UNIVERSITY OF CAPE COAST

USE OF ACCOUNTING INFORMATION SYSTEM FOR DECISION MAKING: PERCEPTION OF SME OWNERS IN THE TAMALE METROPOLITAN AREA

JOSEPH KWAME AFFUM

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BY

JOSEPH KWAME AFFUM

Dissertation submitted to the Department of Accounting, School of Business, University of Cape Coast in partial fulfillment of the requirement for the award of Master of Business Administration Degree in Accounting.

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DECLARATION

Candidate's Declaration

I hereby declare that the presentation of this dissertation is the result of own original research and that no part of it has been presented for another degree in this university or elsewhere.

Signature:.. Date:.................................

Name: Joseph Kwame Affum

Supervisor's Declaration

I hereby declare that this dissertation preparation and presentation were duly supervised in accordance with the guidelines on supervision of a dissertation laid down by the University of Cape Coast, School of Graduate Studies.

Supervisor's Signature:........................ Date:.................................

Supervisor's Name: Dr. Dominic Owusu

ABSTRACT

The perceptions of individuals about a phenomenon influence their adoption of the same or otherwise. The study was carried out in the Tamale metropolitan area to investigate the perceptions of owners of SMEs on the use of accounting information systems for decision-making. The study used the descriptive research design and the quantitative research approach. A sample size of 100 was used for the study. Structured questionnaires were used in gathering data which were later analyzed using descriptive statistics by the use of Statistical Package for Social Sciences version 26. The key findings of the study are that there exists a positive perception regarding the use of accounting information systems on the profitability and subsequent increase in market size, growth potentials, and overall improvement in the delivery of services in their business as well as the use of novel means of doing things and new information about the conduct of business operations. The study further concludes that industry players and owners of SMEs have the perception that a significant number of SMEs use computerized systems in their operations. Although, there is the perception that the nature of their business makes it difficult to employ the use of automation. The majority of industry players share the view that after the implementation of various forms of accounting information systems, they have experienced some improvements in several factors which represents a positive perception about the use of accounting systems. The study recommends that a conscious effort is made to encourage these businesses to adopt automation into their business, the government should put in measures to ensure that conducting business in the digital space becomes less costly through the granting of tax waive subsidies and other incentives to encourage the adoption of accounting information systems.

KEYWORDS

Accounting Information Systems

Decision Making

Accounting

Information Systems

Absorptive Capacity

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DEDICATION

To my Pastor, Rev. Bernard Azizu Abogorago, my wife, Mavis Amponsah, and my children Kojo Andoh, Kofi Afikurah, Adwoa Tonko, and Nhyera Akoto.

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CHAPTER ONE

INTRODUCTION

The various means of conducting business has over the years moved from the traditional means of recording business transactions to a form that employs the use of computers. Businesses the world over, whether small and medium scale enterprises, companies and corporations, over the years have made significant strides in incorporating automation and information systems into their operations because of the benefits it has on business deliverables. Small and medium scale enterprises in most developing economies across sub-Sahara Africa including Ghana have been reported to have had a lower rate of adoption of Accounting Information Systems (AIS). To ensure their sustainability and competitiveness, SMEs need access to timely and accurate information for effective decision making. This study aims to investigate the perception of SME owners in the regarding the use of AIS for decision-making processes with a focus on the metropolitan area in Ghana.

Background of the Study

The necessity has been laid on the world to infuse important and breadth-taking development of informatics and information technology, particularly data-driven wide-spread automation in the conduct of business and in making the everyday life of individuals much easier and comfortable (Akanbi, 2017). The need for a resilient architecture in business has proven the need for a system that can prevent most human shortfalls and improve the value for money. This resulted in the development and the spread of the different forms of user software we have in business.

When the radar is narrowed to business accounting needs, sophisticated information technology and architecture have been developed to make financial accounting and reporting more efficient as compared to those carried out with manual accounting means (Farhad & Asgar, 2015).

Recently, accounting software packages have been developed which supports book-keeping, recording economic events, processing in real time, and reporting – and in many cases they support the decision-making activities of the enterprise as an integral part of a complex, up-to-date, integrated information system. Their purpose is to collect, process and report accurate and timely information related to financial aspects of business events. This helps provide information in making decision about organization. An accounting information system is a collection of resource such as people and equipment designed to transform financial data into information.

The information is communicated to a wide variety of decision makers after it has gone through all the stages of processing. The function Accounting Information Systems play in the strategic business decision-making process of firms cannot be overemphasized. This is because of its ability to enhance the adoption and maintaining of a strategic position in achieving the aims and objectives of the organization. Information systems enhances the collation and integration of both financial and non-financial data about organization in the day-to-day operations of the business (Akanbi, 2017).

Most firms within the country are not making the most of AISs. They prefer the traditional methods of recording data and reporting them through such means. The ability of firms in our part of the world to recognize the value of

Accounting Information Systems and utilize it fully to their advantage has been a bone of contention, separating firms from good management decision making (Al-Okaily, 2021). This is known as Absorptive Capacity theory. Firms in the contemporary world value new information; thus, a lot of resources are allotted to research and development to help expand the operations of the firm, to increase market share and to increase firm growth. Through firm-based research, most firms have grown to understand the need for accounting information systems; which is a specialized sub system of management information system (Swalhah, 2014).

As Small, Medium and Small-Scale Enterprises (SMEs) as well as many giants in various industries commits huge sums of money to research and development in the area of accounting information systems, given the absorptive capacity of these firms; the perception about the use of these automated accounting systems and accounting information systems must be investigated. Generally, this study is carried out to gain insight into the perception of accounting information system use for decision making among SMEs in Ghana.

Statement of the Problem

Management and strategic decision makers who take wrong decision always end up not achieving their set goals and objectives. Many managers who tend to believe that they can operate their institutions successfully without the use of relevant information provided by their accountants, misses out on key economic indicators that tells the trend of growth and the viability of their operations; leading to economic failure such as liquidation (Akanbi, 2017).

So, the value relevant accounting information systems add to the business can never be overemphasized. Along with other congruent forms of management information systems, the information system is employed to evaluate and verify trade and business dealing where the sole idea is to prepare financial statement, provide valuable data to clients and to aid forecasts and decision making. Even though, the current age is all about computers, some information system is still operated as manual where records are made in large files and log books (Abubakar, 2014).

There has been a growing need over recent years for firms to effectively combine both external and internal technological knowledge, capitalize on them to create adequate competitive or absolute advantage. According to Zahra and George, (2002), management information system has grown to become an indispensable tool for effective decision-making process in today's turbulent world of business (Spatarelu & Petee, 2015). Recently, businesses are nurtured to invest in information technology architecture as it increases their efficiency, effectiveness and their overall performance.

Spatarelu and Petee (2015) has it that most of the information in organizations are accounting information and it cuts across the length and breadth of the organization. This statement is underpinned by the fact that the accounting information systems has components and elements of an entire organization, which provides information for users by processing financial events. Based on the accounting information function, which is used to provide information for making substantial decisions, and considering the two components of accounting (financial and managerial), we can assert that accounting has an internal information function, for the enterprise management, and an external one, for the third parties.

While the literature recognizes the importance of AIS for decision making in SMEs, there is limited research focusing on the specific perceptions and challenges faced by SME owners in the Tamale metropolitan area of Ghana. The existing studies often overlook the unique characteristics, resource constraints, and contextual factors that influence the perception and utilization of AIS among SME owners in this metropolitan area. Thus, there is a research gap that needs to be addressed to gain insights into the perceptions that influences the adoption of AIS and the specific challenges faced by SME owners in utilizing AIS for decision making.

This study aims to fill the research gap by investigating the perception of SME owners in Tamale metropolitan area regarding the use of Accounting Information Systems (AIS) for decision making. By examining the level of awareness, perceived benefits, challenges, and utilization of AIS, the study seeks to provide valuable insights into the factors influencing the adoption and effective use of AIS among SME owners.

Given the absorptive capacity of small and medium scale enterprises in Ghana, the integration of AIS into the operations of these businesses has been lagging. As new methods of recording data, processing and reporting to users are eminent, firms that are resistant to change will tend to under-utilize resources. The full return on capital will not be reaped and the firm stands the chance of being displaced out of business when a greater percentage of competitors use AIS to gain competitive advantage. The mishaps between effective use of accounting information systems and effective decision making among SMEs in Ghana calls for aggressive measures from all stakeholders such as owners, regulatory bodies, investors and the government to investigate the perception SME owners have on the use accounting information systems for decision making in small and medium scale enterprises in Ghana. The findings will contribute to enhancing the decision-making capabilities of SMEs and provide recommendations for the successful implementation of AIS in the Tamale metropolitan area. Hence the study.

Purpose of Study

The general objective of this research is to come out with findings on the perception of SME owners on the use of Accounting Information Systems (AIS) for their decision-making processes. This research was carried out in the context of the Tamale Metropolitan area, with a focus on the central business districts and major SME operational areas in the metropolis, with generalizations drawn from the findings to cover other SMEs in other major cities in the country with similar socio-economic conditions.

Research Objectives

It is the objective of the study to;

1. Analyse SME owners' perception of the use of Accounting Information Systems.
2. Examine SME owner's perception of the use of Accounting Information Systems for decision making.
3. To determine the perception of the extent to which SMEs use accounting information systems influences decision making.

Research Questions

1. What is the perception of SME owners on the use of Accounting Information Systems?
2. What is the perception of SME owners on the use of Accounting Information Systems for decision making?
3. What is the perception of the extent of SMEs use of Accounting Information Systems in decision making?

Significance of the Study

The significance of this study is to know the perception of SME owners on the use of accounting information systems for decisions of SMEs. It is the expectation of the researcher to come up with findings about how best SMEs owners perceive and are able to recognize the value in new information (Information Systems), use it in novel ways to solve problems in an attempt to provide value for profit. How decision-making processes are enriched through the use of relevant information which is made available for such purposes. Establishing the perceived use of AIS and the relevance it has on effective decision making will help SME operators to invest in modern AIS to give them relevant information that can help increase return on investment through effective decisions.

Undertaking this study also enhance the research skill of the researcher and will raise awareness about the current needs of effective decision-making variables. This will in the long run increase the survival levels of SMEs as effective decisions will be made which will increase profitability and return on investment.

Limitations

The study is a primary study which makes it prone to respondent biases, non-responses to data collection instruments by target respondents and the issue of assuring respondents of utmost confidentiality will be a limitation to the study. The study was conducted in a primarily muslin community setting which introduces it to a different dimension as to the non-cooperativeness by respondents. The cost incurred in getting relevant articles and journals for our study and also making our questionnaire available to the respondents were also a limiting factor.

Delimitations

This study focuses on selected SMEs within the Tamale metropolitan area in the Northern region of Ghana. With a focus on the central business districts, which captures majority of the SMEs. These businesses cut across relevant sectors of the economy including transport, manufacturing, financial, construction and agriculture sector. The researcher targeted the use of individuals with a wide range of experience working in such fields and who have had the opportunity to work in some other parts of the country. The study was carried out for three months. The decision making was considered as a dependent variable and the perception on accounting information systems was the independent variable. Pre-testing of instruments as well as assuring respondents of anonymity and confidentiality ensured that a significant portion of the limitations of the study were dealt with and will have a less significant impact on the findings of the study.

Definition of Terms

Accounting

Accounting can be described as a closed-end recording (which involves the collection of methods, legal proceedings, techniques, rules and experts), which includes the identification, measuring, recording, processing, storing, controlling and reporting of the phenomena affecting the equity, assets and profit status of the institution to the users of such information to permit informed judgement (Toth, 2012).

