTN Rwandacell Plc and easy bookkeeping.

Capital Adequacy they are to pay interest and dividends to shareholders, on Asset Quality cover an institutional loan's quality, which reflects the earnings of the institution. It deals with policies and practices. MTN Rwandacell Plc practice this perfectly. Management team of MTN Rwandacell Plc minimizes financial stress and introduces well planned regulation on daily basis. Earnings we determined that by assessing the company's earnings, earnings' growth, stability, liquidity, return on asset, return on investment and the quality of the company's existing assets is perfectly in MTN Rwandacell Plc. Liquidity on short term volatile finances to have circulation of cash in MTN Rwandacell Plc is well managed. Sensitivity in MTN Rwandacell Plc they cover risk exposure that can affect institution.

Lastly, IAS affects financial performance of MTN Rwandacell Plc through providing true and fair financial information that can be used in decision making; Reduced time consumption and much more. From findings the researcher observe that we are digital world when computerized System softwares are well done, improve the performance of Telecommunication Industry in general as well as MTN Rwandacell Plc, 90% shows that relating the accounting information System software comes at first place in the Telecom Industry.

The last chapter talks about contribution of accounting information System software to the performance of MTN Rwandacell Plc. In verifying the first Question we are getting the following outcome: The respondent's opinions had pointed out the use of AIS help to access operating activities, its help to share information among employees and other interested parties, facilitate communication, access to the information in different department in time management when

required.

Consequently, the research findings take that majority of the System software user as respondents of this research supported that since their departments computerized accounting System software, the processing of financial transactions were made simply and done at high speed hence leading to the generation of qualitative report and influenced decision making in time. Therefore, it has revealed that, the use of accounting software improves management effectiveness and efficiency in planning, coordinating and controlling of activities.

This study proves that there is relationship between accounting information System software and business entity effectiveness. Which means access to accounting information System software will lead to organizational effectiveness.

Thus, it can be concluded that accounting information System software has an impact on the effectiveness of MTN Rwandacell Plc.

RECOMMENDATIONS

- From the findings and summary, the researcher recommends that first and foremost, the MTN Rwandacell Plc needs to update frequently their software to acquire an accounting Information System software that totally satisfy the organizational needs and business world in general.
- There should also be a multiple System software maintenance programs from once to twice per month put in place so that the System software can get rid of shortfall such as viruses, fraud among others that may affect the System software operations, this should be done so that the System software can operate to the expectation of management and other users.
- On the management point of view, it is important that staffs for handling transactions are trained from one seminar to two seminars per month so as to improve on the accuracy and speed in posting. With increased improvements and versions of accounting packages, staff needs continuous training by the authorized dealers of the packages so that they remain well acquainted with the knowledge and experience of the package. In addition to the training, it is important to constantly appraise the staff to check which staff is failing the System software as regards reporting unbiased financial information.
- The MTN Rwandacell Plc needs more personnel in internal audit reviews to appraise and check the strength of the instituted controls within the System software. The accounting Information System software is prone to fraud in cases where physical cash is involved. Without internal audit reviews, there may arise cases of ghost worker's fraud that may pass unnoticed. It is therefore important external auditors come in frequently to do audit.
- There is a need to increase the security measures in the internal control System software. Management needs to ensure that requisitions are authorized; cheque payment, vouchers and other source documents are approved. On recording, it is important to have a clerk to enter the data which is then updated yet by another person preferably one with more experience and expertise. Management can also consider the option of using a networked System software linking all the System software in different department. This is because the current System software uses standalone personal computers. In this way, errors and fraud possibilities are minimized thus improving on the quality of financial reports.
- The accounting staff should rotate regularly in different accounting section by doing so it will be difficult for person to be tempted to commit frauds by using the knowledge and experiences he/she has in a specific section.

The limitation of this research would never complete without pointing some suggestions:

- To keep all books of accounts and prepare the financial reports based on international accounting standards and international financial reporting.
- Adopt the accounting plan that prove the completion of accounting cycle.
- Draw the chart of account.
- Reinforcing the record of daily transactions from source documents.

Prepare all various types of journals by using accounting software and prepare the necessary types of ledgers using accounting information System software.

