

MAKERERE UNIVERSITY

MAKERERE UNIVERSITY BUSINESS SCHOOL

TECHNOLOGY ADOPTION, EMPLOYEE ATTITUDES, AND THE PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES IN KAMPALA DISTRICT

BY

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PLAN A

April, 2022

DECLARATION

I hereby declare that this dissertation is my original work and it has never been submitted to this or any other institution of higher learning for any award.

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APPROVAL

This is to certify that this dissertation has been prepared under our guidance and is now ready for submission to the Faculty for examination with our approval.

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DEDICATION

To my sister Juliet Birungi Lubega who has redefined the meaning of life for me.

ACKNOWLEDGEMENT

Thank you to my supervisors that have dedicatedly walked this journey with me.

To my friends, thank you for your encouragement to not give up and for standing with me through the ups and downs of a student. Thank you to especially Marjorie, Pheobe, and Stella for pushing me.

Above all, thank you to the Almighty God, for this has only been possible because you willed it.

ABSTRACT

This research study sought to examine the relationship between technology adoption, employee attitudes, and performance in SMEs in Kampala District. The study adopted a cross-sectional survey design using quantitative approaches. A sample of 381 SMEs which was determined from the population using the (Krejcie & Morgan, 1970) table of sample size determination was chosen from a population of 47,000 small and medium enterprises operating in Kampala District. Data were collected using a combination of an online structured questionnaire (Google form), and a self-administered questionnaire physically delivered by the researcher at different SMEs. A response rate of 71 percent was obtained from the study. Analysis was done using SPSS computer software. Pearson's correlation statistics indicated positive and significant relationships between technology adoption and SME performance; employee attitudes and SME Performance; plus technology adoption and employee attitudes. Technology Adoption was found to be a stronger predictor of SME performance compared to employee attitudes. Since the correlation findings indicate a strong relationship between Technology Adoption and SME Performance, the researcher recommends that SMEs effectively ensure a higher level of adoption of information and communication technologies in their operations as a way of encouraging better employee productivity and better business performance. The researcher further recommends that SMEs design policies that nurture positive employee attitudes to ensure better business performance.

Keywords: Technology adoption, Employee attitudes, SME performance

LIST OF ABBREVIATIONS

BSC: Balanced Score Card

COVID: Corona Virus Disease

CVI: Content Validity Index

DOI: Diffusion of Innovations

FSDU: Financial Sector Deepeniing Uganda

GDP: Gross Domestic Products

ICT: Information & Communicartion Technology

ITC: International Trade Center

KACITA: Kampala City Traders Association

MSMEs: Micro, Small, and Medium Businesses

PEOU: Perceived Ease of Use

PU: Perceived Usefulness

ROE: Return on Equity

ROI: Return on Investment

ROS: Return on Sales

SME: Small and Medium Enterprises

SPSS: Statistical Package for Social Scientists

TAM: The Technology Acceptance Model

TCM: Three-Component Model by Allen and Meyer (1991; 1996).

TRA: Theory of Reasoned Action

UIA: Uganda Investment Authority

UNCDF: United Nations Capital Development Fund

UTUAT: Unified Theory of Use and Acceptance of Technology

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

This section describes the background to the study, the problem statement, the purpose of the study, objectives and research questions, research scope, significance, and the conceptual framework that guided this study.

1.2 Background to the study

Small and medium enterprises (SMEs) have become a critical catalyst for the growth of any economy in both developed and developing countries. These are notably the major creators of jobs with a contribution of 90% in the emerging markets, main contributors to poverty reduction and social inclusion, and are a driving force to achieving the SDGs. They are central to the sustainability of economies and play a great role in industrial ecosystems, economic resilience, and technological sovereignty. The growth of SMEs is pivotal for prosperity both in developing and developed countries (Tripathi & Brahma, 2018).

Developed economies already exhibit the role of SMEs in economic growth and development. In China, SMEs make up for 98 percent of businesses accounting for 60.42 percentage of China's business revenue, 51.13 percent of Chinas total employment (Mbih et al., 2018), whereas in India, about 51 million SMEs contributed 37.5 percent of India's GDP, 37 percent of the manufacturing output, 46 percent export contribution and housed 14 percent of India's working class between 2015-2016. This is largely attributed to the adoption of digital technologies that have increased their economies of scale and fostered process upgrades, causing them to scale faster. Those SMEs that have embraced digital technologies reported nearly twice the revenue growth trajectory than those yet to digitize their operations during this period (Atroley, 2017). Furthermore, his article, (Werngren, 2013) reports that according to the Boston Consulting Group survey of 4000 SMEs across the United States,

Germany, China, India, and Brazil, regardless of origin, SMEs that embrace technology increased their annual revenues by 15% faster than their competitors. Therefore, if only 30% of SMEs in these five markets adopted modern technology, they could increase their combined revenues by €570 billion and create more than six million new jobs.

In Sub-Saharan Africa, SMEs continue to be the largest business sector, representing more than 90% of businesses and employing over 60% of workers, the majority of whom are women and youth (International Trade Center, 2018). Usif and Salifu (2020) observe from Ghana, Nigeria, and Togo, that majority of the small enterprises' operators are engaged in the services sector, simple industrial sectors and a few are in highly developed and complex large industries. The SME sub-sector plays a pivotal role in the provision of goods and services directly consumed by the fast-growing SSA population, and also provides inputs and services to the few existing large industries. Small and Medium Enterprises contribute over 50% to the region's gross domestic products (GDP), employ over 80% of the population, and as such is a great engine towards poverty reduction, income generation, growth, development, and the efforts towards the achievement of the Sustainable Development Goals in these countries (Disse and Sommer, 2020; ITC, 2018; International Monetary Fund, 2020; Usif and Salif, 2020). However, most of these SSA SMEs continue to suffer hurdles that cripple their performance, like lack of access to finance, less productivity compared to larger firms, wide-scale informality (which exacerbates the problem of access to formal financing and limits investment options for them (ITC, 2018). Olivier, Carrère, and Strauss-Kahn (nd.), as cited by the ITC (2018) for instance observes that the productivity gap between registered and unregistered SME firms in a study of 24 African countries is estimated at around 120%. Despite these hurdles, these business organizations hold the promise to faster economic development, more employment, and of recent, recovery from the economic effects of the Covid 19 pandemic.

In East Africa, not all has been lost, Msuya et al. (2017) and United Nations (2012), posits that Tanzania's SME competitiveness increased by 47% after the adoption of ICTs in SMEs increasing from almost none existent in 2001 to 80.1 % computer technology usage and 56.6% internet technology usage, the annual growth rate of manufactured export by 30.9% in the period between 2006-2010. As a whole, the general growth rate of the country has increased by 6.5% per year in the past decade (Sitorus, 2017).

The role of technology in small and medium enterprises (SMEs) has been further articulated in the recent pandemic that saw businesses transform from brick and mortar into totally or partially online entities. The need for technology adoption is more urgent today due to the effects of the COVID-19 pandemic. With COVID-19 has come the demand for less physical interaction, forcing almost all organizations to have virtual operations. Therefore, SMEs must digitize their operations or risk running out of business as a result of the removal of trade barriers and thus escalated competition. This competition is no longer segmented as just between small firms, large firms, and by location, but in the recent years since the pandemic, companies are competing despite size and location. Take for instance in the United States small businesses had their sales improved from 10 percent to 17 percentage by moving their retail aspect from brick and mortar to purely digital, (U.S. Chamber of Commerce, 2020). Brazil saw a 55 percent improvement in customer relationships, process agility, and customer acquisition (Mari, 2020), and a 98 percent increase in profit and 99 percent increase in efficiency for the South African SMEs in just two years of the pandemic.

Despite this obvious need for the adoption of technology for the survival of SMEs, in Uganda, there is still hesitancy to adopt them. In a study by (UNCDF, 2020) the rate of usage of ICTs and technologies by SMEs is still very low with only approximately 40 percent of them using online channels for e-commerce, only 30% have taken to innovative

procurement and supply delivery channels, and as low as 27% relying on the mobile door to door delivery. Only 35% of companies in the accommodation and catering sector use digital and online solutions. This is very low a number compared to the ever-sprouting small and medium enterprises in the country. This hesitancy in adoption is attributed to the uneasiness caused by the ever-changing e-business technologies (National Small Business Survey Report, 2015). Technologies are rapidly changing, leaving SME owners overwhelmed and unable to know which technology to adopt to function effectively. There is also a failure by the SMEs to make a connection between technology adoption and their strategic business motives and expectation, causing an unwillingness to invest and adopt the technology. In addition, there is a general lack of trust by the people supposed to operate these technologies and a lack of capacity to learn how to adopt, assimilate and diffuse the technologies. SMEs are simply brushing off technology as unsuited for their business, saying that technology doesn't suit their type of business and/or product (Kyakulumbye & Pather, 2021); (FSDU, 2015). Nevertheless, SMEs can no longer dismiss the importance of technology in their business operations and so must embrace it for a competitive advantage. But for the technology to bear the needed benefits, it must be adopted.

Technology adoption refers to the acceptance, integration, and use of new technology in society (Chavas & Nauges, 2020). The study will apply the Technology Acceptance Model (TAM) that was tailored to predict and explain users' acceptance of technology (Davis, 1989) to explain this concept. TAM relies on two fundamental beliefs of perceived usefulness (PU) and perceived ease of use (PEOU). PU focuses on the user's subjective possibility of increasing the performance when adopting technology, whereas PEOU refers to the user's expectation that using the technology is free of effort. In addition to using TAM to examine various factors explaining technology acceptance, we shall refer to the Diffusion of Innovation theory Rogers (2003) to explain relative advantage, an attribute relevant to shape

potential users' perspectives. On the other hand, to achieve optimal results from the use of technology, it must be accepted by employees and fully used. However, this is dependent on the employee's attitudinal behaviors, among other factors (Afolayan et al., 2015). The Theory of Reasoned Action (TRA) developed by Martin Fishbein and Leek Ajzen in 1975 predicts behavioral intent caused by two factors: attitudes and subjective norms. TRA will be applied in this study to explain the process of adoption while using these technologies. In many cases, there is resistance to new ways of doing things among employees who are settled and stuck in old ways, and this resistance can affect the performance of the organization. This is because an employee's attitude has the potential to impact work performance (Xiong & King, 2020).

Finally, there have been several studies on the aspect of challenges and impediments to survival and performance of SMEs (Ojiambo, 2016; Kyatusimire, 2018; UIA, 2020; Dieleman & Boddewyn, 2012), but hardly are there any studies based on technology adoption and employee attitudes, especially in the Ugandan context. It is not clear to what extent the low technology adoption is affecting the performance of SMEs in Uganda. Extant literature shows that only 5% of SMEs have ever surveyed the attitude of their employees, with the vast majority claiming that it is an unnecessary cost which in fact will affect the profits of the company (Enterprise Uganda, 2016). This is against evidence that staff in many of these SMEs have poor attitudes towards work (Loboea, 2017). This research study sought to examine the relationship between technology adoption, employee attitudes, and performance in SMEs.