Information System

Information Systems can be described as a set of components and procedures interacting with each other to obtain, process and store the relevant data; and make them available in the right time and place; to aid the formulation of relevant decisions so as to contribute meaningfully to the goals and targets of an institution (Siyanbola, Maduemem, & Ogbebor, 2019). Therefore, an information system is said to be relevant when it produces results timely and accurately for the purpose it is seeks to serve.

Accounting Information Systems (AIS)

Regarded AIS as a collection of parts and sub- systems connected with each other and surrounding environment operating as a single overlap relationship. Each part depends on the other to achieve the goals sought by the comprehensive system of accounting, with the goal of providing data and information to decision makers (Siyanbola, Maduemem, & Ogbebor, 2019).

Absorptive Capacity

Absorptive Capacity refers to the extent to which firms recognize the value of new information, acquire and utilize it fully in novel ways to achieve their stated organizational objectives (Zahra & George, 2002).

Decision Making

Effective decision making refers to the process through which various alternatives are selected and then managed through implementation to achieve business objectives (CIMA, 2007).

Accounting system and sub-system

System is a set of interdependent elements that together accomplish specific objective. System must have organization, interrelationship, integration and central objective. Each part of system known as subsystem.

Structure Decision

This is a decision which is repetitive, routine, understood well enough that they can be delegated to low level of employee in the organization. An example is a decision taken to extend credit to established customers; which requires only knowledge about customers' credit limit and current balance. This is a type of decision that can often be automated.

Semi-Structured decision

This refers to the class of decisions which are characterized by incomplete rule for making the decision and the need for subjective assessment and judgments to supplement formal data analysis. Although such decision can’t be fully automated, they are often supported by computer-based decision aids.

Unstructured decision

This type is non-recurring and no routine decision. For example, choosing the cover of magazine, hiring senior management, and etc, no frame work or model exist to solve such problems instead, they require considerable judgment and intuition. Never the less, unstructured decisions can be supported by computer-based decision aid that facilitates gathering information from diverse source (Diaz & Villamizar, 2017).

Internal Users

Internal users are in a position to obtain financial information in a way that suits their needs. The primary internal users are managers of the company that involved in the daily affairs of business. But manager requirement depends on their level in organization or on the particular function they perform.

External Users

External users on the other hand are those not involved directly in operation of business and they need information that differs from the needed by internal users. Examples includes; -lenders, customers, government unit, stock holders and soon.

Organisation of Study

This study is organized into five chapters to help us achieve our stated objectives. Chapter one is the introduction and it covers the background to the study, the problem statement, the research objectives, research question, and significance to the study, delimitations, limitations, and the organization of the study.

Chapter two covers the literature review. This chapter reviews the theoretical, conceptual and the empirical review of accounting information systems and decision making. Chapter three covers the research methods. This chapter shows how the research methods were used and capture the research design, the data collection procedures, the population, sample, and data collection instruments. Chapter four covers the results and discussions. This chapter briefly restated the purpose of the study and summarizes the research method. Chapter five deals with the summary, conclusion, and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

Introduction

Decision-making in our contemporary business is a very key variable in the management and growth of organizations, the development of effective decision decisions is conceived as the brain and nerve centre of the organization which always drives the organisation closer to its targets and objectives. Abubakar (2014) defines decision-making as a process by which a business seeks to define the nature of a problem, a challenge or an opportunity, to bring about alternative solutions, to evaluate them and finally to choose among the available alternatives that seeks to solves the problem, need or challenge. In other varying ways, Rizza, Leotta, and Ruggeri (2017) defines decision making in three ways; first, as the choice of only one alternative of a set of decision alternatives, with guidance from the rational optics of the one making the decision, second, decision making is a process of eliminating alternatives with the exception of that option which is considered to best meet the objectives of the decision maker and third is the processing of data and information for the purpose of defining with which instructions a system eliminates deviations in its operation or can improve it.

Decision-making is a reality in the everyday running of enterprise, and because of this inevitable situation, many alternatives must be analysed for a choice which charts the course of the business in the desired direction it is set to undergo. For entrepreneurs, it is essential to incorporate the information about costing as well as proper product pricing of the products in order to stay in competition. Mostly people who must make decisions lack information, advance blindly and consider factors which aren't supposed to be factored when making these decisions. Within the information systems that support the decision-making process of businesses, the classification made amongst the various variables considers accounting a managerial administrative support subsystem that provides adequate information for management decision making. This is so because, it has been demonstrated overtime that accounting is an information system which is aimed at providing financial information to its internal users such as management and employees, and external users such as third parties and investors who are all users of the financial statements according to their information needs, therefore, allows them to assess the operations of the business enough to be able to make judgments and take decisions

This chapter looks at going through existing and previous literature and the contributions various researchers have made on the subject of Accounting Information Systems and Decision Making. A critical review was made into this study and previous literature was reviewed and analyzed to know what their findings were pertaining to this study. The chapter was captured in three (3) forms thus theoretical, empirical and conceptual review. The theoretical review elaborates on established theories about accounting information system and decision making, the relationship that exists between these theories, and the extent to which the theories have been researched and have contributed to knowledge and the decision-making variables of industry players. The empirical review looks at the various findings of other authors on the subject matter. The conceptual review provides other researcher's ideas on the concepts and how they have been applied to the subjects used in our study.

Theoretical Review

Under the theoretical review of this study, four (4) theories have been identified to have correlation with this study and all these were considered for this study. These are the Contingency Theory, Absorptive Capacity Theory, Agency Theory and Behavioural Theory. The paragraphs which follow expatiated these theories and show how they are related to this study.

Contingency theory

This is a theory that deals with the opinions that an accounting information system should be moulded in such a manner that can be flexible so as to factor the environment and organizational structure that an organisation has and operates with. Accounting information systems also need to be in the form that would be able to give consideration to the specific timely decisions that will be adapted and used by these enterprises. Akanbi (2017) revealed in his study that the uncertain nature of the environment in which businesses operate have a very wide influence on the nature of accounting information systems that can be designed and well applied to these businesses. This makes it imperative for business and industry players to embrace the concept of creating an environment that is adaptive enough and is able to change and adapt to changing trends.

Accounting over the years has been has gained grounds as a basic source of information for the decision-making process in companies. Gebremedihin (2019) in another light, accounting serves as a control tool, it works to feed management of businesses with the financial information for decision-making purposes and determine the benefits that would help a company in each period.

In serving as a control tool in Haleem (2016), accounting information systems in particular were observed that businesses that have implemented some forms of accounting information systems were held to its roots because of its it provides the leverage on which such businesses easily adapt to changing trends.

Also, it aims to produce reports, which when analysed and interpreted, allow to plan, control and make decisions about the core business of the company. Opoku Ware (2015) in addition, financial information and accounting have proven to provide a very wide myriad of information to aid effective decision making of businesses. It also helps decision-making by showing where and how the money has been spent or commitments have been made (Farhad & Asgar, 2015).

The concept of adaptive capacity, influenced by social-ecological systems research as cited by Akanbi (2017), has been defined by the Millennium Ecosystem Assessment (2006: Glossary, 599) and IPCC (2001: 6, IPCC 2007) as: "The ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences". Most literature revision did not reveal a definition of institutions that fosters adaptive capacity, although a number of researchers have found many relevant definitions of adaptive capacity in general from the adaptation literature.

In identifying criteria for assessing institutional adaptive capacity, the literature on governance international relations, organizations and earth system governance, Alshirah, et al. (2021) provides some hints.

Building on the existing definitions and literature, we define adaptive capacity as the inherent characteristics of institutions that empower social actors to respond to short and long-term impacts either through planned measures or through allowing and encouraging creative responses from society both ex ante and ex post.

It encompasses the characteristics of institutions (formal and informal; rules, norms and beliefs) that enable society (individuals, organizations and networks) to cope with climate change, and the resultant degree to which such institutions allow and encourage actors to change these institutions to cope with climate change. This implies that institutions should allow actors to learn from new insights and experiences in order to flexibly and creatively 'manage' the expected and the unexpected, while maintaining a degree of identity. In Six dimensions of adaptive capacity to assess institutions, the literature confirms that adaptive capacity is a useful concept to assess institutions, but does not provide a systematic framework to assess the adaptive capacity created by institutions.

My assessment of the literature indicates that (a) a number of the proposed dimensions and criteria could be clustered together as common ideas (e.g. the need for resources); (b) that there is inconsistent understanding of the concept of institutions (c) that different approaches emphasize different dimensions and criteria (e.g. organizational and international relations literature emphasize leadership, governance literature focuses on good governance); and (d) that most authors emphasize steps to be taken, rather than criteria to be met. Various researchers have decided to develop an assessment framework for analyzing the adaptive capacity fostered by institutions. In order to do so, they adopted a seven-step methodology.

First, by conducting a review of the existing literature in different disciplines (organization studies, management studies, political science, law, business operations and firm growth) to identify the most important criteria for assessing institutions. Second, most researchers considered the use of a computer based collaborative brainstorming session to sort out the different criteria. Similar criteria were evaluated as to whether they added anything new to the discussion or were merely different words for the same criterion. It was important that each criterion should be distinct and not overlapping.

In order to understand how adaptive capacity can be influenced at the local level, it is important to characterize it. As discussed above, direct assessments of adaptive capacity are not feasible, and so it becomes necessary to identify the characteristics or features that influence it. Unfortunately, understandings of adaptive capacity are still very much in their infancy Andarwati, Zuhroh and Amrullah (2020), and there is no agreement about its characteristics and determinants at national, community or household level. The Intergovernmental Panel on Climate Change (IPCC) identifies economic wealth, technology, information and skills, infrastructure, institutions and equity as the principal determinants of adaptive capacity Farhad and Asgar (2015), though no distinction is made between determinants at national and local level.

Recent assessments argue that social factors, in particular power relations e.g. ‘social capital’, governance structures and the role and functions of institutions – have been underplayed in earlier studies Ernawatiningsih and

Kepramareni (2019). Much of the focus in assessments of adaptive capacity has been at the national level, with a heavy emphasis on assets and capitals

A notable exception is the National Adaptive Capacity Framework, which focuses purely on a 'function-based approach' Trabulsi (2018). Asset-based frameworks of this sort typically rely on aggregate proxy data, and are often designed for comparison across countries (ibid.). As such, national-level indicators generally fail to capture many of the processes and contextual factors that influence adaptive capacity, and are not, therefore, an effective reflection of adaptive capacity at the level, where most adaptation actions take place Andarwati, Zuhroh and Amrullah (2020).

Many frameworks have strong links to the Sustainable Livelihoods framework (SL), and have adopted the SL's five 'capitals' (human, economic, social, physical and natural) as direct indicators of adaptive capacity at the community and household levels (Akanbi, 2017; Fitrios, 2016). This has proven to be a useful starting point. However, although the SL framework assists in establishing the resources available to assist adaptation, and has room to include intangible 'assets and power relations (e.g. knowledge could fall under human capital, local institutions under social capital), it is not easy in practice to use the SL framework either to analyses the dynamic processes central to adaptive capacity, or to take into consideration power relations that may determine adaptive capacity at the local level.

Intangible factors, such as flexibility, innovation and redundancy, which are hard to capture in the SL framework, are integral aspects of a community's ability to deal with internal and external shocks. For example, redundancy, and the extent to which components of a system can be substituted and interchanged to deal with failure or irrelevance, is an important precondition for adjusting and adapting to evolving circumstances (Ospina & Heeks, 2010).

The SL framework has been criticized for not incorporating these features. LAC tries to make these more central, without underplaying the importance of asset-based elements.

