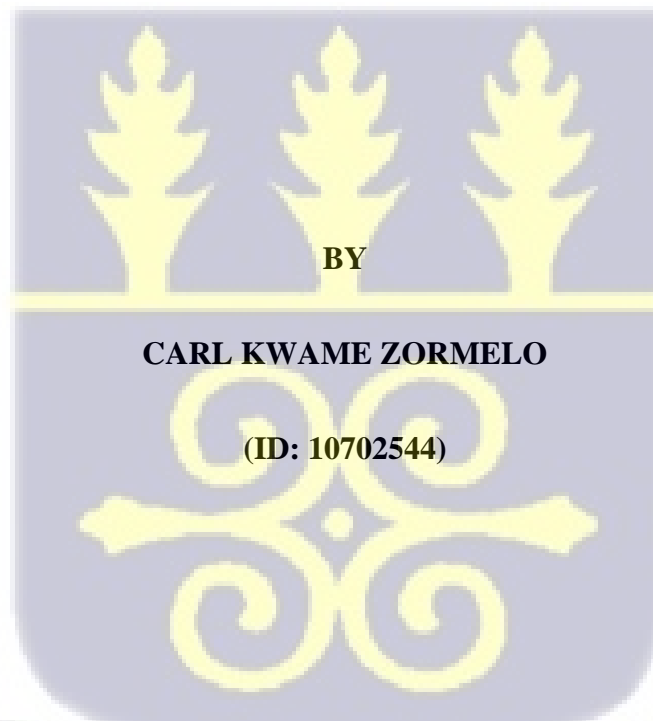


UNIVERSITY OF GHANA

**THE IMPACT OF INFORMATION SYSTEMS ON BUSINESS PROCESSES IN THE
FINANCIAL INDUSTRY: A CASE STUDY OF SIC LIFE SAVING AND LOANS
COMPANY LIMITED**



**A LONG ESSAY SUBMITTED TO THE DEPARTMENT OF OPERATIONS AND
MANAGEMENT INFORMATION SYSTEMS (OMIS), UNIVERSITY OF GHANA
BUSINESS SCHOOL, UNIVERSITY OF GHANA, LEGON IN PARTIAL
FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTERS IN
BUSINESS ADMINISTRATION – MBA (MANAGEMENT INFORMATION SYSTEMS)**

AUGUST, 2020

DECLARATION

I, Carl Kwame Zormelo, do hereby declare that this work is the results of my research and has not been presented by anyone for any academic award in this or any other university. All references used in the work have been fully acknowledged.

.....

CARL KWAME ZORMELO.

(10702544)

.....

DATE

CERTIFICATION

I hereby certify that this was supervised following procedures laid down by the University of Ghana.

.....

DR. ACHEAMPONG OWUSU

(SUPERVISOR)

.....

DATE

DEDICATION

This dissertation is dedicated to my lovely wife Cynthia Asare and kids, Kingsley and Iain. Thank you for all your support in spirit, patience, and encouragement. This dissertation is dedicated also to my lovely Dad, Mum and Uncle. Your advice and well wishes have brought me thus far.

ACKNOWLEDGEMENT

A proposal such as this could not have been accomplished without the support and encouragement of several people. My foremost thanks go to the Almighty God under whose divine favour and guidance I have been able to complete this course.

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ABSTRACT

In most organisations, the influence of information management is a significant challenge and a source of problems. As such causes, numerous economic difficulties, technological challenges and problems in changing organizational structures are frequently listed.

This study seeks to assess the impact of an information system (IS) on business performance and the benefits derived from information systems. The study evaluated the impact of IS System Quality, IS Application Quality and Application Quality on IS Usage at financial institutions as well as the overall net benefits.

Data for the study was collected from Sic Life Savings and Loans (SLSL). The study had a total sample of 195 respondents. Partial Least Square-Structural Equation Modeling (PLS-SEM) technique for data processing has been introduced.

The findings of the study show positive relationships between IS System Quality, IS information Quality, IS Application Quality and IS Usage at the financial institution. Only the relationship between IS System and Is usage was not statistically significant. The relationship between IS Usage and Net benefit derived from information system was significant and positively correlated.

The results from the study show the positive impact of information system on organizations that implement IS. The study provides relevant and helpful conclusions and recommendations for practice, policymaking and future research. For practice, the study has provided information on the use and benefit IS system. This study can serve as a guide for the development, implementation and evaluation of IS system and applications. This study highlights some qualities that can help IS system developers and guide users to choose the best System that will give the best benefit. For policy, management of organizations, unions and government can follow the result of this study to implement policies to regulate the use of IS systems and increase its patronage. The impact of

the IS system on organizations has been proven over the years, and this study provides support for Ghanaian based industries to implement the IS.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Information and communication technology (ICT) is the digital wave of innovation which is currently spreading across globally. ICT drives the financial sector technology change to their advantage (Frame & White, 2015). Studies have shown that technological change is one of the most influential organization's (Porteous, 2006). "Information systems is an integrated set of components that help in collecting, storing and processing data and for delivering information, knowledge, and digital products" (Leonard-Barton, 2011).

An organization's information systems seek to provide data to executives, managers, and shareholders for more effective business planning, reporting, tracking and management. Furthermore, the use of efficient computing tools and network information systems has helped companies become more flexible, remove layers of redundant management procedures, and separate work from the location and even the workflows (Frame & White, 2015). The data architecture and technologies need to be further developed to optimize the benefits of information systems to today's rising, globalized and knowledge-based economy. The Encyclopaedia Britannica, (Olumoye, 2013) observed that information structures have expanded all linked wireless communication networks with the advent of smartphones, tablets and other portable computer-based devices to embrace mobility as a normal human condition.

Information systems boost rewards for effective companies; provided they can capture, store, distribute and exchange data in a timely and coordinated manner. These also help narrow geographic gaps, enabling more efficiency for staff, reflected in improving processes, data management and processing, resulting in a positive outcome (Ferreira & Cherobim, 2012).

Strategic companies such as banks are typically those where the production of technological technologies provides a considerable competitive advantage and where the everyday operation is highly dependent on the smooth running of IT systems because of the volume and nature of the transactions they carry out.

Therefore, this can be argued that their industry's nature means that they cannot afford to mismanage the implementation of IS, which is more important for these organizations to manage well the implementation of their information systems, as well as ensuring the material effect.

1.2 Problem Statement

In times of rapidly evolving markets and technology, companies that want to safeguard their future need to innovate (Ferguson & Brohaugh, 2008) and innovation is "the practical use of a non-trivial change and improvement in a process, product or method that is original to the organization that is creating the change" (Blayse & Manley, 2004). The rapid growth of ICT has greatly impacted the banking industry for over a decade. Financial sectors, especially the banking sector, have improved their services by introducing different information technology (Bhuiyan & Rahman, 2013). Information systems are not only in the developed but also in the developing countries like Ghana, one of the most known and well-embraced technologies.

For the research question as one of the identified issues, much work is being carried out on the effect of information systems on financial sector business processes (Crabbe et al., 2013). Many of these works have researched on an integrated model for assessing the adoption of business intelligence systems, the role of management information systems in industrial firms, implementation as shared technology adaptation and effects of business analytics and enterprise systems (Torsten, 2010; Hua & Chyan, 2011). Extensive work has been carried out on the effect of information systems on business processes with less emphasis on the factors affecting system

implementation (Klein & Mayer, 2011; Crabbe, Standing, & Karjaluoto, 2008). It catalyzes for the study to learn more about the effect of information systems on the implementation of business processes.

Concerning a theory gap, different models and theories have been used to study technology deployment and adoption. Mohammed and Kazeem (2014), the impact of Management Information System (MIS) on the success of organizations in Nigeria, for instance, the impact of information systems on financial sector business processes. Much of this research work performed has centred on analysing a research issue using a single model or theory. In addition, other models are used by researchers such as the Pattern of Technology Acceptance (TAM), Planned Behaviour Theory (TPB), and Institutional Theory that are equally useful in assessing the effect of information systems on business processes (Nayak, Nath & Goel, 2014).

Furthermore, in terms of context gap, much of these studies on the effect of IT systems on business processes throughout financial industry focus more on developing countries like Malaysia, Nigeria, Australia, India and Uganda (Gable, Guy G, Sedera, Darshana and Chan, 2008; Olafemi Yusuf Munirat, Moh'd Sani Isyaka, Kazeem Aina Olalekan 2014; Veeriah Sinniah and Sharan Kaur, 2012; Klein & Mayer, 2011) with less or no research on Ghana.

1.3 Research Purpose

The primary aim of this analysis is to establish knowledge about the impact systems have on banking sector business processes. The data was obtained from Sic Life Savings and Loans and was chosen due to its comprehensive provision of various technology services it offers to its customers because of the need to recognize the benefit of deploying the technology.

1.4 Research Objectives

Two specific objectives that guide the study are:

- i. To examine information system impact on business processes.
- ii. To know the consequence of implementing information systems in an organization.