1.3 Problem Statement

In Uganda, SMEs perform poorly and most of them are struggling to survive past their first birthday yet to this day, technology is being used up to only 45% for financial transactions e.g. sending or receiving money, 34% to access business information, and 26% to carry out marketing of products and services (Ninsiima, 2021). Kyakulumbye and Pather (2021),

consistent with Loboea, (2017) observe that SMEs in Uganda fail to adopt Information Technologies due to several factors, including low ICT learnability, inadequate user confidence, and lack of user-friendliness in existing technologies. Eton, et al., (2019) mentions cost hindrances, skills gaps, information deficiency, negative attitudes, and poor ICT infrastructure among factors that prohibit adoption. There is limited literature relating employee attitudes, technology adoption, and the performance of SMEs in Kampala.

1.4 Purpose of the study

The research sought to examine the relationship between technology adoption, employee attitudes, and the performance of SMEs in Kampala District.

1.5 Research Objectives

i. To examine the relationship between technology adoption and the performance of SMEs in Kampala District.
ii. To examine the relationship between employee attitudes and the performance of SMEs in Kampala District.
iii. To examine the relationship between technology adoption and employee attitude of SMEs in Kampala District.

1.6 Research questions

i. What is the relationship between technology adoption and the performance of SMEs in Kampala District?
ii. What is the relationship between employee attitudes and the performance of SMEs in Kampala District?
iii. What is the relationship between technology adoption and employee attitude of SMEs in Kampala District?

1.7 Scope of the Study

1.7.1 Conceptual Scope

The study focused on examining the relationship between technology adoption, employee attitudes, and the performance of SMEs in Kampala District. The aim was to establish the importance of integrating and utilizing technology in business processes, the effect of employee attitude in this adoption, and how this adoption can boost performance in SMEs in Uganda.

1.7.2 Geographical Scope

The study was undertaken in Kampala, the capital city of Uganda and a central hub of SME business operations in the country. According to the National Small Business Survey of Uganda Report (2017), there are 82,647 small and medium enterprises operating in Kampala District. The study focused on combination of small (5- 49 or 50 employees) and medium (up to 100 employees) enterprises in Kampala.

1.7.3 Time Scope

The study used primary data which was collected from identified respondents for three months during the trading year 2021.

1.8 Significance of the study

(i) The findings study analyse how technology adoption and employee attitudes towards technology can be leveraged for improved performance. This is expected assist SME and startup business owners to come up with the most efficient business technology and innovation policies for their enterprises for improved operational efficiency.

(ii) Researchers and academia: Since there is little data about this area of study, this study provides a building block for scholars and research students for future studies on the best way to roll out technology adoption, the need to consider employee attitudes to maximize the impact on the performance of SMEs.

(iii) This study provides more information to statutory and regulatory bodies like the Kampala Capital City Authority (KCCA), Private Sector Foundation Uganda (PSFU), and the Ministry of Trade and Industry, about the policy and regulatory frameworks and strategies that must be put in place to improve the adoption of technology among SMEs, and their performance in the country.

(iv) Traders' associations such as the Kampala City Traders Association (KACITA) can use the findings from this study to formulate appropriate measures and policies by which they can enable the SME sector, which is a crucial pillar in the economy.

1.9 Conceptual framework

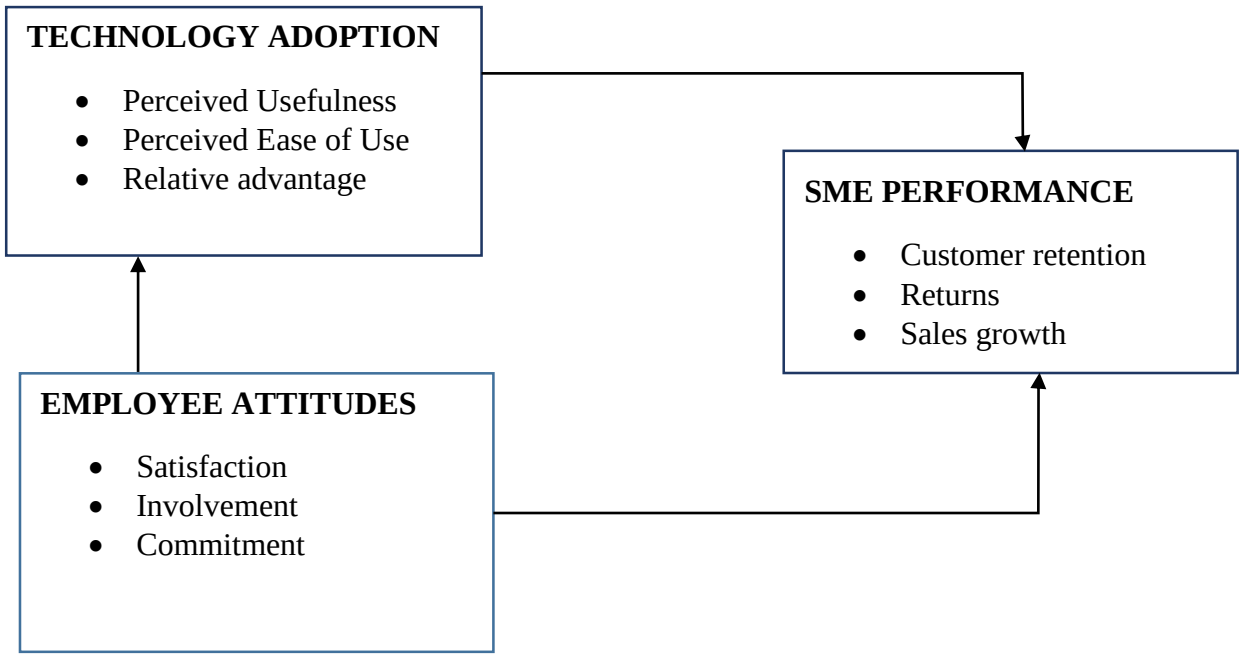


Figure 1: The Conceptual Framework

Source*:* Adapted from the Theory of Reasoned Action by Ajzen and Fishbein, (1975), Ajzen (1991), the Technology Adoption Model by Davis (1989); Davis, Bogozzi, and Warshaw, (1989), Davis and Venkatesh (1996), Lai, (2017), and Loboea (2017), and the Diffusion of Innovation Theory [DOI] by Rogers, (2003), and Herzberg's Two Factor Theory (Herzberg, Mausner, and Snyderman, (1959; 2010), plus its adaption to a Cultural Context by Matei and Abrudan's (2016).

1.10 Explanation of Conceptual Framework

The conceptual framework above highlights the dependent variable as SME performance and the independent variables as technology adoption and employee attitude. Each of the variables has a relationship with SME performance as illustrated in the conceptual framework above. Technology adoption is related to SME performance, employee attitude is related to performance, and technology adoption is related to employee attitude. Technology adoption as indicated in this conceptual/ theoretical framework specifically refers to the adoption of Information and Communication Technology (ICT). The reason why the researcher used

technology as a variable is because the adoption of ICT is now one of the strongest determinants of business performance world-over (Chairoel, Widyarto and Pujani, 2015; Eton et al., 2019; Olise et al., 2014; Onyinyi and Kaberuka, 2019; and Tarutėa and Gatautis, 2013). There is need to examine how exactly technology adoption is related to SME performance in Uganda. Employee attitude is also hypothesized to be related to SME performance and also to ICT adoption. Attitude is a very important determinant of business performance, as it determines the individual productivity of employees and also their relationships with customers. This ultimately affects how a business performs. Attitude has also been hypothesized to be related to the adoption of technology. Positive attitudes, espoused in terms of higher degrees of voluntariness (Venkatech and Davis, 2000), higher perception of usefulness of technology (Bagozzi, Davis, and Warshaw, 1992), all lead to higher levels of technology adoption and consequently better business performance.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This section highlights in detail work done by researchers and scholars on the constructs of Technology Adoption, employee attitudes, and performance of SMEs. It is organized in sections; the first section gives a description of the variables and the second section describes the relationship between the variables.

2.1 Theoretical Framework

2.1.1 The Technology Acceptance Model (TAM)

Over several years various models and theories have been developed to explain the vexing problem of ICT adoption. In this section, we briefly assess one of the seminal adoption theories to examine the usage and non-usage contexts of ICT among SMEs in a developing country. From an adoption perspective, a widely used theory is the Technology Acceptance Model (Davis 1985, 1993). In the original model Davis (1985), posits that a potential user's overall attitude towards using a given system is assumed to be a major determinant of whether one will or will not use it. Attitude towards use is a cognitive issue for which Davis (ibid.) highlights two dimensions, viz., perceived usefulness and perceived ease-of-use. Moreover, a cognitive response results in an effective response (attitude towards using) which later predicts actual use (Davis 1985, 1993). However, inherent in ease-of-use and usefulness is the concept of perception which is behavioral and attitudinal (Kyakulumbye, Muhenda, & Anaclet, 2012; Verma & Sinha 2018; Scherer, Siddiq, & Tondeur 2019). Over the years there have been several studies that render the original TAM variables insignificant. For instance, Sin Tan et al. (2009) found that relative advantage, compatibility, complexity, observability, and security are significant factors influencing internet-based ICT adoption.

Other studies have correlated adoption and diffusion challenges among SMEs to ICT design issues (Aleke, Ojiako, & Wainwright, 2011). Namankani (2019) has argued that to ensure successful diffusion of innovation, a balance must be maintained between the amount of effort expended in the design of ICT and social factors such as language and traditional life. Given the foregoing, and taking into account the low explanatory prediction by the originator of TAM that 'Only 36% of the variance in the adoption of ICTs is explained by TAM constructs, implying that 64% comprises other cognitive and contextual issues,' (Davis 1993, 475), further extensions have been made to the model. One such extension of TAM, which serves to understand pre-usage issues, is the two-stage information systems continuance model (Venkatesh et al. 2011) and Unified Theory of Use and Acceptance of Technology (UTUAT) (Chakraborty & Al Rashdi 2018). For this study, however, we shall stick to the original TAM as a guiding theory of the variables.