Absorptive capacity theory

Absorptive capacity theory is a contemporary theory that examines the extent to which a business or an establishment can identify the value and importance of new external information, assimilate it, and use it in novel ways toward achieving organizational targets and objectives. This theory assumes that obtaining new knowledge can help increase the chances of the organization becoming more innovative and flexible and reach higher levels of performance than it would without obtaining such new knowledge.

According to Zahra and George (2002) the absorptive capacity theory also assumes that firms that have higher abilities for absorbing new knowledge are capable of achieving higher levels of competitive advantage over firms with lower abilities. Research has proven that a firm's technical knowledge tends to come from four sources. These include;

(1) Through the firm's own research and development (R & D). (2) The knowledge derived from its current operations. (3) When the firm borrows new knowledge from other organizations or other sources. And last but not least, (4) when the firm purchases new knowledge, such as through buying new equipment, hiring new knowledgeable people, or paying a consultant to train

individuals in the use of a new method. The possession of prior knowledge is helpful for organizations in two ways.

First, creating an absorptive capacity for new knowledge in one period will help the absorption of new knowledge in the next period. Second, the successful use of new knowledge can be self - reinforcing and can motivate a firm to continue to absorb new knowledge indefinitely. There are two factors that will affect an organization's incentives to acquire new knowledge: (1) the quantity of knowledge available to absorb and exploit and (2) the difficulty and costs involved in absorbing that new knowledge. Zahra and George (2002) reconceptualised part of the theory. They took the steps of recognizing the value of new knowledge and assimilating and applying it, and created four capabilities or dimensions: (1) acquisition, (2) assimilation, (3) transformation, and (4) exploitation. They refer to acquisition and assimilation as "potential" absorptive capacity; transformation and exploitation are "realized" absorptive capacity.

Taherdoost (2016) demonstrated that there can be two kinds of absorptive capacity: demand - pull and science - push. Demand - pull refers to new knowledge derived from market sources (for example, customers, competition, and suppliers). Science - push refers to new knowledge derived from research and scientific sources (such as books, journals, conferences, trade shows, and other academic sources). Organizations will need to assimilate new knowledge from both sources if they want to be as effective and innovative as possible.

Agency theory

In general, agency theory is related to the problem that occurs when cooperating parties have different goals and a division of labor. Specifically, the agency theory focuses on the relationship in which one or more persons (the principal(s)) engage another person (the agent) to perform some work on their behalf. The basic premise of agency theory is that both principals and agents are assumed to be rational economic-maximizing individuals.

Therefore, the separation of ownership and control will result in decisions by the agent which are not always in the principal's best interest and there will arise costs (agency costs) of bringing the agent's behavior into line. For example, costs arise which are incurred by the principals when monitoring and controlling the behavior of the agent (so-called monitoring costs), and costs incurred by the agent in demonstrating compliance with the wishes of the principal (so-called bonding costs).

The unit of analysis in the agency theory is the contract between the principal and agent. These contracts (written and unwritten) specify the rights of the agent, performance criteria on which agents are evaluated, and the payoff functions they face. Especially, there are two problems that the agency theory tries to solve. The first is the problem that arises when the goals of the principal and agent conflict and it is difficult or expensive for the principal to verify what the agent is actually doing. The second is the problem that arises when the principal and agent have different attitudes toward risk, which can lead to different preferred actions.

The agency theory has its roots in information economics, and the theory has developed along two lines; positivist and principal-agent research. The two approaches share a common unit of analysis and use the same agency cost minimizing tautology, but differ in their mathematical strictness. Positivist research is less mathematical and more empirically oriented than principal-agent research. The positivist researchers have focused mainly on the principal-agent relationship between owners and managers of large corporations, whereas principal-agent researchers are concerned with a general theory of the principal-agent relationship. One of the core issues in the agency theory concerns the principals' possibilities to monitor the agent's behavior.

Monitoring refers to the principals' ability to determine whether the agents have lived up to the provisions of the contract and to prevent the agent's misuse of assets due to conflicts of interest. In Jensen-Meckling's definition, monitoring refers to more than just measuring or observing the behavior of the agent. It also includes efforts to "control" the behavior of the agent through budget restrictions, operating rules, etc. In the case were the principal does not have complete information about the agent's behavior, as in the case of external investors, two options exist; to put the agent's behavior under surveillance (e.g., through reporting procedures, and board of directors), or to reward the agent based on outcomes (e.g., profitability).

The strategy can be either behavior or outcome based. The behavior-based strategy refers to an agreement between the principal and the agent which concerns a certain behavior that in some way will be rewarded, whereas outcome-based strategy refers to the principal's measurement of certain outcomes and the reward will be based on this measurement. According to Ouchi (2019), the choice between the strategies depends on two dimensions; knowledge of transformation process and availability of output measures.

The conceptual domain of agency theory is one of the dominant organizational theory perspectives applied in current family business research Turner, Weickgenannt and Copeland (2022). According to agency theory (Jensen & Meckling, 1976; Andarwati, Zuhroh & Amrullah, 2020) agency costs generally arise due to individuals' self-interest and decision making based on rational thinking and oriented toward own preferences.

With more people involved in decision-making, such as through the separation of ownership and management, agency costs occur due to different preferences and information asymmetries between the owner (principal) and the employed management (agent) (Jensen & Meckling, 1976). In other words, agents take decisions based on their individual preferences (e.g., short-term, financial gains) instead of the owners' preferences (e.g., long-term, sustainable development). For family firms, it is often assumed that ownership and management are aligned within the same family or even the same person (Siyanbola, Maduemem & Ogbebor, 2019).

According to Spatarelu and Petee (2015), this alignment would lead to the avoidance of agency costs. However, the influence of family-related issues aside from business interests in family firms Kocsis (2019) creates a more complex structure of individual preferences. Relational and altruistic aspects play an important role in decision-making and so create other sources of agency costs (Diaz and Villamizar, 2017).

Thus, agency theory is considered to be a highly relevant perspective in family business research that aids in better understanding particular aspects of the behavior of actors in family firms. As a logical consequence, Farhad and Asgar, (2015) argue that agency costs are omitted when the firm is led by a managing owner. In this case, ownership and management are unified, leading to the avoidance of agency costs and thus to an increase in value for the firm Salam (2022), extended other works by arguing that despite agency threats occurring from the separation of ownership and management, an increase in efficiencies may exceed agency costs (Putra, 2019). These efficiencies are caused by specialization at various levels and the willingness to take risks due to efficient risk sharing. An alignment of ownership and management is not always the case in reality. Thus, attempts are made to inhibit decision-making that is not in full congruence with the goals of the firm. These controls include the installation of information and monitoring systems and contracts to ensure that firm goals are the main priority of all actors.

The idea of information asymmetries has also been associated with the problem of moral hazard. In this case, the agent pursues own goals and follows own preferences instead of considering the firm's risks and goals. Another problem associated with this approach is adverse selection, which means that the agent might hide or not tell the truth about his or her own abilities and interests for a contractual relationship, causing the principal to be unsure about these abilities and thus select an agent based upon the information available (Ogundana, et al., 2017).

Akanbi (2017) specifies the agency theory approach through seven characteristics (see Table 4.1). First, the key idea of agency theory is to understand the problem of agency threats in principal-agent relationships. These relationships between the owner's (principal) and manager/s (agent) should reflect the efficient organization of information and risk-bearing costs.

Agency theory in family business research can be divided into three main branches (Pedroso & Gomes, 2020). Often known as the principal-agent paradigm, Kocsis (2019) the first branch focuses on the interaction of economic actors. However, family business research also applied and developed the principal-principal approach, which focuses on ownership issues and the behavioral agency model which focuses on risk preferences Al-Okaily (2021). All three branches have been further developed by family business research, introducing additional sources of agency costs that are also of great interest to the general management discipline.

The principal-agent branch is the most common agency theory branch and focuses on information conflicts and asymmetries between the owner (principal) and agent (manager) Al-Okaily (2021). Three major sources of agency costs have been found in prior research from this perspective: (1) costs through monitoring agents; (2) costs from aligning the interests of agents with those of the principal; and (3) remaining costs for the non-efficient practice of diverging goals (Shukla et al., 2014). Proponents of this approach argue for the lack of agency costs when ownership and management are aligned. This alignment of ownership and management is often considered to be a requirement for being defined as family firm (Spatarelu & Petee, 2015). However, in family business research, the approach by Turner, Weickgenannt and Copeland (2022) is critically discussed and other potential sources of agency costs due to altruism and relational issues are found.

These sources encompass self-control problems according to Al-Okaily (2021) depicts generous behaviors within the family and their exploitation, as well as the employment of family members instead of more qualified non-family managers Principal-principal branch. This branch of agency theory was developed in financial research by Al-Okaily (2021). The principal-principal approach focuses on agency costs arising through conflicting interests when more owners, being equally authorized, or majority and minority shareholders are involved Meiryani, Susanto, and Warganegara, (2019) which is usually the case in publicly listed family firms Akanbi (2017). This constellation also raises problems determining who is responsible and has the power to control and make decisions (Morck & Yeung, 2003).

In family firms, this situation can additionally be complicated by the emotional and relational attitudes of the involved family members. Huerta and Jensen (2017) which can eventually lead to a suboptimal economic outcome overall (Shukla et al., 2014). Behavioural agency model (BAM) This branch incorporates elements of agency and prospect theories Taherdoost (2016) and focuses on the fact that family firm owners have different risk preferences than investors in non-family firms (see also the chapter by Kumeto in this book). The concept is based on the assumption that the decision-makers' risk preferences depend on the situation and are not consistent (Meiryani, Susanto, & Warganegara, 2019). Being loss-averse suggests that self-interested individuals are more likely to prefer minimizing current losses over maximizing future gains (Shukla et al., 2014). For family firm owners, non-economic and family-centered, long-term considerations play a major role, possibly in such a loss-averse risk preference.

This way of thinking is incorporated into other approaches evolving from this branch, such as the socio-emotional wealth (SEW) concept (Shukla et al., 2014). This approach focuses on the importance of the social and emotional interests of family firms. In this case, agency costs sometimes also stem from prioritizing non-financially oriented goals, such as keeping control in the family instead of pursuing more auspicious business opportunities (Shukla et al., 2014).

Behavioural theory

Scholars in the behavioral theory of the firm (BTOF) tradition explain multiple firm behaviors as responses to patterns of success or failure in their performance (Taherdoost, 2016). Performance relative to aspirations (PRA) – both positive and negative – can affect organizational actions in various ways. Performance below aspirations triggers actions aimed at improving performance, such as increased risk-taking Haleem (2016), mergers and acquisitions (M&A) or new products launches Meiryani, Susanto, and Warganegara (2019) while performance above aspirations reduces those actions. PRA also shapes firm action by altering the allocation of attention Trabulsi (2018). Firms that perform above aspirations direct energies towards unexploited opportunities or sequentially attend to lower priority goals that decision makers might have previously overlooked (Shukla et al., 2014).

Although changing firm behavior as a response to PRA represents a general phenomenon (Bromiley, 2004; March, 1994), firms differ in how they interpret and react to this information. Firm responses to PRA vary with firm governance arrangements, resources, and organizational structures (Shukla et al., 2014). Indeed, previous research has shown that a firm's entrepreneurial l strategic or temporal orientation can influence its response to PRA. We build on this work to consider another key dimension of firm orientation, namely community embedding (Ogundana, et al., 2017).

