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Case Study

Factors Influencing the Acceptance and Use of Information and Communication Technology (ICT) in Small and Medium Enterprises in Kenema City: (Case Study-Tas Store Enterprise, Shalimar Trading Company and Sierra Juice and Water Company)

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Abstract: This study investigated factors influencing information communication technology (ICT) acceptance and usage by owners/managers of small and medium enterprises (SMEs) in retail business growth in Sierra Leone. Information communication technology (ICT) is one of the forces in the economic growth equation, thus a reason why small and medium enterprises (SMEs) should adopt it in order to promote their business strategy, performance, and growth. Consequently, ICT enables other sectors to develop economically, and yet SMEs are slow to its adoption and use. The SMEs have a significant contribution towards the economic growth in countries both developed and developing countries.

Further, evidence from previous research indicated that SMEs have the potential of benefiting from ICT, and they stand a better position to respond, and adapt technological change due to their flexibility in an effort to ensuring their potentials are unleashed. Therefore accepting ICT enables SMEs to compete globally, coupled with enhanced efficiency and closer customer and supplier relationships.

The researcher used the Sierra Leone business directory (http://www.smeda.gov.sl) to obtain a list of all SMEs profile. The Study population for this research comprised all managers/owners of SMEs found in the selected region in Sierra Leone and that deal with merchandise or that provide retail services. The researcher targeted managers/owners of SMEs based on specific. Considering the list of SMEs found in the Sierra Leone business directory, there were series of SMEs found within the study region.

The researcher used stratified random sampling strategy to select SME managers/owners. The data were analyzed by using Excel and SPSS (statistical Package for Social Sciences. Discussions of study results in this section follow a systematic evaluation of the researcher's work, providing insights into and interpretation of these results. The researcher presents a wider perspective of the study to the field of practice, to prior research, and to the interested communities. Therefore, the researcher provides discussions of the study results and conclusions based on perspective of variables contained in the research questions.

Keywords: ICT, growth, performance and SMEs.

Introduction

According to Mokaya (2012), ICT provides a competitive edge to large enterprises that seek gains in their business performance. Jalloh (2021) reported that the integration of ICT as core subject in Secondary schools of Sierra Leone. On the other hand, Ritchie and Brindley (2005) argued that SMEs continue to face challenges that limit them from accessing critical information on the market. Uwalomwa and Ranti (2009) contends that perceived merits such as high labor intensity, reliance on local skills and technology, entrepreneurship development, ingenuity and growing industrial networks align with SME's promotion and are more visible in the developing world. SMEs and more so in Sierra Leone require critical information regarding markets and business innovation. Adoption of ICT and its subsequent assimilation into SMEs provides the owners/managers with enhanced competitiveness while its usage opens and helps SMEs to venture into international markets (Ongori & Migiro, 2010). Some SMEs in the developing world are unwilling to cope with innovation. They still use traditional faceted communication to conduct business (Chibelushi & Costello, 2009).

According to Apulu and Latham (2011), the main drivers for adopting ICT include the competitive advantage that ICT provides, it enhances customer satisfaction, and that ICT saves time and cuts on cost. Other researchers argue that the age composition of owners/managers of SMEs and their level of education has great influence on ICT adoption. Despite the technological hindrance that owners/managers of SMEs face, adopting ICT is necessary for successful business. In developing countries like Sierra Leone, adoption of ICT requires large financial investment capacity that is a critical factor hindering ICT adoption by the majority of SMEs. The aim of the study is to encourage and show case to owners, managers and business players to accept the full usage of ICT in running their businesses and get them cognizant of the varied benefits derivable from it adoption and full utilization.

Objectives of the Study

The objectives of this study includes the following:

1) To investigate the factors influencing the acceptance of ICT in SMEs
2) To identify the factors of ICT usage in SMEs
3) To identify the benefits of ICT acceptance and adoption in SMEs

Research Questions

The research will be guided by the following:

1) What factors influence SME owners/managers to accept ICT in Sierra Leone?
2) What is the relationship between ICT acceptance and SMEs retail business growth in Sierra Leone?
3) What is the relationship between ICT usage and SMEs retail business growth in Sierra Leone?