1.5 Research Questions

The research questions for this study are therefore stated as:

- i. What is the impact of information systems on business processes?
- ii. What is the consequence of implementing information systems in an organization?

1.6 Research Significance

Significance of this study is viewed from research, practice and policy perspective. Concerning research significance, it will add up to knowledge of exiting area of information systems on business processes in the financial sector.

In practice significance, the research will inform users, managers and executive to appreciate and contribute to the development of information systems and services quality. Practically, this research will further contribute to informing the organization under study about the relevant control measures to deploy and adopt the use of Information Systems.

For policy significance, a feedback on policies to encourage the financial industry with the use of information systems for banking and to promote competition amongst them will be listed.

1.7 Chapter Synopsis

The study was categorized into six chapters namely:

Chapter one, consists of background, problem, research purpose, objectives, research questions and significance which introduces the study.

Chapter two discussed chapter overview, definition of theories, previous research attempts to address research issues and frameworks.

Chapter three presented the research methodology, approach to sampling, data processing, and data interpretation.

Chapter four discusses the context of the study which comprises of a brief background of Sic Life Savings and Loans, its mission, vision, core values, achievements and leadership.

Chapter five includes data analysis and discussion of findings.

Chapter six comprises the summary, recommendations and conclusions.

The references and appendices follow this chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Organizational progress is seen as the foundation of economic growth, a requirement for national development and a significant measure of the competitiveness of the business. Mechanism reflects the tasks or key practices that managers participate in. Such roles are usually known as planning, organization, leadership and power. Shaukat (2012) argued that the growing business has certain goals and the main goal of growing company is to earn revenue through that success. Sushil and Agrawal (2013) argued that the organisations are made up of five key components, organizational structure, corporate culture, business processes, ideology of the company, people and accountability.

2.2 The impact of Information Systems

We are in the midst of a rapidly shifting flow of technology and industry innovations that are transforming the global business landscape. With significant repercussions for the conduct of business, an entirely new internet business culture is emerging. Through seeing how business people use high-speed internet connections to collect e-mail and data, mobile computers connected to cellular networks, and hybrid devices for an increasingly mobile and global workforce, we can see this every day. We all expect online platforms to buy goods and services, we expect our business associates to be available by email and mobile phone, and we expect to be able to communicate with our suppliers, customers and employees on the internet at any time of day or night, so IT can make a difference to you as a manager and an employee during the day.

It is because of this that information systems are so important. A device is a collection of components that are interrelated and function together to achieve such results (Satzinger et al,

2002). An information system is a set of interrelated elements that collect, process, store, organize, retrieve, maintain and provide information in an organization to support business processes, decision-making, and progress (Laudon and Laudon, 2007; O'Brien, 2003). In this sense, the goods, processes, inventions, and requirements used for the purpose of knowledge production vary from information technology (Kroenke, 2007). Information systems play an important role in assisting managers to evaluate problems, imagine challenging topics, and develop new products (Laudon and Laudon, 2008).

2.3 Information Systems

Information system is a paragliding concept used in telecommunication network, programs, and applications to describe a set of computers (Oliveira & Martins, 2010). Chaffey and White (2005) state that IS refers to software programs that collect, monitor and allow access to information, supports the running of installed programs, and telecommunications devices, and networks that enable data transmission within and outside an entity. IS has transformed the way business is conducted by influencing almost every aspect of business operation including product development, process management, customer data processing, networking and interactions between consumers and suppliers. Companies leverage technology to innovate in today's dynamic global and complex world.

IS innovation is increasing in importance, mainly due to three key trends; intense foreign competition, fragmented and competitive markets. In comparison, IS refers to a broad range of computerized technologies that allow touch and electronic information to be obtained, processed, and transmitted. These include: desktop computers, notebooks, mobile devices, wired or wireless applications for intranet and business efficiency, data storage and protection, network security etc.,

(Murtaza & Ashrafi, 2008). As a result of improved productivity, the IS improves economic performance, leading to greater economic development and growth (Laudon & Laudon 2012). Ardalan (2011) argued that IS is the building block for organization, national security and development in a rapidly evolving global climate. Adewoye and Akanbi (2012) argued that IS is a dynamic and heterogeneous assortment of products, software, and services used in knowledge production, distribution, processing, and transformation. IS focuses on human resources and infrastructure, basic instruments and means for evaluating, planning, construction management, and achieving sustainable economic growth and growth. Technological advances have changed much of the work of wealth generation from knowledge-based physical effort to knowledge-based efforts to allow manufacturing companies to recognize the importance of IS by creating business opportunities for their businesses over market rivals. A manufacturing company needs to develop and gain its expertise in manufacturing processes to achieve good quality and increasing the employee productivity to thrive in global competition or industry.

2.4 Theoretical Background (Delone and Mclean IS Success Model)

As corporations continue to implement and optimize information technology (IT) to enhance service quality, increase revenue, and retain more consumers, some organizations do not realize their ability. As a result, in various environments, several models and methods were created to assess the effectiveness of the IS.

The 1992 and 2003 DeLone and McLean, respectively, are the most popular versions. In more than 3,500 publications to date, the two models have been cited and have been used to test thousands of ISs around the world. The original DeLone and McLean (D&M) model (1992) consists of six constructs: system quality, information quality, system use, user satisfaction, individual impact and organizational impact.

System quality, measures the quality of the system itself and information quality measures the quality of the information produced by the system. The two concepts have a significant influence on the use of technology and customer satisfaction, impacting individual users and organizations in general in turn.

As many models and hypotheses, the D&M model, which suggested many improvements to cope with changing its sectors, was reviewed by many researchers. The authors then adopted scientists' recommendations and applied them to the updated model of D&M. In order to assess the effectiveness of IS in both voluntary and mandatory contexts, some of the important changes were to break Use Build into Purpose to Use and Use.

In addition, Service Quality has been introduced to the model as a new framework for evaluating the quality of services provided by the IT Unit, as many organisations tend to allocate a separate IT Unit with computational resources. Similarly, two concepts have been combined: individual impact and organizational impact to form net benefit, as the impact of IS has now exceeded immediate users.

DeLone and McLean (2003) identified some of the beneficiaries of the IS as working groups, organisations, industry, and consumers. Therefore, it was relevant to calculate the net benefits of the IS rather than just the individual and organizational benefits.

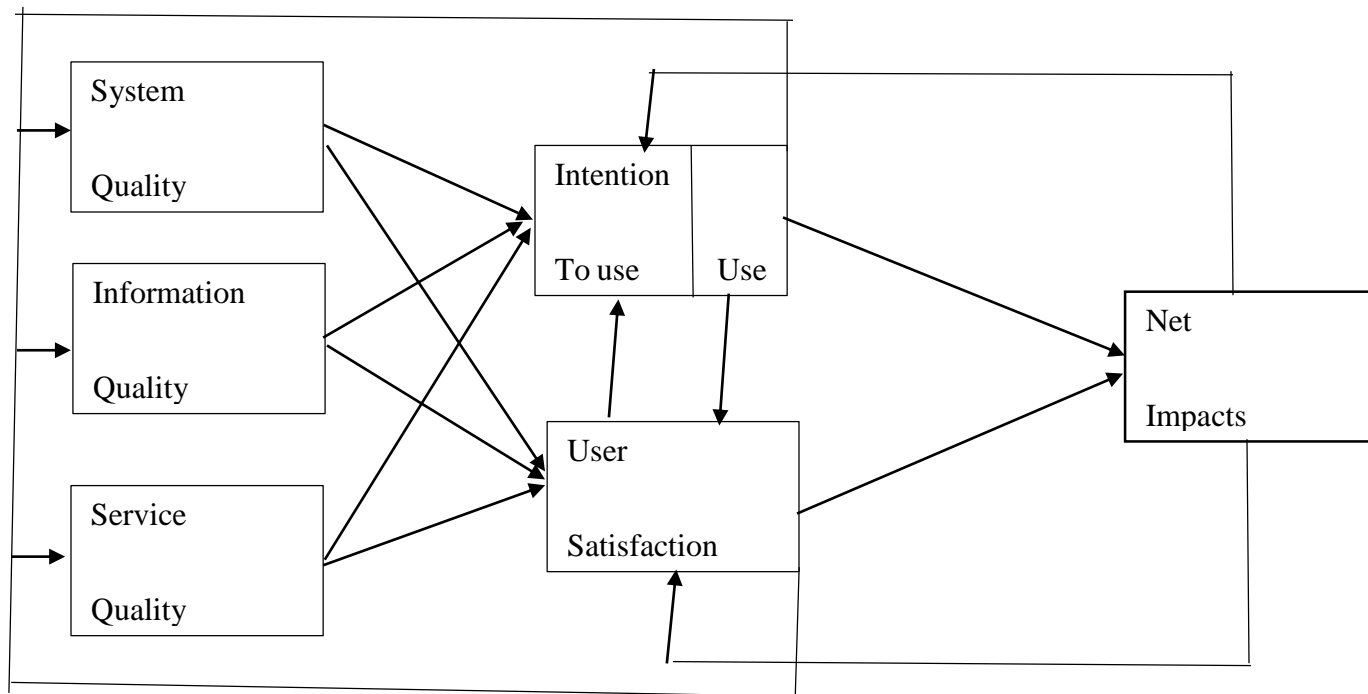


Figure 1.1: The updated D&M model Source: (DeLone & McLean, 2003, p. 24)