Relative to non-community-oriented firms, community-oriented firms are more locally owned and managed, are smaller in size, operate within a limited geographic area, and pursue both financial and community goal· These features influence how these firms experience and behave in response to PRA. For instance, embedding encourages local ownership and control by relatively undiversified owners and locally employed managers. This reduction in the separation of ownership and control should lead to smaller increases in risk taking when firms perform poorly relative to aspirations because locally-embedded owners and managers are more wary about potential firm failure.

Also, embedding leads to greater emphasis on the secondary goal of community investment. Therefore, community-oriented firms can take advantage of the leeway that they receive from exceeding aspirations by following their local preferences to increase attention to secondary community investment goals. In short, organizations with a community orientation should react differently to PRA than other firms. Accordingly, we consider a firm's community orientation as new moderator of BTOF predictions. Specifically, we consider whether a bank is a community bank or not (based on its size), and how this distinction influences its responses to PRA regarding two types of bank behaviors, namely risk taking and community investment.

Indeed, community banks differ markedly from non-community banks. For example, community banks generally take fewer risks than non-community banks Almandoz (2012) and allocate a much larger portion of their assets to small business loans (Al-Okaily, et. al., 2023). Although less profitable than other lending small business loans are vital for local firm survival and job creation. Their proclivity to take fewer risks and disproportionally engage in small business lending suggests that community banks will react differently than non-community banks to PRA. Relying on the sociological concept of local embedding (Almandoz, 2014; Marquis & Battilana, 2009), the theory distinguishes between two responses based on firm community embedding.

First, we expect that community-oriented firms express a differential attainment-induced response to risk taking. That is, community banks will increase their risk taking in response to performance below aspirations, but to a lesser extent than non-community banks.

Empirical Review

The concept of accounting information systems and how it affects business performance has been a relevant research area business of the bearing it has on the managerial deliverables of businesses. Various studies conducted across the world and more specifically in jurisdictions of similar socio-economic characteristics will be reviewed in this section. How these studies were differently conducted, the methodologies employed as well as some pertinent unanswered questions that fuels this study’s relevance.

Akanbi (2017) conducted a study on accounting information system and management decision making: a case study of manufacturing companies in Nigeria. It was the aims of the study to explore the relationship between accounting information systems and management decision-making in manufacturing companies in Nigeria. The study employed a case study approach to examine the use of accounting information systems and their impact on decision-making processes. Data collection involved interviews, questionnaires, and document analysis. The research contributes to the limited understanding of how accounting information systems influence decision-making in the context of Nigerian manufacturing companies. However, the study does not delve into specific challenges or limitations faced by these companies in utilizing accounting information systems effectively. The various socio-economic positions of individuals regarding their choice of use of AIS or otherwise was also not highlighted by the study.

Diaz and Villamizar (2017) conducted a study on the use of Accounting Information Systems as Guidance for Decision Making in Cucuta SMEs. The study primary investigated the role of accounting information systems as a decision-making tool for small and medium-sized enterprises (SMEs) in Cucuta, Colombia. The study employed a qualitative approach and utilized interviews and observations to gather data. It explored how SMEs use accounting information systems to support decision-making and improve their business performance. The study focused on a specific region and highlighted the various importance of accounting information systems for decision-making in SMEs within that study area. However, it does not address potential barriers or limitations faced by SMEs in adopting or implementing accounting information systems effectively and the perceptions of owners of AIS as to whether AIS is serving the various purposes for which they went in for them. The level of adoption of AIS by these SMEs was also another aspect that was missing in the entire study. in order to have a fair and justified view about the true impact accounting information systems have on the decision making of these SMEs, the level of adoption of AIS is an important element that must be investigated.

Gebremedihin (2019) conducted a similar study on the Impact of Accounting Information Systems in Decision Making Process in Local Government Organizations in Ethiopia. This study narrowed the conversation on the impact of AIS on local government organisations and public sector institutions who are not profit oriented. It was the goal of the study to examine the impact of accounting information systems on decision-making processes within local government organizations in Ethiopia. The study employed a quantitative research design and collected data through surveys. It assessed the role of accounting information systems in facilitating decision-making and improving the efficiency of local government organizations. The research contributes to understanding the impact of accounting information systems in the specific context of local government organizations in Ethiopia. However, it does not delve into specific challenges or limitations faced by these organizations in implementing effective accounting information systems.

Rizza, Leotta and Ruggeri (2017) also conducted a similar study on AIS as Sensemaking Tools in Decision-Making Processes of Small Firms." The study which was a focus on small firms, had the aim of investigating the role of accounting information systems as sensemaking tools in decision-making processes of small firms. The qualitative approach to research was employed by the researcher using interviews and observations to collect data. It examined how accounting information systems contribute to sensemaking processes and decision-making in small firms. The research highlighted the potential of accounting information systems as sensemaking tools in decision-making for small firms. However, it does not provide a comprehensive analysis of the challenges or limitations that small firms may face in effectively utilizing accounting information systems for decision-making. The various perceptions of individuals about AIS that fuels the use of AIS or otherwise has however not been investigated.

Conceptual Review

AIS is a computer-based system designed to transform accounting data in to information can also include transaction processing cycles, the use of information technology, and the development of information system that is, AIS includes both manual and computerized accounting system. AIS is generally computer-based system designed to transform financial data into information. AIS are not only generally computer-based system. Prior to automation, all system where manual in all processing was accomplished via people, pens, and pencils and ledger books for posting entries. In the manual system, autographic register is used for recording by hand each receipt of cash. Each day the cash receipts transactions were journalized by hand, at the end of the month, the total cash receipt was manually posted to the cash account and to the room sales account.

As the researcher tried to show the above to the introduction of computer most large compares maintained their financial information by mean of manual accounting system. When the activities were done manually, it was time consuming, sometimes inaccurate, need more effort, and fraud would occur and hence it was difficult to control every activity. But, after the introduction of the computer, computer-based system also increases the ability of a company to operate profitably in a competitive environment of continual and unpredictable changes in customer opportunity.

Various concepts underpinning the study such as Accounting Information Systems, Concept of decision making and the framework the researcher employed to combine these concepts to guide the study were highlighted in the paragraphs below.

Accounting Information

Accounting information is viewed as the information system which is a subsystem of a broader management information systems that is focused on information provided by accounting architecture put in place to facilitate comprehensive decision making and to provide reasonable basis for such decisions. To facilitate the benefits that comes with the full complement of a robust accounting information system, various parts of such system such as management, creditors, debtors, owners, employees, tax authorities, investors, creditors and regulatory authorities who are broadly referred to as stakeholders of accounting information system are to infused into the general and broader framework (Haleem, 2016).

Accounting Information System

To understand the whole framework of Accounting Information Systems, that there is no single of generally acknowledged meaning of the term, as there are distinctive descriptions given from one writing to another. Though, AlS is considered a coherent connection among two fundamental wide subjects of accounting and IS (Turner, Weickgenannt, & Copeland, 2022). Accounting information system (AlS) similar to any other information system that is perceived to plays an incredible role within the running of day-to-day operations in corporate organizations.

Accounting information systems are viewed as one of the supportive information systems utilized in carrying out managerial functions such as planning, organizing, controlling and decision-making, for the way better exploitation of the accessible resources (Samer, 2016).

According to Borhan and Bader (2018), accounting information system (AIS) is a formal system for identifying, measuring, collecting, analyzing, planning, interpreting and communicating accounting information about a specific entity to a specific group. Accounting information system represents a range of sources (people and equipment), which are outlined to collect financial information to reaching the information required for diverse decision-makers at a specific period of time (Kocsis, 2019). Accounting information system is exceptionally crucial of all organizations. It is designed to assist within the management and collection of information, raw data or standard information and change them into financial information for the reason of reporting them to decision makers (Dandago & Rufai, 2014).

AIS is a system that helps within the collection and recording of information and data with respect to occasions that have a financial effect on organizations. It also helps in the maintenance, processing and communication of such information to both internal and external partners. AIS incredibly make difference to supply internal and external reporting information, financial statements and trend. According to Akanbi (2017), AIS refers to the use of computers and other ICT to collect, store, recover and reproduce information used for choice making.

Kocsis (2019) defined AIS as a set of interrelated components which increases organizational competitiveness and provides reliable information for decision making. Andarwati, Zuhroh and Amrullah, (2020) stated that is as a computer-based system that process information of financial nature and help decision makers to facilitate and control organizational activities.

Essentially, Kocsis (2019) characterized IS as an integrated system which gives information in order to support operations, management analysis, processes and decision- making capacities in organizations. On the other hand, Grande, Estebanez and Colomina (2011) clarified AIS as a tool, which in the event that incorporated within the design of IT/IS, empowers organizational directors to monitor and control monetary activities. Accounting Information System comprises of qualified people, equipment, program databases and set of procedures which associated together to supply valuable information for effective decision making inside an organization (El- Dalabeeh & Al.Shbiel, 2012).

On the same note, Haleem (2016) related that AS concerns with the generation of precise, pertinent, taken a toll effective and opportune data to trade in arrange to help organizations to compete positively in commerce environment. According to Al-Kassawna (2012). AIS is the regulatory components of an organization, which deals with the method of information collections, organizing and disseminating of data to different users for decisions making purposes. Rizza, Leotta and Ruggeri (2017) defined AIS as the method of collecting, organizing and reporting financial information, which has a financial esteem to the internal and external users of organizations. Also, Amaefule and Iheduru (2014) characterized AIS as a framework, which records and reports financial activities within an organization. Similarly, Al-Okaily, et. al., (2023) defined AIS as the method of gathering, handling, storing and communicating data using the most recent IS/IT.

Accounting information system according to Manchilot (2019), may be a computer-based electronic framework utilized for collecting, storing, preparing and communicating financial and accounting information through financial articulations with the aim of supporting and directing organizational decision-making handle. Computers are the center of accounting information as they give a stage for the workability of all data systems. For an accounting information system to be operational, it fitting program application must be on the computer system intending to be used. Borhan and Bader (2018) defined accounting information system as a system which contains a bunch of harmonized commerce, components, and asses which processes, oversees, and controls the information for creating and carrying the significant information for decision makers within the organization.

Accounting information requires series of Forms to carry out its work just like any other system. It could be an associated and homogeneous set of the assets and distinctive components (human, equipment, fund, etc) that connected simultaneously inside a particular system to work towards the accomplishment of organizational objectives. According to Borhan and Nafees (2018) accounting information system is the method of collecting, analyzing and converting information into activity. This definition legitimizes accounting information system as a computer-based framework that collects information, prepares and produces results or output. Kashif (2018) states that accounting information system could be a combination of individuals, equipment, policies, and methods that work together to gather information and change it into valuable data.

AIS could be a system that gives people with either information or data relating to an organization's operation to support the activities of workers, proprietors, clients, and other partners within the organization's environment by successfully providing data to authorized individuals in a convenient way. Considering the above definitions of IS and AIS by different researchers, it is clear that both terms clarified the same thing hence making it conceivable for researchers to conclude that the terms can be used interchangeably. Subsequently, this study characterizes. IS as the method of collecting and dispersing of information to users to empower accurate and timely decision making within an organization. IS are artificial systems that are outlined to assist within the process of decision (Akgün & Kilis, 2013). It is additionally defined as a set of components that connected with each other to gather, store, prepare and report information and data to improve the forms of decision- making forms (Al-Adaiteh, 2003).

Different types of AISs are accessible 10 support distinctive organizational levels including operational, strategic, and key level. These systems can give a continuous stream of data from internal or external sources. AI can be defined as the integration of accounting with technology, information and managerial approach (Ibrahim, Ali, & Besar, 2020). AIS is considered as a critical organizational component that is basic for viability of decision management and control in organizations (Monteiro & Cepêda, 2021). Onaolapo and Odetayo (2012) state that AS gives tools to financial office to improve organizational adequacy. He emphasized the solid relationship between AIS and organizational effectiveness. It is concerned with estimation or measurement of business events in financial forms (by recording in accounts) and accounting information handling in expansion to planning of monetary articulations.

