

**UNIVERSITY OF EDUCATION, WINNEBA**

**LINKING ACCOUNTING INFORMATION SYSTEMS TO FINANCIAL  
MANAGEMENT DECISION: THE MODERATING ROLE OF  
INTERNAL CONTROL SYSTEMS AMONG PUBLIC HOSPITALS IN  
THE CENTRAL REGION**



**MASTER OF BUSINESS ADMINISTRATION**

**2022**

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REGION**



**A dissertation in the Department of Accounting,  
School of Business, submitted to the School of  
Graduate Studies in partial fulfilment  
of the requirements for the award of the degree of  
Master of Business Administration  
(Accounting)  
in the University of Education, Winneba.**

**NOVEMBER, 2022**

## DECLARATION

### Student's Declaration

I, Ernestina Mantebea Kumi, declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

**Signature:**.....

**Date:**.....



### Supervisor's Declaration

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of thesis/dissertation/project as laid down by the University of Education, Winneba.

**Supervisor's Name:** Dr. Richard Oduro

**Signature:**.....

**Date:**.....

## DEDICATION

Dedicated to my husband, Dr. Ali Mohammed, and my Children Ms. Akua Atuobua Frimpong, Ms. Afia Serwa Frimpong, and Mr. Kwadwo Adu Frimpong for the time and support they gave me to complete this study. God continues to bless you.



## ACKNOWLEDGEMENTS

I am very appreciative to my supervisor, Dr. Richard Oduro of the Department of Accounting, School Business, UEW for insightful guidance throughout the MBA program. I appreciate all my lecturers and the entire staff of the School of Business, University of Education, Winneba, for their unwavering support during my period of study.

I also wish to thank my family for their encouragement throughout my study.



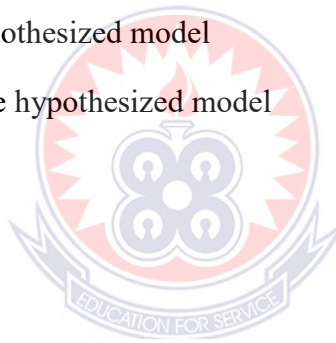
## TABLE OF CONTENTS

<b>Contents</b>	<b>Page</b>
DECLARATION	iii
DEDICATION	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS	vi
LIST OF TABLES	viii
LIST OF FIGURES	ix
ABSTRACT	x
<b>CHAPTER ONE: INTRODUCTION</b>	<b>1</b>
1.0 Overview	1
1.1 Background of the study	1
1.2 Statement of the Problem	5
1.3 Purpose of the Study	8
1.4 Objectives of the Study	8
1.5 Research Questions	8
1.6 Significance of the Study	9
1.6 Delimitation of the Study	9
1.7 Limitation of the Study	9
1.8 Organization of the Study	9
<b>CHAPTER TWO: LITERATURE REVIEW</b>	<b>11</b>
2.0 Overview	11
2.1 Theoretical Review	11
2.2 Empirical Review	19
2.3 Conceptual Review	33

<b>CHAPTER THREE: METHODOLOGY</b>	<b>56</b>
3.0 Overview	56
3.1 Research Design	56
3.2 Population for the Study	56
3.3 Sample for the Study	57
3.4 Sampling Technique	57
3.5 Data Collection Instruments	57
3.6 Data Collection Procedure	57
3.7 Ethical Consideration	58
3.8 Data Analysis	58
<b>CHAPTER FOUR: RESULTS AND DISCUSSION</b>	<b>60</b>
4.0 Overview	60
4.1 Presentation and Analysis of Results	60
4.2 Impact of AIS on Financial Management Decision (FMD) and the Moderating Role of Internal Control Systems.	78
4.3 Discussion of Results	82
<b>CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION</b>	<b>86</b>
5.0 Overview	86
5.1 Summary of the Study	86
5.2 Conclusion	87
5.3 Recommendation	88
5.4 Further Study	89
<b>REFERENCES</b>	<b>90</b>
<b>APPENDIX: Questionnaire</b>	<b>97</b>

## LIST OF TABLES

<b>Table</b>	<b>Page</b>
4.1: Variables and description	61
4.2: Descriptive statistics of responses on AIS	63
4.3: Descriptive statistics of responses on ICS	64
4.4: Descriptive statistics of responses on FMD	64
4.5: Correlation matrix of AIS and ICS	67
4.6: Outer loading matrix of the model	72
4.7: Construct reliability and validity for the outer loadings	73
4.8: Total variance explained	74
4.9: Rotated component matrix	76
4.10: Indirect of the hypothesized model	80
4.11: Total effects of the hypothesized model	81





## LIST OF FIGURES

Figure	Page
2.1: Hypothesized model.	12
2.2: Users of accounting information system	28
2.3: Likelihood vs. impact matrix	45
3.1: Variable deletion process	59
4 1: Histogram of the distribution	65
4.2: Graphical representation of Structural Equation Modelling (SEM)	70
4.3: Path diagram for the hypothesized model	79



## ABSTRACT

An accounting information system (AIS) keeps track of a company's accounting and commercial activities. The purpose of this research is to look into the role of the accounting information system (AIS) in increasing performance efficiency (PE). The relationship between the accounting information system (AIS) indicated by verifiability (VE), accuracy (AC), reliability (RE), and increasing performance efficiency (IPE) in hospitals in the central region are investigated in this quantitative study. Participants were given questionnaires to gauge their perceptions of the AIS's involvement in IPE. A total of 250 respondents were selected from the four hospitals for the study. This study analysed the data using the (SPSS) program, and the results revealed a statistically significant relationship (at the significance level (of  $\alpha \leq 0.05$ ) between the AIS represented by VE, AC, RE, and PE. This means that the AIS provides accountants with relevant information, information that assists them in checking the outcome of planned actions, information that is reliable, and opportunities to improve their work. Furthermore, the AIS contributes to data integrity and IPE.



# CHAPTER ONE

## INTRODUCTION

### 1.0 Overview

This chapter looks at the background of the study, statement of the problem, purpose of the study, objectives of the study and research questions. It also looks at the significance of the study, limitation of the study, delimitation of the study and organization of the study.

### 1.1 Background of the Study

Information and information systems are concepts that are increasingly having an impact on businesses, infiltrating the disciplines of models and management analysis. (Romney & Steinbart, 2000).

The economic information system, like any other information system, contains news and information from several disciplines, but the majority of it comes from the economic database (Nabukeera, 2016). Management is continuously presented with the difficulty of making decisions, particularly when resources are tight and limited. As a result, it's critical to have access to reliable accounting data in order to make informed decisions, maximize profits, and make the most use of limited resources.

Accounting is the language of business since it is the tool for documenting, reporting, and assessing economic events and transactions that have an impact on a company's operations (Romney & Steinbart, 2000). It handles all financial paperwork, including wages, costs, capital expenditures, and other responsibilities, as well as sales income and owner's equity. It gives internal and external users, such as managers, investors, and others, financial information about one's business. It's also known as a means to

an end, with the ending referring to the decision that was aided by the availability of financial data (Buljubašić & Ilgün, 2015). Management decisions are one of the most significant aspects that infect all organizations and influence whether they achieve their predetermined goals and objectives or not. As a result, management's decision to have a "fair view" is qualitatively due to the insufficient and incorrect use of accounting data (Rushdah et al., 2012).

One of the executive's traits is the capacity to make judgments. One of the traits of successful people is the ability to make daring decisions. Making decisions is an essential part of our everyday routine. It is typically one of the primary duties and tasks of management in organizational life (Dan & Triguba, 2020). Because management is in charge of the organization's major decisions, management and decision-making are typically linked together (Van der Stede et al., 2005). Making a decision entail deciding on the best course of action and so management must evaluate the efficiency of many choices in order to choose the optimal solution. As a result, they require some direction, which is normally delivered in the form of data and information and also frequently rely on financial and economic data acquired through management accounting. Accounting information can affect managerial decision-making in two ways: directly as input to decisions or indirectly by influencing the behavior of managers (Wall & Greiling, 2011). A successful information system (IS) should deliver timely, accurate and complete information to decisionmakers at a minimum mental and economic cost (Briggs et al., 2003).

Accounting information, according to Demski and Feltham (1976) can play two roles in decision-making. The first is decision-facilitating information, which is intended to reduce the decision makers' pre-decision uncertainty and, as a result, increase the

probability of making better decisions with respect to the desired objectives. As a result, decision-facilitating information is a direct input in decision-making and is intended to improve knowledge and decision-making prospects. According to Wall and Greiling, (2011), decision-facilitating information facilitates belief revision during the decision-making process. Accounting information about (planned) contribution margins, for example, can help the sales manager make profit-optimal pricing decisions in its decision-facilitating role, and relative contribution margins (per capacity unit) can be used to find the optimal production program in situations with capacity bottlenecks (Friederike, 2011). The second function is decision-influencing, which is important only in multi-person contexts as opposed to information's decision-facilitating role in individual decisions. Decision-influencing information is intended to influence the behaviour of (other) people and, more specifically, managerial decision-making in the management context. Decision-influencing information manifests its effects through behaviour monitoring, performance measurement and evaluation, and rewarding or penalizing performance (Okelo & Lagat, 2016). Of course, the person whose behaviour is to be influenced must be aware of the use of decision-influencing information. To motivate cost-conscious decisions, for example, the manager must be aware that ex-post deviations of actual from budgeted costs will be determined (at least under certain conditions) and will affect compensation (Wall & Greiling, 2011).

According to the study of Markus, (1983), a good accounting information system deployment necessitates a fit between three variables. To begin, a fit with the dominant view in the organization or perception of the issue must be achieved. Second, the accounting system must be compatible with the organization's technology

when problems are resolved. Finally, the accounting system must be compatible with the organization's culture, which includes its norms and value system. Accounting data will be beneficial if users properly utilize the data they give in their decision-making processes (Christensen, 1994). Accounting information, according to Otley, (1980) cited in Shih-Chu et al. (2022) is a vital element of the fabric of organizational life and must be examined in the context of wider management, organizational, and environmental information.

Internal controls are thus measures implemented by an organization to ensure the achievement of the entity's objectives, goals, and missions (Ogneva et al., 2007). Internal controls are sometimes used as check mechanisms to prevent waste, theft, and mismanagement of an organization's assets. Appiah et al. (2016) study on the evaluation of internal financial control systems at public hospitals in Ghana with evidence from Korle Bu teaching hospital stated that financial control measures put in place by management of the hospital to enhance effectiveness of the financial controls are satisfactory but monitoring and compliance were not effective. They therefore recommended the institution of internal control unit in the hospital. According to Ibrahim, Diibuzie and Abubakari, (2017), because of the positive effects on financial performance, the importance of maintaining an effective internal control system in organizations has been repeatedly and enormously emphasized. Internal control that is effective allows for the prevention and detection of fraudulent activities in the institution. Ibrahim et al. (2017) discovered a positive relationship between internal controls and financial performance and recommended that the institutions' governing bodies, possibly supported by the audit reports implementation committee (ARIC),

ensure that the appropriate internal control systems recommended by auditors in health institutions are monitored on a regular basis.

The various studies conducted on internal control systems on financial management decision and accounting information system and financial management decision suggest that accounting information systems and internal controls systems affect's financial management decision (Gordon and Kalenzi, 2019; Nabukeera, 2016; Olinillo & Japutra, 2017). The study aims at linking the accounting information system to financial management decision in the public hospitals in Ghana while considering the mediating role of the internal control systems in the public hospital in Ghana.

## **1.2 Statement of the Problem**

By the mid-1990s shareholder value-related management approaches found a prominent, not to say predominant, position among management and accounting scholars and in practice. Core elements of these management approaches are management accounting techniques that are intended to direct managerial decision-making to maximize a firm's value (Wall & Greiling, 2011). There is currently a wide pool of financial instruments accessible to enhance the decision-making process in order to avoid financial disasters caused by bad and ineffective decisions (Okelo and Lagat, 2016). Nonetheless, the accounting tools used differ from one company to the next. A tool that worked well in one organization may not work well in another. Organizations must focus on multiple accounting tools to support their decision-making process since different information is necessary for these various reasons (Dan & Triguba, 2020).

Since information play a major role in the type of tool that will be used by any firm or institution, there is the need to look for accounting information which is one of the key information used in decision-making for those who manages the finance in firms and institutions. Accounting information systems have grown in popularity and adoption worldwide over the last two decades (Romney & Steinbart, 2000)

However, the way accounting information systems are used today is very different from how they were used in the past. Accounting information systems were initially used as stand-alone accounting and financial systems that served narrowly defined purposes within the adopting firms (Chenhall & Moers, 2015). On the other hand, in today's competitive financial services market, there is more emphasis than ever before on accounting information system implementations to be more integrated. This is evident in the way several research that investigates financial and accounting information systems use as part of the larger enterprise information systems that are used to improve organizational performance and competitiveness (Islam et al., 2017; Simkin et al., 2014; Trigo et al., 2014).

In a market economy, the way a company is managed and developed is critical, because every wrong or misleading decision has a high cost. As a result, every decision made by management should be based on precise, qualitative, timely, and unambiguous information (Dan & Triguba, 2020). After information is collected, it is processed, classified, and stored within the company to serve its purpose. An integrated set of components known as an information system is required for effective and efficient information processing (Okelo & Lagat, 2016). Accounting information systems (AIS), without a doubt, play a significant role in information processing for effective decision making (Buljubašić & Ilgün, 2015). But even though the AIS play a



major role in the decision making of the institutions, the internal controls systems (ITS) also play a major role in the decision making of the institutions. Berger, Cunningham and Drumwright, (2004) defines internal controls as all the measures taken by an organization to protect its resources against waste, fraud, and inefficiency; ensuring the accuracy and reliability of accounting and operating data; ensuring compliance with the organization's policies; and evaluating the level of performance in all units of the organization (Gordon and Kalenzi, 2019). This organizational approach provides a common, accepted, and recommended reference point for both profit and non-profit organizations to assess the quality of their internal financial controls. According to Appiah, Appiah-Konadu, Forson and Frimpong (2016), the overall system of financial controls ensures that an enterprise's business is carried out in an orderly and efficient manner; and to promote strict adherence to management policies, safeguarding assets, and ensuring the completeness and accuracy of financial records to the greatest extent possible.

Various studies stated above and many more which have noted in this study shows the relevance of AIS in our institutions in which the public hospitals are with no exception (Nabukeera, 2016; Olinillo & Japutra, 2017). There is also no doubt about the mediating role of the internal controls systems in such institutions which includes the public hospitals in Ghana. Appiah et al., (2016) study on the evaluation of internal financial control systems at public hospitals in Ghana with evidence from Korle Bu teaching hospital recommended to the hospital management, the need for internal control measures to enhance effectiveness of internal financial controls and hence recommended the establishment of internal control unit to oversee the implementation of the internal financial control policies at the hospital. There is therefore the need to

look at the link between AIS and the financial management decision as well as the mediating role of the internal controls systems in the public hospitals.

### **1.3 Purpose of the Study**

The purpose of this study is to investigate the impact of the accounting information system on the financial management decision of the public hospitals. The study will also explore the moderating role the internal control system between the accounting information system and the financial management decision of the public hospital.

### **1.4 Objectives of the Study**

The objectives of the study are

1. Identify the factors that influence the adoption of accounting information systems (AIS) in the public hospitals in Central Region.
2. to investigate whether accounting information systems have impact on the financial management decision in the public hospitals in Central Region
3. to explore the moderating role of internal control system in the relationship between accounting information system and financial decision.

### **1.5 Research Questions**

The following research questions will guide the study:

1. What factors influence the adoption of accounting information systems (AIS) in the public hospitals in Central Region
2. What is the impact of accounting information system on the financial management decision in the public hospitals?

3. Does internal control system in the public hospitals plays a moderating role in the relationship between accounting information system and the financial management decision of the public hospitals?

### **1.6 Significance of the Study**

This study help organisation identify the various accounting information available and how they are used in the day-to-day decision-making of the public hospitals in the central region. The study also helps both private and public hospitals and other industries to ascertain the impact of accounting information system on the decision-making of the management.

### **1.6 Delimitation of the Study**

The study is limited to the public hospitals in the central region. The study focuses on various accounting information system used by the public hospitals and their impact on their decision-making process as well as the internal control systems and their linkage in.