2.1.2 The Diffusion of Innovation Theory (DOI)

The Diffusion of Innovations theory was first introduced by Rogers (1983) to identify the study with a forty-year sequential tradition of diffusion studies marked by his 1st edition in 1962. At the time of this publication, (more than 2 decades after the 1st edition), the total number of diffusion publications had more than doubled again, to 3,085, and the number of empirical diffusion research reports had increased from 1,500 to 2,297. According to Rogers (2003), diffusion is a social process that occurs among people in response to learning about innovation such as a new evidence-based approach for extending or improving health care. In its classical formulation, diffusion involves an innovation that is communicated through certain channels over time among the members of a social system. Dearing and Cox (2018) note from this defining, that the most salient dependent variable in diffusion research is adoption and the time at which this happens. It should be noted, however, that when complex organizations are the adopters of innovations, subsequent implementation of new technology,

for example, is a more meaningful measure of change. As opposed to normal communication, which presupposes a process in which participants create and share information to reach a mutual understanding, diffusion is a special type of communication, in that the messages are concerned with new ideas.

Rogers and Kincaid (1981) indicate that since communication is a process of convergence (or divergence) as two or more individuals exchange information to move toward each other (or apart) in the meanings that they ascribe to certain events, then communication in terms of diffusion as a two-way process of convergence, rather than as a one-way, linear act in which one individual seeks to transfer a message to another. This conception of human communication may accurately describe certain communication acts or events involved in diffusion, such as when a change agent seeks to persuade a client to adopt an innovation.

Factors that Influence Diffusion

Rogers (2003) identified three main key components of his earlier model, which influenced this study. These included the concept of social systems, the idea of compatibility of technology, and the categorization of early adopters. It is from these triple constructs that the major factors that drive innovations are derived. Dintoe (2019), observing from Rogers (2003) indicates that technological innovation is diffused through a population in a social system based on key attributes such as compatibility by early adopters. Rogers (2003) focused on the social system from a macro level, that is, the organization, as well as the individual adopters - the micro-level. It should also not be assumed, as sometimes has been done in the past, that all innovations are equivalent units of analysis. This, according to Rogers (2003), is a gross oversimplification. While it may take consumer innovations like blue jeans, pocket calculators, or an iPhone, or joining an online social media site like MySpace only five or six years to reach widespread adoption all over the world, other ideas that were new at their time of invention, such as the metric system, using seat belts in cars or

taking lemon juice to prevent an obstinate disease called scurvy in the British navy in the 18th century required several decades to reach complete use. The characteristics of innovations, as perceived by individuals that help us to explain these individuals' different rates of adoption are the factors that influence innovation and they include the relative advantage of an innovation, which is the degree to which an innovation is perceived as better than the idea it supersedes. The degree of relative advantage may be measured in economic terms, but social-prestige factors, convenience, and satisfaction are also often important components. For an information technology innovation like new software, this can be also viewed as the perceived usefulness of an innovation or technology, as mentioned in Davis' Technology Acceptance Model (1991; 1993; 2003), and Venkatesh et al.'s UTAUT (2003).

The second influencing factor in Rogers' model is compatibility. This is the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters. An idea that is not compatible with the prevalent values and norms of a social system will not be adopted as rapidly as a compatible innovation. The adoption of an incompatible innovation often requires the prior adoption of a new value system. Compatibility is very important even in information systems and technologies. For instance, technical, semantic, and social compatibility of systems with other existing software, hardware, and organizational environments, as mentioned in Gujral, Lal, and Li, (2021), and Huang et al., (2021).

Rogers (2003) also adds that the complexity of innovation also affects its adoption. Complexity is the degree to which an innovation is perceived as difficult to understand and use. Some innovations are readily understood by most members of a social system; others are more complicated and will be adopted more slowly. Huang et al., (2021) observe that the complexity of an information technology innovation affects users' willingness to adopt the technology indirectly through attitudes, both positively and negatively. Complex systems that

are not user-friendly enlist negative attitudes, as opposed to easy-to-use systems; and this affects their adoption.

Trialability is the degree to which an innovation may be experimented with, on a limited basis. New ideas that can be tried on the installment plan will generally be adopted more quickly than innovations that are not divisible. This is because human beings are inherently risk-averse and may not fully adopt an innovation immediately. An innovation that is 'trialable' represents less uncertainty to the individual who is considering it for adoption, as it is possible to learn by doing. Like complexity variables, more Trialability means easier and quicker adoption of an innovation or technology (Wang et al., (2018).

Observability is the degree to which the results of an innovation are visible to others. The easier it is for individuals to see the results of an innovation, the more likely they are to adopt. Such visibility stimulates peer discussion of a new idea, as friends and neighbors of an adopter ask him or her for innovation-evaluation information about it. Everyone is either on Facebook or Twitter or WhatsApp because they see their peers are on these social networks. Other ICT consumer innovations like home computers are relatively less observable in the beginning, and thus diffused more slowly. In retrospect, Huang et al., (2020), borrowing and adopting from Rogers (2003), and Davis et al., (2003), make a summarised derivation of the salient factors influencing the diffusion and adoption of ICT innovations, based on their empirical study. The authors indicate that these factors include, through the mediation of perceived attitude (PA), perceived usefulness (PU), Trialability (TL), observability (OS), ease of use (EU), and relative advantage (RA) are factors most related to the diffusion and acceptance of the OSLP innovations.

The Innovation-Development Process

In a wider-scope view of the innovation-development process, Dearing and Cox (2018) observe that diffusion is but one phase of the total sequence through which an innovation

goes from the decision to begin research on a recognized problem to the consequences of an innovation. Past diffusion investigations have overlooked the fact that a lot of relevant activities and decisions usually occurred long before the diffusion process began: a perceived problem, funding decisions about R&D activities that led to research work, the invention of the innovation, and then its development and commercialization, a decision that it should be diffused, transfer of the innovation to a diffusion agency, and its communication to an audience of potential adopters. Then the first adoption occurs. This entire pre-diffusion series of activities and decisions is certainly an important part of the innovation-development process, of which the diffusion phase is one component.

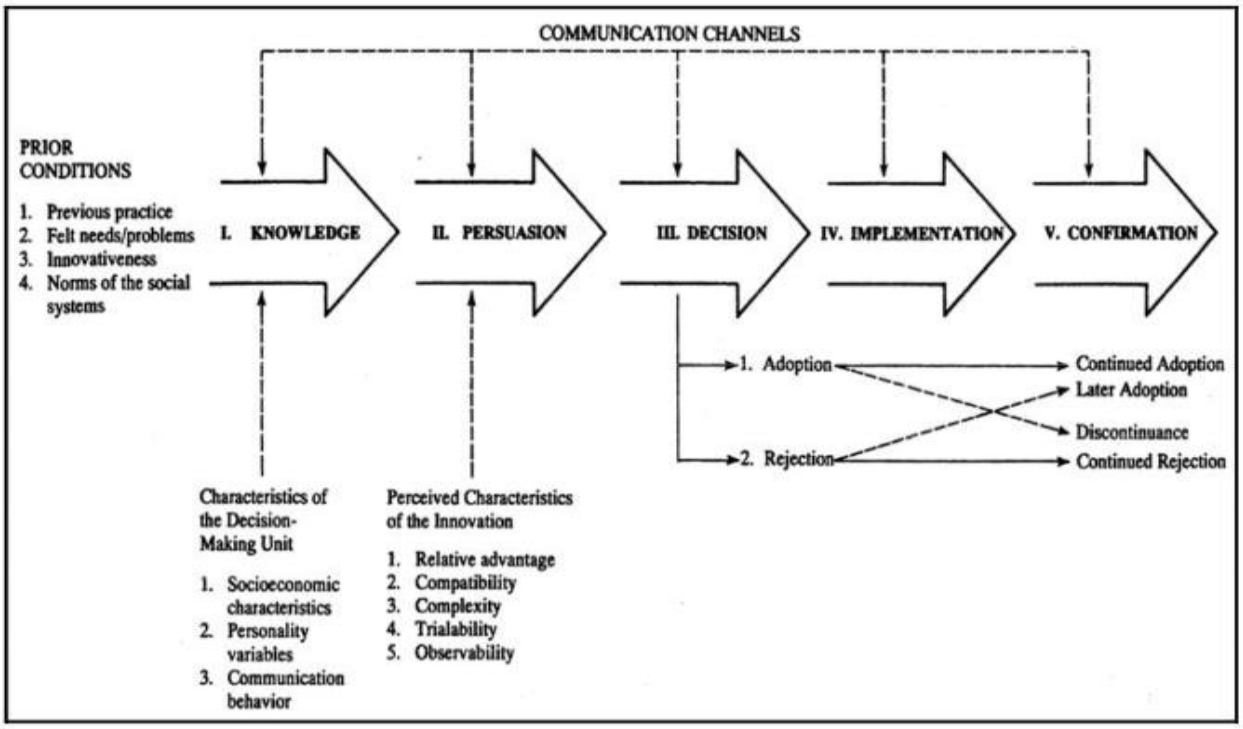


Figure 2: Innovation-decision process (Rogers 2003:78)

The innovation-development process according to Rogers (2003) consists of all of the decisions, activities, and their impacts that occur from recognition of a need or problem, through research, development, and commercialization of an innovation, through diffusion and adoption of the innovation by users, to its consequence. Makovhololo et al., (2017), citing research by Zhang et al., (2015) suggests that DOI is one of the most prevalent theories

to study the adoption of IT and understand how IT innovations are diffused within and between societies. According to Makovhololo et al., (2017), the DOI theory is one model that cannot be ignored when dissecting the process of how information technologies are created, communicated, adopted, and used by organizations and individuals. Overall, the DOI model is one of the most important theories that provide useful insights into factors that influence people's adoption of ICTs, innovations, and technology in general; and this study intends to adopt some of the constructs from this model in explaining ICT adoption and the performance of SMEs in Kampala.

2.2 Technology Adoption

Information and communication technologies (ICTs), particularly the use of the internet to conduct online business, have been changing the conventional way of doing business among brick-and-mortar companies (Beynon-Davies, 2018). In the SME sector, several proponents suggest there is a need for early adoption if business sustainability is to be achieved (Beynon-Davies, 2018). Information technology has been around for a long, long time as long as people have been around (Kamkarian, 2016). Information Technology came into existence in four main stages; the pre-mechanical stage when humans started communicating using pictures to tell a story, the mechanical stage defined when we see connections between our current technology and its ancestors, the electromechanical stage that introduced telecommunications as we know it today. Inventions such as the Morse code, telephone, the radio came into existence in this stage and lastly electronic age was when machines used electronic switches, in the form of vacuum tubes, instead of the electromechanical relays seen in the previous era (Kamkarian, 2016). Information Technology is used to acquire and process data to a form that can be used in specific applications and disseminate the processed data (Rajaraman, 2010). Information technology, therefore, is defined as capabilities offered to organizations by computers, software applications, and telecommunications to deliver data,

information, and knowledge to individuals and processes (Attaran, 2018). Therefore, Information Technology is a terminology that covers all forms of expertise used to create, store exchange, and uses information in its various forms (Pipek & Wulf, 2019).