It can be seen as the foremost vital source of financial information for internal and external clients (Al-Okaily, 2021). Moreover, accounting system, in recent times, has tended to be a system of information that does not halt at limits of information and financial information, but also it incorporates information and descriptive and quantitative information which is valuable in decision making for users particular with majority and differences (Nivinee et al., 2016). The main work of AIS is to assign quantitative value of the past, present and future business events. Accounting information, within the form of periodic reports or special analyses, is frequently a source of data for making decisions including pricing, production levels and the accounting information system is one of the most vital systems in any organization. Its objective is to provide the required information to managers at different levels.

This information helps them to successfully and effectively carry out their duties. In planning, resource observing, performance appraisal and decision-making (Haleem, 2016). The nature of accounting information is decided as a reliable tool in the use of advanced information technology means, which aims at building up modern accounting information systems; their primary role is to improve the convenience of accounting information (Meiryani, Susanto, & Warganegara, 2019). From the point of view of Ibrahim, Ali and Besar (2020), information systems are a system in which information is collected, evaluated and distributed over clients when required, which is planned to help the process of decision-making. Turner, Weickgenannt and Copeland, (2022) accept that accounting information systems are a system for gathering, recording, storing and processing data to obtain the needed information for decision-making.

Knezevié and Tepevac (2012) show that an accounting information system is concerned with each of the different commerce inputs that shapes the information that is relied upon in analysis and processing information included in accounting reports, as well as its concern towards the system outputs represented within the financial statements published and used in the decision-making prepare by users.

Accounting Information Systems Components

Accounting information system is composed of several units, each unit incorporates a particular work. They can be presented as follows:

Collecting Data Unit

This unit collects information from the institution's encompassing environment. This information is represented within the events and facts that the accountant cares about and considers them critical and ought to be acquired and recorded. The nature of the project's goals and the outputs has a great impact over the type of the information collected and recorded within the system, as well as the nature of outputs influences the type of the collected information (Akanbi, 2017).

Data collecting units retrieve data from diverse sources, such as internal databases, spreadsheets, sensors, external databases, web services, and other data feeds. These units extract data from different sources, cleanse and transform it, and integrate it into the AIS for further processing and analysis. Data collecting units apply validation and quality control checks to ensure the accuracy, completeness, and reliability of collected data. Collected data is integrated into the AIS to create a comprehensive and consolidated view of the organization's data (Akanbi, 2017).

Data Operating Unit

The collected data by the accounting information system could be used immediately in the event that they were valuable for the decision-maker the moment they are collected. But, in most cases, this essential information ought to be worked and prepared to be valuable information in the decision-making prepare, thus it is sent to the storage unit in the accounting information system. Data Operating Units are the components of an AIS responsible for processing and manipulating data to generate meaningful information. These units perform various operations, such as data entry, data validation, data transformation, and data integration (Diaz & Villamizar, 2017).

Data operating units facilitate the input of financial and non-financial data into the AIS. This can include transactional data, inventory data, customer data, supplier data, and other relevant information. These units validate the accuracy, completeness, and consistency of the entered data, ensuring that it meets predefined criteria and conforms to data quality standards. Data operating units may perform data transformation processes, such as aggregation, summarization, calculations, and formatting, to convert raw data into meaningful and usable information for reporting and analysis purposes. These units integrate data from different sources within the AIS, ensuring the consistency and reliability of information across various modules and functions (Diaz & Villamizar, 2017).

Data Storage and Recovery Unit

The Data Storage and Recovery Unit is responsible for the secure storage, organization, and retrieval of data within the AIS. This unit ensures that data is stored in a structured manner, safeguarded against unauthorized access, and recoverable in case of data loss or system failures. The unit provides a centralized and organized repository for storing data, including financial transactions, customer information, inventory records, and other relevant data. Data storage and recovery units implement security measures, such as access controls, encryption, and backup strategies, to protect data from unauthorized access, data breaches, or loss (Gebremedihin, 2019).

These units regularly perform data backups to ensure data integrity and enable the recovery of data in the event of system failures, disasters, or data corruption. Data storage and recovery units may incorporate archiving capabilities to manage long-term storage of historical data, ensuring compliance with legal and regulatory requirements (Akanbi, 2017).

Information Delivery Unit (Information Channels)

This unit is the mean to transfer and provide data and information from one unit to another within the accounting information system, until it comes to the producers of administrative decisions. Communication channels could be automatic or manual (monitors or papers) according to the institutions available implies. When choosing the hardware and software components for the accounting systems, the costs and costs of such components ought to be less than the advantage of utilizing the system. Moreover, audit and control individuals should be knowledgeable of accounting information systems, supporting software, and the used tools because the auditing process will be done through the computer. The auditing group ought to be familiar with automation and automatic control. It also has an impact over the accountants work in the future summarized in methods of accountant's work, data recording, new systems and networks, and auditing methods used in the future (Taherdoost, 2016).

Payment Systems

Payment systems refer to the tools used to facilitate and track financial transactions, including outgoing payments to suppliers, vendors, and other stakeholders. These systems are designed to ensure accuracy, efficiency, and security in payment processing. They may include electronic funds transfer (EFT), online payment gateways, checks, and other forms of payment. Payment systems typically have authorization controls to ensure that payments are approved by authorized personnel within the organization. The system records payment details, including the payee, payment amount, payment date, and any associated invoices or purchase orders (Akanbi, 2017).

Payment systems allow for tracking payment statuses, providing real-time visibility into pending, processed, or rejected payments. They most often integrate with other modules of the AIS, such as general ledger and accounts payable, to ensure seamless recording and reconciliation of financial transactions (Akanbi, 2017).

Receivables Management Systems

Receivables management systems focus on managing and tracking accounts receivable, which represent the amounts owed to the organization by its customers or clients. These systems streamline the invoicing, tracking, and collection processes, enabling efficient management of receivables. They generate invoices or bills, recording details such as invoice number, customer information, product or service description, quantity, price, and payment terms (Diaz & Villamizar, 2017).

The system tracks and records payment statuses, allowing organizations to identify overdue or outstanding payments. Receivables management systems facilitate collections by providing automated reminders, generating collection letters, and tracking communication with customers regarding outstanding payments. These systems offer reporting and analysis capabilities to assess the financial health of receivables, aging analysis, and cash flow forecasting (Haleem, 2016).

Inventory Management Systems

Inventory management systems assist organizations in efficiently managing and tracking their inventory levels, ensuring optimal inventory control, and supporting effective decision making related to inventory management. These systems provide real-time tracking of inventory quantities, locations, and other relevant details, enabling organizations to monitor stock levels accurately. Inventory management systems help establish reorder points and automatically generate purchase orders or production orders when inventory levels fall below the specified thresholds (Akanbi, 2017).

These systems support different inventory costing methods such as First-In-First-Out (FIFO), Last-In-First-Out (LIFO), and Average Cost, facilitating accurate valuation of inventory and cost of goods sold. Inventory management systems often offer classification capabilities to categorize inventory items based on criteria such as product type, supplier, or demand (Akanbi, 2017).

Cash Management Systems

Cash management systems focus on monitoring and managing an organization's cash flow, including cash inflows and outflows, bank reconciliation, and liquidity management. These systems help optimize the utilization and availability of cash resources. Cash management systems provide up-to-date visibility into an organization's cash position, including cash balances across different accounts and currencies. These systems enable organizations to forecast future cash flows based on historical data and expected inflows and outflows, assisting in cash planning and liquidity management (Diaz & Villamizar, 2017).

Cash management systems reconcile bank statements with internal records, identifying discrepancies and ensuring the accuracy of cash balances. These systems facilitate the efficient processing of cash disbursements, such as vendor payments, and cash receipts, such as customer payments (Akanbi, 2017).

Accounting Information Systems' Objectives

Accounting information system aims at achieving a common objective represented by giving the accounting information that benefits its users.

Achieving this common objective leads to accomplishing a few sub-objectives at the same time, the most vital among which are (Ali 2011).

(1) Measuring all economic events that take place within the institution through the processes of data collecting and storage, recording, labeling and summarizing in the accounting registers. (2) Delivering the accounting information through a set of archives and reports to all those who can derive advantage from it, among which is the institution organization which employments this data in execution assessment and making suitable decisions. (3) Achieving internal control over all material components that exist in the institution. Manager's commitment is very significant since it highlights not only the centrality of accounting within the information system of all business organizations, but also draws consideration to the users and advocates of such information so derived.

However, Monteiro and Cepêda (2021), expressed that an organization information system can be separated into two the formal portion (of which computerized information can be a part) and the informal position. The formal position can be divided into the areas of the firm's activities. There are three major areas of information system, specifically the financial information system, the personnel information system and the logistics system. They went further to comment on computer-based information systems - that wide spread of computer in credit management gives certain fundamental up-to-date data for analysis. All of the data can be put in computer storage readily available to the credit office, in fact; the computer can give a vast way of detailed information.

In spite of the fact that, much of what comprises an organization system is not computerized, the part that is, is regularly significant. In reality, it may be of greater importance than its proportion to the total information system. In view of the incredible significance of information to hospital lending and nearly all the activities of a hospital organization, the proper type of management information system must be outlined to the right quarters and at the proper time.

In developing a management information system, designers must be mindful of the method of managing a business. This is to make the information reasonable and effective in assisting the manager and induce him to take suitable activities. These however, reveal that decision makers do not generally need information but experience information over-burden. Management information problem may thus be seen as not that of need of important information or that of getting the information, the say they need but need of being overwhelmed with information.

Conceptual Framework

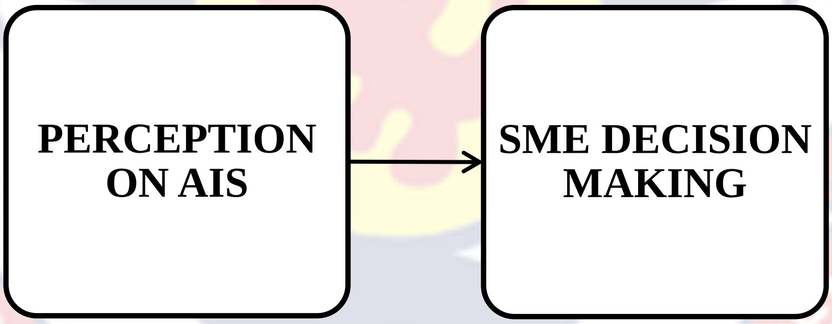

Figure 1: Conceptual Framework

Source: Author's Construct (2022)

Figure 1 shows the conceptual framework of the study. the relationship between the perception of owners of SMEs on AIS and the decision making of these SMEs. The study after investigating the various perceptions of these owners on AIS, how these perceptions influence the decision making they make in carrying out their operations in ensuring customer satisfaction, increased productivity, innovation and learning and profitability. If these perceptions are negative, it will have an adverse effect on the use of AIS. However, if this is positive, it will encourage the use of same in ensuring that the various systems they use are automated.

Chapter Summary

This chapter gave a highlight about the various contributions other researcher have done on the subject matter under study: Accounting Information Systems and decision making amongst SMEs in Ghana. The chapter highlighted major theories in the area of accounting and management information systems decision making as well as its interdependencies in helping users of same to fully utilize it. These included such as the agency theory, contingency theory and the behavioral theory. The conceptual review highlighted the various forms of accounting information systems and other subsidiary concepts and how they have been implemented over the years as well as other concepts used in this study.