### **1.7 Limitation of the Study**

The study covered only one region in Ghana and there is limited study on the accounting information systems in the public hospitals in Ghana. Because the study is limited to only one region, there is the tendency for the study to be bias and this will affect the generalization of the study.

### **1.8 Organisation of the Study**

The study consists of five (5) chapters. Chapter 1 deals with the introduction of the study. Chapter 2 looks at related studies conducted by other researchers. Chapter 3 looks at the methodology of the study. Chapter 4 looks at the results, analysis and

discussion of the study and chapter 5 looks at the summary, conclusion and recommendation of the study.



## **CHAPTER TWO**

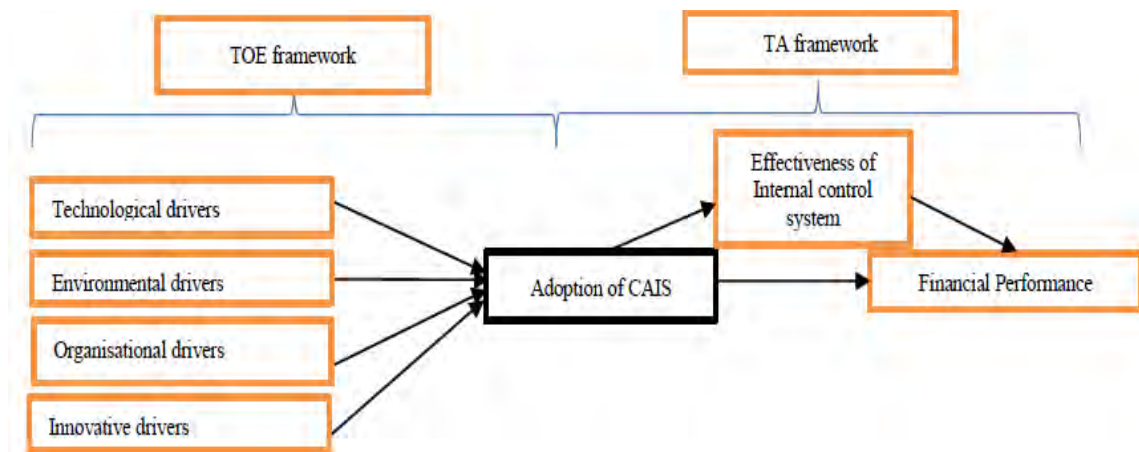
### **LITERATURE REVIEW**

#### **2.0 Overview**

This chapter analyses pertinent recent theoretical, empirical, and conceptual studies that demonstrate how internal control systems connect accounting information systems (AIS) to financial management decisions. This chapter is founded on three main goals. First, in an effort to describe the theoretical foundations upon which the current study is built, a thorough overview of the theoretical literature that links internal control systems, financial management, and AIS is provided. In order to create hypotheses among the variables analysed in this study, it is also necessary to assess empirical research on the impact of AIS adoption on financial management decisions. Finally, the conceptual framework upon which this study is built should be explored.

#### **2.1 Theoretical Review**

The Technology Acceptance (TA) theory by Davis (1989) and the Technology-Organisation-Environment (TOE) Framework by Tornatzky and Fleischer (1990) are the two key psychology-based company level theoretical frameworks that the current study is based. Figure 2.1 and 2.2 shows how the constructs derived from these ideas relate to one another in a hypothetical scenario.



**Figure 2.1: Hypothesized model**

**Source:** Adopted from Davis (1989) and Tornatzky and Fleischer (1990)

### 2.1.1 Technology Acceptance (TA) theory

According to Momani et al. (2017), studying the adoption and use of technologies has grown to be one of the most important disciplines in the software engineering field. These theories were created to investigate how people use technology and to demonstrate their capacity to do so based on behavioural science theories from psychology and sociology and how they affect technology usage. These theories have evolved over time and came about as a result of one another's extensions. As a result, the 10 most significant and well-known theories are examined as follows: The Theory of Planned Behaviour (TPB) (Ajzen, 1985), which was expanded to include the Decomposed Theory of Planned Behaviour (DTPB), was derived from the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980; Taylor & Todd, 1995b). The Technology Acceptance Model (TAM) (Davis, 1986), an extension of TRA that also has an extension to TAM2, was made possible in part by information systems (Venkatesh & Davis, 2000). In addition to the TAM and TPB combination form (C-TAM-TPB) (Taylor & Todd, 1995a).

Technology acceptance theory explains how a change in a company's technological system might be accepted by the people who would use it in the hopes of improving performance (Molinillo & Japutra, 2017). The hypothesis is predicated on the idea that people naturally exhibit some degree of resistance to change, therefore its anticipated effect of enhancing the performance of the company would not be realized without training the implementers of information technology-based systems. The theory assumes that the use of information technology-based systems leads to improved performance through perceived usefulness of the system, which is the extent to which users believe using a particular system will improve their performance, and perceived ease-of-use, which is the extent to which a person believes using a particular system will be effortless (Davis, 1989). For instance, Ngadiman et al., (2014) examined AIS adoption and system performance using the technological acceptance framework, where AIS perceived usefulness (measured by system quality, relevance, and system compatibility) and perceived usability were used as proxy measures (proxied by screen design, exploring power and system terminology). The study came to the conclusion that system quality and system relevance significantly positively mediate the performance of the firm. Because internal control systems are used as a gauge of implementer orientation and training, the adoption of CAIS and financial performance are relevant to the current study (perceived ease-of-use).

### **2.1.2 Technology-Organisation-environment (TOE) framework**

The Technology-Organization-Environment (TOE) framework was first introduced in Tornatzky and Fleischer's in their book, "The Processes of Technological Innovation" in 1990. In this book, they describe the entire process of adopting and implementing

innovations, from their initial stages of development to their eventual adoption and implementation by users within the context of a firm and their impact on the firm's performance. The concept suggests that three key factors - technological, organizational, and environmental - are responsible for the adoption of a technology-based system like CAIS.

The technical context encompasses all technologies that are pertinent to a firm's activities, regardless of whether those technologies are presently in use by the aforementioned enterprises or are simply out there in the market. As Tornatzky and Fleischer (1990) explains, the state of existing technologies is important for determining the amount and kind of change that a company can handle at any given time. In the original framework, Tornatzky and Fleischer (1990) identified two constructs within the technological dimension of the TOE framework that may mediate the adoption of information systems and system performance: technology availability and inherent technology characteristics. However, due to the generic and imprecise nature of the constructs, as demonstrated by Dincer and Dincer (2016) and Oliveira and Martins, (2011), researchers rarely apply the original constructs under the technological dimension of the TOE framework. For instance, the framework asserts that a given information technology system's adoption is influenced by its technological characteristics, which are intended to affect performance, but it doesn't offer a clear definition of what those characteristics are. Due to this, most academics have resorted to incorporating concepts from other theoretical frameworks into the TOE framework's technological dimension in an effort to measure it, which has resulted in the development of the Diffusion of Innovation theory (DOI).



The TOE framework's organizational context collects characteristics of a company that may have an impact on the relationship between technology adoption and company performance. As fundamental organizational characteristics that affect the nexus between technology adoption and organizational performance within the organizational setting, Tornazky and Fleischer (1990) suggested formal and informal structures, communication procedures, size, and slack resources. However, most studies typically include constructs that support their research objectives when employing this construct in empirical studies. For instance, Senyo, Effah and Addae (2016) discovered that in Ghana, organizational characteristics such as business size, scope, and technology compatibility have a substantial impact on the relationship between information technology adoption and organizational success. Accordingly, (Wang, Wang and Yang (2010) support the contention made by Gibbs and Kraemer (2004) that organizational characteristics that affect technology adoption and financial performance connection include business size, technical competency, perceived benefits, compatibility, and financial resource availability. According to Wang et al (2010), the organizational component of the TOE framework for the current study was comprised of Redundancy, Readiness to Adopt, and Uncertain Policy to Apply CAIS (2010).

According to Tornazky and Fleischer (1990) 's TOE framework, the business environment has an impact on how well a corporation performs after adopting new technologies. Tornazky and Fleischer (1990) specifically assert that pressure to embrace a certain technology might come from the industry's structure, the existence or absence of technological service providers, and the regulatory environment. Prior to the creation of the TOE framework, none of the prevalent theoretical frameworks

emphasized the necessity of measuring how environmental factors affect the adoption of technology and how that affects company performance. Rahayu and Day (2015) claim that direct competition, governmental regulation, and governmental sponsorship are three sources of environmental forces that can affect the adoption of technology.

#### *Diffusion of Innovation Theory (DOI)*

The diffusion of innovation theory, which describes how and how quickly new concepts and innovations become economically advantageous through organizational culture at both the individual and business levels, is another theory on which the current study is based (Oliveira & Martins, 2011). According to the DOI hypothesis, innovation is an economic force that is disseminated through time through specific channels and is therefore anticipated to result in money over the long term (Rogers, 1995). Consequently, Rogers identified five stages - innovation, early adaption, the early majority, the late majority, and laggards - through which the adoption of technology-based systems leads to economic advantage.

Rogers (1995) goes on to say that depending on the firm's technology features, which include relative advantage, compatibility, complexity, trialability, and observability, adoption of an innovation technology-based system has a tendency to translate into economic benefit. Numerous research that examined the relationship between technology adoption and economic benefit employed the DOI theory's elements as a sub-component to gauge the Technological dimension of the TOE framework (Kendall et al., 2001; Oni & Papazafeiropoulou, 2014; Pease & Rowe, 2005; Tan et al., 2009). By using the DOI theory to examine factors at the firm level that influence the use of e-business and how it generates financial gains, Hsu et al. (2006) found that organizational readiness, outside pressure, compatibility, trialability, pressure from

trading partners, and government regulations all have a significant impact on the adoption of e-business and the conversion of accounting information systems into financial gains. Tan et al. (2009) therefore added security and ICT cost to the DOI hypothesis. Their findings showed that adoption of information systems is influenced by relative advantage, compatibility, complexity, observability, and security concerns; neither trialability (Tan et al., 2009) nor costs were shown to be important. This supports the argument made by Sin-Tan et al. (2009) that the availability of pirated software renders trialability unimportant. Wan and Ali (2013) and Thong (1999) emphasized that top management commitment and owner innovativeness are critical elements influencing information systems adoption and its impact on economic success at the individual level.

### *Institutional Theory*

The institutional theory emphasizes how organizational structure and decisions can be impacted by external institutional forces when technology-based systems are adopted (Scott & Christensen, 1995). In order for organizations to achieve institutional isomorphism, DiMaggio and Powell, (1983) introduced three different environmental pressures. These pressures included coercive (such as political influence and the legitimacy problem), mimetic (such as standard responses to uncertainty), and normative pressures (i.e. associated with professionalization). Several studies have employed the institutional theory to explain how organizations embrace technology and how that adoption relates to firm performance, according to Molinillo and Japutra (2017) (Cater-Steel, 2009; Teo et al., 2006). For instance, Teo et al. (2003) used the institutional theory to conduct a study on information technology adoption and firm performance. They found that coercive pressures come from suppliers, customers, and

the government, while normative pressures come from industry associations. Pressures from competitors lead to mimetic isomorphism as firms adopt information technology to imitate industry leaders. In the South African context, Cater-Steel (2009) found that normative pressures come from the industry network and regulations, while mimetic pressures are also noticeable as organizations imitate the industry leaders. Coercive pressures to adopt computerized accounting information systems come from customers, governments, IT service providers, hardware suppliers, and head offices.

### **2.2.3 Hypothesis derived from the study**

The hypotheses examined in the aforementioned theoretical perspectives, in summary, centre on how CAIS adoption affects company performance. Technology acceptance theory concentrated on how a change in a firm's technological system might be accepted by those who will utilize it in the hope of improving performance. As a result, the adoption of an accounting information system can improve financial performance, and the technology acceptance hypothesis takes this into account. Diffusion describes the mechanism and the rate at which new ideas and technology translate to economic benefit through organizational culture, operating at the individual and firm levels. The technology-Organization-Environment framework proposed that accounting information system translate to firm's performance through technology, organizational, and environmental factors. The adoption of technology-based systems is influenced by organizational structure and external institutional constraints, according to institutional theory. Although each of the four theories explains a different mechanism by which the adoption of an accounting information system affects a firm's performance, there appears to be some overlap and congruence

between them all in the idea that adoption of an accounting information system results in improved financial performance.

## **2.2 Empirical Review**

### **2.2.1 The internal control system**

According to Oduro et al. (2022), the mixed reported association between drivers computerized accounting information systems (CAIS) adoption and financial success is partly owing to the exclusion of the mediating role of important variables in the CAIS adoption drivers and financial performance nexus as stated by the Technology Acceptance (TA) theoretical framework by Davis, (1989). The TA theory describes how a change in technological system is capable of being accepted by implementers in anticipation of improving performance (Molinillo & Japutra, 2017). The theory is of the assumption that, naturally, individual have some level of resistance to change and thus, without orienting the implementers, its perceived benefits would not be realized. The theory is based on the idea that CAIS adoption leads to higher performance because users believe the system is beneficial and simple to use (Davis, 1989). One of these factors according to Oduro et al., (2022) is internal control policies while using the CAIS, as specified by the TA framework.

COSO defined internal control systems as a process, effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting, and compliance. The COSO internal control framework (2013) has three objectives: operations, reporting and compliance (Dan & Triguba, 2020).

Additionally, internal control system mediates the relationship between CAIS complexity and financial performance, followed by the relationship between cost and data security threat, but internal control system does not mediate the relationship between the expense of adopting CAIS and financial performance, followed by the relationship between readiness to adopt CAIS and financial performance. Based on this, the report advised government measures to increase local government's adoption of technology, including ICT education and training, an emphasis on strengthening internal controls, and programs to raise awareness among important local government controllers (Oduro et al., 2022). Puttick (2001) cited in Okelo and Lagat, (2016) defines internal controls as a collection of hierarchical tactics and sanctioned internal procedures (internal controls) used by organizations to ostensibly achieve management's main goal of ensuring the smooth operation of the company.

Internal control systems are an essential part of how management functions in the public sector, and their role in this study is to give reasonable assurance that financial management is done openly and honestly (Okelo & Lagat, 2016). Internal control has been pointed out as unique and essential to the success of organizations (Pillai, 2010; Synder et al., 1989). Internal control is a process guided by the organization's framework that reliably assures the entity that its purpose for existence will be achieved (Anderson et al., 2021). The rationale is that the stakeholders are demanded to provide framework that safeguard resources, promote consistent information, enhance adherence to recommended laws and meet effectively the operations of the organization. Conceptually, internal control is comprised five interconnected components: control environment, risk assessment, control activities, information and communication, and monitoring activities (Anderson et al., 2021). Internal control has

been regarded a distinctive factor to enhanced health quality service delivery (Ntongo, 2012) and is a system that is guided by a framework invented to reliably assure the organization that its purpose for existence will be achieved (Dan & Triguba, 2020).

Internal controls have a big impact on local government's ability to deliver high-quality healthcare (Gordon & Kalenzi, 2019). According to Makanyeza et al (2013) and McNeil, et al (2009) cited in Gordon and Kalenzi (2019), local governments must raise the standard of the services they provide if the entire world is to experience service satisfaction and Kimenyi (2013) also cited in Gordon and Kalenzi (2019) also stated that, improved human well-being, especially in the health sector, is correlated with higher service quality, which raises life productivity. However, despite the crucial importance of high-quality health service delivery as described above, Uganda's health care delivery is subpar (Nabukeera, 2016). Services, and drug inadequacy, dilapidated health infrastructure systems, among others, have combined in numerous proportions to weaken the quality of health care provided. Lack of trained human resources, poor organization of health services, and drug inadequacy, among others, have also contributed (Nabukeera, 2016; Wane & Gayle, 2013). This condition has persisted despite a number of reforms, including improved health training institutions, a better system for managing health services, increased funding from different funding organizations, revamped health infrastructures, improved drug management techniques, improved health models, and improved remuneration systems, among others (Nabukeera, 2016; UNHCO, 2014; WHO, 2015).