Information technology has many favorable consequences but before an organization can reap these benefits, they must adopt and use it. The process of this adoption and use is determined by some factors as explained by the Technology Acceptance Methodology theory (TAM). These factors include perceived ease of use, perceived usefulness, and relative advantage. Perceived ease of use is defined as "the degree to which an individual believes that using a particular system would be free from physical and mental effort" Davis, (1991). It has also been defined as a user's subjective perception of the effortlessness of a computer system. This follows from the definition of the word "ease": "freedom from difficulty or great effort." Perceived ease of use may contribute towards performance whilst lack of it can cause frustration and impair technology adoption (Venkatesh & Davis, 2000). The impact of perceived ease of use on users' intention to adopt technology has been documented well in the literature. However, its role in TAM research remains controversial. For example, Fang et al. (2005) found that the nature of technology may influence its perceived ease of use. Perceived ease of use can be explained by usability characteristics which have been empirically validated by Lederer et al. (2000).

Perceived usefulness has been defined as a person's subjective perception of the ability of the technology to increase job performance when completing a task, which affects their perceived usefulness thus having an indirect effect on users' technology acceptance. It is defined as 'the degree to which a person believes that using a particular technology will enhance his or her job performance (Davis, 1986). In the words of Bagozzi, Davis, and Warshaw (1992), perceived usefulness refers to consumers' perceptions regarding the

outcome of an experience. Gender, age, experience, and voluntariness of use are posited to moderate the impact of the four key constructs on usage intention and behavior.

2.3 Employee Attitudes

Managing employees' attitudes is a critical management function. Managing these employee attitudes is greatly managing expectations and contributions from employees and employers. This entails what the employers expect from employees for their contributions towards organizational goals in return for the pay and likewise what employees expect from their employers for their efforts towards achieving the organizational goals (Ile, 2002). These expectations are anchored on the employment relationship between the organization and employees. The employee must provide efforts and skills to do work for the employer while the employer must provide the employee with salary or wage for agreed work done, Olajide (2000) cited in Obijuru, Oguejiofor and Emenike (2017). Employee attitude entails job satisfaction, job involvement, and organizational commitment (Gopinath & Kalpana, 2020).

2.3.1. Job Satisfaction

Job satisfaction is one of the most researched phenomena in the domain of human resource management and organizational behavior. It is commonly defined as a "pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Schneider & Snyder, 1975; Locke, 1976). Job satisfaction is a key element of work motivation, which is a fundamental determinant of one's behavior in an organization. According to Gopinath (2016; 2020), employee satisfaction at work is one of the most complex and ambiguous concepts to define and understand. This is because it is too subjective and multidimensional, as every employee has their own needs and goals, the satisfaction of a person depends on their ambition, role in the company, expectations at work, and their experiences in daily life.

2.3.2 Job Involvement

Job involvement represents a type of attitude toward work and is usually defined as the degree to which one identifies psychologically with one's work, i.e., how much importance one places on their work. A distinction should be made between work involvement and job involvement. Work involvement is conditioned by the process of early socialization and relates to the values one has concerning work and its benefits, while job involvement relates to the current job and is conditioned with the one's current employment situation and to what extent it meets one's needs (Brown, 1996).

2.3.3 Employee Commitment

Employee or organizational commitment represents the degree to which the employees identify with the organization in which they work, how engaged they are in the organization, and whether they are ready to leave it (Greenberg & Baron, 2008). Employee commitment has been defined by Boehman (2006), consistent with Allen & Meyer (1997), as the extent to which an individual accepts, internalizes, and views his or her role based on organizational values and goals. Several studies have demonstrated that there is a strong connection between organizational commitment, job satisfaction, and fluctuation (Porter et al., 1974), as well as those people who are more committed to an organization, are less likely to leave their job. Organizational commitment can be thought of as an extension of job satisfaction, as it deals with the positive attitude that an employee has, not toward her job, but the organization. The emotions, however, are much stronger in the case of organizational commitment and it is characterized by the attachment of the employee to the organization and readiness to make sacrifices for the organization.

The more widely applied conceptualization of employee commitment is a triple-dimension from Meyer and Allen, (1991, 1997), involving affective, normative, and continuance commitment. Affective commitment is a more emotional dimension of commitment that

describes one's attachment to, identification with, and involvement with an organization (Allen & Meyer, 1997). It is that form of strong desire to stay with an organization because of a robust and powerful connection with this organization Normative Commitment on the other hand is that feeling of obligation to remain employed by the organization (Meyer et al., 1993). Normative commitment concentrates on the moral aspect of an employee's feeling about their work. It is based on the feeling of whether it is right or wrong to leave an organization. Employees with strong normative commitment remain because they feel they ought to (Meyer et al., 1993). Normative commitment has similar consequences with affective commitment, though often to a lesser degree. Nakate (2011) indicates that continuance commitment is based on the costs that employees associate with leaving the organization. Therefore, employees are compelled to stay with the organization because they feel a need to be there. Continual employment to the firm, therefore, becomes a matter of necessity and sometimes survival (Meyer & Allen, 1997). According to Kwan (2011), continuance commitment may also be looked at in terms of the material sacrifices of leaving the job. Allen and Meyer (1997) here indicate that people may have, for example, benefits, which make them believe that they are in the organization because they need to do so. According to Muda and Fook (2020), employees tend to be effectively committed if they feel that the organization is supporting them, treating them fairly, and respecting them and that they will exhibit all or at least one of the three TCM components as introduced by Allen and Meyer (1991).

2.4 Performance of SMEs

Conțu (2020; pp.339) defines organizational performance as "the degree to which the organization, with some informational, financial, and human resources, positions itself effectively on the business market". Harmanzi (2002) observes that business organizations gauge their performance in terms of "effectiveness" in achieving their mission, purpose, or

goals. Organizational performance can be measured using various variables like profitability, ratio analysis, and net assets among others. Internally, performance is driven by the organization's motivation to perform, which refers to the organizational culture, history, mission, values, and incentive systems. These factors affect the quality of work, the nature of how the organization competes, and the degree of involvement of internal stakeholders in decision-making processes (Wamala, 2019). It is impossible to dissect the concept of organizational performance without delineating the processes of determining what performance is. Organizations need this to determine what performance is, and what it is not, to avoid ambiguity in organizational and individual evaluations and appraisals, respectively. In measuring performance, different metrics are used, depending on the kind of organization or entity one is looking at. In business organizations, performance is measured using popular tools like Kaplan and Norton's (1993) Balanced Score Card (BSC). Other measures of organizational performance include financial ratios like return on equity (ROE) and return on investment (ROI), liquidity, and profitability ratios, among other quantitative tools. Kras´nicka, Gło´d, and Wronka-Pos´piech (2017) indicate that enterprise performance can be measured using Antoncic and Hisrich's (2003), subjective assessment of six values including average annual growth in employment, average annual growth in total sales, market share dynamics (measured with sales), an average return on sales (ROS), an average return on equity (ROE), profitability compared with competitors- in the last 3 years.

According to Kamyabi and Devi (2011) marketing is a vital function in the success of any business, and as such SMEs should endeavor to see that this function is well exploited for competitiveness. Often, small enterprises need to seek external support to drive businesses into new markets or get a stronghold of the existing market. Therefore, the small enterprises should work at innovating in such areas as the complexity of marketing decisions which most of the time is one of the key performance indicators for improved performance.

Small business performance is of key concern in Uganda because SMEs dominate the Ugandan economy (Sebikari, 2019). Micro, Small, and Medium Businesses (MSMEs) are generally regarded as the "backbone of the economy" (Kirby & Kaiser, 2003). These businesses constitute a majority of the economic growth and development that is derived. However, the entrepreneurial performance is very low; it is therefore in the interest of the country to increase the performance of these enterprises (Nangoli et al., 2013). These companies are spread across all sectors with 49 percent in the service sector, 33 percent in commerce and trade, 10 percent in manufacturing, and 8 percent in other fields. They account for approximately 90 percent of the entire private sector, over 80 percent of manufactured output, and contribute about 75 percent to the gross domestic product (GDP). The sector employs more than 2.5 million people equivalent to 90 percent of total non-farm sector workers and comprises about 1,100,000 enterprises which make the sector one of the largest employers in the country (UIA, 2015).

SMEs are making positive contributions to economic growth and development in Uganda, although the rate of failure is also high (Kazooba, 2006). The performance of SMEs in terms of profitability and growth are in most cases hindered by little attention given to areas that influence business efficiency. Hindrances that affect the performance of SMEs, their competitiveness, and survival include limited information on financing options, inadequate and expensive supply of utilities, and limited access to networks that are needed to enhance competitiveness (Hategа, 2007; Kigozi, 2009). SMEs in Uganda are currently being faced with many serious difficulties such as shortage of capital for expanding and renovating equipment and technology, low productivity and competitiveness, lack of experience in terms of marketing, production management, and financial management.

According to Shehu et al., (2013) SMEs are operating in an economy that is knowledge-based and whose entrepreneurial growth and development are majorly pushed by innovation. As global economic boundaries are being erased, small enterprises' business strategies ought to evolve to allow continuous development if they are to stay competitive and relevant in the global value chain. This is the only way SMEs will ensure long-term sustainability and continuously improve performance (Saqib et al., 2018).

2.5 Relationships between Variables in the Theoretical Framework

2.5.1 Technology Adoption and Performance of SMEs

The problem of low adoption of ICT amongst this sector is well documented in the literature (e.g. Nguyen 2009; Mramba et al. 2016; Pather & Abiodun, 2017). This problem is further compounded in practice wherein SMEs fail to make the connection between ICT adoption and their profit-motive on the one hand and their motive gain expectations on the other. There is a widely accepted consensus that if SMEs harness ICTs, it is likely to improve performance, growth, and sustainability for more inclusive employment, increased mobility, ability to organize customer information, and improved inter-connectedness to other microenterprises (Francis & Willard 2016). Durojowu (2017) points out that the goal of technological change under study is the ability of SMEs to accept new innovative methods that will lead to higher performance of humans and machines for increased productivity. She adds that spending much money on the acquisition of new technology means a deviation from manual (simple) to sophisticated and automatic ways.

Technological change in most cases requires more training and is capital intensive despite the achievement of new business opportunities for organizations. In SMEs engaged in manufacturing goods, slack time is discouraged in production. Also, service providers where ICT makes information processing becomes faster to network clients, customers, and other stakeholders worldwide through internet facilities technological change is embraced. That is

why many dynamic organizations through the adoption of new technologies can move ahead while others are left behind in competitive markets.

In general, digital technologies will foster improved performance because of the need for high-risk tolerance, heavy investment in the recruitment of talent, and leaders with transformative visions helping a company to keep up to date with the latest developments in the business digital arena thus sustaining competitiveness.