CHAPTER THREE

RESEARCH METHODS

Introduction

The third chapter of this study discussed the research methods used to undertake this study. It provided detailed information about the research design, detailed information about the population and the area of study. Insights were made into various methodologies, and important variables about the study such as the sample procedures, data gathering procedures, data collection instruments were also highlighted.

Research Approach

In this study, the quantitative research approach was used to come out with the findings of the study. This is as a result of the nature of the variables that will be investigated and also the research approach that the researcher employs. The use of the quantitative approach to research offers a more justifiable approach to analyzing the quantitative data and results that will be obtained from the study (Diaz & Villamizar, 2017). This will afford the researcher to employ the various analytical approaches to investigate the relationships between the variables in the study (Siyanbola, Maduemem, & Ogbebor, 2019).

Research Design

In Swalhah (2014), the framework of a research can be described as its research design. It is also popularly described as the suggested study work plan which link all the various pieces of the study into a single project (Gebremedihin, 2019). The research design is also a set of criteria applied for gathering of data and analysis that aims to balance the significance of the research with economy and efficiency. In another way, the study design gives how relevant data was collected and analyzed, as well as how all of this was used to answer the research questions. A research design can be a descriptive design, causal or explanatory design, correlational design, case study design, cross-sectional design or an experimental design.

For this study, the descriptive research design was employed with justification from our research objectives and research questions. The descriptive research design is one that does not employ the use of causal and explanatory insights as to how a phenomenon is the way it appears but rather gives a detailed description of the status of a phenomenon.

The descriptive design is used to describe a phenomenon and its various components. It is type of research design which is more concerned with what has exactly occurred rather than how or why it has occurred (Siyanbola, Maduemem, & Ogbebor, 2019). As a result, data is frequently gathered using observation and survey methods. Descriptive research design centers on the premise that certain problems can be resolved and practices can be improved by observation and analysis as well as description. Based on the definition above, this approach was used to answer the how and what in our research questions. This design also provided the researcher with knowledge about how management of these SMEs make decisions, how accounting information systems are employed and how they are able to assimilate new information about current trends and use them to their advantage (Diaz & Villamizar, 2017).

Study Area

This study was carried out predominantly in the central business area in the Tamale Township in the Tamale metropolitan area. This is a major historic trade city having its economic activity dating back to the early colonial times. Over the years, there has been several modifications in the conduct of commerce and the study sort to focus on this area to assess their perception on the use of accounting information systems through purposive sampling. The major economic centres which house most SMEs in the Tamale Township is the Tamale central market. This is an ancient market which houses a very vast number of traders including micro, small and medium scale enterprises (MSMEs). The major economic activity in this market incudes the wholesale and retail trading, food and beverages, cattle and livestock, fabric and clothing, cereals and cash crop retail and wholesale trade activities, transport, fashion and clothing just to name a few (Local Government Service, 2019).

The Tamale metropolitan area is located in the Northern region and shares borders with Savelugu to the north, Yendi to the east, Tolon to the west, Gonja to the south-west and Ganja to the south. The metropolis can be located at the heart of the Northern region of Ghana (Local Government Service, 2019).

Population

A research population can be defined as a well-defined set of items or people who share comparable traits, such as nature, appearance, or other factors and the same set of analysis can be applied to them. A research population more properly identifies with a set or group of individuals on which the findings of the research is to be applied (Gebremedihin, 2019).

According to Haleem (2016), an entire population may generally rely on some similar resources, are face similar environmental challenges, and at times become dependent on the availability of other members to stand the test of time, according to the researchers. The population comprises of a significant number of the SMEs in the Tamale metropolis. They are mostly individuals who have either received formal or informal education and training and are applying such knowledge in the conduct of business in order to make profits. They can be categorized into small or medium scale by the number of employees they have and their capital used for operation (Ghana Statistical Service, Population and Housing Census Report, 2010).

According to the 2019 National Micro, Small and Medium Enterprises Policy of the Ministry of Trade and Industry report, the total number of registered operational SMEs in the Tamale metropolis stood at 300. (Ministry of Trade and Industry, 2019) This will represent the population of the study. As a result of the difficulty in using the entire population in carrying out the study, appropriate tools and techniques will be employed to obtain a justified sample size for the study.

Sampling Procedures

According to Taherdoost (2016), it is always easier to work with samples than to work with the entire population. This is because a justifiable sample size gives a representation of the entire population to be worked on which saves the researcher a great deal of repetitive work that would be carried out on numerous sets of units of analysis. When a very accurate sample size is used for a study, findings are carried out on them and generalizations drawn to represent the position of the entire population (Taherdoost, 2016).

Working with samples also gives the researcher to opportunity to probe and obtain accurate feedback from units of analysis which would have been less likely to obtain when working with the entire population. From the population of 300 registered operational SMEs in the metropolis, a sample size of 116 will be drawn for the study. total of hundred (116) samples were used for this study. a confidence level of 90% will be used subject to a margin of error of 0.03. From the Anokye Adam sample size determination table, the most appropriate minimum sample size for a population of 300, a margin of error of 3% and at a 90% confidence level is 116 (Adam, 2020). Therefore, the sample size used for the study is 116 respondents.

Population Size	Sample Size					
	Categorical data (margin of error=.05), p=2			Continuous data (margin of error=.03), p=4		
	90% confidence Level $t = 1.645$	95% confidence Level $t = 1.96$	99% confidence Level $t = 2.58$	90% confidence Level $t = 1.645$	95% confidence Level $t = 1.96$	99% confidence Level $t = 2.58$
10	10	10	10	10	10	10
15	15	15	15	14	15	15
20	19	20	20	19	19	20
25	23	24	25	23	23	24
30	28	28	29	26	27	29
35	31	33	34	30	31	33
40	35	37	38	33	35	37
50	43	45	47	40	43	46
60	50	52	56	46	49	54
70	56	60	64	52	56	61
80	62	67	72	57	62	69
90	68	73	80	61	68	76
100	74	80	87	66	73	83
110	79	86	95	70	78	89
120	84	92	102	74	83	96
130	88	98	109	77	88	102
140	93	103	116	81	92	108
150	97	108	123	84	97	114
160	101	113	129	87	101	119
170	105	118	136	90	104	125
180	109	123	142	92	108	130
190	112	128	148	95	111	135
200	116	132	154	97	115	140
220	122	140	166	102	121	150
250	130	152	182	108	130	163
300	143	169	207	116	142	182
350	153	184	230	123	152	200
400	162	196	250	128	161	215
450	169	208	269	133	168	229
500	176	218	286	137	174	241
600	187	235	316	144	185	262
700	196	249	342	149	194	279
800	203	260	364	153	201	293
900	209	270	383	156	206	306

Source: (Adam, 2020)

For this study, the probabilistic sampling technique was used to come out with a justifiable sample size. The stratified and simple random sampling method, which is a probabilistic sampling method was used to first obtain an appropriate sample size for this study. This method was applied with justifications from the already established research objectives. The SMEs in the entire business area in the metropolis were divided into 3 strata (market centres) using the stratified random sampling technique; the north, south-east and south-west. After this, they were further divided into medium scale enterprises and small-scale enterprises. Then, the simple random sampling was employed to obtain the sample size on which the study was to be carried out. This gave a fair representation of the entire population of SMEs in the metropolis because all the components of the population were fairly represented.

Data Collection Instruments

Primary data served as the source of data for this study. Primary data is data collected from the main units of analysis through questionnaires, interviews, surveys, observation, etc. Self-administered questionnaires were used to obtain responses from our respondents. The self-administered questionnaires enable our respondents more flexibility and a very convenient way of providing answers to the questions that helped the researcher in achieving his research objectives. The questionnaire was structured into four (4) sections.

The first section of the questionnaire had questions about the demography of the respondents. This helped the researcher to understand the socio-demography of the respondents. The second section handles perception on the use new information in decision making processes. The perception of use of accounting information systems in business operations was tackled in the third session and finally the perception of use of accounting information systems in decision making in SMEs was the fourth and final section of the questionnaire.

Data Collection Procedure

Primary data was used for this study. This is data collected directly from our respondents through structured self-administered questionnaires. Given the sampling size and sampling technique used for this study, the three (3) major markets centres which are our major centre for data collection were further segmented into markets for small scale businesses and that for medium scale enterprises. Equal number of questionnaires were administered in these markets and for each scale of enterprise (small or medium). This gives a fair representation of all our units of analysis across the entire metropolis.

The questionnaire was distributed to top management or proprietors as may be applicable to the business in person. Respondents were guided in how to appropriately respond to the questions across all the sections. This was done over a period of five (5) weeks.

Data Processing and Analysis

Data analysis has everything to do with modifying, inspecting and refining data collected with the aim of presenting it in a manner that is useful for meaningful discussions. The data obtained from the questionnaires that were administered was group according to how they relate with the research objectives and questions. Results were analysed using the descriptive statistics and narrative analysis to assess the status of these SMEs in relation to their use of accounting information systems.

Since the study investigated the perception of owners of SMEs in the use of accounting information systems. Descriptives statistics of central tendency and dispersion. Measures of central tendency such as mean, mode and median were employed for the study. For the measures of dispersion, for the study included mean deviation, standard deviation.

Chapter Summary

This chapter gave the methodology to be used to undertake this study. This study is one that made use of both the quantitative and the qualitative approach to research. The justification for such an approach is from our research objectives and research questions.

The descriptive design was used for the study. The descriptive research design is one that does not employ the use of causal and explanatory insights as to how a phenomenon is the way it appears but rather gives a detailed description of the status of a phenomenon. The descriptive design is used to describe a phenomenon and its various components. It is type of research design which is more concerned with what has exactly occurred rather than how or why it has occurred. The mixed research approach which is a hybrid of the quantitative and the qualitative research approach was employed with regards to data collection. Because it contains parts of both methodologies, the mixed research approach sits in the midst of the quantitative and qualitative spectrum. Also, my research has limitations such as time frame, easy accessibility to correct response and implementation of data collection methods due to the research approach and design.

There may be the presence of bias in my findings since I may assume my targeted audience may not have enough knowledge about the topic as I assumed. The cost of getting relevant articles and journals for my study and also making my questionnaire available to the respondents may be a limiting factor.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

Introduction

This chapter presents findings from field survey conducted to understand the perception SME owners have on the use of accounting information systems for decision making. The perception of SME owners on the use of accounting information systems was assessed from the SME owner's perspective and further discussed to depict what the data purports to tell. For the researcher to fully achieve this objective, the chapter was organized into four sections; the first section gave information about the demographic information about the various respondents who availed themselves for this study. The next section, section B presented data and analysis on the perception of SME owners on the use of new technology in formulating decision in their business operations. The perception on the use of accounting information systems in business operations was tackled in the third section, section C. The final section had data and analysis on the perception of SME owners on the use of accounting information systems for decision making.

It is the general purpose of the study to arrive at conclusion that gives an understanding about the perception of SME owners on the use of accounting information systems for decision making. A total of one hundred (100) SMEs were sampled in the Tamale metropolis. The perception SME owners have on the relevance of accounting information systems on the decisions they make in an attempt to increase their profitability were analyzed.

The descriptive research design was employed to assess the status of these SMEs in the various study areas. This was done mainly through the use of descriptive statistics. The results from the field survey were presented in tables to help give a comprehensive understanding of the positions of respondents relative to the issues of the study.

Demographics of Respondents

The table below has information about the gender of the various respondents used for this study. The gender disparities tell the researcher what percentage of each gender is most dominant and more likely to make the decision to be made from the findings of the study skewed to a particular direction.