### *Hypothesis 1*

$H_0$ : Internal control systems does not significantly moderate the relationship between adoption of accounting information system adoption drivers and financial performance of public hospitals in Central Region

#### **2.2.2 Computerized accounting information system**

The way a company is run and developed is particularly crucial in a market economy because every poor or deceptive choice has a large cost. Therefore, every choice that management makes needs to be supported by exact, high-quality, timely, and clear data. After being gathered, information is processed, categorised, and stored within the firm in order to fulfil its purpose. An integrated system of components, known as an information system, is required for effective and efficient information processing. Unquestionably, the accounting information system plays a key role in the processing of information for successful decision-making (Buljubašić & Ilgün, 2015).

In order to provide accurate accounting information, an organization should ensure that all employees in the accounts department cooperate with one another and are completely aware of their responsibilities (Srivastava & Lognathan, 2016). According to Jacob and Karim (2013), nobody is quite certain of the origins of accounting in the most restrictive sense. It is accepted practice to discard any accounting that is not useful in some way. Accounting information is useful to management in all phases, whether it be to officers, sub-officers of educational institutions, lecturers and potential employees, creditors and potential creditors of one or more government tertiary schools, or creditors and potential creditors. These accounting data users all oversee their interactions with the businesses, at the very least, in light of the



accounting reports. If the choice, the implementation, and the control of the execution are based on useful, accurate, and comprehensive information, an economic activity can be carried out correctly. We need an accounting management in this situation on the one hand to supply the necessary information, but we also need an accounting that meets the needs of the manager.

There is a substantial impact of the use of accounting information as an aid to management decision making in the institutions since the adequate supply and right use of accounting information had gone a long way in aiding management in making efficient and effective decisions (Srivastava & Lognathan, 2016). With the advancement of technology and the rise in information needs, information systems' significance grows. Although, contrary to popular belief, information systems are not computers, they are nonetheless necessary for us to accomplish our objectives. However, as technology advances, information systems play a bigger part in society. An improved understanding of information systems can aid firms in attaining their objectives in such situations (Alikhani, Noushin & Mahdi, 2013).

Communities undergo significant changes as a result of the industrial revolution, the economy, and business. Information needs rose significantly as technology continued to advance. As a result, the third revolution is known as the information revolution, and the current century is known as the information century. The requirement for processing information at the same pace is growing in this context due to the rising volume and velocity of information delivered to people. It is the role of the information system to process and analyse the collected data so that it can be used more effectively. Despite the abundance of information, a good system is needed to deliver timely and pertinent information for decision-making, planning, and control.

Without the existence of smaller, interconnected subsystems, such a massive system cannot be developed. Knowing the systems and how they interact as a result is crucial. Knowing these systems and comprehending how they interact can allow for better system design and utilization (Alikhani et al., 2013).

Accounting is a technique for keeping track of an organization's financial activity so that stakeholders can be informed. Accounting systems should, in accordance with ASOBAT and GAAP, deliver data to help management with planning and decision-making (Wu, 1995). Therefore, accounting can be thought of as an information system with two domains: management reporting and external financial reporting. While the latter is based on management preferences, the former is based on generally accepted accounting rules (ArabmazarYardi, 2003).

Data is processed by information systems, however occasionally it's mistakenly believed that this just entails the financial and non-financial events of the company being processed as raw data. However, it is a truth that managers at various levels are concerned with a range of challenges with varying degrees of complexity. Additionally, the type of system that can assist in resolving this variety is positioned in a range of prospective intelligent systems to retroactive ordinary database systems (ArabmazarYardi, 2003).

As a result, Accounting Information System (AIS) transforms commercial and financial operations into ones that are beneficial to users (people who need information about economic activities for their decision making). Additionally, according to another definition of Accounting Information System (AIS), the system is divided into components that gather, organize, process, and analyze financial data

before providing it to internal and external stakeholders for decision-making (Moscove, Simkin & Bagranoff, 1997).

An accounting information system is made up of people, procedures, and information technology. Generally speaking, AIS is responsible for the following three primary tasks:

1. collecting and preserving information about the transactions and activities so that the organization may analyze what took place.
2. the transformation of data into information that aids management in the planning, execution, and monitoring of activities.
3. putting in place the necessary procedures to protect the organization's assets and financial information. These measures make ensuring that data are accurate, dependable, and accessible when needed.

Additionally, a well-designed AIS increases the productivity and effectiveness of activities in the following ways:

1. AIS can be used to manage machinery so that the operator is alerted as soon as an operation strays outside the bounds of acceptable quality, improving quality and lowering production or service costs, for instance.
2. AIS can help to increase operations' efficiency by giving more accurate information in a timely manner. For instance, the just-in-time (JIT) strategy necessitates continual, precise, and fresh data regarding the inventory of raw materials and their location.
3. Enhancing decision-making: By giving personnel the proper access to reliable information, AIS can enhance decision-making.

4. Exchange of knowledge: If an AIS is properly designed, knowledge sharing may result. Sharing expertise enhances operations and gives businesses a competitive edge. By creating and utilizing a network or system, for instance, an audit firm will be able to impart knowledge to staff members working in other departments (Romney & Steinbart, 2000).

Accounting information needs to have a few essential characteristics in order to meet user needs. According to McLaney and Atrill (2010) cited in Buljubašić and Ilgün, (2015), good information should have the following attributes or characteristics: relevance, reliability, comparability, and understandability.

**Relevance** - Accounting information must have the power to affect choices. Without this quality, information production serves no purpose. The accounting data may be important for projecting what will happen in the future or for verifying what has already happened. Because users frequently wish to examine the accuracy of prior predictions they have made, which may have an impact on the accuracy of current judgments, accounting information plays a vital part in the confirmation of past occurrences.

**Reliability** - Accounting information shouldn't be constrained by bias or significant mistake. It ought to show and represent what it claims to show and represent. Accounting dependability is the capacity of financial information to withstand repeated scrutiny and usage by creditors and investors while producing consistent results. Reliability essentially relates to the credibility of the financial statement.

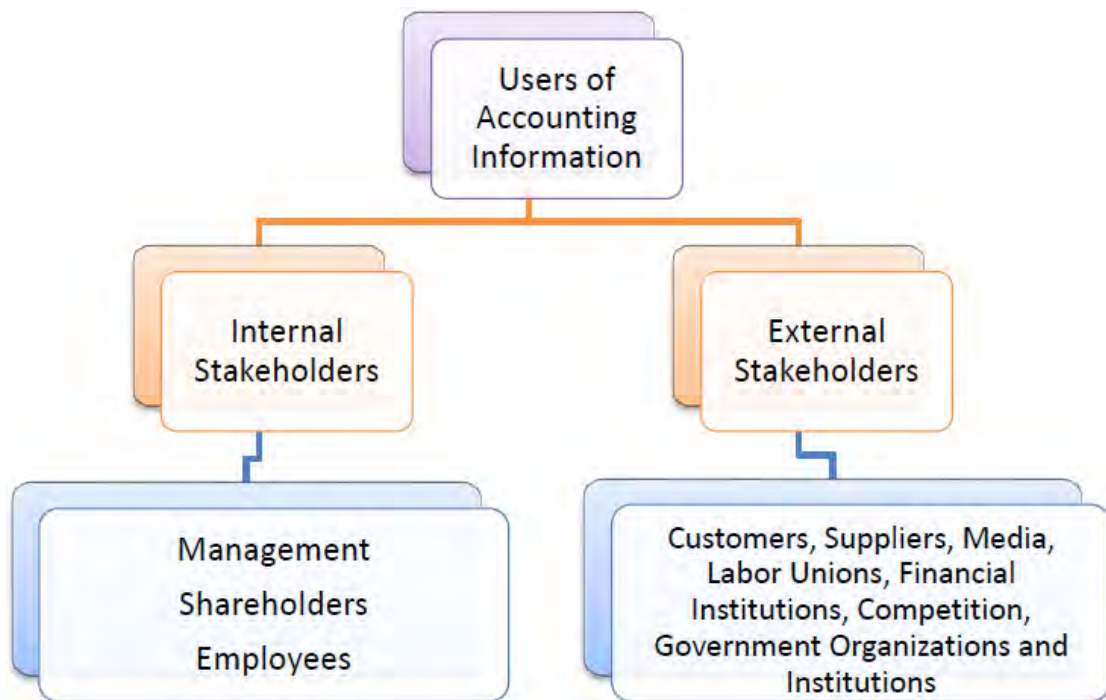
**Comparability** - If accounting data exhibits this quality, users will be able to track changes in business operations over time. Additionally, it will help them evaluate

their company's performance in comparison to that of other firms of a similar nature. If the same items are considered the same way for certain accounting reasons, comparability is achieved. Clarifying the procedures used in the evaluation and dissemination of the information may help to increase comparability.

**Understandability** - Accounting data should be presented in a way that makes sense to the reader. Although it doesn't call for highly specialized business knowledge, it is presumed that the reader has a fair understanding of business. Information must be given in a thorough, succinct, clear, and ordered manner in order to be understood.

Additionally, according to Bassam, (2006), accounting information needs to be appropriate, credible, accurate, timely, understandable and absorbable, important, and fulfilling.

According to Buljubašić and Ilgün, (2015), a company must naturally operate in a setting where it engages with a variety of important forces and interested parties, sometimes known as stakeholders. Stakeholders within and outside the firm who have an interest, claim, or stake in it and who are keenly interested in its financial performance and operational outcomes are referred to as internal and external stakeholders.



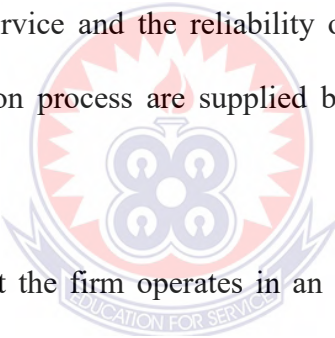
**Figure 2.2: Users of accounting information system**

**Source:** Buljubašić and Ilgün, (2015)

According to Buljubašić and Ilgün, (2015), management, stockholders, and staff are internal stakeholders. By putting their resources (money, skills, knowledge, and time) into the business, this set of stakeholders expects their own expectations to be met. Shareholders who own the company's capital anticipate receiving a reasonable return on their investments. They are looking for details about a company's activities and the safety of its investments. Additionally, shareholders are concerned with things like the size of the profit, the earnings per share or dividend, the manager's success in running the business, etc (Buljubašić & Ilgün, 2015). Shareholders determine whether to preserve, increase, or decrease their capital in a specific company based on that information. High profit, a high return on equity ratio, a high return on assets ratio, etc. are just a few examples of how management hopes to produce exceptional returns on the company's investment by devoting their expertise, skills, and time to the

business. According to Đogić, (2009), employees provide the required human resources and talents for the business, and they also expect from the business sufficient pay, pleasant working conditions, and job security, so they are interested in information about these topics.

Customers, suppliers, the media, labour unions, financial institutions, the competition, and government entities and organizations are examples of external stakeholders. Depending on their position, relevance, and function in the input, transformation, and output processes, external stakeholders have a variety of effects on a company's operations. Customers who purchase a product or service from a corporation anticipate that it will fulfil their needs and desires. They are concerned with the quality of the good or service and the reliability of the supply. The raw materials required for the production process are supplied by suppliers (Buljubašić & Ilgün, 2015).



**Competitors** - Given that the firm operates in an environment where both existing and potential competitors are constantly a danger, it makes sense that the company's strengths and shortcomings must routinely be examined and contrasted with those of rivals. The corporation must also keep an eye out for emerging rivals (Dan & Triguba, 2020) One of the most significant external stakeholders is the government and government entities, which through laws, decrees, and regulations influences enterprises and limits freedom of action. The government can directly intervene with businesses or groups that carry out public interest activities (post, telephone, railway, electricity, water, forestry, transportation, etc.). Some of the aforementioned businesses or organizations are nationalized by the government or subject to legal regulation; in such circumstances, the government has the majority voting power

(Buljubašić & Ilgün, 2015). The network of commercial and investment banks, insurance companies, and other institutions that supply funds for financing economic activities must be examined because enterprises depend on the capital markets. On the other hand, those financial institutions require knowledge about the company's solvency and liquidity in order to sanction funds.

The management of the company is required to analyse accounting information and, if necessary, complete it with various non-financial indicators due to the numerous interest groups or stakeholders (Đogić, 2009).

According to Buljubašić and Ilgün (2015), business information systems may be broken down into three subsystems: the executive subsystem, the information subsystem, and the management subsystem. This is in reference to decision-making based on accounting information systems. The information subsystem serves as a link between the executive and management subsystems, and its job is to give them timely information so they can make decisions. Buljubašić and Ilgün, (2015) were of the view that, accounting and non-accounting information subsystems are two subdivisions of accounting information system based on the accounting role and task. It is significant to remember that various subsystems frequently function together in the overlapping responsibility areas rather than existing as a separate entity. Strategic management claims that the decision-making process frequently calls for a variety of clear information. Strategic management frequently involves making decisions that are future-focused, and as a result, these decisions include a significant amount of risk in terms of how they will turn out. Compared to strategic level management, tactical level management needs more information, but for a shorter period of time (Buljubašić & Ilgün, 2015).



### **2.2.3 Financial management decision-making**

Accounting information, according to (Demski & Feltham, 1976), can play two functions in decision-making. Decision-facilitating information is meant to minimize the pre-decision maker's uncertainty and, as a result, increase the likelihood of making better judgments in relation to the targeted objectives. As a result, decision-facilitating information is a direct input in decision-making and is intended to improve knowledge and decision-making prospects. Decision-facilitating information, in particular, aids belief changes during the decision-making process (Baiman, 1982). Accounting information about (planned) contribution margins, for example, can assist the sales manager in making profit-optimal pricing decisions, and relative contribution margins (per capacity unit) can be utilized to discover the ideal production program in instances with capacity constraints. Furthermore, accounting data from previous eras may aid (future) decisions: Cost deviations from a previous period, for example, can show management where they need to take corrective action to meet particular goals.

Accounting information systems have been widely implemented by both public and private sector enterprises (Rom & Rohde, 2007). For decision-making, managerial control, and performance management, firms use an accounting information system that includes both structured and unstructured financial and non-financial data (Granlund, 2011). One of the components of the management information system is the accounting information system (Scott, 1986, p. 66). Although many researchers agree on the nature of the relationship between the two systems, with some believing that the accounting information system is the foundation and the management information system is a component of it, others argue that the accounting information

system is a separate system from the management information system; however, the two systems overlap (Alikhani, Ahmadi & Mehravar, 2013).

The researchers looked at a vast number of past studies, which were separated into two types: practical and empirical studies and theoretical studies. These studies are conducted in a variety of settings, regions, and industries. According to the studies, the accounting information system is constantly growing, and it has become required for various operations and activities within enterprises, necessitating the organizations' use and usage of it (Mohammad et al., 2017).

According to Mohammed et al., (2012), accounting information systems are a critical resource for organizations and institutions in both the private and public sectors to deal with the current environment, which is marked by rapid change and increased competition, not only on a local but also on an international level. Accounting information systems literature occupies a prominent position in all fields where information systems have advanced rapidly and have various applications at all administrative levels. The information checks have a number of advantages that allow them to give crucial information to all communities of information users. The study also found that the role of accounting information systems in activating the role of the responsibility accounting in the Jordanian industrial companies does not vary depending on the educational qualification of employees. In addition, the role of accounting information systems in activating the role of responsibility accounting in the Jordanian industrial companies varies depending on the practical experience of the employee (Mohammed et al., 2012).

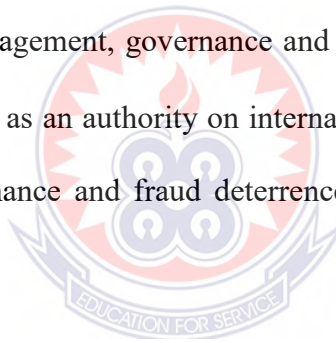
## *Hypothesis 2*

$H_0$ : There is no significant relationship between adoption of computerized accounting information system drivers and financial performance of the public hospitals in Central Region

## **2.3 Conceptual Review**

### **2.3.1 The conceptual framework**

The study adopted the COSO framework. The Committee of Sponsoring Organizations (COSO) is a joint initiative established in 1985 to sponsor the National Commission on Fraudulent Financial Reporting. COSO's mission is to help organizations improve performance by developing thought leadership that enhances internal control, risk management, governance and fraud deterrence and the vision is to be globally recognized as an authority on internal controls and a thought leader on risk management, governance and fraud deterrence (Anderson et al., 2021; Dan & Triguba, 2020).