2.5. Related Studies

A recent information systems literature survey by Aruldoss et al. (2014) has shown that IS application processes have gained a lot of coverage, with little emphasis on the effect of IS systems. Some researchers have also used quantitative studies to analyze the specific variables to work on in-depth, since IS is an area that is still evolving, however, there are often case studies involving a few entities where it is not possible to generalize outcomes. Examples of these are: identification of SME-specific Business Intelligence Systems (BIS) firm-level adoption determinants (Owusu & Said, 2016); investigation of BI adoption in a retail chain based in Slovakia (Owusu, Ghanbari-Baghestan, & Kalantari, 2017); exploration of variables that can allow organizations to be more effective in achieving widespread use of IS (Trkman, 2010). Moreover, other researchers have also

suggested conceptual models and the design, implementation and deployment of the IS effect in several studies (Dos Santos, Peffers, & Mauer, 1993).

Specifically, there are few empirical research at the organizational level on the effect of IS Structures using the Delone and Mclean IS Success Model theories. In addition, most of the recent research has Instead of a limited emphasis on the banking sector, he concentrated on a number of industries. The following are further discussed examples of some of these studies:

Sujitparapitaya et al. (2012) analyzed ten variables that influence the adoption of BI in academic, organizational and environmental variables in private and public higher education institutions (IHE) in the USA. Data was collected from 243 senior managers of the institutional research and information technology units of both organizations for two and four years using a survey procedure. Their results showed that IHE's organizational structure, institution size, absorptive power, organizational reputation, stakeholder support, perceived costs, and perceived complexity are important determinants of the adoption of BI and that there is no significant effect on the adoption of executive support, competitive advantage, and perceived benefits.

In his research, Malladi (2013) also examined the variables associated with the degree of Business Intelligence & Analytics (BIA) organizational acceptance using the framework of Technology-Organization-Environment. Via a survey, information was gathered from 358 companies across North America. His results indicate that a company's perceived benefits, the sophistication of technology in terms of data infrastructure, and organizational sizes are positively related to the degree of adoption of BIA. The results also showed that companies in knowledge-intensive industries are likely to favor BIA more broadly, but the lack of industry standards hinders acceptance.

2.6. Conceptual Framework

The research aim is to study the effect of the information systems (IS) on the company's performance. Based on the earlier review of the literature, Figure 1.2 illustrates a frame of study in this research which is the effect of IS on business processes and its key challenges. In addition, the impact of IS on business processes will be explored as success factors. Lastly, it examines the impact on an organization and its procedures that focus on effects and consequences. To that end the pattern is described below:

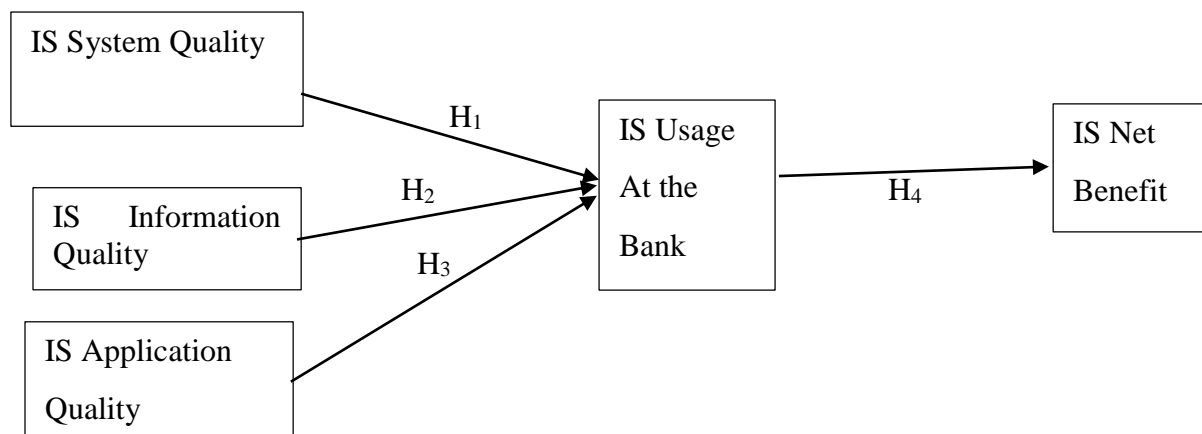


Figure 1.2: Conceptual Framework

2.6.1 IS System Quality

IS System Quality refers to the process by which organization can streamline contact more effectively, control processes, maintain records better and take decisions more informally (Mudzana & Maharaj, 2015). Measuring information system efficiency is a multidimensional process that focuses on multiple device aspects, examples of application features, configuration tools, usability and other technical tools (Urbach & Müller, 2012); higher performance of the IS device is expected to result in increased IS use in this context at the bank, increased usage, and increased user satisfaction, resulting in positive impacts on individual performance.

The hypothesis for this concept is:

Hypothesis H1: the consistency of the IS System Quality positively affects bank use of IS.

2.6.2 IS Quality of information

IS Information Quality — the desirable characteristics of the system outputs; i.e., management reports and Web pages (DeLone & McLean, 2016). For example, relevance, understandability, accuracy, conciseness, completeness, understandability, currency, timeliness, and usability. Information quality plays a critical role in maintaining a positive attitude to the advantages of using a specific information system (IS), according to Akter, D'Ambra and Ray (2013). The 'standard of knowledge is also used as a key precedent for user satisfaction' (Urbach & Müller, 2012).

The hypotheses for this construct is:

Hypothesis H2: IS Information quality positively influence IS usage at the bank.

2.6.3 IS Application Quality

IS Application Quality — the mechanism that brings together all facets of software quality from specifications to delivery, offers an organized approach to solving the management problems, and is the glue that holds IS together (DeLone & McLean, 2003). The quality of the application is the consistency of the service rendered by system users from the IS department and IT support staff (DeLone & McLean, 2003; Petter et al., 2008) (responsiveness, reliability, succinct, technical competence, and empathy of staff). The hypotheses for this structure are:

Hypothesis H3: IS Application quality positively influence IS usage at the bank.

2.6.4 IS Usage at the Bank

IS Usage at the bank — the degree and way in which employees and consumers use an information system's capabilities (DeLone & McLean, 2016). For instance, Usage amount, frequency of use, quality of use, appropriateness of use, degree of use and purpose of use. Satisfaction of Consumers and user intent are closely linked (Au, Ngai & Cheng, 2008).

The hypotheses for this construct is:

Hypothesis H₄: The user satisfaction of IS usage at the bank influences individual performance.

2.6.5 IS Net Benefit

IS Net Benefit — The degree to which information systems contribute (or do not contribute) to individuals, communities, organizations, industries, and nations' progress (DeLone & McLean, 2016). For example: enhanced decision-making, enhanced productivity, increased revenue, reduction of costs, improved profitability, market performance, welfare of the customer, job creation, and economic growth. Although overall goals frequently focus on intangible benefits, such as gaining a competitive advantage or increasing customer loyalty, many businesses frequently profit from tangible benefits, such as cost savings, improved performance, and fewer errors in data entry (DeLone & McLean, 2003). When customers begin to use a particular information system well, more attention should be paid to its creativity and promotional activities (Venkatesh, Thong & Xu 2012); with increasing awareness, consumers expect higher IS to have a positive impact on demand.

Table 1: Survey Instrument Constructions for IS influence.

Construct	Items	Adapted from
IS System Quality	Availability Simple to use Usability Reliability	Doll and Torkzadeh (1988); McLean and DeLone(1992); DeLone and McLean (2003)
IS Information Quality	Data Quality Concise timeline	Doll and Torkzadeh (1988)
IS Application Quality	Assurance Empathy Reacts to Intelligence	DeLone and Mclean (2003)
IS Usage at the Bank	Using the system regularly. Depends on the system in question. Fits the needs for information. Speak of the system as being truly successful.	Seddon (1997) Rai et al. (2002)
IS Net Benefit	The system affects my job positively. Overall, System efficiency is fine. The system is usually effective. The system is an important and useful support for me in carrying out my research.	Mclean and DeLone (1992); DeLone and Mclean (2003)

2.7 Summary of Chapter

Chapter two addressed the summary of the analysis, theoretical history of Delone and Mclean IS success model, relevant research attempts to resolve research problems and conceptual frameworks.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The process and methods used to collect and analyse the relevant data for the analysis are linked to this portion of the research work. It consists of data collection techniques and procedures and the techniques adopted for processing and analysing the data collected. It also highlights the form of questions and the essence of the evidence provided (Saunders, 2007). The chapter ends with a brief description of the field of study; Sic Life Saving and Loans.