2.5.2 Employee Attitudes and Performance of SMEs

Many studies have shown a strong relationship between employee attitudes and morale and workplace productivity. It makes a lot of sense that people will work harder, faster and better when they are happy and positively motivated (Browne, 2018). Employers expect personnel to behave in a manner consistent with the company's mission and goals. By establishing standards for business conduct, company executives set expectations about acceptable behavior. A positive attitude toward maintaining high standards for work ethics usually creates a productive environment in which people take pride in the work, and customers, suppliers, and partners want to conduct business (Duggan, 2020).

When attitudes of personal accountability are dominant in organizations, more of the vital works get done. Individuals and teams overcome seemingly impossible obstacles when they have a high sense of personal and organizational accountability – the belief that our actions or inactions are the major cause of success or failure (Senn & Hart, 2009). Organizations looking for ways to improve worker productivity can start by evaluating the attitude their employees bring to the job each day. A positive or negative attitude affects how workers approach their jobs, and attitudes can have a ripple effect on those around them. In general, a positive attitude will have a positive impact on productivity, while the reverse is also true (Joseph, 2019).

2.5.3 Employee Attitudes and Technology Adoption

Kyakulumbye and Pather (2021) posit that before any intervention to address low ICT adoption, there is a need to understand the underlying perceptual beliefs, attitudes, and expectations about ICTs amongst SME owners. Employee attitudes can be either positive or negative. Furthermore, pre-usage beliefs and attitudes of ICT could influence and determine the use of ICTs (Ceresia & Mendola, 2019). For instance, when assessing the usage of mobile-based payments, Almazroa and Gulliver (2018) reveal that personal characteristics have a positive influence on actual ICT use. Similarly, Alruwaie, El-Haddadeh, and Weerakkody (2020) also found that demographic characteristics are crucial in influencing citizens' continuous use of e-government services. Moreover, such expectation beliefs and attitudes may be likened to tangible and intangible elements from technology-based innovations (Jawed & Siddiqui, 2019). In terms of negative and positive attitudes influencing ICT usage, Gholami et al. (2013) found a significant positive effect. On the other hand, Verma and Sinha (2018) did not find a significant influence of ICT usage attitudes on perceived wellbeing.

The theory of Reasoned Action (TRA) as developed by Martin Fishbein and leek Ajzen as an improvement over Information Integration theory (Ajzen & Fishbein, 1975). Reasoned Action predicts that behavioral intent is created or caused by two factors: our attitudes and our subjective norms. As in Information Integration theory, attitudes have two components. Fishbein and Ajzen call these the evaluation and strength of a belief. The second component influencing behavioral intent, subjective norms, also have two components: normative beliefs (what I think others would want or expect me to do) and motivation to comply (how important it is to me to do what I think others expect). The components which construct the theory of reasoned action are Behavioral Intentions (BI), Attitudes (A), and Subjective Norms

(SN). The theory suggests that a person's behavioral intentions will be depending on his attitudes and Subjective norms.

The rationale of the technology acceptance model is that the influence of external variables on technology acceptance behavior is mediated through user beliefs and attitudes, in which beliefs represent a degree of instrumentality tied to action and attitudes are purely affective. This shows a link between employee attitudes and technology adoption in an SME setting.

2.6 Conclusion

The adoption of information and communication technology by business entities has provided opportunities for improved employee productivity, attitudes towards work, and their commitment to organizations. These benefits provide an impetuous for businesses to build competitiveness and potential for profit maximization. The realization that Information and Communication Technologies are now a necessity for improved business performance is a strong precursor for better achievement of business goals, and the provision of quality products to customers. Small and Medium Enterprises, which constitute the bulk of business entities in Sub-Saharan Africa need to continue harnessing opportunities provided by the information technology revolution as a way of growing their business and gradually emerging as large enterprises.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This section presents the description of the methodology that was used in collecting and processing data about the topic under study. It covers the research design, study population, sample size and selection, sampling techniques, and procedures. It also addresses the various methods of data collection and data analysis that were used in the study.

3.1 Research Design

The study adopted a cross-sectional survey design using quantitative approaches. A cross-sectional survey is suitable for such a study that intends to get information at a given point in time, rather than from a given period (Babbie, 2014). Cross-sectional analysis has the advantage of avoiding various complicating aspects of the use of data drawn from various points in time. It also has the advantage that the data analysis itself does not need an assumption that the nature of the relationships between variables is stable over time.

However, one weakness here is that it is difficult to determine whether the outcome followed exposure in time or exposure resulted from the outcome (Schmidt & Kohlman, 2008). Cross-sectional surveys differ from time series analysis, in which the behavior of one or more economic aggregates is traced through time (Trochim, 2006).

3.2 Study Population, Sample Size & Selection Procedure

According to the National Small Business Survey of Uganda Report (Uganda Bureau of Statistics, 2017), there were 82,647 small and medium enterprises operating in Kampala District. These comprised the study population. The unit of analysis was an individual and the unit of inquiry was the employees and sole proprietors of these SMEs who were actively engaged in running these SME businesses. The respondents were chosen because all of them are in the best position to provide information related to the study.

A sample of 381 SMEs was determined from the population using the (Krejcie & Morgan, 1970) table of sample size determination. The SMEs were selected using a simple random sampling design. Simple random sample advantages include ease of use and accuracy of representation. No easier method exists to extract a research sample from a larger population than simple random sampling (Dhivyadeepa, 2015).

3.3 Sources of Data

The researcher collected Primary data from SMEs across Kampala. Secondary about the performance analysis of SMEs in Sub Saharan Africa and Uganda in particular was also used in reviewing literature and discussion of findings.

3.4 Data Collection Instrument

A survey questionnaire was used to collect data. A self-administered survey was distributed to individual respondents via a Google form and physically to target respondents as a way of gathering the important data needed to obtain results for the study. The respondents were required to complete the questionnaire without being interrupted by the researcher conducting the survey. The questionnaires asked different types of close-ended questions tapping the different variables of the concept. Questions and statements anchored on the five-point Likert scale (1- Strongly Disagree to 5- Strongly Agree) where respondents were asked/ given to respondents for them to indicate their level of agreement with them.

3.5 Reliability and Validity of the Measurement Instrument

a) Reliability

Reliability is dependability or trustworthiness and in the context of measuring an instrument, it is the degree to which the instrument consistently measures whatever it is measuring (Amin, 2003 & Field, 2009). An instrument is reliable if it produces the same results whenever it is repeatedly used to measure traits or concepts from the same respondents even by other researchers. The more reliable a test is the more confidence we can have that the

score obtained from the test are essentially the same scores that would be obtained if the test was re-administered. The level of reliability that the researcher should expect from a test is determined largely by the nature of the research in which he plans to use the measure. Cronbach's alpha is a reliability coefficient that indicates how well the items in a set are positively correlated to one another. Cronbach and alpha are computed in terms of the average inter-correlation among the items measuring the closer Cronbach alpha is to 1 the higher the internal consistency reliability (Sekaran, 2003). This study conducted a Reliability Analysis on the questionnaire and the results are shown in Table 1 below.

b) Validity

Validity is the ability to produce findings that are in agreement with theoretical or conceptual values, in other words, to produce accurate results and to measure what is supposed to be measured. A research instrument is said to be valid if it measures what it is supposed to measure (Amin, 2003 & Field, 2009). The validity of an instrument can be checked in two ways; empirical validation and theoretical validation. With empirical validation, the validity of a measure is checked against empirical evidence.

The validity of the research instrument was checked using the face and content validity approach by expert judgment. To ensure the validity of the instrument, the drafted questionnaire was given to supervisors and business practitioners for a critical assessment of each item. They were requested to state the relevance or non-relevance (NR) of each item. They were also asked to check for language and clarity of the questions. The Content Coefficient Validity Index (CVI) was computed using standardized measures and appropriate adjustment was generated from the formula below;

CVI = Item related relevant /Total number of items on the questionnaires

According to Amin (2005) coefficient is acceptable if it is within the statistical range of .500 to 1.000.

In addition, the researcher took full control of data collection and documentation of sources. To meet the acceptable standards for research, all alpha reliabilities (α) for all scales are expected to be above 0.7 (Nunnally, 1978). The results of the CVI analysis are also shown in Table 1 below:

Variable Name	No. of Items	Reliability Results (Cronbach's Alpha)	Content Validity Index
Technology Adoption	15	.953	.733
Employee Attitudes	28	.916	.714
SME Performance	11	.910	.727

Table 1: Validity and Reliability Statistics

Table 1 above presents research results obtained during the testing of the research instrument for validity and reliability. Reliability statistics indicate that the 15 statements used to measure Technology Adoption generated a Cronbach's Alpha of .953, then the 28 statements used for Employee Attitudes had .916, and the 11 statements used to measure SME Performance generated a Cronbach's Alpha of 0.910. All of these were well above the acceptable .70 cut-off as recommended by Field (2003) and other researchers. These results indicate that the data collection tool was found to be highly reliable. Content Validity Statistics were 0.733 for Technology Adoption, 0.714 for Employee Attitudes, and 0.727 for SME Performance. All of these were above the acceptable 0.7 cut-off point for CVI. This means the questionnaire was valid and good for the study.

3.6 Measurement of the Variables

Technology adoption as an independent variable that was measured by perceived usefulness, perceived ease of use, and relative advantage as pointed out in the review of the technology acceptance theory by Davis (1991; 2003), Rogers (1983; 2003), and Mugo et al., (2017).

Employee attitudes are also an independent variable and they were measured using three constructs namely: satisfaction, involvement, and commitment as adapted from the works of Gopinath and Kalpana (2020), and Allen and Meyer, (1991; 1997).

SME performance indicators were customer retention, returns, and growth. These indicators are adapted from the performance management theory (Wongrassamee et al., 2003).

3.6.1 Operationalization of Measurements of Variables

a) Categorical Variables relating to Respondents' bio-data and business information		
Variables	**Measures**	**Measurement Scale**
- **Gender** - **Age**	• Demographic Measures include binary (male or female for gender), and the number of years for age.	**Nominal Scale**
- Level of education - Duration of Tenure - Respondent's position in the business - Firm Size - Duration of operation - Number of Employees	• Ordinal measures	**Ordinal Scales**

b) Variables in the Conceptual Framework		
Variables	**Measures of the Variables**	**Measurement Scale**
Technology Adoption (Independent Variable 1)	• **Perceived usefulness and perceived ease of use** (adapted from the Theory of Reasoned Action by Ajzen, 1991; Fishbien and Ajzen, 1975; and the Technology Adoption Model [TAM] by Davis (1989); Davis, Bogozzi, and Warshaw, (1989); • **Relative advantage**, adapted from the Diffusion of Innovations Theory [DOI] (Rogers, 2003) plus Dearing and Cox (2018).	**Interval Scale: 5-Point Likert**
Employee Attitudes (Independent Variable 1)	• Workplace Satisfaction and Employee involvement as adapted from the works of Gopinath and Kalpana (2020), plus job satisfaction measures derived from Matei and Abrudan's (2016) adaptation of Herzberg's Two Factor Theory to the Cultural Context of Romania; • Employee commitment from the Three-Component Model (TCM) by Allen and Meyer (1991; 1996).	**Interval Scale: 5-Point Likert**
SME Performance (Dependent Variable)	Business performance measures from Kaplan and Norton (1996); Neely (2012), and Wongrassamee et al., 2003. These will include: Sales Growth, Returns and Customer Retention	**Interval Scale: 5-Point Likert**

Table 2: Operationalization of Variables

Table 2 above presents the criteria that was used during the operationalization of variables, including the variable types, variable measures and the measurement scales used in this study.