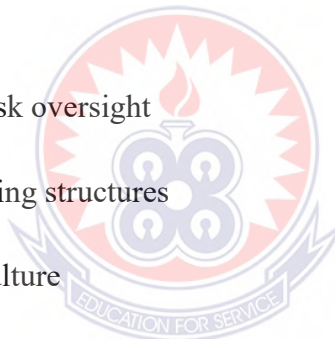
The COSO framework consist of five (5) components. These are (1) governance and culture, (2) strategy and objective-setting, (3) performance, (4) review and revision and (5) information, communication and reporting. Each of these components consisting of principles making up what is known as COSO Enterprise Risk Management (ERM) principles. Under the principles, the governance and culture exercises board risk oversight, establishes operating structures and defines desired culture. They also demonstrate commitment to core values and attracts, develops and retains capable individuals in the industry. The strategy and objective-setting components analyses business context, defines risk appetite, evaluates alternative

strategies and formulate objectives. The performance component identifies risk, assesses severity of the risk, prioritizes risk, implement risk responses and develops portfolio view. The review and revision component assesses substantial change, reviews risk and performance and pursues improvement in enterprise risk management. Finally, the information, communication and reporting component leverages information and technology, communicates risk information and reports on risk, culture and performance (Dan & Triguba, 2020). These components make up the twenty (20) principles of risk management components.

### *1 Governance and Culture for Compliance Risk*

The COSO framework describes the following five principles that underlie this component:

1. Exercises board risk oversight
2. Establishes operating structures
3. Defines desired culture
4. Demonstrates commitment to core values
5. Attracts, develops, and retains capable individuals



**Principle 1 - Exercises board risk oversight:** The organization's compliance and ethics (C&E) program is overseen by the board of directors, and management is in charge of its creation and administration. The C&E program standards that have been published in numerous nations reinforce the requirement for board monitoring. A company's "governing authority shall be knowledgeable about the content and implementation of the compliance and ethics program and shall exert appropriate oversight," according to USSG & 8B2.1(b)(2)(A)-(C). It is sometimes advised for the

board to assign responsibility for this oversight to a board-level standing committee, similar to how audit oversight is typically assigned to an audit committee, given the potential complexity of an organization's C&E program. As a result, a committee can spend the necessary time to oversight that the entire board might not have. The term "board" is used to refer to either the board of directors or a board-level committee that is in charge of overseeing the C&E program, as was previously stated.

A clear and direct line of communication between the chief compliance officer (CCO) and the board is necessary for effective oversight to take place. This communication should cover routinely planned events, such as gatherings where the board meets privately with the CCO without other senior management personnel present. Having a board member with experience in compliance can be very beneficial and improve program oversight. This knowledge should ideally come from experience in the relevant industry dealing with compliance challenges as well as experience creating and managing successful compliance programs.

**Principle 2 - Establishes operating structures:** The efficacy of the program is significantly impacted by where the compliance function is located inside a business. The person in charge of the compliance function should be in a position to be effective, which usually entails being a senior leader's peer. Additionally, the compliance function has to have the power, resources, and equipment necessary to successfully carry out its duties. Last but not least, the compliance function needs to be functionally different from other tasks, especially those that regulators typically view as having competing obligations or priorities (e.g., legal, finance, etc.). While it might be possible for the compliance and ethics role to work effectively while placed within other departments, the ideal practice is for compliance to be functionally

distinct and - like internal audit - report to the board. Extra care must be made to ensure sufficient autonomy, proper resources, and direct access to the board if the function does not report to the board.

**Principle 3 - Defines desired culture:** The establishment and upkeep of an environment that values compliance and integrity are essential for the organization. Even the most carefully constructed compliance controls will be prone to failure without it. At the leadership level, compliance and ethics must be sincerely prioritized. The commitment is demonstrated in numerous different ways, starting with its inclusion in a code of conduct or corporate ethics that is worded in a way that makes expectations of behavior apparent. This culture can be reaffirmed and made clearer by leadership through additional communications. This dedication to culture should also be demonstrated by adopting significant compliance measures and actively integrating compliance into the procedures for performance evaluation and incentive compensation, especially at the leadership levels.

Senior management should engage in a thorough discussion regarding the relationship between compliance risk and the organization's risk appetite and risk tolerance, which are covered in more detail in the next section, since this exercise can help set expectations for culture. Given that compliance with laws, regulations, and other requirements ought to be one of the main business objectives for all organizations, tolerance - which takes into account acceptable levels of variation in performance related to achieving business objectives - should pay particular attention to the potential impact of compliance risk.

**Principle 4 - Demonstrates commitment to core values:** A value statement or other set of guiding principles that displays a commitment to compliance and ethical business conduct should be used to represent dedication to core values. Studies are increasingly demonstrating a link between ethical culture and organizational performance, which is congruent with the value creation objective of ERM. In addressing compliance risks, the tone set at the top is crucial. The executive team must lead by example in terms of compliance and moral conduct. Tone "from" the top, as opposed to tone "at" the top, refers to the belief that this dedication must spread across the entire organization. The supervisors and managers of others must interact with and convey this tone to the next tier of leaders inside a business.

**Principle 5 - Attracts, develops, and retains capable individuals:** A CCO with the necessary experience and credentials should be in charge of an efficient compliance operation. Depending on the organization, the sector it belongs to, and a number of other variables, the specifics of past experience and other credentials may differ. Hiring people who value compliance and behave ethically in business choices is essential to managing compliance risks across the entire firm. In fact, establishing a reputation as a company that values compliance and ethics aids in a company's ability to recruit and keep talented employees.

## ***2 Strategy and Objective-Setting for Compliance Risks***

The COSO ERM framework, and the following four principles associated with the management of compliance risks:

6. Analyzes business context
7. Defines risk appetite

8. Evaluates alternative strategies
9. Formulates business objectives

**Principle 6 - Analyzes business context:** Understanding and addressing compliance risks depend on context. One of the factors that affects compliance risk is business decision-making; actions have the power to add new risks, modify current risks, or remove risks. As a result, the organization's dynamic strategy should be taken into account while identifying a compliance risk universe. To put the compliance function in a position to recognize and create plans to manage compliance risks that result from changes in strategy, the CCO should participate in the strategy-setting process to the proper extent. The CCO should also be made aware of any abrupt changes in strategy that may take place as a firm reacts to environmental changes. Other internal drivers of compliance risk, or elements that have the potential to alter or create new hazards, must be taken into account for successful compliance risk management. Changes in people, processes, and technology are some of the most significant internal drivers of compliance risk. Management pressure is another factor that increases the risk of noncompliance, especially when it is absent from adequate reminders about the need for compliance and incentives to follow the C&E program. In a broader sense, changes in organizational culture can result from a variety of causes and influence the risk of compliance.

**Principle 7 - Defines risk appetite:** When people hear the phrase "appetite for compliance risk," they frequently envision businesses willingly tolerating compliance infractions. Due to the very nature of compliance risk, a company may break the law and suffer financial or non-financial repercussions (e.g., fines, suspension or



debarment, reputational damage). Management and the board have discussions about how much compliance risk is acceptable when pursuing business goals and objectives (being clear to point out that this discussion is not related to accepting known violations; it is about the realistic assumption that it is impossible to eliminate the possibility of a noncompliance event).

According to COSO, risk appetite is the organization's general willingness to accept certain types and amounts of risk in order to achieve its goals. The acceptable levels of performance variance in relation to business objectives, also known as appetite and risk tolerance, are often not established at the risk-specific level. There may be distinct risk-centric statements relating to particular compliance risk areas, even while appetite or tolerance for compliance risk are not emphasized. More frequently, the determination and declaration of risk appetite and tolerance should take into account the potential influence of compliance risk on the accomplishment of business objectives. As was stated before, the corporation should view compliance with laws, regulations, and other requirements in and of itself as a commercial aim.

Viewing compliance risk at the level of the business unit or location and by type of compliance risk is a useful method to understand it and its relationship to risk appetite and tolerance. Each group often faces distinct compliance risks at the business unit (or functional) level, each with quite different possible repercussions for infractions. An international bribery infraction, for instance, may incur far greater financial penalties than a breach of the construction code.

The potential repercussions of a fire code violation tragically leading to the loss of life could be huge, even though it might only result in a very minor punishment.

Apparently insignificant compliance risks like this infraction of the building code can result in more serious risks like a building inspector asking for a bribe. An essential component of compliance risk management is assessing risk appetite while taking the whole range of potential outcomes into account.

As noted in COSO's May 2020 publication, *Risk Appetite – Critical to Success: Using Risk Appetite to Thrive in a Changing World*, three of the inputs to risk appetite are as follows:

1. Board and management perspectives on appetite
2. Understanding the existing risk profile
3. Organizational culture

**Principle 8 - Evaluates alternative strategies:** The compliance function should participate in strategy discussions from two perspectives: (1) to understand the strategy so that the C&E program can be designed to manage compliance risks effectively; and (2) to inform strategic decision-makers about potential compliance risks associated with strategies under consideration. When the compliance function is fully informed prior to starting new strategic initiatives, compliance risk assessment and management are most effective, allowing the C&E program to be ready to proactively address new or changing compliance issues. In light of shifting strategies and risk appetite, the CCO should also contribute to the creation of innovative methods for reducing compliance risk and provide support for assessing compliance risk problems related to potential substitute tactics.

It is crucial for compliance to be involved early in the process when an organization's strategic decisions involve merger or acquisition operations so that necessary due

diligence concentrating on compliance concerns may be carried out. In order to understand the level of risk that may be inherited as a result of the transaction and any demands or risks associated with C&E program integration, this due diligence is crucial to the decision-making process for mergers and acquisitions.

The compliance department should identify and comprehend the implications for the organization's C&E program once the approach has been chosen. Start by identifying and evaluating compliance risks and suggesting adjustments to internal controls that are intended to reduce compliance risk. Think about making adjustments to the C&E program's training, supervision, and auditing strategies as well as the creation of important compliance measures or performance indicators.

**Principle 9 - Formulates business objectives:** Business objectives are quantifiable standards by which the organization as a whole and specific business units can be assessed. They are related to strategy. The creation of corporate objectives frequently influences or increases the possibility of compliance violations, much like the adoption of strategy can influence compliance risk. In addition, if compliance is not specifically addressed by other stated business objectives, compliance with applicable laws, regulations, contract conditions, and other requirements should be regarded as its own business aim.

Performance measures designed for business units may occasionally unintentionally encourage regulatory violations. Consider the straightforward case of a manufacturing facility where employees are motivated by ambitious new production goals. If the production team sees flouting these compliance rules as a reasonable way to meet the new targets, this goal could result in shortcuts in quality control and inspections,

resulting in product safety violations. To ensure that incentives are properly structured to minimize the promotion of bad behavior or that such incentives are balanced with appropriate compliance incentives, the compliance function should be consulted as part of the establishment of business objectives, much like how it is described in Principle 8. Ideally, compliance participates in the establishment of business objectives, but at a minimum, it is well informed of such objectives and the performance metrics that are used for individual evaluations.

### *3 Performance for Compliance Risk*

According to the COSO ERM framework there are five principles associated with the management of compliance risks:

10. Identifies risk
11. Assesses severity of risk
12. Prioritizes risk
13. Implements risk responses
14. Develops portfolio view



Regulators and others expect firms to regularly examine the possible risks of legal, regulatory, and policy noncompliance, as well as ethical wrongdoing, in order to take action to control these risks to acceptable levels and ensure the effectiveness of C&E programs.

**Principle 10 - Identifies risk:** Finding all of the organization's many compliance hazards is one of the C & E program's most difficult duties. Numerous thousands of rules and regulations apply to organizations, covering anything from local sales taxes,

license requirements, and environmental regulations to antitrust, privacy, fraud, and intellectual property rights/obligations. Additionally, these risks are always evolving due to new and modified legal and regulatory requirements, changes in organizational strategy (such as when a retailer enters the health care services market), and the creation of new compliance hazards as social values change. The C&E program needs to have systems in place to detect and monitor these varied hazards across the company if it is to operate effectively.

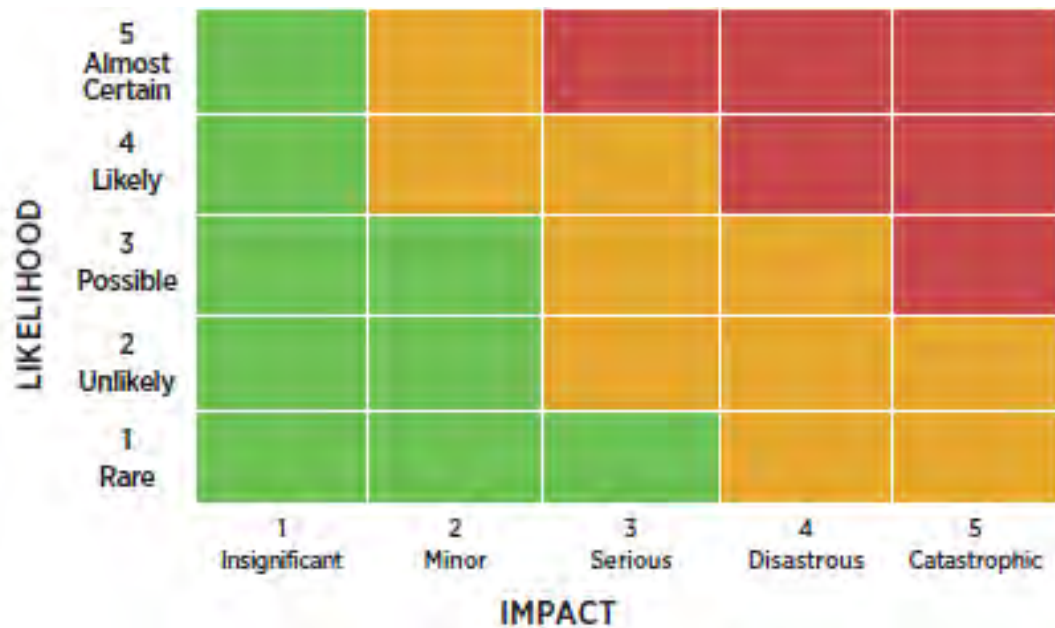
The key characteristics of identifying risks are:

1. Describe the compliance risk identification and assessment process in documented policies and procedures
2. Identify compliance risks associated with planned strategy and business objectives
3. Assess internal and external environments to identify risks
4. Create process for identifying new and emerging risks
5. Consider risks associated with use of third parties
6. Consider information gathered through hotlines, other reporting channels, and results of investigations

**Principle 11 - Assesses severity of risk:** The possibility and impact of a compliance risk are often the main factors used to determine its severity. The likelihood that a risk will materialize is known as likelihood. This refers to the likelihood of a specific violation of a law, rule, or ethical breach in the context of compliance. In the majority of situations, determining the possibility of compliance risk requires an opinion. Despite being subjective, judgment can be made systematically. One strategy is to

take the frequency of noncompliance into account. Will the occurrence (such as a salesperson paying an official in the government illegally to secure a contract) happen annually or only once every five years? If such data is available, it may also be based on experience or the organization's historical data. The organizational setting is another element that is taken into account in this assessment. Usually, the assessor assumes certain things about the controls that are in place, including the policies that forbid certain payments or the controls that surround the payment process. The assessment should ideally be done with the assumption that there are no controls at all, but it can be challenging for people to picture scenarios with no controls. Typically, they base their analysis on "normal controls" or some other kind of "minimum controls." Some evaluation techniques divide the likelihood assessment into two parts - one for likelihood or frequency and the other for the efficacy of internal controls - for higher precision. Preventive controls are more relevant to likelihood or frequency, and detective controls are more likely to change the impact of an event based on the timeliness of detection. Some models may even treat preventive and detective controls as two different elements.