3.2 Research Design

The methodology of this research was designed along descriptive and historical approaches. Leedy (1997) defines research design as a plan of study which provides the overall framework for data collection. It is defined by MacMillan and Schumacher (2004) as a technique for selecting subjects, test sites and data-gathering procedures to address the study question(s). They also point out that a sound design for analysis is expected to achieve results that are deemed precise. For Durrheim (2004), research design is a conceptual intervention framework that acts as a bridge between research questions and implementation, or the implementation of a research strategy. Descriptive analysis with descriptive research design demonstrates and interprets the gained knowledge for analysis. The study thus discusses the influence of IS on the activities of the bank.

3.3 The study area

The research population is composed of Sic Life Savings and Loans Company Limited, from which the company's seven (7) branches were intentionally selected for the review. As of 2020, the study population is composed of Operations, Credit, I.T Staff, Relationship Officers, Finance, HR and Admin and Treasury. From the 200 questionnaires distributed, 194 were usable,

representing a 97% response rate. The respondents were chosen during the five (5) working days of which the bank's workers administered two hundred (200) questionnaires in their various branches.

3.4 Sample Size and Technique Sampling

The sample size refers to Sobowale (1983), the total number of the respondent representative of the study population. Hence for this research, one hundred and ninety-five (195) respondents were chosen for the research. This sample was taken from the branches of the Sic Life Save and Loans site. The sampling system used in this research is known as the simple random sampling method. The simple method of random sampling means that every individual is uniformly and entirely selected by chance, so that each individual has the same probability of being selected at any point during the sampling process(Langley, Jantz, Ousley, Jantz, & George, 2016).

3.5 Data Method Gathering

3.5.1 Sources of Data

In the purposes of this study, the primary and secondary data were used. The primary data were generated using a structured questionnaire. The questionnaire had been divided into two parts. One was used to collect personal data, and the other was programmed to represent the response of the bank workers. The two questionnaires had two sections; the first section gathered data from the respondents, while the second section focused on the research subject.

3.6 Actual Work Field

The questionnaires were administered directly by the researchers. For the analysis, an online approach was adopted to disseminate the questionnaires. This approach has been introduced with the aim of monitoring data collection and ensuring good quality of the data collected or supplied.

3.7 Data Analysis

This study employed version 23 of the Statistical Program for Social Science (SPSS) to analyze the respondent's descriptive statistics. Using PLS-SEM approach using SmartPLS, inferential statistics have been obtained (Ringle et al. , 2016). Prior to the study, data scanning was performed to ensure the cleanliness of the data. In particular, through its ability to handle small samples and data that are normally not distributed, the use of PLS-SEM, the option to use SmartPLS, was accomplished (Hair et al., 2014, p. 19). For this reason it was fair to use the PLS-SEM approach with a small sample size of 195 respondents. In addition, PLS-SEM has been utilized across many disciplines in the latest studies. In, for example, Management Information System (Owusu, 2017; Owusu, 2019; Owusu, Ghanbari-Baghestan, and Kalantari, 2017; Owusu et al., 2017; Weli, 2019), (Owusu & Said, 2016), and Advertisement and Marketing (Abdurrahaman and Osman, 2016; Abdurrahaman, Owusu, Soladoye, and Kalimuthu, 2018; Bakare, Owusu, and Abdurrahaman, 2017). Partial Least Square-Structural Equation Modelling was used to evaluate the regression model of the study.

3.8 Summary of Chapter

This chapter discussed the methodology employed in this research. The research design and development of questionnaire were presented here. The researcher collected data from Sic Life Savings and Loans. Partial Least Square-Structural Equation Modeling was employed by the researcher as the methodological method for data obtained.

CHAPTER FOUR

CONTEXT OF STUDY

4.1 Introduction

The study background has been addressed in this chapter. There was a description of the developments in Ghana's savings and loans sector as well as possible issues related to Sic Life Savings and Loans.

4.2 Overview of Ghana's saving and Loans Industry Development

In Ghana, the provision of excellent financial products and services over the past decade has seen substantial changes in the financial and banking infrastructure field in the quality of service delivery and service delivery (Bank of Ghana web site). Advances in information technology (IT), the national and regional privatization of financial services and the effects of the globalization process are the most important factors driving market change (Olumoye, 2013). With the introduction of technological innovation in the banking industry, new delivery systems such as Web, debit and credit cards and Automated Teller Machines (ATMs) were introduced (Quartey & Afful-Mensah, 2014) .

The Bank of Ghana has overall supervisory and regulatory authority over both financial and non-banking activities matters in order to create stable, effective banking services for the benefit depositors of these institutions and other clients and the economy as a whole. Consequently, it is the Bank of Ghana duty to ensure the financial system remains stable and promotes the wealth creation, economic growth, and development. The banking sector of Ghana successfully completed its banks, Deposit Specialized Institutions (DSI) and the financial institutions of non-banks (FINB) clean-up sector, which started in August 2017, the regulator stated in a statement announcing the revocation of S&L licenses and financing houses. Nevertheless, licenses were

withdrawn from nine Universal financial institutions, 347 microfinance firms – 155 of which operations had already ended; 39 micro-credit / money lenders – 10 of whom had stopped operations; 15 savings and loans companies; eight financial firms and two financial institutions outside the banking sector which had already stopped operations (Bank of Ghana Annual Report, 2018).

4.3 Sic Life Saving and Loans Ghana

On 27 July 2010, SIC Life Saving & Loans Corporation, SIC Life Trust Finance Limited formerly, approved the establishment of a Finance House according to the 2004 Banking Act (Act 673). The company was approved on July 15, 2015, as a corporation for savings and loans. Our strategic objective provides our investors with attractive returns from a highly lucrative non-bank financial institution by offering high-quality, creative products and competitive value services. SIC Life S & L is a wholly proprietary company of Ghana's largest Life insurance company, SIC Life Firm Limited.

Mission:

To become a low-interest and large-scale financial services provider for the micro and SME market, offering our investors stable investments with competitive returns through a highly motivated and skilled workforce.

Vision:

Securing a leadership position as the preferred retailer of micro and SME finance services, leveraging the SIC brand by providing the most reliable solutions that meet the financial needs of our customers.

4.3.1 Core Values

Customer Focus:

- We know our customers will be delighted.
- We believe in treating and representing our customers like royalty.
- We believe in quick service to please our customers and provide them with the right information at all times.
- Our customer loyalty is enduring.

Trustworthiness:

- We enforce the strictest confidentiality to ensure that all records, including the security of the interests of the Company and our clients and shareholders, are protected.
- We believe in transparency; provide our investors and consumers with accurate accounting data upon request.
- We believe in good judgment and decision-making of performance

We are reliable:

- We deliver our services to our customers at their convenience. We are ready to listen and serve at all times.
- We provide a leaning shoulder.

Innovation:

- In our customer service delivery, we plan to use Customer Relationship Management.
- We believe in providing our clients with tailor-made products and services.
- We agree that our products will be exceptional in addressing current and future needs of our customers.
- We plan to use technology to provide our services and provide information.
- They plan to use electronic payments and reimbursements.
- Maximization of Stakeholder Value
- It is of paramount importance to consistently reward our investors and raise their share value.

Our aim is to maintain and expand our company's capital investment.

- We are mindful of our external environment and our Corporate Social Responsibility.
- Creation of citizens
- We provide our workers with the right training to develop their skills. We allow our people to plan for personal development.
- We believe in training and mentoring our workers to develop and strengthen their skills.

In the short to medium term, by delivering innovative and low-interest products and services, strategic goal becomes and continues to be a profitable non-bank financing business capable of providing our investors stable and high-quality returns.

4.3.2 Products and Services

SIC Life Trust Finance Limited provides prospective customers various types of loans and investment products with flexible repayment at a reasonable interest rate.

- **Personal Loans:** This program offers personal loans for government and non-governmental employees in order to fulfil pressing financial obligations. There are flexible terms of repayment for such services.
- **Business loans:** Plan for short- to medium-term loans to SMEs to finance sustainable business operations.
- **Asset Finance:** This system allows consumers to own and pay over some time for any product they want. Support is offered for items such as furniture, electronic home office equipment, generator set / plant, water pumps, audio equipment, construction materials, vehicle and earth-moving equipment, etc.
- **Sika Plan Loans:** a lending product designed exclusively for micro-enterprises (including our Sika Plan customers) as a business expansion aid where customers can review loans using their plan as collateral.
- **Trust Flexi Investment Plan Account:** This is an investment account that provides an incentive for individuals to move from a lifestyle of pro-expenditure to a lifestyle of wealth creation. Minimum GHc 50.00 opening balance.
- **Trust Special Fixed Term Deposit:** This plan is a high-yielding savings account for investors who do not immediately use their funds and who can invest for a period of time with returns higher than the current Treasury bill level.