3.7 Data Processing, Analysis, and Presentation

Data collected was extracted from the Google form as an Excel CSV file. Additional data from hard copy questionnaires were entered into this excel sheet. All the data were then edited to remove unnecessary details like the time of response. It was then coded, cleaned, and exported to the Statistical Package for Social Scientists (SPSS) computer software for analysis. Descriptive statistics, correlation, and regression were run to establish the sums and frequencies, and the levels of association (relationships) between the dependent variable and independent variables of the study, per Field, (2009). The researcher used these cross-sectional design tools to establish the associations between the independent variables (technology adoption and employee attitudes), and the dependent variable (SME performance). Regression analysis was used to measure the predictive power of the independent variables on the dependent variable. This analysis was done to determine the percentage, effect, or variation that the independent variables have on the dependent variable. In addition, the data has been presented using tables, as well as correlation and hierarchical regression analysis.

3.8 Ethical Considerations

An introductory letter from the university was prepared and availed on request to the prospective respondents who were given hard copy questionnaires. Permission was sought from the relevant authorities in the SMEs to carry out the study.

Consent was also sought from all participants in the SMEs and they were allowed to withdraw from the study at any point without any preconditions. All information that was to be given is going to be kept confidential and for strictly academic purposes.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.0 Introduction

This chapter presents the findings of the study entitled technology adoption, employee attitudes, and performance of small and medium enterprises in Kampala district. A response rate of 72% (273 respondents of a targeted 381) was obtained from the study. Data was collected using a combination of an online structured questionnaire (Google form), and a self-administered questionnaire physically delivered, translated and interpreted by the researcher at different SMEs, especially where respondents were found to be illiterate or had no access to the internet. The findings are presented in terms of descriptive statistics, correlation, and regression analysis, as extracted from SPSS. The findings are based on the following objective of the study:

i. To examine the relationship between technology adoption and the performance of SMEs in Kampala District.
ii. To examine the relationship between employee attitudes and the performance of SMEs in Kampala District.
iii. To examine the relationship between employee attitude and technology adoption of SMEs in Kampala District.

4.1 Descriptive Statistics

4.1.1 Gender of Respondents

The respondents were asked to indicate their gender; the results are presented in the table below;

		Frequency	***Percent***	***Valid Percent***	***Cumulative Percent***
Valid	Female	144	52.7	53	53
	Male	129	47.3	47	100.0
	Total	***273***	***100.0***	***100.0***	

Table 3: Gender of Respondents

Table 3 above presents research findings relating to the gender of respondents. Findings from the study indicate that majority of the SME practitioners studied were females, representing 53%, while males constituted 47% of all respondents. These findings attest to the fact that the data were collected from both sexes and is representative of the population demographics of SMEs in Kampala city.

4.1.2 Respondents Education Level

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	No formal education	11	4.0	4	10
	Certificate	16	5.9	6	6
	Primary Education	5	1.8	2	12
	Secondary education	48	17.6	18	30
	University degree and higher	193	70.7	70	100.0
	Total	***273***	***100.0***	***100.0***	

Table 4: Respondents' Education Level

Table 4 above presents research findings relating to the highest level of education of respondents, ranging from no formal education, to university degree or higher. Findings from the study, relating to the highest level of education indicate that majority of the respondents had a university degree or higher (70%), followed by those with secondary school education (18%). Those with no formal education (4%), and primary education (2%) were fewer among the respondents studied. These particular ones were guided by the researcher when answering and filling the questionnaire, by translating the research tool and explaining to them the meaning of the contents of the tool. These findings imply that most of the respondents could competently interpret the questionnaire and provide the required responses to the researcher.

4.1.3 Duration of tenure at SME [How long have you been working in this organization?]

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	Less than 1year	95	34.8	35	35
	Between 1 and 5 years	121	44.3	44	79
	Between 5 and 10 years	34	12.5	13	92
	Above 10 years	23	8.4	8	100.0
	Total	***273***	***100.0***	***100.0***	

Table 5: How long have you worked with this SME?

Table 5 above presents research findings relating to how long the respondents had been working with the different SMEs. When asked about how long they had been working with the studied SMEs, the majority of respondents indicated that they had been with these SMEs for 1 to 5 years (44%), followed by those that had been at the organization for less than a year (35%), and those that spent between 5 and 10 years (13%), and then those who had been at the organization for more than 10 years (8%). This indicates that the researcher sampled respondents that had stayed with the SME firms long enough to have information relating to technology adoption, employee attitudes, and business performance.

4.1.4 Respondent's Job Position in the SME Business

Please indicate your position in this business:

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	Business Owner	45	16.5	17	17
	Employee	158	57.9	58	75
	Middle Manager	39	14.3	14	89
	Top Manager	19	7.0	7	96
	Any Other Indicate	12	4.4	4	100.0
	Total	***273***	***100.0***	***100.0***	

Table 6: Respondents' Job Position

Table 6 above presents research findings relating to the respondents job positions in the SMEs w\they work with. Findings from the study indicate that majority of the respondents studied were employees of SMEs (58%), followed by middle managers (14%), business owners (17%), top managers (7%), and a few who performed other roles, like interns in these SMEs (only 4%). These findings imply that majority of the respondents who provided the data for this study were in positions that afforded them sufficient information about the study variables.

4.1.5 Length of Period of Operation of SME

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	0 -3 years	45	16.4	16	16
	3 -5 years	92	33.7	34	50
	5-10 years	67	24.5	25	75
	11 -15years	16	5.9	6	81
	Over 15 Years	53	19.4	19	100
	Total	**273**	**100.00**	**100**	

Table 7: Length of Operation of SME

Table 7 above presents research findings relating to the period of time that each SME has been in operation. When asked about their firm's years of operation, respondents indicate that majority of the SMEs studied had stayed in business for at least 3 to 5 years (34%), followed by those that had been in business for about 6 to 10 years (25%), and those of over 15 years were about 19%. These findings indicate that SMEs of different ages and experiences were considered for this study.

4.1.6 Number of Employees

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	1 – 20	119	43.49	43	43
	20 – 40	68	24.91	25	68
	41 – 60	28	10.26	10	78
	61 – 80	10	3.66	4	82
	Over 80 employees	48	17.58	18	100
	Total	***273***	***100.0***	***100.0***	

Table 8: Number of Employees in the SME

Table 8 above presents research findings relating to the number of employees in the studied SMEs, ranging from between 1 and 20 to over 80 employees. Findings from the study indicate that majority of SMEs studied had at least 1-20 employees (119, representing 43%), followed by those with about 20 to 40 employees (68 SMEs representing 25%), then those with over 80 employees (48 SMEs, representing about 18%), and then those with between 41 and 60 employees (28 SMEs, representing 10%) and lastly those with between 61 and 80 employees (10 SMEs, representing 4%). SMEs with a range of other numbers of employees were also studied. This indicates that all forms of SMEs, of different sizes, were well represented in this study.

4.2 The Relationships between the Variables of Study

Correlations

		Technology Adoption	**Employee Attitudes**	**SME Performance**
Technology Adoption	***Pearson Correlation***	1		
Employee Attitudes	***Pearson Correlation***	.496**	1	
SME Performance	***Pearson Correlation***	.623**	.640**	1

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

Table 9: Correlation Statistics

Table 9 above presents research findings from Person's correlation analysis, specifically highlighting the relationships between Technology Adoption and SME Performance; Employee Attitudes and SME Performance; plus Employee Attitudes and Technology Adoption. These are explained below:

4.2.1 The relationship between Technology Adoption and SME Performance

Pearson's correlation statistics indicate a positive and significant relationship between Technology Adoption and SME Performance (r = .623**, Sig. < .05). These findings imply that SME performance is moderately associated with their adoption of Information and Communication Technologies.

4.2.2 The relationship between Employee Attitudes and SME Performance

Pearson's correlation statistics from the study indicate a positive and significant relationship between Employee Attitudes and SME Performance (r = .640**, Sig. <.05). These findings imply that SME performance is moderately associated with the attitudes of their employees towards the adoption of Information and Communication Technologies.

4.2.3 The relationship between Employee Attitudes and Technology Adoption

When relating the two independent variables, Pearson's correlation statistics from the study indicate a positive and significant relationship between Technology Adoption and Employee Attitudes, (r = 496, Sig. <.05). These findings imply that Employee Attitudes are associated with to the adoption of Information and Communication Technologies by their SMEs, but the relationship was found to be a weak one.

4.3 Regression Statistics

4.3.1 Predictive strength of Technology Adoption and Employee Attitudes on change in SME performance

Model Summary:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.734[a]	.539	.535	5.00237	.539	130.551	2

Model	Change Statistics	
	df2	Sig. F Change
1	223[a]	.000

Analysis of Variance[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6533.746	2	3266.873	130.551	.000[b]
	Residual	5580.294	223	25.024		
	Total	12114.040	225			

a. Dependent Variable: SME Performance

b. Predictors: (Constant), Employee Attitudes, Technology Adoption

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.043	2.570		.795	.428
	Technology Adoption	.242	.031	.400	7.857	.000
	Employee Attitudes	.213	.023	.462	9.066	.000

Table 10: Regression Statistics

Table 10 above presents research findings from regression analysis, specifically highlighting the predictive potential of the independent variables (Employee Attitudes Technology Adoption) on the dependent variable (SME Performance). Regression statistics indicate an R of .734[a], an adjusted R of .539, and an R Square of .535. These results indicate that independent variables (predictors), including Technology Adoption and Employee Attitudes, contribute a 53.5% approximate change in the dependent variable (SME performance). Among the two independent variables studied, employee attitudes was found to be a stronger predictor of SME performance compared to Technology Adoption (Beta figures of .462 for technology adoption, compared to .400 for employee attitudes, and both predictors are significant at $p<.001$). This implies that while employee attitudes increase SME performance by 46%, technology adoption increases performance by 40%. These regression statistics confirm the existence of strong relationships between the independent variables and the dependent variables, and also indicate a high level of significance of the dependent variables in predicting the dependent variable.