**Principle 12 - Prioritizes risks:** The assessments of compliance risks in terms of likelihood and impact allow for prioritization across the organization. One method used to capture and summarize the severity assessment is to construct a risk inventory matrix. Example of such matrix is indicated in the Figure 2.1



**Figure 2.3: Likelihood vs. impact matrix**

This enables the organization to categorize hazards according to how, when, and how much attention each will receive. Although it may be claimed that the business could ideally manage all of its compliance risks, from a practical standpoint, the more serious risks need more direct and urgent attention. The organization's risk appetite, tolerance, and resource availability will determine how this is accomplished. For instance, in the illustration, dangers in the green spaces would be routinely re-evaluated, but no particular risk response action or intensive monitoring action would be implemented. The risk owners would need to create a plan for risk mitigation in the yellow areas in order to minimize or eliminate them without the addition of considerable resources. Compliance committees would be tasked with working with risk owners to create thorough action plans for risks that fell into the red zones. These action plans would clearly identify risk ownership, assign accountability for risk responses, and create monitoring and auditing plans for the remediation efforts.

The key characteristics in risk prioritization as follows:

1. Prioritize compliance risks based on assessed level of risk relative to meeting of business objectives
2. Use objective scoring based on assessment
3. Consider use of other assessment criteria (trend, velocity, etc.) in prioritizing compliance risks
4. Consider possible effects of planned changes in strategy and operations
5. Develop risk-based action plans for mitigation (risk responses, implemented in next step)

**Principle 13 - Implements risk responses:** Risk management techniques are aimed to control the level of risk that has been determined. The design and execution of stronger internal controls over compliance is the most obvious reaction to a high degree of risk. Each of the seven components of a C&E program must be taken into account in order to effectively mitigate a compliance risk (e.g., policies, training).

Internal controls are a common component of risk-specific policies. Internal controls over compliance may be preventive or investigative in nature, with a combination of the two being optimum. Although preventing noncompliance and ethical misbehavior is desired, an organization may have to rely more heavily on timely detective controls for some risks due to practical factors.

Risk responses may involve many actions other than improvements to procedural internal controls. For example, targeted training aimed at areas of vulnerability may be useful. Training is a form of internal control that is a particularly valuable response



when the design of procedural controls is sound, but there are breakdowns in those controls based on a lack of understanding of how the controls are to be applied or a general lack of awareness of the controls.

The key characteristics of the implementation of risk responses are:

1. Consider potential need for modifications in each element of the C&E program when designing risk responses
2. Design compliance risk responses that consider the impact on other (non-compliance) risks and risk responses
3. Assign accountability for each compliance risk response (including timeline, etc.)
4. Follow up to determine whether compliance risk responses have been properly implemented as designed
5. Consider compliance risk responses when developing monitoring and auditing plans

**Principle 14 - Develops portfolio view:** It is critical to understand how compliance risks interact with one another as well as how they relate to other organizational issues. The design and implementation of risk responses, as well as the evaluation of risk, can all benefit from taking these interactions into account. This thought process can also result in the discovery of specific risk drivers - factors that don't necessarily produce new risks but can raise the probability of one risk happening as a result of another action or circumstance.

The key characteristics of the portfolio view development are

1. Consider risk interactions (i.e., how mitigating a compliance risk can affect other risks)
2. Consider interactions of compliance risk responses with other risk responses
3. Integrate compliance risk management with ERM
4. Have regular meetings/communications between compliance and business units

#### *4 Review and Revision for Compliance Risk*

The COSO ERM framework came out with three principles associated with the management of compliance risks:

15. Assesses substantial change
16. Reviews risk and performance
17. Pursues improvement in enterprise risk management

**Principle 15 - Assesses substantial change:** Changes in the organization's internal and external environment can have significant impacts on the organization's compliance risk profile, often very quickly, which is why many compliance program standards require periodic re-evaluation and modification. The CCO needs to identify potential drivers of changing compliance risk. Broadly, these potential drivers include, but are not limited to the following:

- Changes to the organization's strategies and objectives
- Changes to people, process, and technology
- Changes in regulatory requirements and/or societal expectations

In assessing substantial change, the following key characteristics may be considered:

1. Identify drivers of change in compliance risk - internal and external
2. Consider how implementation of new strategic initiatives affects compliance risk
3. Consider how changes in senior personnel affect compliance risk and/or risk tolerance
4. Evaluate changes in laws and regulations
5. Consider developments in enforcement, guidance from regulators, and other trends
6. Assess changes in local/regional environments

**Principle 16 - Reviews risk and performance:** As mentioned in the discussion of Principle 1, the CCO and management are in charge of designing and implementing the organization's C&E program, while the board of directors has oversight responsibilities for the program's performance. Mechanisms are required to ensure that compliance risks are handled within acceptable levels so that the board and management can carry out their duties.

Beyond only giving the board and management and the comfort they need to fulfil their obligations for keeping compliance risk to acceptable levels, the reviews of C&E program performance also aim to help the program get better. Regulators are now clearer about what they anticipate in terms of the performance evaluation of C&E programs as a crucial component of a successful compliance program. One of the seven components of a successful compliance program under the USSG, as was

already mentioned, is the requirement to "regularly evaluate the performance of the organization's compliance and ethics program." Similar guidelines from many agencies throughout the world can be obtained for evaluating the performance of the C&E program.

The key characteristics of the review risk and performance are as follows:

1. Monitor performance against compliance and ethics metrics and report at the management and board levels
2. Update compliance risk assessments on a periodic basis
3. Develop monitoring plans for high-priority risks, assign assurance responsibilities clearly across the three lines, and set clear performance expectations
4. Ensure that internal audit considers compliance risk in connection with its review of entity risk and performance
5. Periodically assess the organization's culture of compliance
6. Ensure that annual C&E program work plans reflect risk assessment (cross-referenced)
7. Include appropriate audit rights clauses in third-party contracts to facilitate monitoring and auditing
8. Obtain feedback from participants in compliance training, hotline reports, employee surveys, and exit interviews
9. Require that implementation of corrective action plans is an important metric monitored by management and the board
10. Perform root cause analyses for compliance risk events experienced

**Principle 17 - Pursues improvement in enterprise risk management:** A dedication to continuous improvement is one of the most important signs of a successful C&E program. The significance of employing a number of procedures to spot significant alterations in the company and its surroundings as well as to spot gaps in program success is discussed in Principles 15 and 16. However, merely recognizing problems is insufficient. The C&E program has to be improved and adjusted. Regulators stress more and more how crucial it is for the organization to show that it is making an effort to examine the program and take action to keep it fresh. Reduced fines and requirements in resolution agreements and prosecution decisions are often the result of an organization's proactive actions, according to numerous authorities. The key characteristics of the pursues improvement in enterprise risk management are as follows:

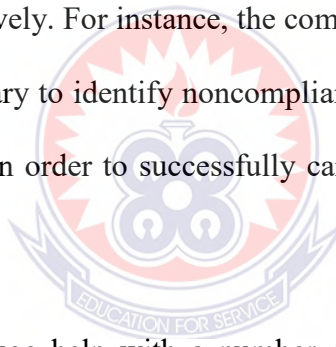
1. Maintain awareness of current trends in compliance risk management (through training, review of regulatory guidance, etc.)
2. Ensure that compliance periodically self-assesses the C&E program's performance
3. Obtain feedback from the board on the quality and usefulness of compliance risk information shared
4. Consider obtaining periodic independent evaluation of the C&E program
5. Consider benchmarking the C&E program against similar organizations
6. Review efficacy of the compliance risk assessment process on a periodic basis
7. Ensure that internal audit plays an active role in periodically evaluating the effectiveness of the C&E program

### *5: Information, Communication, and Reporting for Compliance Risks*

The application of the information, communication, and reporting component of the COSO ERM framework have the following three principles associated with compliance risks:

18. Leverages information and technology
19. Communicates risk information
20. Reports on risk, culture, and performance

**Principle 18 - Leverages information and technology:** A compliance function needs timely access to information about each of the C&E program's components in order to manage it effectively. For instance, the compliance function must have access to all information necessary to identify noncompliance or weaknesses in compliance-related internal controls in order to successfully carry out a monitoring and auditing function.



Technology may be a huge help with a number of C&E program components. In contrast to traditional techniques, such in-person classroom training, technology may be used to give compliance awareness training through a wide range of ways and formats with interactive aspects that enhance learning. Technology-assisted training is often easy to update in order to rapidly address new issues or simply to keep training fresh.

The key characteristics of the leverages information and technology are:

1. Ensure that compliance has access to all information relevant to effectively manage compliance risk

2. Provide compliance with relevant information technology/data analytics skills or access to such skills
3. Utilize data analytics in monitoring/auditing (monitor compliance and performance of internal controls)
4. Create automated dashboards/reports for monitoring compliance
5. Leverage technology to provide for the delivery of effective compliance and ethics training
6. Utilize technology to facilitate risk assessment process (scoring, reporting, etc.)

**Principle 19 - Communicates risk information:** The most important quality that a C&E program may have been communication. Almost every business unit and function within the organization should interact with the compliance function, which should serve as a partner in identifying and managing compliance and ethics risks that pose a threat to the organization. It should also provide high-quality training and information regarding compliance and ethics risks, as well as provide responses to complaints or inquiries about compliance-related issues. The success of the C&E program depends on the collaboration between compliance and particular business units. Nobody is in a better position to assist the business unit in understanding the implications of compliance and ethics concerns than the CCO and the compliance team, just as the business units are the best at understanding their operations. As a result, the best way to manage compliance risks is to have constant communication between compliance and each business unit. This creates a shared goal of balancing compliance with operational effectiveness. This communication is bidirectional and does not just go from compliance to operations. In order to ensure that solutions are

created with the practicality and effectiveness that operations executives bring to the table, operations must be allowed to work with compliance in this manner.

The key characteristics of risk information communication are:

1. Ensure that employees receive clear and regular communications on their roles regarding C&E
2. Require periodic reporting to the board by the CCO
3. Establish protocols and ensure a clear understanding of an escalation policy
4. Provide compliance risk communications that support and relate to training and job responsibilities
5. Engage in effective two-way communication between operations management and compliance

**Principle 20 - Reports on risk, culture, and performance:**

Reporting on risk, culture, and performance connected with compliance-related risks is closely related to sharing risk information. The senior executive team, any internal compliance committee (if there is one), the board of directors, any board-level committee delegated the responsibility of compliance risk oversight (if there is one), the appropriate managers/heads of departments or functions within the organization are among these stakeholders. The frequency of reporting to various groups as well as the specific demands and duties of each should be taken into account (Dan & Triguba, 2020).

For instance, informing the board about the risk assessment process, identifying the most significant risks, and the actions being taken to address those risks, as well as



meaningful compliance metrics that address the program's structural and substantive performance, resource allocations, and needs, are all important topics to cover. The culture of compliance and ethics should be routinely discussed in reports to the board. Even though assessing culture might be challenging, attempts should be taken to give the board some insight and trends on organizational culture related to compliance and ethics. This may be accomplished through employee surveys; data associated with culture; and other less formal methods, such as interviews and focus groups.

1. The key characteristics of reports on risk, culture and performance are as follows:
2. Provide periodic reports on compliance and ethics risk assessments and related remediation efforts tailored to key stakeholder needs
3. Develop and report on meaningful operational and substantive metrics associated with the effectiveness of the C&E program
4. Provide managers with reports on completion and results of training of their direct reports
5. Use a case management and reporting system for investigations and outcomes
6. Establish and follow a policy that clearly articulates the nature of reporting on all significant remediation efforts

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 Overview**

This chapter looks at the research design, the population, sample and sampling technique, data collection instruments, data collection procedure and data analysis.

#### **3.1 Research Design**

A cross-sectional design was used to investigate this research issue. Cross-sectional study design is a type of observational study design. Cross-sectional studies are sometimes carried out to investigate associations between risk factors and the outcome of interest. Cross-sectional design can estimate prevalence of outcome of interest because sample is usually taken from the whole population (Levin, 2006). This design is appropriate for this study because the study looks at the association between Accounting Information System (AIS) and the moderating role of the internal control system (ICS) and its impact on the financial management decision (FMD) of public hospitals in the Central Region of Ghana.

#### **3.2 Population for the Study**

The population consist of all public hospitals in the Central Region of Ghana. The hospitals in Central Region were used for the study because they are the most accessible population in due to the location of the study. That is, Central Region was chosen due to proximity.

### **3.3 Sample for the Study**

The sample for the study consists of all administrators, nurses and doctors who are in administrative position in the public hospitals in the Efutu Municipality and Agona Swedru Municipality. In all, four (4) hospitals were sampled from these two municipalities with two (2) from each municipality. A total of 250 respondents were selected from the four hospitals for the study.

### **3.4 Sampling Technique**

Convenient sampling technique was employed for the study. Convenience sampling is defined as a method adopted by researchers where they collect market research data from a conveniently available pool of respondents. Convenience sampling was used because subjects for the study were readily available. That is, the nurses, administrators and medical doctors.

### **3.5 Data Collection Instruments**

The data collection instruments that were used for the study are questionnaire and semi-structured interview. Both qualitative and quantitative data was collected for the study. The questionnaire was used to gather both quantitative data and qualitative data on AIS, ICS and FMD. The semi-structured interview was used to further clarify the information obtained from the questionnaire.

### **3.6 Data Collection Procedure**

Questionnaire was distributed to administrators as well as doctors and nurses in administrative position. Some selected administrators, nurses and doctors were interviewed in to gather more data on the internal control system and how

management use the internal control system and computerized accounting information in financial decision of the hospitals.

### **3.7 Ethical Consideration**

Approval was sought from the administrative heads of all the hospitals that were involved in the study. Also, confidentiality of the information that will come from each hospital or the staff of the hospital was also be taking into consideration.

### **3.8 Data Analysis**

Structural equation modelling (SEM) was employed for this study. For the structural equation modelling (SEM), this study employed the method of partial least squares (PLS) or PLS-SEM. The use of PLS-SEM in this study was factored by several reasons (Barroso et al., 2010; Hair et al., 2017) with the first one being the nature of this study that is exploratory. Notably, the linkage between AIS and FMD is yet to be proven. As such, a new interconnection can possibly be discovered with this study. Another reason for using PLS is its nature that is non-parametric and thus, the data employed do not need to be normally distributed. PLS-SEM can also improve the explanatory capability of key target variables alongside their associations (Hair et al., 2014). The measurement model results and the structural model analysis based on Chin (1998) and Hair et al. (2017).

To test for the reliability and validity of the constructs, the outer loading relevance test indicated in Figure 3.1 was used.

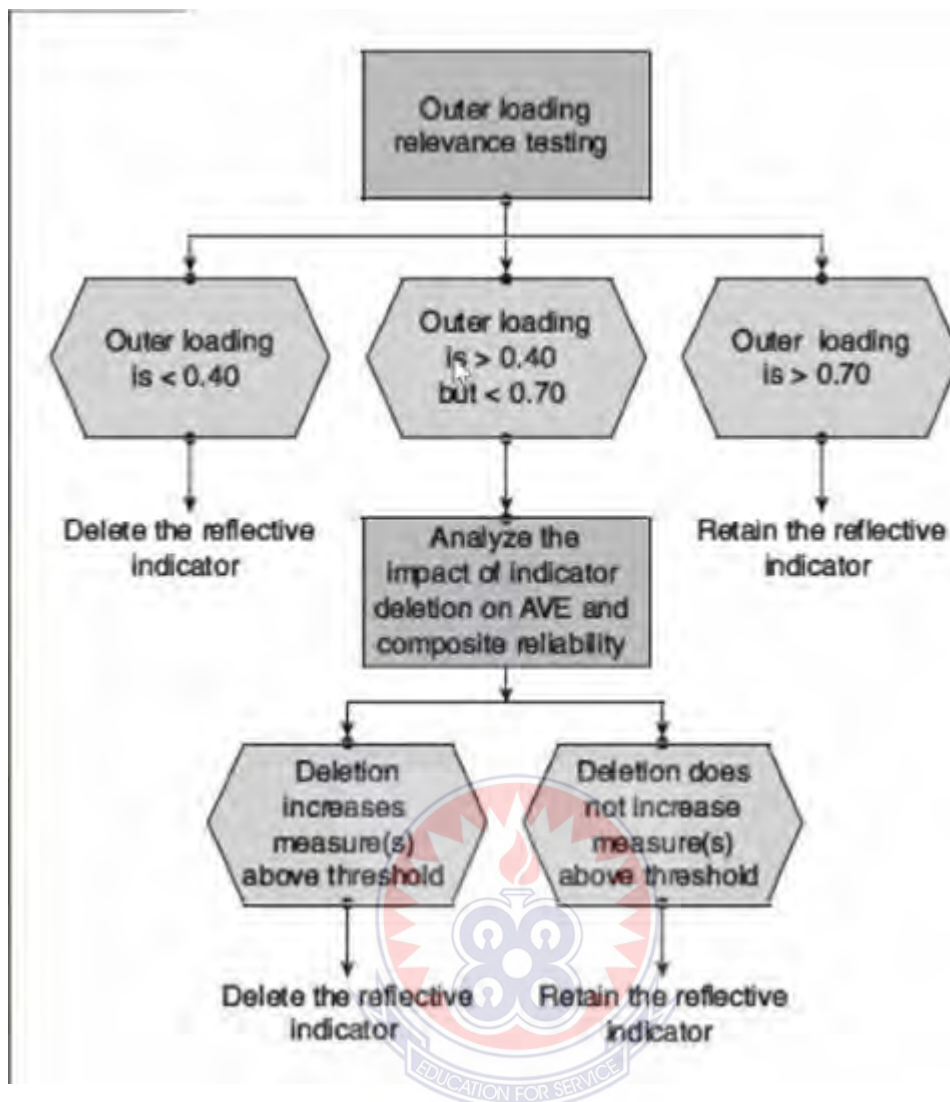


Figure 3.1: Variable deletion process

Source: Dr. Dhaval Maheta YouTube video)

## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.0 Overview

This chapter looks at the presentation of results, analysis of the results and discussion of the results. The chapter is into two sections. The first section is about presentation of results and the second is on discussion of the results.