Table 1: Gender

	Frequency	Percent	Cumulative Percent
Female	51	51.0	51.0
Male	49	49.0	100.0
Total	100	100.0	

Source: Field Survey (2022)

From the table 1 above, it can be observed that from the total number of one hundred respondents, a total number of fifty-one females responded which constitute fifty-one percent of the total number of respondents. Males however constituted the other half which is forty-nine percent of the total number of respondents.

This shows that the various markets centers are slightly female dominated as the probability of meeting a female entrepreneur operating a business in these markets is slightly higher than that of the male gender.

Table 2 has data on the age of respondents used for this survey. This gives an idea about the age distribution of the sample used for the study. A more younger age distribution tells the researcher that majority of the young individuals within these various metropolitan areas are into entrepreneurship and are venturing into business start-ups. And the reverse depicts that most of the working population are those within the aged bracket.

Table 2: Age of Respondents

	Frequency	Percent	Cumulative Percent
20 - 30 years	50	50.0	50.0
31 - 40 years	33	33.0	83.0
41 - 50 years	13	13.0	96.0
51 years and above	4	4.0	100.0
Total	100	100.0	

Source: Field Survey (2022)

From table 2 above it can be observed that the age bracket twenty to thirty years had the highest number of respondents. Individuals between this age bracket had fifty representation representing fifty percent of the total number of respondents. Those who fall between the ages of thirty-one to forty years also constituted thirty-three percent with a total representation of thirty-three individuals.

Cumulatively, those between twenty to forty years constituted eighty-three percent of the total number of respondents. This shows that majority of the individuals used for this study are individuals who are of the youthful stage. Those aged forty-one years to fifty years formed thirteen percent with a total representation with thirteen respondents and individuals who are aged fifty years and above are four. This also constituted a four percent percentage representation. This shows that more youth and energetic individuals are those who form majority of those in regular businesses, especially in the areas used for study.

The highest educational qualification of the respondents used for the study are analyzed in table 3 below. The highest educational qualification examines the extent of exposure of the various respondents to formal education. When majority of the respondents demonstrate high exposure to higher levels of formal education, it adds value to the responses they provide. This is because the level of formal education received puts them in a better position to understand the various issues the study seeks to highlight.

Table 3: Highest Educational Level

	Frequency	Percent	Cumulative Percent
Junior High School level	4	4.0	4.0
Senior High School level	13	13.0	17.0
Tertiary level	82	82.0	99.0
Post Graduate	1	1.0	100.0
Total	100	100.0	

Source: Field Survey (2022)

From table 3, it can be observed that the total number of respondents who have junior high school as their highest level of educational qualification is four. This represents four percent of the total number of respondents.

Those with senior high school qualification are thirteen which makes those with pre-tertiary qualification to stand at seventeen percent of the total number of respondents. Individuals who have tertiary education were eighty-two and constitute eighty-two percent of the total number of respondents. A single individual has a post graduate educational qualification. This data depicts that all the respondents have been exposed to formal education. With majority of them having tertiary education to be their highest level of educational qualification.

Table 5 below has information on the number of years these study units that is the various businesses have been in operation. The number of years they have been in operation assisted the researcher to understand the dynamics relating to how best they have gathered operational experience or otherwise. Having some relevant years of experience on your hands will help the business operator to employ some knowledge and skill set acquired on the job that the ordinary entrant would not have.

Table 4: Years of Operation

	Frequency	Percent	Cumulative Percent
0 - 5 years	52	52.0	52.0
6 - 10 years	22	22.0	74.0
Above 10 years	26	26.0	100.0
Total	100	100.0	

Source: Field Survey (2022)

From table 5 above, it can be observed that the total number of respondents who have been in business for zero to five years are the individuals with the highest representation in this data set. They constituted a total of fifty-two of the respondents. This forms a 52% representation of the number of respondents. Those in business from six to ten years are also fairly represented with a total count of twenty-two which represents twenty-two percent. Respondents who have been in business for ten years and over and have enough experience are on the lower side with twenty-six percent representation. This shows that a majority of the respondents are individuals who have begun operations into their respective businesses. They are primarily individuals who have ten years or below years of experience in such industries.

Table 6 below has data on the nature of business of the respondents used for this study. The nature of business tells the industry within which these individual businesses operate in.

Table 5: Nature of Business

	Frequency	Percent	Cumulative Percent
Fashion and Clothing	10	10.0	10.0
Food and Beverages	28	28.0	38.0
Tourism and Leisure	8	8.0	46.0
Wholesale and Retail	54	54.0	100.0
Total	100	100.0	

Source: Field Survey (2022)

From table 6 above, it can be observed that the total number of individuals who are into the fashion and clothing business constituted ten percent of the total number of respondents. That of Tourism and Leisure had eight respondents which also constituted eight percent of the total number of respondents. The Food and Beverages industry and the Wholesale and Retail trade industries had a representation of twenty-eight percent and fifty-four percent respectively.

This showed that across all these three markets from the two metropolis, wholesale and retail trade is the one that is very dominant and majority of those carrying out economic activity engage in that. The two industries cumulatively constituted eighty-two percent of the total number of respondents.

The number of employees these individual businesses employs is shown in table 7 below. The total number of employees each respondent has or each business owner has told the scale at which such business is operating. The number of employees helps the researcher in categorizing the various businesses into small, medium and large-scale enterprises.

Table 6: Number of Employees

	Frequency	Percent	Cumulative Percent
0 - 5 employees	74	74.0	74.0
6 - 29 employees	21	21.0	95.0
30 employees and above	5	5.0	100.0
Total	100	100.0	

Source: Field Survey (2022)

From table 7 above, it can be observed that the total number of individuals with employees between zero and five is seventy-four. This represents seventy-four percent of the total number of units of analysis. This means majority of these respondents are individuals who are operating a small-scale business. The representation from individuals operating a medium scale business; having employee strength of between six and twenty-nine is twenty-one. This also represents twenty-one percent of the total number of respondents used for this study. Cumulatively the small and medium scale enterprises form ninety-five percent of the total number of units of analysis. Businesses having thirty employees and above are five. This represents the large business group in the various markets and across the two-metropolis used for this study.

Perception of Use AIS in General and for Decision Making Processes.

Having assessed the demographic characteristics of the respondents, this section of the study assesses the perception of the use of accounting information systems in their business decision processes. Data on the perception of the use of accounting information systems by SMEs in their decision-making processes was presented in table 8 below. How SMEs make use of AIS and incorporate them into their decision-making processes is in consonance with the theory of adaptive capacity were presented below.

Table 7: Perception of Use of Accounting Information Systems

	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Std. Error
Decision Making Meaning	3.410	0.922	-1.544	0.241
Existence Broad Consultation	3.280	0.944	-1.107	0.241
Relevant Means of Conducting Business	3.360	0.811	-1.218	0.241
Contemporary Systems	3.250	0.947	-1.107	0.241

Current and Modern Trends	3.370	0.939	-1.481	0.241
Integration of Modern Trends	3.410	0.842	-1.316	0.241
Effects of Conducting Business	3.360	0.871	-1.339	0.241
Valid N	100			

Source: Field Survey (2022)

Table 8 above presents the position of respondents on their perception of factors they consider in making decisions for their business. These factors were assessed to inform the general knowledge of industry players on how they even make effective decisions and their perception of the vital inputs that must be factored. Out of a total sampled number of one hundred, the mean, standard deviation, skewness and standard errors were computed as 3.10, 0.992, -1.544 and 0.241 respectively.

This data points to the fact that though the distribution seems to be normal, a significant number of the respondents tend to agree more to the factors that inform their decisions about the use of accounting information systems for their decisions. The mean of 3.40 is much closer to 4 which indicates strongly agree and this depicts the positive perception of these respondents have about the use of new information through broad consultation, contemporary systems, the use of new technology into their decision-making processes. The skewness of -1.544 also supports the assertion that most of the respondents agree with the factors that inform their inclusion of these variables into their decision-making processes. The standard error, 0.241, also indicates that information from this survey is very realistic and not bias and therefore can be used to make projections on the general perception of the general public.

These findings are consistent with (Haleem, 2016) and (Jawabreh & Alrabei, 2012). These were both studies which were conducted using the descriptive research design and at the end of the study it was concluded that majority of the respondents agree to the fact that firms have a positive disposition to the use of new information about current trends of conducting business and the use of novel means of conducting business which subsequently affect the decision-making processes of businesses enterprises especially, small and medium scale enterprises.

The Perception of Use of Accounting Information Systems for Decisions

Having assessed the use of new information obtained in the decision-making processes of SMEs, this section seeks to assess the perception of use of accounting information systems. Table 9 presents the results about the perception of use of various information systems amongst these respondents across the various markets. Frequencies and percentages were used to present the findings on the percentage use of some key accounting information system availability and usage.

Table 8: Perception on AIS Use for Decision Making

	Frequency	Percent	Cumulative Percent
Use of Computerized Information Systems			
YES	26	26.0	26.0
NO	74	74.0	100.0
Total	100	100.0	
Nature that Permits Computerized Systems			
NO	35	35.0	35.0
YES	65	65.0	100.0
Total	100	100.0	
Systems that Process and Interpret data			
NO	75	75.0	75.0
YES	25	25.0	100.0
Total	100	100.0	
Processing of Financial and Non-Financial data			
NO	60	60.0	60.0
YES	40	40.0	100.0
Total	100	100.0	
Reports for Timely Decision			
NO	19	19.0	19.0
YES	81	81.0	100.0
Total	100	100.0	
Data on Assets, Liabilities and Capital			
NO	15	15.0	15.0

YES	85	85.0	100.0
Total	100	100.0	
Recording of Transactions Manually			
NO	31	31.0	31.0
YES	69	69.0	69.0
Total	100	100.0	
Filing of Tax returns electronically			
NO	33	33.0	33.0
YES	67	67.0	100.0
Total	100	100.0	

Source: Field Survey (2022)

From table 9, it can be observed that on the average about seventy percent (70%) of all the respondents shared a positive view on the position of their business in relation to the use of computerized systems, nature that enables the use of computerized systems, reports for timely decisions, data on assets and liabilities, and the filing of tax returns electronically. These are processes they are able to carry out with little or no computerized systems in place.

On the other hand, with systems that interprets data, the processing of financial and non-financial data and the recording of transactions manually, are having on the average about forty percent (45%) agreeing and fifty-five percent opposing to the use of accounting information systems for such purposes.

More specifically, on the perception on the use of computerized systems in SME operations, seventy-four percent (74%) of the total respondents agreed to its use, sixty-five percent agreed to the fact that the nature of small and medium scale enterprises permits the use of computerized systems, only twenty-five percent (25%) agree that systems are in place which supports the processing and interpretation of data, eighty-five percent (85%) agree to the fact that there exist data on the assets and liabilities of these small and medium scale enterprises and sixty-nine percent (69%) agreed that transactions are recorded manually across these SMEs. These are all positions which are consistent with the findings of (Akanbi, 2017), (Diaz & Villamizar, 2017) and (Lengauer, Mayr, & Parasote, 2006). In these studies, it was concluded that significant number of SMEs uses systems that are computer friendly and can easily and seamlessly employ the use of same and also the manual recording of business transactions. These form the perceptions of other units of analysis in different jurisdictions.

This also shows a positive relation between adapting to new trends and the perception of its influence on increased profitability and growth of the firm. The positive relationships that exist between these independent variables and the dependent variable which is a positive one is consistent with the findings from (Abubakar, 2014).

In (Abubakar, 2014) it was established factors such as increased customer satisfaction, lesser opportunity cost, the reduction of internal challenges and the adaptation to new trends are all positively related to increased firm growth and profitability.