4.3.2 Regressing Employee Attitudes on Technology Adoption

Model Summary						
Model	**R**	**R Square**	**Adjusted R Square**		**Std. Error of the Estimate**	
1	.496[a]	.246	.243		11.21832	
ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	9398.406	1	9398.406	74.679	.000[b]
	Residual	28819.828	229	125.851		
	Total	38218.234	230			
Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	31.866	4.953		6.433	.000
	Employee Attitudes	.392	.045	.496	8.642	.000

a. Dependent Variable: Technology Adoption
b. Predictor: (Constant), Employee Attitudes
Table 11: Regression Statistics

Table 11 above presents research findings from regression analysis, specifically highlighting the predictive potential of Employee Attitudes on Technology Adoption. When employee attitudes was regressed onto Technology adoption, results indicated that employee attitudes was significantly related to technology adoption, with a sig p<.001, an adjusted R square of .243, and a beta figure of .4962 for technology adoption. This implies that a positive change in employee attitudes leads to a 49.6% change (improvement) in technology adoption among SMEs studied.

CHAPTER FIVE

DISCUSSION OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a discussion of the findings presented in chapter four, based on the research objectives; conclusions from the findings, and recommendations that can be drawn from the study, areas of further study, and limitations of the study.

5.1 Discussion of Findings from the Study

5.1.1 The relationship between technology adoption and the performance of SMEs in Kampala District

Findings from the study indicated a positive and significant association between technology adoption and SME performance. These findings imply that SME performance is strongly related to their adoption of Information and Communication Technologies. There are several other studies in East Africa and the world that attest to the fact that the adoption of technology adoption is strongly related to and improves SME performance. Chairoel, Widyarto, and Pujani (2015) for example indicate that ICT adoption has several positive contributions to SME performance, in terms of increased business efficiency and effectiveness, better operational financial performance (in terms of reducing costs of operation), increased productivity, higher profit margins, and greater market share. Some of the measures for SME performance, like sales performance and profit margins, used by Chairoel, Widyarto, and Pujani (2015) are the same measures used in this study.

The findings from the current study are also in line with those from Mallinguh, Wasike, and Zoltan (2020) that indicate that the adoption of information communication technologies among Kenyan SMEs, reflected in the proportion of the business' capital budget (financial resources) spent on these technologies was closely related with the average growth in sales and sales performance in general among the 101 SMEs they studied. These results according

to Mukamanzi and Ndikubwimana (2018), are owed to the fact that ICT adoption and its perceived benefits enhance innovation among SMEs. Anjum (2018) studies the effect of ICT adoption on business performance among SMEs in India.

The findings of the current study are also in line with Anjum's (2018)'s findings, who indicate that ICT adoption enhances Customer and Supplier Relationships, improves Innovative capability, reduces Innovative Cost, and is significantly related to the overall performance of SMEs. The findings from this study are also in line with Eton et al., (2019) who studied the ICT adoption and SME growth in Kampala. The authors found that ICT adoption increases business efficiency, the ability of SMEs to utilize capital to and generate profits increases the levels of customer orders, increases in income, and the ability of a business to sell multiple products provides wider access to new markets and better access to a cheap source of raw materials. Olupot, Kituyi, and Noguera (2014) also found that the adoption of ICT systems, like Customer Relationship Management Information Systems was very beneficial in promoting Small and Medium Enterprises' new products, marketing existing products, keeping their customers updated, and their ability to share information with their customers.

The findings from the current study are also in line with Sitharam and Hoque (2016), who indicates that the majority of SME managers studied in South Africa reported that the adoption of ICTs in their businesses assists their organization in storing information, improves communication with customers, suppliers, and business partners, facilitates the business transaction, and enhances the overall performance of SMEs. Muhanguzi and Kyobe (2014) also report research results that are similar to what the current study finds. The authors observe that high-performing SMEs in Uganda are those that are increasingly harnessing mobile technology applications and using them in strategies that improve customer services

and employee productivity. Cariolle and Carroll (2020) also reported similar findings from a study of digital technology adoption among SMEs in Sub-Saharan Africa.

The authors indicate that technology adoption (specifically email use) is associated with a 70% increase in total sales among SMEs studied, a 44% increase in sales per worker a 72% increase in direct and indirect exports among internationally trading SMEs studied; while website adoption was associated with a 50% increase in total sales, a 25% increase in sales per worker and a 152% increase in direct and indirect exports. The findings from the current study are also supported by earlier findings from Byukusenge, Munene, Ratajczak-Mrozek (2017), who cite Schiuma, Andreeva, and Kianto (2012), and observe that the adoption of IT facilitates to enable the generation of innovations, improvement in Knowledge Management (KM) and all of these results in the increased business performance of SMEs in Uganda. The findings from the current study are therefore in line with most of these and other studies that have analyzed the relationship between ICT adoption and SME performance.

Encarnacion, Frelyn Ranay (2021) similarly observe in their study that there is a strong correlation between the attitude of employees toward their work and their work performance. The authors add that positive cognitive and emotional attitudes towards work are usually a result of improved employees' knowledge and skills, which energize them to accomplish their work and consequently increase productivity. All of this leads to improved organizational performance.

5.1.2 The relationship between employee attitudes and the performance of SMEs in Kampala District

Correlation statistics from the study indicate a positive and significant association between employee attitudes and SME performance. These findings imply that SME performance is strongly related to the attitudes of their employees towards the adoption of Information and Communication Technologies. Offorbike, Nandi, and Ado (2018) observe that employee

attitudes are psychological states of mind, reflecting the way employees think about situations, and ultimately determining their behavior at the workplace. These attitudes can be either positive or negative, and without a doubt, they are strongly related to how employee task performance, and overall organizational performance. The findings in the current study reflect these very sentiments. SME performance is therefore likely to be higher when the attitudes of their employees are particularly positive.

The findings of the current study are in line with findings by Soale and Akudugu (2021) who report in their study about employee attitudes and job performance, that changes in employees' job performance can be attributed to changes in their attitudes; and that attitudes are mostly spurred by encouraging employee innovations and change, and total quality management. All of these lead to better performance of employees and their organizations. Managing attitudes is very important if employees are to perform well in their jobs, and if the organization is to fulfill its mission. The findings from the study are also in line with other authors like Ciobanu, Androniceanu and Lazaroiu, (2019), consistent with Mohan and Sudarsan (2018) who posit that positive or favorable employee attitude positively influence their job satisfaction, job commitment, job involvement, task performance and by extension institutional/organizational performance.

The findings are also supported by similar findings by Damianus, et al., (2021), especially regarding the fact that positive attitudes are reinforced by the knowledge and skills of employees. The findings in the current study indicated that employee attitudes are reinforced by their ICT skills, and this leads to improved performance of the organization. The findings from this study are also in tandem with findings by Katou (2021), who posits that positive attitudes towards work are part of the general High-Performance Work Systems (HPWS) that improve organizational performance. Attitudes also have a great impact on the sustainability practices of a business (Rifai et al., 2021), and since sustainable development is increasingly

becoming an important anchor for business performance, this implies that the current study situates itself in the contemporary development agenda that is driving economies today.

The findings of the study also reflect results from Ibua (2016), who examines the mediating role of job-related attitudes on the relationship between employee empowerment and organizational performance; and finds that attitudes significantly mediate this association. Empowerment in the current study can be looked at in terms of providing employees with the required technology and environment for them to execute their tasks. This in turn leads to improved task performance and better business performance. The findings in this study are also in line with Verreynne, Parker, and Wilson (2011), who uses a similar measure of attitude to measure performance. The authors find that when employees exhibit positive and 'virtuous' pathways, in statements like "I enjoy coming to work", "I understand the processes in place to achieve efficiencies and use them successful", and "It is important to work as a team moving forward together", they are more likely to achieve job satisfaction, affective commitment, and collective capability, all of which lead to improved organizational performance.

5.1.3 The relationship between employee attitude and technology adoption among SMEs in Kampala District

The results of this study found a positive and significant relationship between employee attitudes and technology adoption. These findings imply that employee attitudes are strongly related to the adoption of Information and Communication Technologies by their SMEs. These results are demonstrated in earlier studies by Baskaran et al., (2020), who finds that adopting information technology by an organization is strongly premised on the attitudes and sentiments of an employee, reflected in statements from employees who indicated that; "I feel that using technology gives them a sense of personal satisfaction; "I take pride in doing their job as well as they can when I use technology", and that "I think of using technology enables

me to do my job effectively." These findings are especially true in the sense that a positive attitude towards technology influences higher rates or levels of use among employees, and higher levels of adoption among their business organizations. These statements reinforce the findings in the current study.

The findings from the current study of SMEs are further in line with findings by Al-Khattab and Saeed (2016) who indicate that positive employee attitudes are significantly related to the adoption and implementation of innovative technology, which in turn has a positive impact on employee performance. Vasiljeva, Kreituss, and Lulle (2021) found several technology-related factors that employees base on to have a positive work attitude towards these technologies and choose to adopt them. These include trust, relative advantage, cost, and social factors. The current study used some of these antecedents to measure technology adoption and the results of the study are in line with the results from Vasiljeva, et al., (2021). The findings from the current study are also in agreement with findings from Hwang, Chung, and Sin (2018), who found that technology adoption factors including perceived usefulness, appropriateness, and perceived behavioral control are strongly influenced by attitudes toward information systems.

The findings of the current study also reinforce findings from Agboola et al., (2019) who look at attitudes of employees towards technology in terms of employee behavior, this being positive or negative. In this study, positive employee behavior strongly affects technology usage, promotes individual learning, increases efficiency and effectiveness, and improves organizational performance- all of which are reflected in the theoretical framework guiding this study. The results of this study on SMEs also reflect earlier observations by Suseno et al., (2020), who opines from findings that employee attitudes positively influence their change readiness and the level of these employees' adoption of technological.

Chaudhry (2018) also reports findings that are in parallel with findings from the current study. The author indicates that for business organizations to successfully deploy information systems and get sufficient returns from these investments, they must carefully mitigate the negative attitude of employees towards impending change. This will ensure enormous returns on investment, lower technology adoption cost, limited time wastage, and long-term performance of an organization. The study's findings are also in line with results from Saghafian, Laumann, and Skogstad (2021), who reports that employee attitude, can either slow down the process of technology adoption or speed it up. Positive attitudes speed up adoption and negative attitudes slow down the adoption of information technology. The authors go-ahead to present similar antecedents of employee attitudes and performance, which are in tandem with what the current study hypothesizes. The current study also confirms observations by Susitha (2021), that enhanced positive attitude, and behavioral intention of an individual towards a technology usually lead to technology acceptance and use can, in turn, create a feeling of greater work engagement and motivation among employees, and improved organizational performance.