#### 4.1 Presentation and Analysis of Results

Out of a total of 250 respondents, a total of 205 respondents answered the questionnaire. The presentation, analysis and discussion of the results is based on the 205 respondents view on the study. This section looks at the factors affecting the adoption of AIS and ICS in the public hospitals in the central region of Ghana. The analysis will look at the impact of AIS and ICS on the financial management decision of the hospitals.

##### 4.1.1 Adoption of Accounting Information System (AIS) and Internal Control System (ICS) by Public Hospitals

Before looking at the impact of AIS and ICS on financial management decision (FMD) of the public hospital, we look at the adoption of AIS and ICS by the public hospitals in the Central Region of Ghana. The variables that were considered and the corresponding codes are indicated in Table 4.1.

**Table 4.1: Variables and description**

Code	Variables	Description of Variables
CA01	Government adoption policy	We are obliged to adopt once is government policy to adopt
CA02	Technological changes	We adopt AIS when there is a change in trend in technology
CA03	Complexities of AIS	Complexities of the AIS discourage us from adopting AIS
CA04	Innovation	Innovativeness is key in our adoption of AIS
CA05	Cost of data security	Data security cost deter us in the adoption of AIS
CA06	Set-up cost	Set-up cost is higher and thus discourage our adoption of AIS
CA07	Political influence	Political influence determines whether or not we have to adopt AIS
CA08	Legality	We have no option to adopt if it is legal requirement to adopt
CA09	AIS comprehensibility	AIS comprehensibility makes adoption easier
CA10	Cost of training	Training cost deter us from adoption of AIS
CA11	Threat in data security	Data security threat make us vulnerable when we adopt
CA12	Effect on Staff	When we adopt AIS, we would have to lay some staffs off
CA13	Maintenance cost	Maintenance cost deter us from adoption of AIS
CA14	Readiness for adoption	We are not psychologically just not ready to adopt
CA15	Policy for adoption of AIS	We also do not have clear policy to apply AIS
CA16	Legal barking for adoption of AIS	There is no legal barking to adopt AIS
IC01	Control consciousness of employees	Employee have a high level of control consciousness in all aspect of operations
IC02	Control procedures for revenue receipts	There is control procedure in receiving revenue and other income
IC03	Commitments and payments	There is a control in requesting for commitments and payments
IC04	Identification and analysis of risks	There are processes to identify and analyse relevant risks of achieving organizational objectives
IC05	Systems and processes	There are systems and processes to support the identification , capture, and exchange of information
IC06	Availability of policies and procedures	There are policies and procedures available to help ensure management directives are carried out.

<b>IC07</b>	Assessment of the quality of internal control system	There are processes available to assess the quality of internal control performance over time
<b>FM01</b>	Improvement of FMD	AIS and ICS help to improve financial management decision of the hospital
<b>FM02</b>	Clarity of AIS and ICS presentation	The inputs of AIS and ICS are presented in an easily and clear manner and improves financial management decision of the hospital
<b>FM03</b>	Accurate information	Accurate information in financial records improves the management of the hospital due to the AIS and ICS
<b>FM04</b>	Effectiveness of ICS	ICS is effective in their mediating role in the financial management decision.
<b>FM05</b>	Preferability of AIS	I prefer using accounting information systems.

**Source:** Author's own data from the field, 2022

In the study, sixteen (16) variables were considered for the AIS and seven (7) variables for the ICS and five (5) variables were considered for FMD. The AIS variables are coded as CA, the ICS variables are coded, IC and FMD variables are coded as FM. To have a good idea about the distribution of the responses, preliminary descriptive analysis of the variables for AIS, ICS and FMD was conducted and the results are indicated in tables 4.2 and 4.3 respectively.



**Table 4.2: Descriptive statistics of responses on AIS**

<b>Variables</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Kurtosis</b>	<b>Skewness</b>
CA01	2.424	1.394	-0.795	0.789
CA02	4.005	0.536	0.516	0.004
CA03	3.707	0.707	2.084	-2.016
CA04	1.712	0.453	-1.119	-0.944
CA05	3.434	0.496	-1.947	0.268
CA06	3.859	0.348	2.319	-2.073
CA07	3.702	1.17	1.439	-1.609
CA08	3.707	0.707	2.084	-2.016
CA09	3.283	1.159	-0.534	-1.118
CA10	4.561	1.06	2.084	-2.016
CA11	4.566	0.734	0.207	-1.35
CA12	3.278	1.039	0.564	-1.368
CA13	1.439	1.06	2.084	2.016
CA14	1.434	0.734	0.207	1.35
CA15	2.722	1.167	-0.551	1.114
CA16	4.288	0.453	-1.119	0.944

**Source:** Author's own data from the field, 2022

In exception of government adoption policy (CA01), innovation (CA04), maintenance cost (CA13), readiness for adoption (CA14) and policy for adoption of AIS (CA15), the responses show that, the respondent tend agree with the statement posed to them on the AIS. This is seen in the averages of the scores indicated in Table 4.2. Looking at the skewness and kurtosis of the data, in exception of the few which are closer to zero, the rest are not all that close to normal distribution since skewness most of distributions have their skewness outside the range  $-1 \leq skewness \leq 1$ .

**Table 4.3: Descriptive statistics of responses on ICS**

Variables	Mean	Standard deviation	Kurtosis	Skewness
IC01	3.707	0.707	2.084	-2.016
IC02	3.702	1.17	1.439	-1.609
IC03	3.995	0.536	0.516	-0.004
IC04	3.854	0.353	2.084	-2.016
IC05	2.576	0.733	-0.648	0.859
IC06	2.298	1.17	1.439	1.609
IC07	4.42	1.059	1.111	-1.649

**Source:** Author's own data from the field, 2022

Table 4.3 indicates that, the responses of the respondents are all in agreement what the posed statement on internal control system (ICS) in the public hospitals. Similarly, to the AIS, with the exception to the payments (ICO3) and systems and processes (IC05) which are closer to normality, the rest are all out of the range,  $-1 \leq skewness \leq 1$ , indicating that the distributions are not all that close to normality. The kurtosis also indicates that, the skewness has a long tail. Table 4.4 displays the descriptive statistics of the financial management decision (FMD).

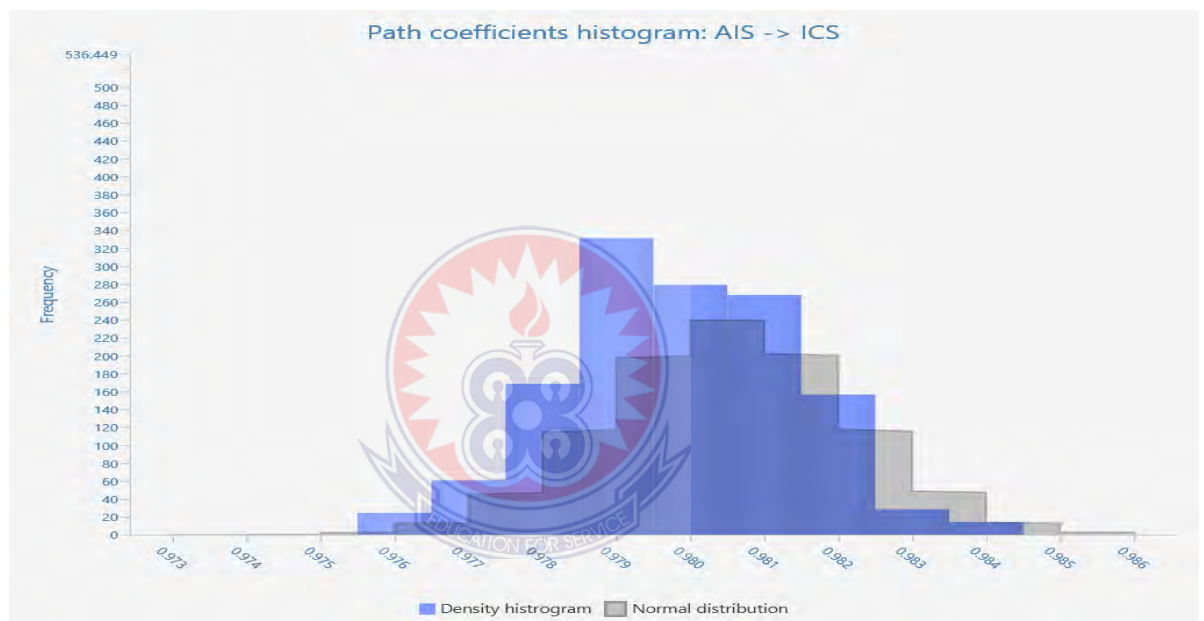
**Table 4.4: Descriptive statistics of responses on FMD**

Name	Mean	Stdev	Kurtosis	Skewness
FM01	4.288	0.663	-0.762	-0.399
FM02	4.102	0.722	1.322	-0.863
FM03	4.239	0.812	-1.34	-0.466
FM04	4.239	0.717	-0.993	-0.391
FM05	4.39	0.562	-0.813	-0.222

From Table 4.4, the responses from the respondents indicates that they were in agreement with the statement posed to them. This is seen from the mean value

responses where are all greater than 4. Again, the kurtosis and skewness indicate that, the distribution is negatively skewed.

The histogram in Figure 4.1 indicates that, the distribution is not all that far away from normality. These, both AIS and ICS, could be attributed to the larger number of respondents agreeing to the posed statements. To look further into the factors affecting the adoption of AIS and ICS, a correlation between the variables were also examine. The results are indicated in Table 4.4.



**Figure 4 1: Histogram of the distribution**

Basically, the assumption underlying the interpretation of the correlation matrix is that, a correlation coefficient must be greater than 0.6 to be considered high so that the grouping of such variables could be done. From Table 4.5, CA02 (technological changes) and CA07 (political influence); CA02 and CA08 (legality); CA02 and CA10 (Cost of training) highly correlate among themselves. Other variables that correlate with CA02 are CA11 (threat in data security), CA12 (effect on staff), CA13 (maintenance cost) and CA15 (policy for adoption of AIS). The ICS variables IC01 (control consciousness of employees), IC02 (control procedure for revenue receipts),

IC04 (identification and analysis of risks), IC05 (systems and processes), IC06 (availability of policies and procedures) and IC07 (assessment of the quality of internal control system). This indicates that the group of variables (CA02, CA07, CA08, CA10 – CA13, CA15, IC01, IC02, IC05 – IC07) are likely to correlate with the same underlying factors. The results in Table 4.4 indicate that, most of the variables are likely to correlate among themselves with the same underlying factors. The table did not include the financial management decision (FMD) because none of them have correlation coefficient greater than 0.6.



**Table 4.5: Correlation matrix of AIS and ICS**

	CA01	CA02	CA03	CA04	CA05	CA06	CA07	CA08	CA09	CA10	CA11	CA12	CA13	CA14	CA15	CA16	IC01	IC02	IC03	IC04	IC05	IC06	IC07
CA01	1																						
CA02	-0.381	1																					
CA03	0.126	-0.768	1																				
CA04	-0.479	-0.597	0.651	1																			
CA05	0.348	0.542	-0.473	-0.726	1																		
CA06	0.124	0.004	-0.168	-0.258	0.356	1																	
CA07	0.251	-0.922	0.956	0.667	-0.534	-0.103	1																
CA08	0.126	-0.768	1	0.651	-0.473	-0.168	0.956	1															
CA09	0.188	-0.465	0.458	0.164	0.032	0.799	0.49	0.458	1														
CA10	0.126	-0.768	1	0.651	-0.473	-0.168	0.956	1	0.458	1													
CA11	-0.235	-0.738	0.884	0.931	-0.676	-0.24	0.872	0.884	0.322	0.884	1												
CA12	0.407	-0.782	0.908	0.492	-0.244	-0.282	0.907	0.908	0.299	0.908	0.741	1											
CA13	-0.126	0.768	-1	-0.651	0.473	0.168	-0.956	-1	-0.458	-1	-0.884	-0.908	1										
CA14	0.097	0.379	-0.884	-0.505	0.287	0.24	-0.707	-0.884	-0.322	-0.884	0.737	0.741	0.884	1									
CA15	-0.188	0.696	-0.808	-0.438	0.217	-0.445	-0.807	-0.808	-0.894	-0.808	0.659	0.657	0.808	0.659	1								
CA16	-0.194	0.597	-0.651	-0.31	0.095	-0.639	-0.667	-0.651	-0.973	-0.651	-0.505	-0.492	0.651	0.505	0.973	1							
IC01	0.126	-0.768	1	0.651	-0.473	-0.168	0.956	1	0.458	1	0.884	0.908	-1	-0.884	-0.808	-0.651	1						
IC02	-0.009	-0.697	0.956	0.667	-0.534	-0.103	0.897	0.956	0.49	0.956	0.872	0.79	-0.956	-0.872	-0.807	-0.667	0.956	1					
IC03	0.003	-0.768	0.597	-0.768	-0.76	0.697	0.768	-0.768	-0.768	0.768	0.738	0.782	-0.768	-0.768	-0.768	-0.768	0.768	0.697	1				

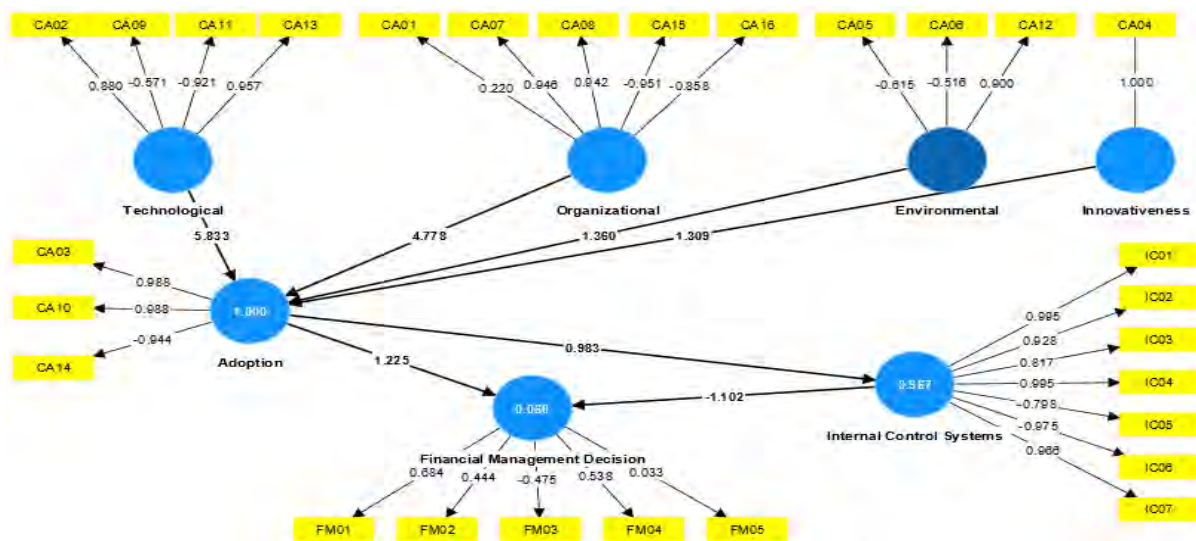
		0.508			0.542				0.217				0.768	0.738	0.244	0.014									
IC04	0.126	- 0.768	1	0.651	- 0.473	- 0.168	0.956	1	0.458	1	0.884	0.908	-1	- 0.884	- 0.808	- 0.651	1	0.956	0.768	1					
IC05	- 0.378	0.737	- 0.805	- 0.383	0.118	- 0.235	-	-	-	-	-	-	0.805	0.624	0.872	0.809	-	-	-	-	1				
IC06	- 0.077	0.697	- 0.956	- 0.667	0.534	0.45	-	-	-	-	-	-	0.956	0.872	0.6	0.4	-	-	-	-	0.659	1			
IC07	0.263	- 0.768	0.946	0.567	- 0.356	- 0.222	0.923	0.946	0.376	0.946	0.806	0.945	- 0.946	- 0.806	-	-	0.946	0.809	0.768	0.946	-	-	1		