4.4 Leadership

Saving and Loans at Sic Life drives success through team work. The group is led by visionary leaders who have excelled in their various disciplines and work tirelessly in the interests of clients, customers, investors, workers and other stakeholders. It has a flat organizational structure consisting of the Chief Executive, General Manager, Head of Channels (Personnel and Business Banking), Head of Corporate and Investment Banking, Head of Legal, Head of Procurement and Logistics, Head of Finance, Operations Head, Marketing Head and Pr., Audit Manager, HR Manager and IT Manager.

4.5 Chapter Summary

This chapter covered Ghana's saving and loans overview and the growth of the loans banking industry. It continued to address the mission, vision, development claims, the different core values and Sic Life Saving products and services and loans. Sic Life Saving and Loans business divisions, which included the private and banking division, as well as corporate and investment banking, and finally the management structure of the company were also discussed.

CHAPTER FIVE

DATA ANALYSIS, FINDINGS AND DISCUSSIONS

5.1 Introduction

The data analyses and presentation of the findings of this study are presented in this chapter. The descriptive statistics of respondents and variables are given to elaborate on their composition. By testing the proposed research model through the results of the study are provided by Partial Least Square-Structural Equation Modeling (PLS-SEM). First, the results of the validity and reliability tests were evaluated under the measurement model. Successively, the structural model results were evaluated, In particular, the determination coefficient (R^2), and the predictive significance (Q^2) and the regression results are discussed.

5.2 Profile of Respondents

The profile of the sample size is taken from the staff of Sic Life Savings and Loans (SLSL). Male respondents made up 51.3% with females constituting 48.7%. The descriptive statistic for gender shows a diversified gender workforce at Sic Life Savings and Loans. The results indicate that 23.6% of the respondents work at the head office in Accra and the rest are distributed across other major cities such as Koforidua, Kumasi, Techiman and Tema. The majority (61%) of the respondents have worked with Sic Life Savings and Loans for 1 – 5 years. Also, 38% of the respondents showed that they have been with Sic Life Savings and Loans for 6 – 10 while only 1% indicated that they have been with the company for 11 -14 years. The data shows that 39.5% of the respondents work at operation in the company, 23.6% at the relationship office and 21.5% at the credit department. The remaining workers (15.4%) indicated that they work at the finance, treasury, IT and administration offices. All the workers agreed that they use the information system

implemented by Sic Life Savings and Loans. The result for the descriptive analysis for the respondent is presented in table 5.1 with their frequencies and percentages.

Table 5.1: Descriptive of Respondents

Variables		Frequency (195)	Percentage (100)
Gender	Female	95	48.7
	Male	100	51.3
Age	20 – 25	4	2.1
	26 – 30	73	37.4
	31 – 40	114	58.5
	41 – 50	3	1.5
	51 – 60	1	0.5
	Are you a staff of Sic Life Savings and Loans	Yes	195
Where is your Office Location	Head Office	46	23.6
	Koforidua	31	15.9
	Kumasi	29	14.9
	Makola	17	8.7
	Tamale	22	11.3
	Techiman	28	14.4
	Tema	22	11.3
	How many years have you been with SLSL	1 – 5	119
	6 – 10	74	38.0
	11 – 14	2	1.0
What is the nature of your work	Credit	42	21.5
	Finance	7	3.6
	HR & Admin	4	2.1
	IT Staff	7	3.6
	Operations	77	39.5
	Relationship Officers	46	23.6
	Treasury	12	6.2
	Do you use the information systems	Yes	195

5.3 Descriptive statistics of variables

The research variables' descriptive statistics measured mean ratings and standard variables deviations throughout the sample. The outcome is set out in table 5.2. The results include the variable general averages and the variable indicator ranking. The maximum value on the Likert scale is 5 with the minimum being 1.

The overall average for IS System Quality was 2.31 (SD = 0.83). The highest-rated indicator in the variable is “The IS system features are sufficient” with a mean of 2.41. The least-rated indicators are “The response time of IS System is good” and “The IS system navigation is good” with means of 2.27 each. The overall rating by the staff of Sic Life Savings and Loans (SLSL) is below a median of 3 on the Likert scale. The result shows that the staff of the company are not very pleased with the quality system.

The second variable in the study IS Information Quality which had an overall average of 2.37 (0.884). The highest-rated indicator is “The output or Information obtained from the IS System is timely” with a mean of 2.41. The indicator “The output or Information obtained from the IS System up-to-date” had the least rating at a mean of 2.25. The general rating of the variable, even though is below the median of 3 on the scale, shows that the system has an appreciable level of information quality.

The third variable IS Application quality has an overall mean of 2.45 (SD = 0.94) The indicator with the highest rating is “The personnel of the IT Unit are always ready to serve staff with regards to the IS system” with a mean of 2.50. The least-rated indicator is “The technical competence of

IT personnel with regards to the IS system is high” with a mean of 2.38. The scores of this variable specify a good level of support from the IT unit.

IS Usage at the bank is the fourth variable of the study and it had an average rating of 2.53 (SD = 0.93). The average score of IS Usage at the bank is the second-highest for all of the study variables. The highest-rated indicator is “The IS system helps me to monitor the status of business registrations” with a mean of 2.56. The indicator with the least-rating is “The IS system helps me to credit and debit account of customers” with a mean of 2.47. The ratings indicate that the information system usage at Sic Life Savings and Loans has proven to be useful.

The last and dependent variable of the study, IS Net Benefit, has an overall rating of 2.56 (SD = 0.90). The overall mean of this variable is the highest among all the variable of the study. The highest-rated indicator is “The IS system has increased productivity of SLSL” with a mean of 2.68. The least-rated indicator is “The IS system helps me save time on the job” with a mean of 2.41. Overall, the scores of this variable points to the benefits in productivity of the company and increased in employee performance by the implementation of the IS System.

Table 5.2: Descriptive Statistics of study variables

Variables and Indicators	Mean	Std. Deviation
IS System Quality		
The IS system is user-friendly	2.30	0.684
The IS system is easy to use	2.34	0.861
The IS system is easy to learn or understand	2.25	0.839
The response time of IS System is good	2.27	0.872
The IS system features are sufficient	2.41	0.883
The IS system navigation is good	2.27	0.841
Overall Average	2.31	0.83
IS Information Quality		
The output or Information obtained from the IS System is accurate	2.30	0.742
The output or Information obtained from the IS System up-to-date	2.26	0.830
The output or Information obtained from the IS System is sufficient	2.38	0.843

The output or Information obtained from the IS System is reliable	2.38	0.943
The output or Information obtained from the IS System is timely	2.41	0.917
The output or Information obtained from the IS System is useful	2.37	0.884

Overall Average

IS Application Quality

The support application provided by the IT Unit with regards to the IS System is prompt	2.42	0.860
The support application provided by the IT Unit with regards to the IS system is accurate	2.42	0.957
The personnel of the IT Unit are always ready to serve staff with regards to the IS system	2.50	0.955
The technical competence of IT personnel with regards to the IS system is high	2.38	0.930
The support application provided by the IT Unit with regards to the IS system is reliable	2.45	0.931
The personnel of the IT Unit are always available to serve staff with regards to the IS system	2.45	0.957
The IT unit offer periodic training to staff with regards to the use of the IS system	2.52	0.960
Overall Average	2.45	0.94

IS Usage at the bank

The IS system helps me to credit and debit account of customers	2.47	0.847
The IS system helps me to transfer money through various payment platforms	2.54	0.892
The IS system helps me to monitor status of business registrations	2.56	0.984
The IS system helps me to convert financial data into accounting information	2.53	0.961
The IS system helps me in decision makers by streamline their operations, improve customer experience and achieve better financial performance	2.53	0.972
Overall Average	2.53	0.93

IS Net Benefit

The IS system makes my job easier than before	2.53	0.845
The IS system helps me save time on the job	2.41	0.871
The IS system meets my expectation	2.60	0.933
The IS system has enhanced my productivity	2.61	0.970
The IS system has increased the productivity of SLSL	2.68	0.883
Overall Average	2.56	0.90

5.4 Model Development

The development of a model in PLS-SEM application SmartPLS 3 followed the descriptive analyses. The remaining analysis in the study followed a conceptual framework to assess the measurement and structural models of the study variables using the data sample of Sic Life Savings and Loans staff. The SmartPLS 3 program for Windows (Ringle, Wende & Becker, 2015) was used to perform these studies. The model is presented below as figure 5.1.