Literature Review

ICT is gradually becoming indispensable for SMEs globally (Ladokun, Osunwole, & Olaoye, 2013), and Sierra Leone is not an exception to this phenomenon. The contribution of ICT to enterprise development has led Sierra Leone to make it part of the economic growth policy which owners/managers of SMEs can take advantage and use it to grow their businesses. The term ICT acts as an umbrella that covers all technical capabilities to process and communicate information (Olise *et al.*, 2014). ICT is now a globally computerized technology that enables communication in digital forms (Apulu & Latham, 2011). Additionally, ICT is generally, a collection of software, hardware, telecommunication and techniques of information management. The use of ICT tools provide suitable means to create, analyze, processing, packaging, distributing, receiving, retrieving, storing and transforming information (Barba-Sánchez *et al.*, 2007).

SMEs use ICT to grow and become innovative, to improve both technical and managerial skills, and to make solutions available (Apulu & Ige, 2011). SMEs benefit from using ICT aimed at increasing productivity or improving communication to reach new customers. The use of ICT depends on the

nature of operational investment that points to cost and efficiency. Regardless of the approach taken, ICT usage starts with basic technologies for instance telephone (fixed line or mobile phone), fax, and computer software that process documents, to sophisticated technology for example email, e-commerce and systems that process information.

Matthews (2007) posits that through exploiting technology, businesses will grow. The key areas that ICT boosts include marketing, communication, networking and resource planning. The use of websites, emails and telephones contribute to improved service and expanded base of customers. Websites present excellent tools to reach new markets. SMEs that use ICT for networking stand to benefit as knowledge integrators. Small firms that use ICT benefit from enhanced profitability and outreach. These firms position strategically for wholesale expansion.

Most SMEs fail to embrace the use of ICT tools and embark to operate on financial existence characterized as hand-to-mouth. Small enterprises shy from adopting ICT in their business because they perceive ICT as expensive to maintain and that it presents negative variation effects (Mokaya, 2012). ICT provides suitable medium for communication with customers and enables electronic data interchange. SMEs need to implement ICT applications that help in capturing data through bar codes. ICT also helps SMEs to serve the large number of customers, manage efficiently the expanding organization and provides crucial tools for reviewing transaction orders in cost effective ways.

However, owners/managers face varied obstacles when they implement ICT such as lack of financial capacity, expertise, technical skills and employee computer literacy (Antlová, 2009). The factors linked to the environment, human capital, and structural characteristics of firm, competitive strategy and internal organization are as well responsible for SME's skepticism of adopting ICT (Ongori & Migiro, 2011).

Methodology

This study focused to provide understanding of these factors and the usage of ICT in the growth of SME retail business. The topics that this chapter covers include the research design, sampling procedure, instrumentation, data collection criteria, data analysis, validity and reliability, and ethical considerations.

Additionally, this study sought to provide answers to research questions that included:

1) What factors influence SME owners/managers to accept ICT in Sierra Leone?
2) What is the relationship between ICT acceptance and SMEs retail business growth in Sierra Leone?
3) What is the relationship between ICT usage and SMEs retail business growth in Sierra Leone?

Research Design

Quantitative studies helped to explore and generate new understanding of existing phenomenon in research areas. To achieve the objectives of this study, the researcher applied correlational study design; one of the quantitative study methods used in similar previous studies on ICT adoption in SMEs. Correlation approach helped the researcher to explore the relationship between ICT acceptance, ICT usage, and SMEs retail business growth.

The study used Factor Analysis and Correlation approaches to answer the research questions. Both Factor Analysis and Correlation were relevant to the current study because they elucidated contribution of previous researchers and put it in the appropriate context of overall knowledge. Factor Analysis and Correlation provided the means to identify suitable research instrument for gathering data from SME owners/managers concerning ICT acceptance.

The researcher sought ontological understanding surrounding the current study using positivism approach. Positivist researchers separate and distance themselves from participants in research, so

that they may remain neutral emotionally to see how reason is different from feeling. The researcher used these variables to subsequently analyze numerical data collected from respondents The research attempted to answer research questions that included what factors influence SME owners/managers to accept ICT in Siera Leone?, What is the relationship between ICT acceptance and SMEs retail business growth in Sierra Leone? What is the relationship between ICT usage and SMEs retail business growth in Sierra Leone? These research questions aligned with the research hypotheses presented in the data analysis section.