SUMMARY

The summary of findings of this study has been done based on the specific objectives; however, the findings are there for verifying if the targeted objective is achieved effectively on the assessment of indicators of performance of MTN Rwandacell Plc as a first objective: The findings indicates that adoption of IAS in accounting practices has both, positive and negative impacts. The positive impacts include simplification of processing, timely preparation, accuracy and traceability deductions. The negative impacts include risk of fraud and requirement of additional training for users and additional costs.

According to the findings from the study, accounting information System software is of a great importance to the running of the MTN Rwandacell Plc but is also associated with its own weaknesses that sometimes hinder efficiency in the MTN Rwandacell Plc business environment.

The most prominent values of the System software being: ability to carry out automatic financial auditing and transaction balancing, easy communication, user friendliness, speed and the time saving factor. With all these values at hand, it is clear that the System software actually performs its operations very well as far as guaranteeing effectiveness and efficiency of business operations is concerned.

The irregularities of the System software, however, count in as well. These majorly include risk of data loss through theft, fire or human error among others. Most of these weaknesses of the System software can be combated easily in order to reduce on the business risks that may come up as a result. For example, it can be solved through consistent upgrading of the System software, double-check and the aspect of human error can be controlled by avoiding long working hours on computers and operation through working shifts.

REFERENCES

- Accounting principles board(APB). (1870). the accounting review. *An analysis of accounting principles board statements* No.4, p.40,p.76-84.
- Ahmad, M., & Alrjoub, A. (2014).The extent of the application of the commercial banks in aqaba for modern methods of accounting information System softwares. *International Journal of Academic Research in Accounting, Finance and Management Sciences* Vol. 4 (2), 127-135.
- Alshaeefee, A. (2007). *ACCOUNTING INFORMATION SYSTEM SOFTWARE AND ITS APPLICATION IN PETROLEUM COMPANIES IN YEMEN*. UNIVERSITY OF PUNE. PUNE, INDIA:Alshaeefee,A.A.G.H.
- Anthony,R,N., &J,S.(1975).*Management accounting principles*. Taraporewala: Anthony,R.N.and J.S.
- Anthony, R,N., & J,S. (1975,). *Management accounting principles*. *Taraporewala*, p.11.
- Anthony, R.a. (1975).*Management accounting principles*. Taraporewala.
- association, A. a. (1966). a statement of *basic accounting theory*. Evanston, III.
- association, A. a. (1966). a *statement of basic accounting* theory. evanston, III.
- Bryman, A., & Bell, E. (2007).*Business Research Methods*. Oxford University Press.
- BUCKLEY J., S. R. (JAN, 2012). CLASSIFICATION OF COMPANIES. *SSRN Electronic Journal*,1 CHAP.131-134.
- hussey,J.H.(1996). *business accounting*. NEW YORK: Cengage Learning EMEA.
- Jain, S. &. (2014). Performance Management System software: A Strategic Tool for Human Resource Management. *Prabandhan Guru*. 5.,28-32.
- JAQUELINE, M.F. (2016).ANALYSIS OF EFFECTIVENESS OF *ACCOUNTING PRINCIPLES AND PRACTICES* IN PRIVATE COMPANY. KIGALI.77|Page
- Kakooza,R.(2006). Introduction research methodology. *Research methodology*.
- Khan, A.** (2017). **IMPACT OF ACCOUNTING INFORMATION SYSTEM SOFTWARE ON THE ORGANISATIONAL PERFORMANCE: A CASE STUDY OF PROCTER AND GAMBLE**. *Star Research: An International*, Vol. 5, Issu 12,26-32.
- Kieso, D.a. (1980). *Intermediate accounting*. Illinois: J.J John Wiley.

LOEVINGER, L. (1969). THE LAW OF FREE ENTERPRISE. A *REVIEW OF GENERAL SEMANTICS*,59.

Maheshwari, S. (1995). *advanced accountancy*. New York: Vikas publishing.

Maheshwari, S. (1999). *cost and management accounting*. new Delhi.

Mark, G.S., Carolyn, S. N., & Jake, R. (2011).*Core concepts of accounting information System softwares*. New York: WILEY.

Mcleod, s. (2018, august 10). *simply psychology*. Retrieved from simply psychology website:

<https://www.simplypsychology.org/what-is-a-hypotheses.html>

Neogy, T. (2014). Evaluation of efficiency of accounting information System softwares: A study on mobile telecommunication companies in Bangladesh. *Global Disclosure of Economics and Business*, Vol.3, No 1,40-50.

pandey,I. (1999). *Financial management*. venice: vikas publishing house pvt.