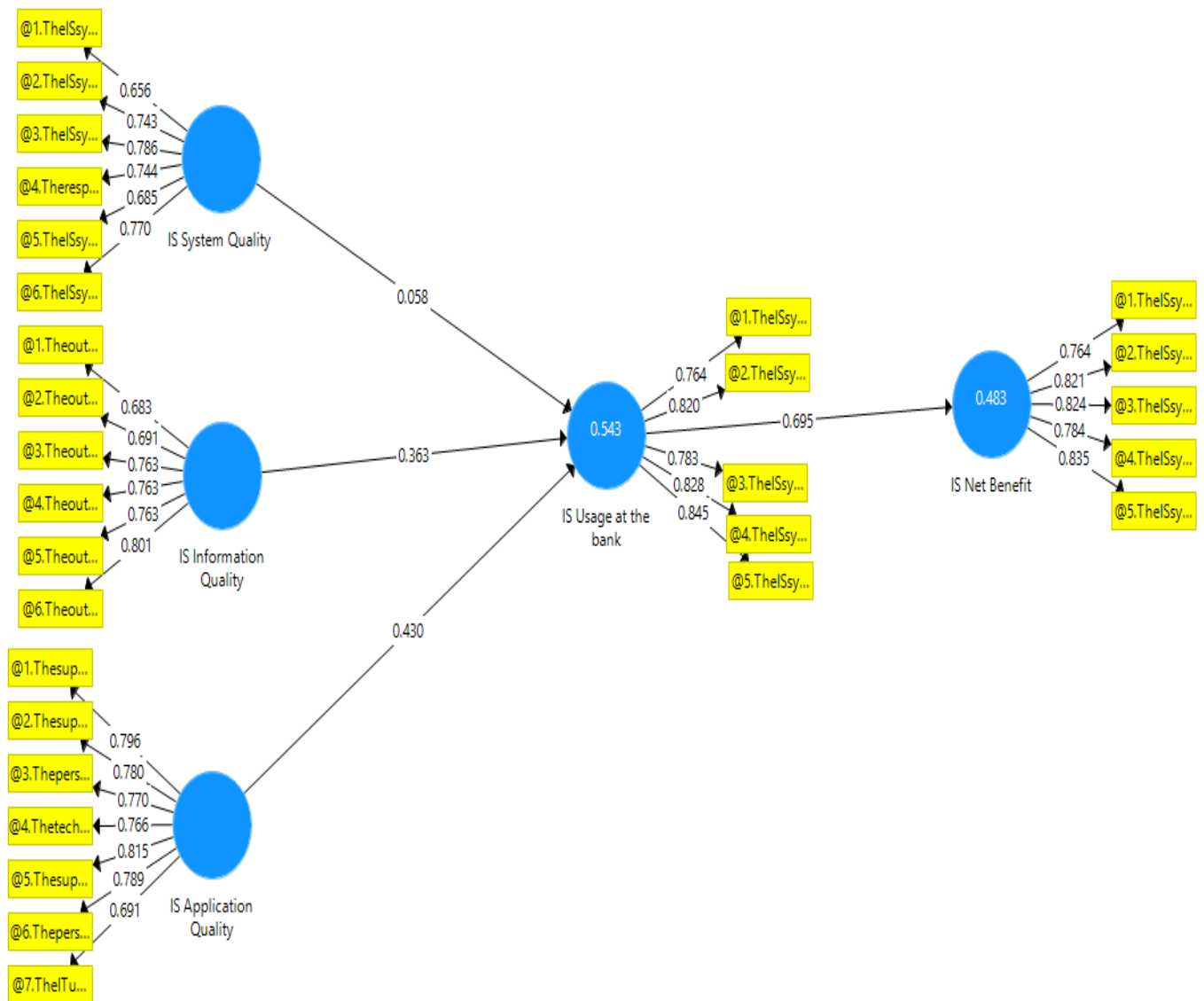


Figure 5.1: PLS Model for Analysis

5.5 Assessment measurement model

Partial Least Square-Structural Equation Model (PLS-SEM) has two parameters for evaluating the research result. The first criterion to evaluate the model outcome is the assessment of measurement model (Hair et al., 2014; Hair et al., 2017). The measurement model assessment evaluates the validity and reliability of the study's model. It covers the indicator reliability, internal consistency, convergent validity and multicollinearity.

5.5.1 Internal Reliability of Quality

Internal quality of reliability measures the extent to which a set of indicators of a variable measure that variable. Internal Quality of Reliability is measured by Cronbach Alpha and Composite Reliability. The ideal measure in PLS-SEM is the composite reliability and it's superior to Cronbach's Alpha (Hair et al., 2010). The internal consistency is valid if the value for Cronbach alpha and Composite reliability is 0.7. All the variables had Cronbach Alpha and Composite Reliability values greater than 0.80. The results are presented in Table 5.3.

Table 5.3: Cronbach Alpha, Composite Reliability and AVE.

	Cronbach's Alpha	Composite Reliability	Average Extracted (AVE)	Variance
IS Application Quality	0.888	0.912	0.598	
IS Information Quality	0.839	0.882	0.555	
IS Net Benefit	0.865	0.903	0.650	
IS System Quality	0.826	0.873	0.536	
IS Usage at the bank	0.867	0.904	0.654	

5.5.2 Convergent Validity

Convergent validity implies that variables of the same variable associate favourably with each other. As suggested by Fornell and Larcker (1981), convergent validity is measured by the Average

Variance Derived (AVE). “The AVE is required to be greater than 0.5 which means half or more of the variance of the indicators are explained” (Hair et al., 2014). The results met this criterion with their AVEs being higher than 0.530 and they are presented in Table 5.3 above.

5.5.3 Indicator Loadings and Multicollinearity

Indicator reliability assesses the cross-loading of each indicator unto its variable. A loading of 0.7 is required to achieve indicator reliability. According to Hair *et al.* (2014), if an indicator is below the benchmark it can be removed to improve the loading of the others as well as other measurement model criteria. Thus, indicator reliability was achieved even though five of the total indicators had loadings below 0.7. Multicollinearity check assesses the model to ensure that indicators do not relate too closely to other variables. Multicollinearity is measured by the Variance Inflation Factor (VIF) and the VIF expected to be lower than 5 (Hair et al., 2017). All the indicators had VIFs lower than 3.0, thus multicollinearity criterion was achieved.

Table 5.4: Indicator Loadings and VIF

Variables and Indicators	Indicator Loading	VIF
IS System Quality		
The IS system is user-friendly	0.656	1.453
The IS system is easy to use	0.743	1.718
The IS system is easy to learn or understand	0.786	1.689
The response time of IS System is good	0.744	1.663
The IS system features are sufficient	0.685	1.645
The IS system navigation is good	0.770	1.895
IS Information Quality		
The output or Information obtained from the IS System is accurate	0.683	1.588
The output or Information obtained from the IS System up-to-date	0.691	1.625
The output or Information obtained from the IS System is sufficient	0.763	1.783
The output or Information obtained from the IS System is reliable	0.763	1.905
The output or Information obtained from the IS System is timely	0.763	2.199
The output or Information obtained from the IS System is useful	0.801	2.157

IS Application Quality

The support application provided by the IT Unit with regards to the IS System is prompt	0.796	2.392
The support application provided by the IT Unit with regards to the IS system is accurate	0.780	2.453
The personnel of the IT Unit are always ready to serve staff with regards to the IS system	0.770	2.013
The technical competence of IT personnel with regards to the IS system is high	0.766	1.971
The support application provided by the IT Unit with regards to the IS system is reliable	0.815	2.488
The personnel of the IT Unit are always available to serve staff with regards to the IS system	0.789	2.276
The IT unit offer periodic training to staff with regards to the use of the IS system	0.691	1.614

IS Usage at the bank

The IS system helps me to credit and debit account of customers	0.764	1.749
The IS system helps me to transfer money through various payment platforms	0.820	2.037
The IS system helps me to monitor status of business registrations	0.783	1.847
The IS system helps me to convert financial data into accounting information	0.828	2.458
The IS system helps me in decision makers by streamline their operations, improve customer experience and achieve better financial performance	0.845	2.468

IS Net Benefit

The IS system makes my job easier than before	0.764	1.734
The IS system helps me save time on the job	0.821	2.146
The IS system meets my expectation	0.824	2.154
The IS system has enhanced my productivity	0.784	1.890
The IS system has increased the productivity of SLSL	0.835	2.023

5.5.4 Discriminant Validity

Discriminant validity is the extent of the distinction that exists between variables measured (Sarstedt, Ringle, & Hair, 2014). To assess the discriminating validity, the square root of a variable's AVE is measured against cross-loading the variable with others (Fornell & Larcker,

1981). Where the square root of the AVE variables exceeds all their cross-loads with other variables, discriminating validity has been achieved (Sarstedt et al., 2014; Hair et al., 2017).

Table 5.5 shows results for the discriminate validity.