Sample Population

True probability sampling requires all subjects of the population to have equal chances of being selected. Sampling enabled the researcher to draw references about the larger population through studying and examining the selected sample at affordable cost, time and effort. In this study, the researcher sampled managers/owners of SMEs by establishing their demographic and business characteristics aimed to answer the research questions. Study population for this research comprised all managers/owners of SMEs found in the selected region in Sierra Leone and that deal with merchandise or that provide retail services. The researcher targeted managers/owners of SMEs based on specific. The researcher used the Sierra Leone business directory (http://www.smeda.gov.sl) to obtain a list of all SMEs profile. Considering the list of SMEs found in the Sierra Leone business directory, there were series of SMEs found within the study region.

Additionally, the study identified categories of SME businesses and provided their population based on the sources mentioned above. The researcher obtained additional information of respondents from sponsoring organization that run a chain of SMEs in Sierra Leone. The researcher used stratified random sampling strategy to select SME managers/owners. Stratified random sampling allowed the researcher to achieve a higher degree of representation of SMEs that run various types of businesses identified.

Instrumentation/Measures

Explanatory studies involve subjects generally measured once with the intention of establishing associations between variables. This study elicited information from SMEs located in Sierra Leone Eastern Region. The study instrument elicited data classified into various sections. The researcher considered the survey appropriate because it addressed the same variables that this study sought to measure. The survey instrument elicited information from eight parts comprised of distinct constructs that included demographic profile, business profile, drivers of ICT acceptance in SMEs, ICT tools used in SMEs, benefits of ICT acceptance and usage in SMEs, barriers to ICT acceptance and usage, strategies for ICT adoption and usage, and role of the government in ICT acceptance and use in SMEs.

The survey asked questions that drew data to measure the relationship between ICT acceptance and SME retail business growth, and data to measure the relationship between ICT usage and SME retail business growth. The researcher measured the items found in every construct on a 5-point Likert scale with assigned weights. Based on the approach identified in the strategy sampling section above, an appropriate sample size of respondents for this study was therefore determined.

Data Collection

This study sought respondents from Sierra Leone SMEs in conjunction with the sponsoring organizations and of which these SMEs were registered. The researcher requested owners/managers of these SMEs to complete the survey. Additionally, participants in the study indicated whether they were business owners/managers via inquiry on the survey instrument. The researcher stopped collecting data if a participant indicated that he/she was not the owner/manager of SME business. The researcher used delivery and collection method to present the consent form and survey instrument to 15 respondents including (the owners/managers, customers and co-workers) of the selected SMEs in the study region.

The researcher requested them to participate in the research by first completing a consent form. The respondents completed the survey in approximately 15 minutes. Additionally, the form indicated researcher's protection of study subjects by not collecting their personal identifiable information, and that their participation was voluntary. The participants voluntarily assented hand signing the consent forms and proceeded to complete the survey questions. The researcher made it clear to the participants that they had the option of declining from taking part in the survey and their efforts appreciated. The researcher provided a period of one (1) week for the respondents to complete the survey. The researcher maintained detailed information on the number of surveys distributed to owners/managers of SMEs in order to evaluate any limitations that arose from the response rate. Sponsoring organization (SMEDA) provided permission in order for the researcher to distribute the survey questionnaires to SMEs using delivery and collection method. The researcher met respondents during workday and presented them with the consent form and the survey to complete. The researcher hoped to get representative response rate, however, study limitations would affect this study, and contribute to less than 100% response rate from participants due to other reasons that the researcher was not aware of at that time.

Data Analysis

The researcher analyzed collected data using Excel and SPSS (statistical Package for Social Sciences.

Research Hypotheses

Q1: What is the relationship between ICT acceptance and SMEs retail business growth in Sierra Leone?
H0: ICT acceptance does not significantly correlate with SMEs retail business growth.
Ha: ICT acceptance correlates significantly with SMEs retail business growth.
Q2: What is the relationship between ICT usage and SMEs retail business growth in Sierra Leone?
H0: ICT usage does not correlate significantly with SMEs retail business growth.
Ha: ICT usage correlates significantly with SMEs retail business growth.