5.2 Conclusion

In conclusion, therefore, the study found positive and significant relationships between technology adoption and SME business performance, attitudes, and technology adoption, plus attitudes and SME performance. Key among the findings were the facts that employee attitudes were found to be a stronger predictor of SME performance compared to Technology Adoption. A positive predictive potential of Employee Attitudes on Technology Adoption was also found in this study. These results point to the importance of information technology and social-cognitive factors like attitudes, norms, and perceptions of employees in ensuring that SME businesses perform, meet expectations of their stakeholders, fulfill their goals and thrive. However, since a further review of literature indicates that information technology

adoption also facilitates positive employee attitudes towards work (Baskaran, et al, 2019; Panari, Lorenzi, and Marian, 2021), a further inquiry is also necessary to find out which particular factor has a greater influence on the other.

5.3 Recommendations

Since the findings from this study indicate a significant relationship between Technology Adoption and SME Performance, it is necessary for SMEs to effectively ensure a higher level of adoption of information and communication technologies in their operations as a way of encouraging better employee productivity and better business performance. Systems like bookkeeping applications, stock management software, and other information systems, plus hardware tools to encourage higher adoption must be invested in by SMEs. Secondly, SME employees should be encouraged to use these systems to improve their task execution and performance.

The other important findings were that employee attitudes were found to be significantly related to technology adoption and SME Performance. These findings point to the fact that positive attitudes are a very strong ingredient to higher levels of technology adoption and ultimately better organizational performance. SMEs must establish policies that nurture positive attitudes among their employees for them to actively use information systems and other technologies that their organizations have procured/ adopted.

5.4 Limitations of the Study

i. ***Data Collection limitations:*** The researcher faced some resource constraints during the process of data collection in terms of financial and time restrictions. These were managed by prior planning, budgeting for the data collection exercise, and the use of an online questionnaire to limit the amount of money required to travel and distribute questionnaires.

ii. ***Respondent Attitudes:*** The researcher faced some lack of cooperation from the respondents. This was offset by converting the questionnaire into an electronic copy for easy filling, and taking time explain to them that the importance of this study in improving the performance of their businesses.

iii. ***COVID-19 and Lockdown Measures:*** Uganda has been experiencing some of the strictest COVID-19 lockdown measures in the world (Hartwig & Lakemann 2020), with many businesses being forced to close or operate under strict social distancing rules, and regular curfews. These regulations caused challenges in accessing SMEs and their staff. This was mitigated by using alternative online means to reach business owners through email or telephone on a case-by-case basis.

iv. ***Limitations of the findings:*** The results of this study are only for Kampala District and only limited to the respondents that were sampled and reached. These findings can however be generalized to represent the SME population of Uganda because Kampala City has the highest number of SMEs and is one of the most populous cities/ districts in Uganda.

5.5 Areas of Further Study

The study concentrated on only a few components in the Technology Acceptance Model, the Diffusion of Innovation Theory, and the UTAUT Model to examine the relationships between the independent variables (technology adoption and employee attitudes), and Dependent Variable (SME performance). Components like behavioral intention to use information technologies, user behavior, and social factors that are part of technology acceptance models were not studied. Even commitment, which was used to measure employee attitudes were not exhaustively dissected into affective, normative, and continuance sub-components.

The relationship between employee/ user attitudes, technology adoption and performance is multifaceted. Sometimes attitudes can be hypothesized to be a result of adoption, while on other occasions; adoption is a result of positive employee attitudes. The researcher recommends a further examination of the mediating role of employee attitudes on the relationship between technology adoption and SME performance.

For SME performance, only qualitative measures were used, yet there are quantitative measures of business performance, like profit, turn-over, return on investments, return on equity, among others. All of these were not studied. The researcher recommends another study, which should specifically use some of these measures.

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APPENDICES

Appendix I: Questionnaire for Respondents

Dear Respondent,

I am **Regina Nnakasolya** a Master's student at Makerere University Business School researching "**TECHNOLOGY ADOPTION, EMPLOYEE ATTITUDES, AND PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES IN KAMPALA DISTRICT."** I kindly request your voluntary participation in this study by filling the attached questionnaire. The information gathered shall be treated confidentially and shall be used for this research only.

Section A: Please answer the following questions as honestly as possible

1. Gender;

a) Male ☐
b) Female ☐

2. Age category;

a) 18-29 years ☐
b) 30 to 39 years ☐
c) 40 to 49 years ☐
d) 50 to 59 years ☐
e) 60 years and above ☐

3. Highest level of education Attained

a) No formal education ☐
b) Primary Education ☐
c) Secondary education ☐
d) Certificate ☐
e) University degree and higher ☐

4. How long have you been working in this organization?

a) Less than 1year ☐
b) Between 1 and 5 years ☐
c) Between 6 and 10 years ☐
d) Above 10 years ☐

5. Please indicate your position in this business ☐

- Employee
- Middle Management ☐
- Top Management ☐
- Business Owner ☐
- Any Other Indicate……

Firm's information

6. Please indicate your firm's years of operation

0 -2years ☐ 3 -5 years ☐ 6-10 years ☐

11 -15years ☐ Over 15 Years ☐

8. The Number of Employees in your firm

1 -20 ☐ 21 -40 ☐ 41-60 ☐

61 -80 ☐ Over 80 employees ☐

Section B: TECHNOLOGY ADOPTION

Kindly indicate by ticking (√) the extent with regards to **Technology Adoption**. Use a scale of 1-5 where: 1 = Strongly Disagree, 2 = Disagree, 3 = Not sure, 4 = Agree and 5 = Strongly Agree

	Perceived Usefulness	**SD**	**D**	**NS**	**A**	**SA**
1	Information technology makes me accomplish my tasks easily	1	2	3	4	5
2	Information technology is useful in my job	1	2	3	4	5
3	Information technology enables me to do my work the right way.	1	2	3	4	5
4	Information technology makes it easy for me to perform my tasks	1	2	3	4	5
5	Information technology supports me to maintain work quality	1	2	3	4	5
6	Information technology improves productivity in this organization	1	2	3	4	5
7	IT enables me to have greater control over my work	1	2	3	4	5
	Perceived Ease of Use	1	2	3	4	5
1	It is easy to remember how to perform tasks using IT	1	2	3	4	5
2	I find it easy to apply modern technology in my work	1	2	3	4	5

3	I can apply Information technology across several activities	1	2	3	4	5
4	I find the use of Information technology friendly	1	2	3	4	5
5	I find information technology easy to use	1	2	3	4	5
6	Learning how to use information technology is easy	1	2	3	4	5
	Relative Advantage	1	2	3	4	5
1	Adopting appropriate IT tools enables me better run operations and tasks assigned to me in this businesses	1	2	3	4	5
2	Using technology can put me ahead of other workers in these businesses	1	2	3	4	5
3	It is better for me to adopt information technology than lose time and efficiency at work	1	2	3	4	5
4	Using IT gives me a clear advantage over other people at work	1	2	3	4	5

Section C: EMPLOYEE ATTITUDES

Kindly indicate by ticking (√) regarding **Employee Attitudes**. Use a scale of 1-5 where: 1 = Strongly Disagree, 2 = Disagree, 3 = Not sure, 4 = Agree and 5 = Strongly Agree.

	Satisfaction	**SD**	**D**	**NS**	**A**	**SA**
1	I know what I am expected to do at work.	1	2	3	4	5
2	I have the necessary tools to enable me to do my work right	1	2	3	4	5
3	I have the opportunity to do what I do best every day	1	2	3	4	5
4	My supervisor and people at work care about me as a person	1	2	3	4	5
5	There are people at work who encourage my development	1	2	3	4	5
6	This company/business makes me feel my job is important	1	2	3	4	5
7	My workmates are committed to doing quality work	1	2	3	4	5
8	The pay I get in this firm is satisfactory to me	1	2	3	4	5
9	My job in this enterprise is secure	1	2	3	4	5
10	I am given enough responsibilities by my superiors	1	2	3	4	5
11	Our clients recognise the good work I do around here	1	2	3	4	5
12	I have been provided opportunities for career growth in this enterprise	1	2	3	4	5
	Involvement	**SD**	**D**	**NS**	**A**	**SA**
1	I am always aware of the affairs of the business	1	2	3	4	5
2	I pick interest in all minute details of the business	1	2	3	4	5

3	Involvement in business affairs is important	1	2	3	4	5
4	I encourage others to take interest in the business matters	1	2	3	4	5
	Commitment	**SD**	**D**	**NS**	**A**	**SA**
1	I don't intend to stop working here	1	2	3	4	5
2	I will do all that is possible to ensure the success of this business	1	2	3	4	5
3	I would be very happy to spend the rest of my career in this business	1	2	3	4	5
4	This business inspires me to keep supporting its existence	1	2	3	4	5
5	I feel as if this business' problems are my own.	1	2	3	4	5
6	I do feel like this business organization is "part of my family"	1	2	3	4	5
7	I feel so "emotionally attached" to this business entity	1	2	3	4	5
8	It would be very hard for me to leave my job at this business entity right now even if I wanted to.	1	2	3	4	5
9	Too much of my life would be disrupted if I leave my business organization	1	2	3	4	5
10	This business organisation deserves my loyalty	1	2	3	4	5
11	I would not leave my organization right now because of my sense of obligation to it.	1	2	3	4	5
12	I owe a great deal to this business organization	1	2	3	4	5

Section D: PERFORMANCE OF SMEs

Kindly indicate by ticking (√) the level of performance of your business. Use a scale of 1-5 where: 1 = Strongly Disagree, 2 = Disagree, 3 = Not sure, 4 = Agree and 5 = Strongly Agree

	Sales Growth	**SD**	**D**	**NS**	**A**	**SA**
1	Sales can grow in the current business environment	1	2	3	4	5
2	The business will eventually progress into large scale enterprises	1	2	3	4	5
3	There is a high rate of business growth in this business	1	2	3	4	5
4	The current business environment is conducive to increase sales levels	1	2	3	4	5
	Returns	**SD**	**D**	**NS**	**A**	**SA**
1	This business makes satisfactory returns	1	2	3	4	5
2	The business returns have been improving over time	1	2	3	4	5
3	The business returns can even grow beyond the current levels	1	2	3	4	5

	Customer Retention	SD	D	NS	A	SA
1	The business has a high number of loyal customers	1	2	3	4	5
2	Most old customers always seek to transact with this business	1	2	3	4	5
3	We value retaining customers over gaining new ones	1	2	3	4	5
4	Our customers recommend others to use our business services	1	2	3	4	5

Thank you!

Appendix II: Sampling Table

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	26	140	103	340	181	1000	276	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is Population Size
"S" is Sample Size.