Table 5.5: Discriminant Validity (Fornell-Larcker Criterion)

Variables	IS Application Quality	IS Information Quality	IS Net Benefit	IS System Quality	IS Usage at the bank
IS Application Quality	0.773				
IS Information Quality	0.559	0.745			
IS Net Benefit	0.639	0.548	0.806		
IS System Quality	0.470	0.629	0.402	0.732	
IS Usage at the bank	0.659	0.639	0.695	0.487	0.808

5.6 Assessment of the Structure Model

After achieving the reliability and validity criteria benchmarks, the subsequent analyses were on the structural model. In the PLS study, the evaluation of the structural model included: Determination coefficient (R²), Predictive relevance (Q²), Path coefficients and their significance (Henseler, Ringle, & Sinkovics, 2009; Sarstedt et al., 2014).

5.6.1 Coefficient of determination

The coefficient of determination also known as the R² measures the predictive accuracy in PLS-SEM. The R² gives the effect of all the independent variables on the dependent variable in the study. The R² determines the variance of the dependent variable clarified in the model by the independent variables (Vinzi et al., 2010). This study has two dependent variables: IS Usage at the bank and IS Benefit. IS Usage at Sic Life Savings and Loans having 54.3% of its variance explained by the System Quality, Information Quality and Application Quality? IS Net Benefit,

the final dependent, has 48.3% of its variance explained by all the four independent variables in the model?

Table 5.6: Coefficient of determination and Predictive Relevance

Dependent Variable	R Square	Q Square
IS Net Benefit	0.483	0.280
IS Usage at the bank	0.543	0.324

5.6.2 Predictive Relevance

Predictive relevance, also known as Q^2 , assesses the strength of the model's predictions and it is calculated using Blindfolding's cross-validity redundancy in PLS-SEM. Q^2 values higher than zero give the dependent variable the predictive meaning of the independent variables. Q^2 of 0.02, 0.15 and 0.35 are small, medium and high (Henseler et al, 2009). IS Usage at the bank and IS Net Benefit had 0.324 and 0.280 respectively. The result is present medium effects and it is shown in table 5.6 above.

5.7 Coefficients in the route

The route location and magnitude of the association between two variables in a model is given by the coefficient (Vinzi, Chin, Henseler, & Wang, 2010). The PLS-SEM output provides an estimate for route coefficients. The model of the study provides both direct and indirect effects which are discussed separately with the focus on the direct effects. In order to determine the significance of the route coefficients, a complete Bootstrap analysis was performed with 5,000 subsamples. The study model has four direct coefficients for the direction. Of the four direct relationships, three are completely important. All the relationships show a positive relationship. This means as one variable increase or improves the others also increase. The results for the direct path coefficients are presented in table 5.7.

Table 5.7: Direct Path Coefficient

Direct Path	Coefficient	P Values
IS Application Quality -> IS Usage at the bank	0.430	0.000
IS Information Quality -> IS Usage at the bank	0.363	0.000
IS System Quality -> IS Usage at the bank	0.058	0.276
IS Usage at the bank -> IS Net Benefit	0.695	0.000

5.7.1 Indirect Path Effect

The indirect path coefficients assess the relationships of IS Application Quality, IS Information Quality and IS System Quality with Net Benefit through IS Usage at Sic Life Savings and Loans (SLSL). All three indirect relationships were positive. However, only two are significant. The Indirect Effect of IS System on Net Benefit was not significant (p-value = 0.284). The indirect impact of IS Application Quality and IS Information Quality had a perfectly significant relationship with IS Net Benefit. The results portray that the indirect influence of IS Application Quality, IS Information Quality and IS System Quality on Net Benefit must not be ignored by IS System developers and the user companies. To achieve a maximum net benefit from IS systems the complete direct and indirect effects must be assessed. The findings are set out in Table 5.8.

Table 5.8: Indirect path Coefficient

Indirect Path	Coefficient	P Values
IS Application Quality -> IS Usage at the bank -> IS Net Benefit	0.299	0.000
IS Information Quality -> IS Usage at the bank -> IS Net Benefit	0.252	0.000
IS System Quality -> IS Usage at the bank -> IS Net Benefit	0.040	0.284

5.7.2 Hypotheses Testing

This section presents a summary of the test of hypotheses and their statistical results. The test of hypotheses follows after the model evaluation and structural model results which provide adequate reliability and validity for the study results. Three hypotheses (H2, H3 & H4) were accepted while Hypothesis 1 was rejected. The findings of the hypothesis are set out in Table 5.9.

Table 5.9: Hypotheses Results

Number	Hypothesis	Outcome
1	The consistency of the IS method positively affects bank use of IS	Rejected
2	IS Information quality positively influence IS usage at the bank.	Accepted
3	IS Application quality positively influence IS usage at the bank	Accepted
4	The user satisfaction of IS usage at the bank influences the performance of the company and individuals.	Accepted

5.8 Discussion of Findings

IS Application Quality relationship with IS Usage at Sic Life Savings and Loans is positive with higher magnitude. The relationship is significant at 1%. This indicates that an increase in the quality of support received from the IS or IT department increases the usage of the IS systems at Sic Life Savings and Loans. The technical competence and reliability of the IT unit are key to increase the patronage of the IS system. Therefore, it is imperative for organizations and IS providers to integrate the IS Application strategically to replace old methods. When the IS application is of optimum quality, it will gain the appropriate usefulness rating which eventually leads to Net Benefit received. Backed by this result (DeLone & McLean, 2003; Petter et al., 2008).

Also, IS Information Quality and IS Usage at Sic Life Savings and Loans is positive and significant at 1%. The strength of this relationship is higher with a coefficient of 0.363. This implies that the attributes or features of the IS system to process, store and deliver information is essential to the usage of the IS system. The results postulate that for the IS system to attain the patronage among staff and other users, the information quality of it must constantly be improved. As carried out by other application and IT organizers, a regular update is essential to improve the information quality of the information system. Improving the information system will lead to ease of use and greater satisfaction among users of the systems. The outcome of this relationship is supported by the findings of (Akter et al., 2013; Urbach & Müller, 2012).

The IS System Quality and IS Usage is positively correlated but not large (p-value= 0.276). The relationship between the two variables shows that features of an IS system (control processes, maintain records and help management decision making) influence the usage of the system. Thus, IS system developers should focus on the integration of management and administration features into the IS system. These features will make the daily work activities of organizations much easier and effective. The overall IS system quality is an important determinant of the service usage and its net benefit impact on user organizations. The positive relationship between IS System and IS Usage is supported by (Urbach & Müller, 2012); Petter et al., 2008).

Finally, the relationship between IS Usage and IS Net Benefit is significantly positive with the highest magnitude in the study's model (0.695). The model confirms the crucial benefit that is delivered from the implementation and usage of the IS System. As postulated by Au et al. (2008), the result of this relationship specifies the importance of IS Usage on the Net Benefit in a financial institution like Sic Life Savings and Loans (SLSL). The findings of the study have demonstrated the impact of IS Application Quality, IS Information Quality and IS System Quality on IS Usage

and how all the four independent variable influence IS Net Benefit. As the world continues to move deeper into technology, all organizations need to pivot and implement Information Systems. The benefits of IS Systems are enormous and will help organizations to achieve their goals as suggested by (Venkatesh et al, 2012).

5.9 Chapter summary

Chapter five covers data analysis, respondent profile, variable descriptive statistics, model creation, structure model evaluation, path coefficients and findings discussion.

CHAPTER SIX

SUMMARY, RECOMMENDATION AND CONCLUSION

6.1 Introduction

This chapter provides a summary of this research study and conclusions based on the research results. The chapter discusses some limitations of the study and recommendations for practice, policy, and further research.

6.2 Summary of Findings

Many studies have been undertaken to assess the impact of the Information System on organizations. This study sought to evaluate the impact of IS Application quality, IS System Quality and IS Information Quality on IS System Usage. Furthermore, the study, investigated how IS Application quality, IS System Quality, IS Information Quality and IS System Usage affect the Net Benefit companies derives from information systems. The focus of this study was on a financial institution called Sic Life Savings and Loans (SLSL). The summary of the findings is presented in this section.

The study aims to fill the literature gap regarding the effect of an information system on financial institutions, their operations and efficiency. The thesis implemented a quantitative approach for data processing using the technique of Partial Least Square-Structural Equation Modelling. The study had four hypothesized relationships. Three out of the four relationships were positive and significant. One of the relationships had the expected relationship but was not statistically significant.

Fist, the study found a positive and significant relationship between IS Application Quality and IS Usage at the bank or financial institutions. This indicates that as the quality of IS applications

improve, it increases the rate of use by user organizations. Therefore, it's important for IS system providers to always update their applications.

Second, the findings of the study show that IS information Quality and IS Usage is positively correlated. The result was significant and indicates that the information processing, storage and output plays a vital role to increase the usage of information system among organizations.

Third, study findings indicate a good relationship between the two, IS System Quality and IS Usage at the chosen organization for the study. Statistically, the relationship was not significant. However, the findings prove that better system qualities increase the usage of the systems. This indicates that IS system providers must implement strategies to develop a system that meets the quality expectations of users.