Validity and Reliability

Instrument reliability is a situation that presents the measurement process to produce consistent scores without changing the phenomenon in question during the repeated measurements. This study administered the same measurement tool and that each respondent completed the survey once. The research measurement intended to obtain the same results and hence this study treated measurement as test-retest reliability. Validity refers to the extent of measuring what the researcher identifies and hopes to measure, and that which this study intended to measure. The research instrument was appropriate for this study since the previous study shows that the researcher was building on performed pilot test with ICT experts and SME owner/managers to ascertain its validity. Pre-testing the research instrument ensures that the questionnaires are free from vagueness and misunderstanding.

Ethical Considerations

Research that involves human subjects assumes partnership between volunteers taking part in the research, the public that benefits from the research, investigators that design and carry out research and sponsors who review researches. Compliance and regulations govern research with human subjects while taking a broad upfront in ethical considerations, however, though regulations have practical applications of ethical principles for instance respect for persons, beneficence and justice, they take little concern of explicitly referencing these principles. They do not provide ways to ensure individuals who design, conduct or review research are taking proper considerations.

In this study, the researcher protected respondents by complying with the research regulations. The researcher adhered to ethical principles of conducting research including respect for person, beneficence and justice. The current research obtained permission from businesses in order to

facilitate data collection from respondents. The survey instrument for the research provided respondents with the consent form. The respondents voluntarily assented by hand signing the forms prior to completing the survey. The researcher did not coerce or influence the respondents in any way for instance by offering a fee to participate in the research. Instead, the researcher took responsibility to explain how the results of ICT adoption would benefit the SME managers/owners and the public.

Results

Demographic Profile and Age Distribution

The demographic profile results of respondents included gender, age, academic qualification and years of business experience. The tables below presents mean results using frequency distribution. The findings indicated that 61% of the respondents were males and 39% were females. These results show that males owned most of the SMEs surveyed. The majority of respondents were in age group 18-25, 26-35, 36-45, 46-55 and over 55 years. The findings imply that the majority of surveyed SMEs were owned /managed by persons of middle age.

Table 1. Respondent's age distribution as per Age categories

S.No	SME'S	Ages	Male	Female	Total (%)
1	Shalimar	18-25	2	0	2
		26-35	3	2	5
		36-45	2	1	3
		46-55	2	2	4
		Over 55	1	0	1
		Total	**10**	**05**	**15**
2	Tas Stores	18-25	2	1	3
		26-35	6	1	7
		36-45	3	1	4
		46-55	1	0	1
		Over 55	0	0	0
		Total	**12**	**03**	**15**
3	My Munu Water Company	18-25	5	3	8
		26-35	2	2	4
		36-45	3	0	3
		46-55	0	0	0
		Over 55	0	0	0
		Total	**10**	**05**	**15**
4	Sierra Juice	18-25	5	2	7
		26-35	3	2	5
		36-45	3	0	3
		46-55	0	0	0
		Over 55	0	0	0
		Total	**11**	**04**	**15**

Respondents Years of Experience

The results also indicate that 50% (30) of respondents had 6-10 years of experience in business. 0.0% had 1-5 years of experience in business, 33.33% (20) and 16.67% (10) had 11-15 years and 16-20 years of business experience respectively. These findings demonstrate that the majority of the SME owners/managers had a long experience in business to realize and understand the importance of accepting ICT in their businesses.

Table 2. Depicting respondents` Years of Experience in the Business sector

S.No.	Duration	Respondents	Percentage
1	1-5 Years	0	0.0%
2	6-10 Years	30	50%
3	11-15 Years	20	33.33%
4	16-20 Years	10	16.67%
5	Over 20 Year`s	0	0.0%
6	**Total**	**60**	**100%**

Respondents` Academic Qualification

The results also indicated that the majority of respondents were holders of Sierra Leone Certificate of Secondary Education (BECE) 50%(30). 25%(15) of the respondents were Diploma holders, and 8.33% (05) were degree holders. These results clearly demonstrate that the majority of respondents had plausible education to enable them understand the use of ICT in their business.