Chapter Summary

The chapter four of this study presented the results and discussions for the study. Data collected from field survey was presented in a form that is easy to understand. Analysis was made using descriptive statistics such as mean, standard deviation and skewness analysis. These results were further presented in tables and inferences made from them. The knowledge of SME owners on the perception of AIS use were analyzed with its consistency and inconsistency with exiting literature highlighted.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

Introduction

The chapter five of this study is the concluding chapter for the entire study. This chapter begin with the objectives of the study, the methodology employed by the researcher and the techniques used in analyzing the data to come out with the findings of the study. A summary of the key findings of the study was given in relation to the research objectives and conclusions deduced from them. Specific recommendation were made to stakeholders after which suggestions for further research works in same subject area or similar topics will be given.

Summary of the Study

The main objective of the study was to investigate the perception owners of SMEs have on the use of accounting information systems for their decisions. To be able to fully carry out this study, one hundred (100) business enterprises ranging from small to medium scale were investigated across the Tamale central market in the Tamale Metropolitan Area. Accounting information systems play a vital role in ensuring that businesses have access to reliable information and accurate data to drive their decision-making needs.

Both the quantitative and qualitative research approach were used for this study. This afforded the researcher to bridge the gaps that comes with the two approaches individually. This is because the hybrid of the two approaches, blends the two approaches and gives a more concrete outcome which is devoid of most of the limitations of either approach.

Primary data were gathered through the use of a questionnaire and an imbedded interview which sort to find out the positions of these respondents across the three (3) markets in the two metropolitan areas.

One hundred (100) questionnaires were administered to the various respondents from the three (3) markets areas used for this study. Several analyses were made from the responses obtained from the data collection which helped the researcher in achieving his research objectives and aims. The data obtained from the questionnaires were analyzed through the use of descriptive statistics such as frequencies, percentages and ratios which were measured on an interval scale. This method used to obtain data and responses from the respondents enabled them to respond to the questionnaires in a manner that gave them more confidentiality and flexibility. These results were subsequently presented in tables.

Summary of Key Findings

The previous chapter, chapter four, presented the results but the substantive results from the study are discussed below;

1. A significant number of the SMEs across the two Metropolitan Areas are newly established businesses. The majority of them having less than five (5) years of experience in business. The proportion of those that have been in business for ten years and lesser also represents seventy-two percent (72%) of the total number of SMEs engaged. These are also managed by individuals who are primarily tertiary level school graduates. This shows the picture that a lot more individuals who leave school are venturing into entrepreneurship and increasing the number of SMEs providing various services across the country.

2. The findings of the study also brought to the fore the fact that there exists a positive perception regarding the use of accounting information systems and the use of novel means of doing things and new information about the conduct of business operations. Businesses are able to utilize new information and incorporate them into their decision-making processes. This gives the indication that there exists a positive perception regarding the use of accounting information systems through adaptive capacity among majority of these SMEs across the three markets.

3. The findings of the study also brought to the fore the fact that industry players and owners of SMEs have the perception that a significant number of them make use of computerized systems in their operations. Although, there is also the perception that the nature of their business and operations makes it a bit difficult to employ the use of computerized systems and automation. This is because, a significant number of the respondents have the perception that manual means of recording business transactions and reporting of financial information exist in their business.

4. There exist a positive perception in relation to the use of accounting information systems on the profitability and subsequent increase in market size, growth potentials and overall improvement in the delivery of services in their business. Majority of industry player share the view that after the implementation of various forms of accounting information systems, they have experienced some improvements in a number of factors which represents a positive perception about the use of accounting information systems.

Conclusion

This study has given an ideal picture of the real situation on the ground with regards to the perception of SME owners on the use of accounting information systems for their decision making. The factors that influence their decisions most and the level of automation that exists in these individual SMEs.

It is very important individuals operating businesses across the various sectors of the economy take keen interest in issues of automation and computerization. It will always be beneficial if businesses make use of reach academic literature on issues that concern their operations. The analysis and inputs provided in this study will be very useful to firm and other policy considerations. More specifically, firms with similar socio-economic characteristics as the two metropolises in which the study was conducted. When the perception of industry players regarding the use of accounting information systems is known, policy considerations can be directed to increase the use of automation in the various processes of these businesses.

From the findings of the study, it can be concluded that there exist a positive perception regarding the use of novel means of doing things and new information about the conduct of business operations. There exist also the fact that industry players and owners of SMEs have the perception that a significant number of them make use of computerized systems in their operations. Although, there is also the perception that the nature of their business and operations makes it a bit difficult to employ the use of computerized systems and automation.

This is because, a significant number of the respondents have the perception that manual means of recording business transactions and reporting of financial information exist in their business.

There exist a positive perception in relation to the use of accounting information systems on the profitability and subsequent increase in market size, growth potentials and overall improvement in the delivery of services in their business. Majority of industry player share the view that after the implementation of various forms of accounting information systems, they have experienced some improvements in a number of factors which represents a positive perception about the use of accounting.

Recommendations

Given the key findings of this study, the following recommendations are made for policy consideration and future decision making.

- Given the positive perception about the use of accounting information systems for decision making of SMEs, various stakeholders primarily the government should put in measures to ensure that conducting business in the digital space become less costly through the granting of tax waivers, subsidies and other incentives to encourage the adoption of this mode of carrying out business operations to increase the general business growth and profitability which will transcend into increased gross domestic product for the country.
- From the findings of the study, the number of businesses which are in their infant stage across the two metropolitan areas in the three markets used for the study represents a very significant proportion of the total number of

business establishment. Policy directions should be channeled towards making the business environment favorable for them through capacity building and the provision of a favorable business environment.

- The positive perception industry players have regarding the use of accounting information systems should not be the stopping point. A conscious effort must be made to encourage these businesses to adopt various means of automation into their business operations to reap the benefits thereof.
- As various industry players have the positive perception about the use of accounting information systems for their decisions, policy directions should be directed towards making advanced technologies much more affordable to help make it easy for budding SMEs to adopt such means of conducting business.

Suggestions for Further Research

Further research works can be expanded to investigate the actual impact of accounting information systems on decision making and not just the perception of such use. Other researchers can also employ the use of the ganger test to investigate and find the possibility of which variable actually influences the perception of the use of accounting information systems for decision making of SMEs.

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APPENDICES

UNIVERSITY OF CAPE COAST

COLLEGE OF DISTANCE EDUCATION

SCHOOL OF BUSINESS STUDIES

QUESTIONNAIRE

Dear respondent, this study seeks to come out with findings on the role Accounting Information Systems (AIS) play in decision making among SMEs in the Ghana. It is solely designed for academic purposes, therefore every information provided will be treated with utmost confidentiality and anonymity. The University has given us permission to conduct this study, and your honesty is crucial when answering the questionnaire. Please tick the appropriate response.

SECTION A: DEMOGRAPHICS

1. Gender:

   Male [ ]   Female [ ]

2. Age:

   20 – 30 years [ ]   31 – 40 years [ ]   41 – 50 years [ ]   51 and above [ ]

3. Level of Education:

   Junior High School level [ ]

   Senior High School level [ ]

   Tertiary level [ ]

   Other (s)

   If other, please specify …………………………………………………

4. In which market does your business operate?

   Abura Market [ ]

   Kotokuraba Market [ ]

   Neither of the above [ ]

5. How many employees does your business employ?

   0 – 5 employees [ ]

   6 – 29 employees [ ]

   30 employees and above [ ]

6. For how long has this business being in operation?

   0 – 5 years [ ]

   5 – 10 years [ ]

   Above 10 years [ ]

7. Which of the following best describes the nature of your business.

   Wholesale and Retail Trade [ ]

   Tourism and Leisure [ ]

   Food and Beverages [ ]

   Fashion and Clothing [ ]

SECTION B

Perception on the Use New Information in Decision Making Processes.

This session seeks to obtain responses from our respondents about the perception of how well management of SMEs are able to use new information about changing trends in the market in formulating decisions. Completing this session is easy and your complete honesty is required. Kindly provide suitable answers to the questions that follow by choosing from the scale as it may apply to you and your business.

Please indicate the degree to which you agree with the statements below.

Key: 1=Strongly Disagree (SD); 2=Disagree (D); 3=Agree (A); 4=Strongly Agree (SA)

S/N	STATEMENT	SD	D	A	SA
1	Effective decision making refers to the process through which various alternatives are selected and then managed through implementation to achieve my stated business objectives.				
2	There is broad consultation; involving key employees, all levels of management, external consultants, etc. before major decisions are reached in my business.				
3	The business environment in which I find myself in makes the use of novel means of conducting business easier and very relevant when inculcated into operations.				

4	The nature of my business permits the inclusion of dynamic and contemporary systems of operation.				
5	I place optimum value on current trends and modern techniques in conducting my business or delivery of my service.				
6	I always make sure current knowledge and modern trends of conducting business are integrated into my final business decisions.				
7	The inclusion and use of current trends in my business processes has resulted in a more robust and efficient way of conducting my business and service delivery.				

SECTION C

Perception on the Use of Accounting Information Systems

Most often than not, the operations of businesses are not computerized but operated on manual basis. This session therefore seeks to measure the perception of SME owners on the use of accounting information systems in their operations within the two Metropolises. Completing this session is easier, and your complete honesty will be appreciated. Kindly provide suitable answers to the questions that follow by answering YES or NO to the questions that follows.

Perception on use of Accounting Information Systems: Please tick [√] the appropriate response.

Key: 1=YES; 2=NO

S/N	STATEMENT	YES	NO
1	Do you use any form of computerized information system in your business operations?		
2	The nature of my business permits the use of computerized accounting systems in the conduct of my business.		
3	Is there a system in your business that is used to collect, process, analyze, store, retrieve and report financial and non-financial data in a manner which helps to provide decision makers with the needed information?		
4	This system for collecting, processing, analyzing, storing, retrieving and reporting financial and non-financial data is very robust and efficient.		
5	Reports for timely decision making processes are made available to decision makers using manual means of document processing and delivery.		
6	Data on assets, liabilities and capital can be made readily available for decision making on a timely basis.		
7	Are sales, purchases, receipts and payments recorded manually in a separate book of account used for records keeping in this business?		
8	My business files its tax returns, files invoices and bills and issue receipts using an electronic automated system.		

SECTION D

Perception of Use of Accounting Information Systems in Decision Making

This final session seeks to obtain responses from our respondents on their perception on how accounting information systems has affected their business enterprise decisions in their day-to-day operations. Completing this session is very easy and your complete honesty will be much appreciated. Kindly provide suitable answers to the questions that follow by choosing from the scale as it may apply to you and your business.

Perception on AIS and Decision Making: Please tick [√] the appropriate response.

KEY: 1=Strongly Disagree (SD); 2=Disagree (D); 3=Agree (A); 4=Strongly Agree (SA)

	STATEMENT	SD	D	A	SA
1	Since the implementation of an automated accounting system, I always obtain accurate timely data to feed my strategic and operational decision processes.				
2	I always obtain accurate reports from the automated accounting system in place which makes forecasting and planning in my business very efficient.				
3	Internal challenges such as fraud and errors in my business are kept at the barest minimum as a result of the use of an automated accounting system.				

4	My business always upgrades and adapts to new technologies that increase it's the quality of information needed for decision making.				
5	The automated accounting systems in place in my business has increased my profitability since its implementation.				
6	Since the implementation of an AIS, my customers are always satisfied with my service delivery.				
7	The opportunity cost of running an automated accounting system is much lesser than running a manual system because of the quality information the automated system gives me.				