Finally, the findings prove that IS Usage at the bank positively impact the net benefit of the organization. The significant results postulate that organizations which implement and use IS systems enjoy some benefits. IS systems and application makes work easier for employees, reduce business operation hours and leads to financial benefits. Organizations need to adopt IS system and applications that will benefit their business.

The findings of the study provide adequate support for the use of IS systems in organizations. This is necessary for organizations to implement IS systems to stay competitive on the market and increase employees' performance. It is essential for IS system and application providers to build and develop a system that meets the quality standards of users. The results of this study serve as a basis for IS system usage in organizations.

Table 6.1: Summary of findings

Research Objective	Research Questions	Finding and Conclusion
To determine information systems impact on business processes	What is the impact of information systems on business processes?	<ol style="list-style-type: none"> 1. The study found that IS Application Quality, IS Information Quality and IS System Quality positively impact IS Usage in the organization. 2. IS Usage positively impact the Net benefit of information system in organizations.
To determine information systems nature in business processes.	What are information systems nature in business processes?	<p>The study found three nature of information systems in business processes.</p> <ol style="list-style-type: none"> 1. IS Application Quality is the quality of the support received from IS providers. This positively influences IS Usage and the net benefit derived from it. 2. IS Information Quality is the information process, storage and delivery features. This positively influences the use of IS systems and the net benefit delivered from IS Usage. 3. IS System Quality this refers to the process by which organization can organise contact more effectively, control processes, maintain records better and take decisions. This positively influences the use of IS Systems and the benefits derived from it.

6.3 Conclusion

This study achieved its aim by investigating the impact of information systems on the banking sector business processes. The findings of the study provide relevant insights into the development, usage and implementation of information systems. The study results indicate that the system, information and application qualities of information systems have a great influence on its usage.

The study suggests that developers and user must pay attention to the qualities of IS and their effect on business performance.

Also, the study highlights the importance of IS usage and their benefits to organizations. The study shows that IS Usage positively and effectively impact the business performance of organizations. It makes it clear that as a business switch to the use of information systems, their performance and operations improve. This provides a recommendation for organizations in all industries to pivot and add information system to their businesses. The nature of the information system provides a platform for efficiency and effectiveness in business operations. This led to greater performance in operations and finance of the originations. Management can control the business successively and employees become more effective at work. The result of the study is relevant for the management of organizations, employees and all other stakeholders. Table 6.1 presents the summary research objective, questions and findings.

6.4 Recommendations for policymaking and Practice

This study provides insightful recommendations for practice and policymaking. For practice, the study has provided information on the use and benefit IS system. This study can serve as a guide for the development, implementation and evaluation of IS system and applications. This study highlights some qualities that can help IS system developers and guide users to choose the best System that will give the best benefit. The finding of the study provides adequate information for decision making among all the stakeholders and users of IS systems.

For policymakers, management of organizations, unions and government can follow the result of this study to implement policies to regulate the use of IS systems and increase its patronage. The

impact of the IS system on organizations has been proven over the years, and this study provides support for Ghanaian based industries to implement the IS Systems. Other industries players can benefit from this study to support their policies on IS systems in their organizations.

6.5 Implication for Future Research

Relating to future research, the limitations of this study provides a good basis for future research to follow. Future research can consider using other research methodologies to investigate IS Systems and their benefits in organizations. Also, future research can consider adding other variables to sufficiently study the area of IS System in Ghana. These will expand the model and evaluate how other factors that affect information system usage and their impact on organizations. Lastly, future research may consider studying other organizations and industries to understand how information system impact organizations in those industries.

6.6 Limitations and suggestion for future studies

The study had some limitations despite its great findings and information output. First, the sample size of the study focused on only one organization. This might make the information skewed and affected by the chosen organization. Generalizing the study's results to other organizations and industries will need other supporting research to buttress findings of this study.

Also, the study used close-ended questionnaires which allowed the respondents to rate the indicators of the variables used in the study. The quantitative method did not give room for respondents to express their views, opinions and recommendations. This makes the result limited to the variables selected.

Nonetheless, the results of the study are not affected by the limitations in any major way. The limitations provide more or less a recommendation or new areas for future research to explore concerning IS System in organizations.

Relating to future research, the limitations of this study provides a good basis for future research to follow. Future research can consider using other research methodologies to investigate IS Systems and their benefits in organizations. Also, future research can consider adding other variables to sufficiently study the area of IS System in Ghana. These will expand the model and evaluate how other factors affect information system usage and their impact on organizations. Lastly, future research may consider studying other organizations and industries to understand how information system impact organizations in those industries.

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APPENDIX

Appendix 1: Research Questionnaire

Dear Sir/Madam,

My name is Carl Kwame Zormelo (Mr.), a postgraduate student of the University of Ghana Business School. I would be grateful if you could help me fill out this questionnaire as part of my thesis for an MBA (MIS) degree, on the topic:

THE IMPACT OF INFORMATION SYSTEMS ON BUSINESS PROCESSES IN THE FINANCIAL INDUSTRY: A CASE STUDY OF SIC LIFE SAVINGS AND LOANS COMPANY LTD

The aim of this questionnaire is to collect data that will help to determine the effect of information systems on Sic Life Savings and Loans (SLSL) business processes. This would also assist in assessing the effect and scope of information systems on the financial industry's business processes. The model will inform users, managers and executive to appreciate and contribute to the development of information systems and services quality. Your ability to participate is respected very much. Your answers will only be viewed confidentially and used for the purposes of this research.

Kindly contact me for further information on crlzormelo@gmail.com, 0542920045 or my Supervisor, Dr. Acheampong Owusu (aowusu@ug.edu.gh).

SECTION 1

Kindly answer the following questions by ticking in the box as appropriate.

1. Gender: Male Female
2. Age range: 20-25 26-30 31-40 41-50 51-60
2. Are you a staff of Sic Life Savings and Loans? Yes No

3. Where is your Office Location? Head office Makola Tema
 Koforidua Kumasi Techiman Tamale
4. How many years have you been with SLSL? 1-5 6-10 10-11 15-20
5. What is the nature of your work? Operations Credit IT Staff
 Relationship officer's Finance HR & Admin Treasury
6. Do you use the Information Systems? Yes No

SECTION 2

In this section, kindly read the questions in the Tables below and answer by **ticking in the appropriate fields**, which best suits your views and experiences regarding the use of the Information Systems(IS). The answers range from strongly disagree, Disagree, Neutral, Agree and strongly agree.

Table 1: IS System Quality: This refers to measures to assess the technical performance and usability of the IS System.

(Please choose your answer by ticking the appropriate field corresponding to the question asked).

No.	IS System Quality measures	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	The IS system is user-friendly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	The IS system is easy to use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	The IS system is easy to learn or understand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	The response time of IS System is good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	The IS system features are sufficient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	The IS system navigation is good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Any other remarks

Table 2: IS Information Quality: It refers to the quality of the information that the IS System is able to store, process and produce.

(Please choose your answer by ticking the appropriate field corresponding to the question asked).

No.	IS Information Quality measures	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
8	The output or Information obtained from the IS System is accurate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	The output or Information obtained from the IS System up-to-date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	The output or Information obtained from the IS System is sufficient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	The output or Information obtained from the IS System is reliable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	The output or Information obtained from the IS System is timely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	The output or Information obtained from the IS System is useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. Any other remarks

Table 3: IS Application Quality: This measures the support services offered by the IT Unit of SLSL to employees with regards to the use of the IS System.

(Please choose your answer by ticking the appropriate field corresponding to the question asked).

No.	IS Application Quality measures	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
15	The support application provided by the IT Unit with regards to the IS System is prompt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	The support application provided by the IT Unit with regards to the IS system is accurate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	The personnel of the IT Unit are always ready to serve staff with regards to the IS system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	The technical competence of IT personnel with regards to the IS system is high	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	The support application provided by the IT Unit with regards to the IS system is reliable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	The personnel of the IT Unit are always available to serve staff with regards to the IS system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	The IT unit offer periodic training to staff with regards to the use of the IS system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. Any other remarks

Table 4: IS Usage at the bank: This refers to the capabilities of the IS System to perform functions, as used by SLSL employees.

(Please choose your answer by ticking the appropriate field corresponding to the question asked).

No.	IS Usage at the bank measures	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
23	The IS system helps me to credit and debit account of customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	The IS system helps me to transfer money through various payment platforms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	The IS system helps me to monitor status of business registrations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26	The IS system helps me to convert financial data into accounting information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27	The IS system helps me in decision makers by streamline their operations, improve customer experience and achieve better financial performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

28. Any other remarks

Table 5: IS Net Benefits: This refers to the overall value that the IS system will provide to its users or to the organisation (SLSL) on a whole.

(Please choose your answer by ticking the appropriate field corresponding to the question asked).

No.	IS Net Benefit measures	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
29	The IS system makes my job easier than before	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	The IS system helps me save time on the job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	The IS system meets my expectation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	The IS system has enhanced my productivity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

33	The IS system has increased productivity of SLSL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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34. Any other remarks

Thank you!