Source: Field data (2022)



#### **4.1.2 Impact of accounting information system and internal control systems on financial management decision**

Research question one looks at the impact of accounting information system (AIS) on the financial management decision in the public hospitals while research question two looks at the moderating role the internal control system (ICS) play on the relationship between the AIS and the financial management decision (FMD) in the public hospitals. In order to achieve these objectives, structural equation modelling (SEM) was applied. From Figure 4.2, variables CA02, CA03, CA04, CA07, CA08, CA10, CA12, IC01, IC02, IC03, IC04 and IC07 have factor loadings greater than 0.7 indicating that there is a high correlation between the variables and the AIS. Similarly, IC01 to IC04 have factor loadings greater than 0.7 which also indicates that there is high correlation between the variables and the ICS. The rest of the variables with factor loadings less than 0.7 indicates that, there are some issues on indicator reliability. The R-Square of 0.965 (96.5%) indicates that 96.5% change in the ICS can be accounted by the AIS. Again, the beta coefficient of 0.982 which is way bigger than 0.2 indicates that AIS strongly influence ICS and for that matter, the financial management decision of the hospitals.



**Figure 4.2: Graphical representation of Structural Equation Modelling (SEM)**

#### 4.1.3 Model fitness test

To test whether or not the hypothesized model fits the data obtained from the field, the model fitness test was carried out. Figure 4.2 is the graphical representation of the Partial Least Square Structural Equation Model (PLS-SEM). As PLS-SEM processes standardized data, the path coefficients indicate the changes in an endogenous construct's values that are associated with standard deviation unit changes in a certain predictor construct, holding all other predictor constructs constant. But the performance of the entire construct is measured by the average variance extracted (AVE). AVE is a measure of the amount of variance that is captured by a construct in relation to the amount of variance due to measurement error. To be able to measure the AVE, we compute the path coefficients of the model. Table 4.5 gives the correlation matrix for the path coefficient of the variables of the outer loadings of the model. In a path analysis model from the correlation matrix, two or more casual models are compared. The path of the model is shown by a square and an arrow,



which shows the causation. Regression weight is predicated by the model. Again, the performance of each variable is measured by the variance extracted by that variable. So, if the path coefficient of the variable is greater than 0.7, it means at least 50% variance could be extracted by the variable. That is, if any statement could not extract 50% variance, that statement should not be included in our model.

The assessment of the reflective measurement model includes composite reliability to evaluate internal consistency, individual indicator reliability and AVE to evaluate convergent validity and Fornell-Larcker criterion and cross loadings are used to assess discriminant validity of the model (Hair et al., 2017).

#### **4.1.4 Validity and reliability of the model**

The analysis of the study started by first measuring the reliability and validity of the model. In the case of the reliability of the model, we look at the indicator reliability and for that, the item loading should be greater than 0.7. For the internal consistency reliability, the composite reliability and Cronbach's Alpha, the item loading should also be greater than 0.7 and Rho\_A should also be more than 0.7. Like Cronbach's alpha, Raykov's rho (also known as reliability rho and composite reliability), ranges between zero and one. The higher its value the more reliable the item scale. A value of rho above 0.7 indicates good internal consistency, while below 0.7 represents the lower limit of adequacy (Hair et al., 2017). In the case of the validity, for convergent validity, the AVE should be greater than 0.5. For divergent validity, using the Fornell-Larcker Criteria (FLC), the coefficient matrix should be a diagonal matrix and Heterotrait-Monotrait Ratio (HTMT) should be less than 0.85 (Hair et al., 2017).

**Table 4.6: Outer loading matrix of the model**

	<b>Adoption</b>	<b>Environmental</b>	<b>Financial Management Decision</b>	<b>Innovative</b>	<b>Internal Control System</b>	<b>Organizational</b>	<b>Technological</b>
CA01						0.22	
CA02							0.88
CA03	0.988						
CA04				1			
CA05		-0.615					
CA06		-0.516					
CA07						0.946	
CA08						0.942	
CA09							-0.571
CA10	0.988						
CA11							-0.921
CA12		0.9					
CA13							0.957
CA14	-0.944						
CA15						-0.951	
CA16						-0.858	
FM01			0.048				
FM02			0.509				
FM03			0.627				
FM04			0.841				
FM05			0.375				
IC01					0.995		
IC02					0.928		
IC03					0.817		
IC04					0.995		
IC05					-0.798		
IC06					-0.975		
IC07					0.966		

*Note:* Bolded ones indicates that the path coefficient is more than 0.7

From Table 4.5, all the values bolded have the path coefficients greater than 0.7. This indicate that 50% variance could be extracted from those variables. Since not all the coefficients are greater than 0.7, we need to indicate which of the variables are relevant. To indicate which of the variables are relevant, the outer loading relevance testing was used. Table 4.6 gives the construct reliability and validity of the outer loadings.

**Table 4.7: Construct reliability and validity for the outer loadings**

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Adoption	-1.571	0.976	0.874	0.949
Environmental	-0.192	0.71	0.033	0.485
Financial Management Decision	0.367	0.179	0.622	0.3
Internal Control System	0.277	0.979	0.898	0.861
Organizational	-0.846	0.971	0.055	0.694
Technological	-3.557	0.942	0.095	0.716

Since not all coefficients are greater than 0.7, we cannot say that reliability and validity have been achieved

#### 4.1.5 Factor extraction and renaming of factors

In this section, the underlying factors that look at the factors that influence the AIS in the public hospitals using factor analysis using the principal component extraction method in the SPSS. Table 4.8 displays the factor analysis of the variables CA01 to CA16 and IC01 to IC07 with communality for each factor being 1. There were 23 variables for the factor analysis but the first 6 factors which were gives relatively 100% as indicated by the variance (Eigenvalues) of the factors as shown in Table 4.8. The remaining 16 factors are all having 0% variance (Eigenvalues).

**Table 4.8: Total variance explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	15.949	69.345	69.345	15.9	69.3	69.34	12.9	56.3	56.3
2	3.643	15.840	85.185	4.9	45	5	53	17	17
3	1.835	7.976	93.161	3.64	15.8	85.18	4.19	18.2	74.5
4	1.010	4.390	97.552	3	40	5	5	37	55
5	.387	1.682	99.233	1.83	7.97	93.16	3.44	14.9	89.5
6	.176	.767	100.00	5	6	1	8	90	45
7	9.442E-15	4.105E-14	100.00	0	0	2	2	7	52
8	7.427E-15	3.229E-14	100.00						
9	6.012E-15	2.614E-14	100.00						
10	2.333E-15	1.014E-14	100.00						
11	1.377E-15	5.986E-15	100.00						
12	9.186E-16	3.994E-15	100.00						
13	2.737E-16	1.190E-15	100.00						
14	-1.061E-16	-4.613E-16	100.00						
15	-2.215E-16	-9.629E-16	100.00						
16	-3.713E-16	-1.614E-15	100.00						
17	-1.190E-15	-5.175E-15	100.00						
18	-1.856E-15	-8.069E-15	100.00						
19	-2.111E-15	-9.176E-15	100.00						
20	-3.215E-15	-1.398E-14	100.00						
21	-5.636E-15	-2.450E-14	100.00						
22	-1.072E-14	-4.663E-14	100.00						
23	-1.368E-14	-5.947E-14	100.00						

**Source:** Author's computation from field data. **Extraction Method:** Principal Component Analysis

From Table 4.8, the eigenvalues for the factors are decreasing in order of magnitude from factor 1 to factor 6 and through to factor 7 to factor 23. Factors 1 to 4 accounts

for 97.552% of the total variance in the data and after rotating the sum of square loading the accumulated percentage variance still remains as 97.552%. The remaining two factors accounted for 2.448% of the total variance. From Tables 4.2 and 4.3, 23 factors were extracted, only 4 were useful in determining the reason for adopting AIS and so only a smaller number of factors were extracted for the adoption of the AIS in management decision making. Therefore, using the criterion of retaining only factors with eigenvalues of 1 or greater, the first 4 factors were retained for interpretation since it accounts for whopping accumulated percentage variance of 97.552%. since the remaining 19 factors with the majority being the 5<sup>th</sup> and 6<sup>th</sup> factors account for only 2.448%, using additional factor out these 19 factors is marginal and hence the decision to retain only the first 4 factors.

The rotated component matrix after 6 iterations indicated in Table 4.9 was obtained using the Varimax rotation method with Kaiser Normalization. Twenty-three variables were presented by the matrix. The matrix presents the correlation or loadings between 23 variables considered and the 4 extracted factors, which indicates how closely the variables are related to each extracted factor. Correlation coefficient of 0.6 or high was considered to be significant and therefore such variables loads on the extracted factor.

**Table 4.9: Rotated component matrix**

		<b>Component</b>			
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
CA01	We are obliged to adopt once is government policy to adopt	.110	.104	-.322	.924
CA02	We adopt AIS when there is a change in trend in technology	-.510	-.289	-.607	-.532
CA03	Complexities of the AIS discourage us from adopting AIS	.923	.216	.301	.101
CA04	Innovativeness is key in our adoption of AIS	.487	.047	.771	-.277
CA05	Data security cost deter us in the adoption of AIS	-.256	.132	-.880	.120
CA06	Set-up cost is higher and thus discourage our adoption of AIS	-.346	.923	-.165	.012
CA07	Political influence determines whether or not we have to adopt AIS	.791	.263	.460	.305
CA08	We have no option to adopt if it is legal requirement to adopt	.923	.216	.301	.101
CA09	AIS comprehensibility makes adoption easier	.250	.964	.035	.072
CA10	Training cost deter us from adoption of AIS	.923	.216	.301	.101
CA11	Data security threat make us vulnerable when we adopt	.745	.133	.621	-.123
CA12	When we adopt AIS, we would have to lay some staffs off	.885	.049	.154	.397
CA13	Maintenance cost deter us from adoption of AIS	-.923	-.216	-.301	-.101
CA14	We are not psychologically just not ready to adopt	-.960	-.101	.010	.243
CA15	We also do not have clear policy to apply AIS	-.632	-.748	-.175	-.099
CA16	There is no legal backing to adopt AIS	-.454	-.879	-.108	-.088
IC01	Employee have a high level of control consciousness in all aspect of operations	.923	.216	.301	.101
IC02	There is control procedure in receiving revenue and other income	.857	.268	.347	-.060
IC03	There is a control in requesting for commitments and payments	.833	-.458	.305	.059
IC04	There are processes to identify and analysed relevant risks of achieving organisational objectives	.923	.216	.301	.101
IC05	There are systems and processes to support the identification , capture, and exchange of information	-.691	-.531	-.093	-.344
IC06	There are policies and procedures available to help ensure management directives are carried out.	-.939	.080	-.322	-.088
IC07	There are processes available to assess the quality of internal control performance over time	.900	.136	.219	.268

Rotation Method: Varimax with Kaiser Normalization. Extraction Method: Principal

Component Analysis. a. Rotation converged in 6 iterations.

From Table 4.9, variable CA03 (Complexities of AIS), CA07 (political influence), CA10 (cost of training), CA11 (threat in data security, CA12 (effect on staff), CA13 (maintenance cost), CA14 (readiness for adoption), CA15 (policy for adoption of AIS), CA16 (legal backing for adoption of AIS) loads significantly on factor 1. The rest that loads significantly on factor 1 are IC01 (control consciousness of employees), IC02 (control procedures for revenue receipt), IC03 (commitments and payments), IC04 (identification and analysis of risk), IC05 (systems and processes), IC06 (availability of policies and procedures) and IC07 (assessment of the quality of the internal control system).

From Table 4.5, variables CA03, CA07, CA10, CA11, CA12, CA13, CA14, CA15, IC01, IC02, IC03, IC04, IC05 and IC06 have significant correlation between each pair which shows that these variables are driven by a common underlying factor. Since they are all related to internal control systems, factor 1 was re-labelled as **Internal Control Factor (ICF)**.

From Table 4.9, the variables CA06 (Set-up cost), CA09 (AIS comprehensibility), CA15 (policy for adoption of AIS) and CA16 (Legal backing for adoption of AIS) loads significantly on factor 2. From Table 4.5, variables CA09 and CA06 have higher correlation between them, CA15 and CA09 have higher correlation between them, CA16 and CA09 have higher correlation between them and CA16 and CA15 also have higher correlation between them but CA15 and CA06 do not have higher correlation between them. This indicate also that these variances in these variables are also driven by a common underlying factor and these variables are in relation to policies and cost and so factor 2 was rename as **policy and cost factor**.

Thirdly, from Table 4.9, CA02 (Technological changes), CA04 (Innovation), CA05 (Cost of data security) and CA11 (Threat in data security) loads significantly on factor 3. From Table 4.5, CA02 and CA04 do not have correlation between them and CA02 and CA05 do not have higher correlation between them but CA02 and CA11 correlates highly between them, CA04 and CA05 correlates significantly between themselves, CA04 and CA11 correlates significantly between themselves and CA05 and CA11 also correlates significantly between themselves. Hence the variances in the variables CA02, CA04, CA05 and CA11 are likely to be explain by factor 3. Factor 3 was re-labelled as **technological factor**. Finally, from Table 4.9, CA01 (Government adoption policy) is the only variable that loads significantly on factor 4 and so factor 4 was re-labelled as **Government policy**.

In summary, 4 factors were identified as the main factors that influence the adoption of AIS in the public hospitals in the central region of Ghana. These are; factor 1: **internal control factor (ICF)**, factor 2: **policy and cost factor (PCF)**, factor 3: **technological factor (TF)** and factor 4: **Government policy (GP)**.

#### **4.2 Impact of AIS on Financial Management Decision (FMD) and the Moderating Role of Internal Control Systems.**

The first objective was to look at the impact of AIS on the financial management decision in the public hospitals. The hypothesis formulated for the impact of AIS on FMD is that, there is no significant relationship between adoption of computerized accounting information system drivers and financial performance of the public hospitals in Central Region. The hypothesized model shown in Figure 2.1 was put to the test using structural equation modeling (SEM), which enables the evaluation of several paths simultaneously. The result of the path analysis is presented a path



diagram shown in Figure 4.1. The two hypotheses were tested by conducting bootstrap analysis with bias-corrected 95% confidence interval where 500 sub-samples were created with observations randomly drawn from the original set of data.