PARANJAPE, D.N. (2010). COMPANY LAW. *CENTRAL LAW AGENCY*, 35.

POPLI, Rajeshwar, S. K., & R, S. (1994). *principles and practices of fnancial accounting*. New dheli.

Professor Roger H. Hermanson, P.C., Professor James D. Edwards, P. D., & Professor Michael W. Maher, P.C. (2011). *Accounting Principles: A Business Perspective*. Houston, Texas, USA: BC campus.

S. N Maheshwari, f. e. (1996).*an introduction to accountancy*, New York.

Sambasivan, Y., & Assefa, K. (2013). EVALUATING THE DESIGN OF ACCOUNTING INFORMATION SYSTEM SOFTWARE AND ITS IMPLEMENTATION IN ETHIOPIAN MANUFACTURING INDUSTRIES. *Research Journal of Science, IT and management* Vol.02,No.07,16-26.

Samuel,N. (2013). *Impact of accounting information System softwares on organizational effectiveness of automobile companies in Kenya*. University of Nairobi. Nairobi: Samuel, N.

tuovila, a. (2019, may 24). *Investopedia*. Retrieved from Investopedia website:

<https://www.investopedia.com/terms/a/accounting-information-System software-ais.asp>

tuovila, a. (2020, jan 28). *invetopedia*. Retrieved from Investopedia web site:
<https://www.investopedia.com/terms/a/accounting.asp>

Wamy, RL, G., & Radhas, M. (1999). *advanced accountancy*. Sultan Chand & Sons - Tb.

WIKIPEDIA. (2020,MAY 21). Retrieved from WIKIPEDIA THE FREE ENCYCLOPEDIA:

<https://en.wikipedia.org/wiki/Accounting>

Woodruff, & Jim. (2019, January 31). chron. Retrieved from chron website:

<https://smallbusiness.chron.com/examples-accounting-System softwares-25408.html>

Jahanbakht MM. The Role of Entrepreneurship in the Development of the African Mobile Telecommunications Industry (Doctoral dissertation, Carnegie Mellon University).

APPENDICES

Appendices

Appendix 1: Data collection questionnaire

MAZIMPAKA James

Bachelor degree candidate ULK

Tel: +250 787 926 346

Email: pr.jammesk@gmail.com

Dear Respondent,

MAZIMPAKA James at Kigali Independent University ULK in school of Economics and Business Studies, EBS. The researcher is carrying out this research for the partial fulfilment of the requirement for bachelor degree in Accounting. The aim of this research is to find out "Contribution of Accounting Information System software to the Performance of Telecommunication Industry". Case study of MTN Rwanda cell Plc, period: 2020-2023" Answers to the following questionnaire will help the researcher answering the research

questions and the information provided will remain confidential.

Section 1: Demographic Information

Please kindly tick appropriately:

1. Gender: A) Male male

2. Age group
1)18-25 2)26-33 3)34-41
4)42-49 5)50+

3. Educational level
i)Primary ii) Secondary iii) Diploma
iv)Bachelor's degree v) Master's degree vi) PhD

4. Experience: I have been working for this organization for

- i) 5 years and less ii) 6-10 years
- iii) 11-15 years iv) 16 years and above

v. Career planning (.....)

5. Which of the following Accounting Information System softwares do you use by the Telecom Industry?

(Tick all that are used)

- a) Oracle Financials
- b) Sage Business
- c) QuickBooks
- d) FreshBooks
- g) Others,
specify.....

Section 2: The Contribution of Accounting Information System software.

Mark with X to the box.	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1.System software quality					
2.Information quality					
3.Service quality					
4.System software					

use					
5.User Satisfaction					
6.Net System software benefits					

Other, please mention

Section 3: Which one of the following factors were considered by the telecommunication company in choosing the Accounting Information System software?

Mark with X to the box.	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1.Prevention of errors					
2.High level of accuracy					
3.Time Saving					
4.Effective Communication					
5.Storage of Information					
6.Company Policy					

Other, please mention

Section 4: The challenges faced by MTN Rwandacell Plc in adopting Accounting Information System software.

Mark with X to the box.	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1.Risk of fraud					
2.Requires additional costs					
3.Risk of data loss through theft, fire or human error					
4.Risk of wrong data entry					

Other, please mention