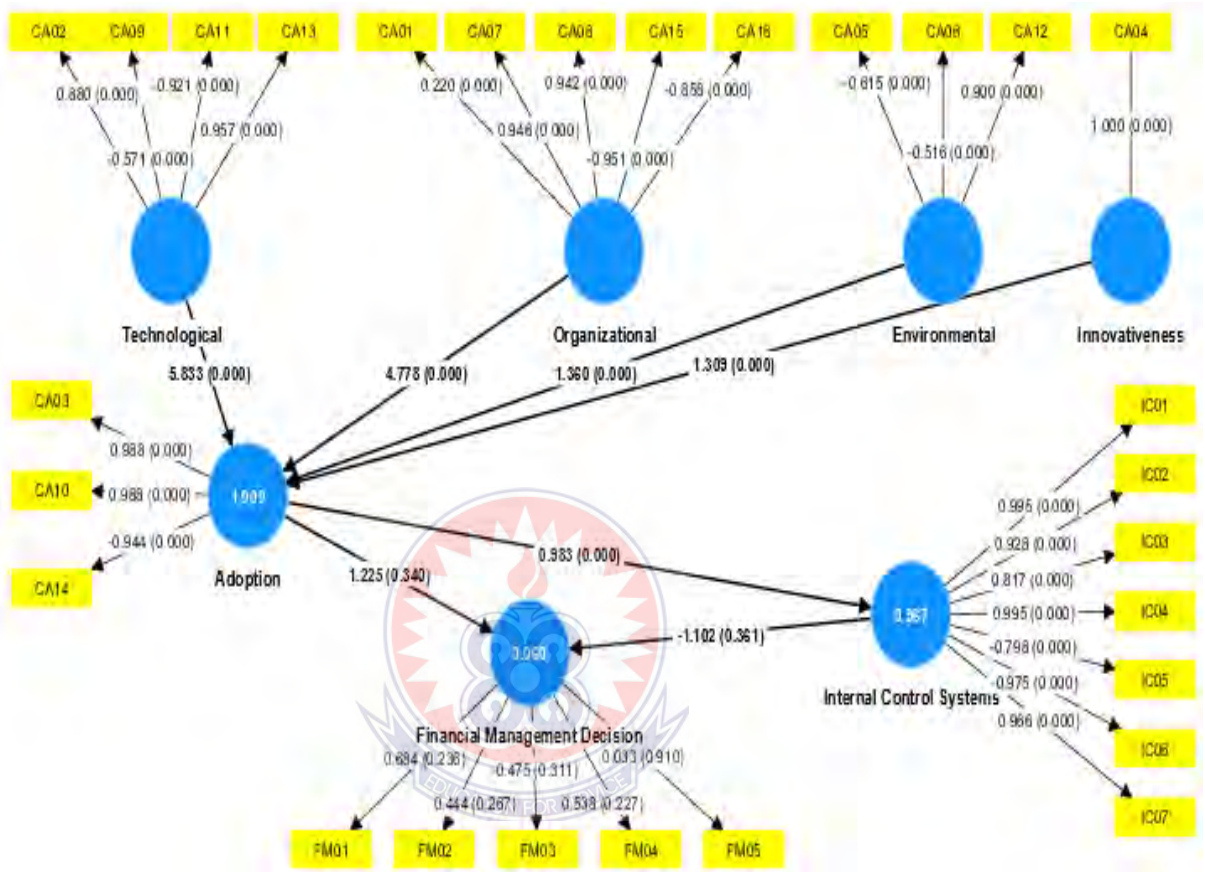
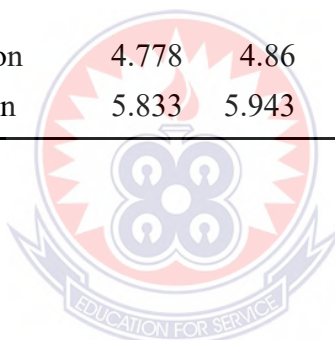


Figure 4.3: Path diagram for the hypothesized model

The results of the bootstrap analysis are shown in tables 4.10 and 4.11 respectively.

**Table 4.10: Indirect of the hypothesized model**

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T-Value	P values	Decision on null hypothesis
Adoption -> Financial Management Decision	1.225	0.542	1.283	0.955	0.34	Rejected
Adoption -> Internal Control Systems	0.983	0.983	0.002	403	.000	Accepted
Environmental -> Adoption	1.36	1.375	0.283	4.811	.000	Accepted
Innovativeness -> Adoption	1.309	1.342	0.361	3.629	.000	Accepted
Internal Control Systems -> Financial Management Decision	-1.1	-0.42	1.205	0.914	0.36	Rejected
Organizational -> Adoption	4.778	4.86	0.903	5.291	.000	Accepted
Technological -> Adoption	5.833	5.943	1.322	4.411	.000	Accepted



**Table 4.11: Total effects of the hypothesized model**

	Original sample (O)	Sample mean (M)	STDEV	T-Value	P-values	Decision on null hypothesis
Adoption -> Financial Management Decision	0.141	0.129	0.139	1.016	.31	Rejected
Adoption -> Internal Control Systems	0.983	0.983	0.002	402.205	.000	Accepted
Environmental -> Adoption	1.36	1.379	0.275	4.937	.000	Accepted
Environmental -> Financial Management Decision	0.192	0.173	0.197	0.973	0.331	Rejected
Environmental -> Internal Control Systems	1.337	1.356	0.268	4.99	.000	Accepted
Innovativeness -> Adoption	1.309	1.347	0.352	3.722	.000	Accepted
Innovativeness -> Financial Management Decision	0.185	0.169	0.198	0.936	0.349	Rejected
Innovativeness -> Internal Control Systems	1.287	1.324	0.342	3.757	.000	Accepted
Internal Control Systems -> Financial Management Decision	-1.102	-0.438	1.201	0.917	0.359	Rejected
Organizational -> Adoption	4.778	4.864	0.885	5.398	.000	Accepted
Organizational -> Financial Management Decision	0.675	0.617	0.693	0.974	0.330	Rejected
Organizational -> Internal Control Systems	4.698	4.78	0.86	5.466	.000	Accepted
Technological -> Adoption	5.833	5.951	1.293	4.51	.000	Accepted
Technological -> Financial Management Decision	0.824	0.75	0.857	0.961	0.336	Rejected
Technological -> Internal Control Systems	5.735	5.848	1.258	4.559	.000	Accepted

#### **4.2.1 The impact of Accounting Information System (AIS) on the Financial Management Decision (FMD) in the public hospitals**

The hypothesis guiding this study is that, there is no significant relationship between adoption of computerized accounting information system drivers and financial performance of the public hospitals in Central Region

From tables 4.10 and 4.11, the adoption of AIS and the internal control system have significant impact on the financial management decision since the p-values in both tables (0.34 as in Table 4.10 and 0.31 as in Table 4.11) are greater than 0.05, the  $\alpha$  –values indicating a rejecting in the null hypothesis and therefore accepting the alternate hypothesis which says that there is an impact of AIS on the financial management decision of the public hospitals.

#### **4.2.2 The moderating role of internal control systems in the relationship between AIS and financial Management Decision (FMD)**

The null hypothesis guiding research question 2 is stated as follows: Internal control systems does not significantly moderate the relationship between adoption of accounting information system adoption drivers and financial performance of public hospitals in Central Region. From the two tables, the null hypothesis was rejected since the p-values in both tables (0.36 as in Table 4.10 and 0.359 as in Table 4.11).

#### **4.3 Discussion of Results**

Four factors were shown to be the primary determinants of AIS implementation in Ghana's public hospitals in the central area. These include internal control factor (ICF), policy and cost factor (PCF), technology factor (TF), and government policy factor (GP).

According to the survey, management are more likely to choose a reasonably priced AIS technology than a more expensive one when administering their accounting information systems. Notably, it was discovered that the complexities of the AIS, political influence, threat in data security readiness for adoption and policy for adoption were among the leading predictors of AIS adoption of the management. This result is consistent with research by Senyo et al., (2016) and Thong (1999), who found that public sector organizations, particularly those in developing nations, frequently depend on the central government for funding and have a variety of policies to pursue. As a result, they are not financially stable and frequently choose to implement less expensive technology. The results are also in line with the TOE framework's technological dimension, which proposed that system affordability has an impact on whether a new technology is adopted.

The first research question looks at the impact of the accounting information systems (AIS) on financial management decision. The outcomes of our research on accounting information systems show that the adoption and integration of accounting information systems have an impact on organizational performance. These high correlations suggest that hospitals' ability to deploy and integrate their information systems is a key factor in how well they perform in the hospitals. The results of this thesis fascinatingly reveal that the performance of accounting information systems was affected differently. In addition, integration of accounting information systems is more conducive to improving organizational performance than deployment of accounting information systems.

Research question 2 looks at the moderating role of the internal control systems in the relationship between accounting information system and the financial management decision.

This variable examined whether the public hospitals that participated in the study adhered to the policies and procedures base on the ICS. All of the respondents were in agreement with the statements posed on them. To each of the questions or variables, indicating unequivocally that all hospitals and clinics adhere to the aforementioned policies and procedures, which are all a part of an organization's internal control systems. These comments are thought to be a true reflection of the reality in the organization given the working experience and positions held by the respondents. Additionally, the research asked respondents to strongly disagree (SD), disagree (D), be neutral (N), agree (A), or strongly agree (SA) to specific internal control system component constructions in order to learn more about the components of the hospitals' internal control systems. The results indicates that all the respondents agreed that the health facility's philosophy and operating style are explicitly expressed in the entity.

It is evident from the study that public hospitals have attained efficacy through the deployment of internal control systems. These statistics pertain to the effectiveness of internal controls on public hospitals. According to the authors, the overall proportion of respondents who either agreed or strongly agreed to the assertions about the effectiveness of the internal control system is what led to this conclusion. The percentage of respondents who agreed and strongly agreed in each situation (in the case of public and private hospitals) exceeded 50%.

Internal control systems are not ideal systems; hence it is crucial to note that they are typically expected to achieve tolerable efficiency rather than perfect efficiency. Internal control mechanisms in public hospitals were, to a large extent, shown to be satisfactorily effective by the disclosure of the findings. Internal control systems offer reasonable assurance, not absolute assurance, as is asserted by Lannoye (1999). In this regard, it is crucial to clarify that, no matter how effectively and efficiently the internal control system functions, it is incredibly difficult to achieve perfect confidence with regard to the goals the healthcare facility intends to accomplish.



## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATION

#### 5.0 Overview

This section looks at the summary of the study, the conclusion and recommendation of the study.

#### 5.1 Summary of the Study

The study aims to investigate the impact of accounting information systems (AIS) on the financial management decision (FMD) and the moderating role of the internal control system (ICS) on the FMD. A cross-sectional design was employed in this study. The population for the study was all public hospitals in the Central Region of Ghana. Convenient sampling technique was employed to select four (4) hospitals in the Efutu and Agona Swedru municipalities. A total of 250 questionnaires were administered to the respondents but a total of 205 representing 82% of the total sample selected. The study employed partial-least square structural equation modelling (PLS-SEM) for the analysis of the results. The study identified internal control factors (ICF), policy and cost factor (PC), technological factor (TC) and government policy (GP) as the four (4) factors that influence the adoption of AIS in the public hospitals. The study also revealed that, the AIS and ICS have positive influence on the financial management decision of the public hospitals in the central region of Ghana.



## 5.2 Conclusion

First, the study comes to the conclusion that the management have been slow to implement the technology-based accounting information system due to a lack of expertise and inadequate awareness of the potential benefits of AIS adoption and their subsequent impact on financial performance. Second, cost (i.e., the cost of purchase, installation, and maintenance) prevents management from implementing AIS technology. According to Awiagah et al. (2016), management encounter difficulties when trying to invest money in the acquisition and deployment of these systems, which frequently slows down their efforts to adopt the necessary innovations in their accounting systems. The study also comes to the conclusion that government assistance geared toward encouraging management of the hospitals' technology use would have a favourable impact on AIS adoption since it would increase management readiness for AIS.

Finally, the study indicates that the use of AIS improves the performance of management by improving the quality of financial information generated and also by enhancing operational efficiency. The improved quality of financial information generated as a result of AIS adoption is expected to aid decision making and to promote accountability and transparency in public financial management. Furthermore, the improved operational efficiency that comes with AIS adoption is expected to reduce cost and the time needed to complete financial transactions. In conclusion, the study affirms that the adoption of AIS technology in the financial decision making of the public hospitals has the potential to improve the performance of financial section. However, adequate knowledge and awareness of the potential

benefits, government support, and cost reduction measures are needed to encourage hospitals to adopt AIS technology.

### **5.3 Recommendation**

The following recommendations were made from the study:

#### **5.3.1 Policy recommendation**

1. Government initiatives should improve hospital technology use, with a focus on ICT education, training, and awareness-building initiatives for key staff controllers such financial officers, budget officers, and internal auditors. ICT education will raise awareness of the potential advantages of AIS adoption, which will then encourage support for the concept.
2. The Ghana Integrated Management Information System (GIFMIS) is being adopted, which is a step in the right direction because it aims to automate all types of accounting tasks. Nevertheless, the report suggests that since only a small number of hospitals are now connected to the system, government should hasten adoption and implementation processes to cover all hospitals.

#### **5.3.2 Practitioner's recommendation**

1. The cost of adoption has a substantial and inverse relationship with financial performance, which was one of the study's key findings. Therefore, it is advised that hospitals investigate AIS technology based on Software-as-a-Service (SaaS), also known as cloud accounting, subject to the approval of the approving authority. Numerous empirical studies have demonstrated that cloud accounting systems are significantly less expensive than locally hosted AIS systems. In addition, cloud accounting systems will lower the cost of

hiring specialized network administrators to manage local servers hosting AIS systems, which will lower AIS management costs. It makes sense that in a SaaS setup, direct expenses of administering AIS systems would primarily be handled by the SaaS provider and shared among subscribers, making the cost of adoption substantially less expensive than locally hosted AIS.

2. One of the study's key conclusions was that organizational readiness (in terms of technical expertise, governmental regulations, and institutional structures) influences AIS adoption and has a direct bearing on hospitals' financial performance. The study suggests that hospitals supplement their lack of AIS expertise by working with outside AIS experts, such as consulting companies and IT vendors, to help train and equip their staff with the necessary technical know-how for AIS application and set up the necessary institutional structure for AIS adoption. This is likely to have a positive impact on the performance of the hospitals in terms of revenue mobilization and expenditure management.

#### **5.4 Further Study**

The recent research centred on AIS generally. Future research may focus on certain AIS topics, such as computerized assisted assistance procedures, automated revenue management systems, and automated spending management systems.

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## APPENDIX

### Questionnaire

SN	<b>Instructions:</b> The following questions ask you about the extent to which you agree to the following factors as being a driver for the adoption of accounting information system (AIS) in this Assembly	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly disagree</b>
1	We are obliged to adopt once is government policy to adopt					
2	We adopt AIS when there is a change in trend in technology					
3	Complexities of the AIS discourage us from adopting AIS					
4	Innovativeness is key in our adoption of AIS					
5	Data security cost deter us in the adoption of AIS					
6	Set-up cost is higher and thus discourage our adoption of AIS					
7	Political influence determines whether or not we have to adopt AIS					
8	We have no option to adopt if it is legal requirement to adopt					
9	AIS comprehensibility makes adoption easier					
10	Training cost deter us from adoption of AIS					
11	Data security threat make us vulnerable when we adopt					
12	When we adopt AIS, we would have to lay some staffs off					
13	Maintenance cost deter us from adoption of AIS					
14	We are not psychologically just not ready to adopt					
15	We also do not have clear policy to apply AIS					
16	There is no legal backing to adopt AIS					

	<b>Instructions</b> The following questions ask you about the extent to which you agree to the following statement on the effectiveness of your internal control system (ICS)	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly disagree</b>
1	Employee have a high level of control consciousness in all aspect of operations					
2	There is control procedure in receiving revenue and other income					
3	There is a control procedure in requesting for commitments and payments					
4	There are processes to identify and analysed relevant risks of achieving organisational objectives					
5	There are systems and processes to support the identification, capture, and exchange of information.					
6	There are policies and procedures available to help ensure management directives are carried out.					
7	There are processes available to assess the quality of internal control performance over time					
	<b>Instructions</b> The following questions ask you about the extent to which AIS and ICS helps in the financial management decision	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly disagree</b>
1	AIS and ICS help to improve financial management decision of the hospital					
2	The inputs of AIS and ICS are presented in an easily and clear manner and improves financial management decision					
3	Accurate information in financial records improves the management of the hospital due to the AIS and ICS					
4	ICS is effective in their mediating role in the financial management decision.					
5	I prefer using computerized accounting system.					