Table 3. Depicting Respondents` Academic Qualification

S.No.	Qualification	Frequency	Percentage
1	NPSE	10	16.7%
2	BECE	30	50%
3	Diploma	15	25%
4	Degree	05	8.33%
5	Post Graduate Degree	00	0.00%
6	**Total**	**60**	**100%**

Factor Analysis

Factors of ICT Acceptance in SMEs

To answer research question one, "What factors influence SME to accept ICT usage their businesses in Sierra Leone ?", respondent were asked to rate 17 factors of ICT acceptance that influenced their SME businesses on a Likert scale ranging from 5= strongly agree, 4= Agree, 3=Neutral, 2=Disagree, and 1=strongly disagree. These factors are assigned codes in the tables for ease of data analysis. Factor analysis with Varimax rotation was used to evaluate factors that influence ICT acceptance in SMEs. Further, Pearson (r) correlation and Principal Component extraction method was used to generate a correlation matrix of these factors.

Table 4. Distribution of respondents' opinion on Driving forces of ICTs acceptance or adoption

S.No	Forces	Status	Frequency	Percentage
1	Customer demands	Strongly Agree	25	41.6
		Agree	25	41.6
		Neutral	05	8.3
		Disagree	03	5
		Strongly Disagree	02	3.3
	Total	**5**	**60**	**100**
2	Cost reduction	Strongly Agree	30	50
		Agree	10	16.67
		Neutral	10	16.67
		Disagree	05	8.33
		Strongly Disagree	05	8.33
	Total	**5**	**60**	**100**
3	Improve customer services	Strongly Agree	25	41.6
		Agree	25	41.6
		Neutral	05	8.3

		Disagree	03	5
		Strongly Disagree	02	3.3
	Total	**5**	**60**	**100**
4	Increase sales	Strongly Agree	30	50
		Agree	10	16.67
		Neutral	10	16.67
		Disagree	05	8.33
		Strongly Disagree	05	8.33
	Total	**5**	**60**	**100**
5	Improve internal efficiency	Strongly Agree	50	83.33
		Agree	10	16.67
		Neutral	00	00
		Disagree	00	00
		Strongly Disagree	00	00
	Total	**5**	**60**	**100**
6	Facilitate the control of business	Strongly Agree	25	41.6
		Agree	25	41.6
		Neutral	05	8.3
		Disagree	03	5
		Strongly Disagree	02	3.3
	Total	**5**	**60**	**100**
7	Improve relations with other business partners	Strongly Agree	30	50
		Agree	10	16.67
		Neutral	10	16.67
		Disagree	05	8.33
		Strongly Disagree	05	8.33
	Total	**5**	**60**	**100**
8	Availability of skilled manpower	Strongly Agree	25	41.6
		Agree	25	41.6
		Neutral	05	8.3
		Disagree	03	5
		Strongly Disagree	02	3.3
	Total	**5**	**60**	**100**
9	Facilitate growth of the business	Strongly Agree	50	83.33
		Agree	10	16.67
		Neutral	00	00
		Disagree	00	00
		Strongly Disagree	00	00
	Total	**5**	**60**	**100**
10	Managing Large volume of information	Strongly Agree	25	41.6
		Agree	25	41.6
		Neutral	05	8.3
		Disagree	03	5
		Strongly Disagree	02	3.3
	Total	**5**	**60**	**100**

The table above depicts that the driving forces of ICT acceptance or adoption is greatly understudied to the following forces and findings were all opinions accumulated from respective respondents who willingly participated. The overall findings indicated that improved customer services are always assured. Based on the above analysis, the findings indicated that internal factors that have primary influence on ICT acceptance in SMEs as rated by respondents. These factors were improving

customer services (41.6%), cost reduction (50%), improving internal efficiency (41.6%) and management of information flow (41.6%). Businesses that improve their customer services stand in a better position of surviving and growing in the present era of globalization.

These results are consistent with Ongori and Migiro (2010) who contended that SMEs accept ICT in their businesses as a way of reducing costs, improving internal efficiency, and increasing sales. These finding indicated clearly that SMEs are compelled to accept ICT in their business to help them compete with other businesses in this era of globalization.

These results are consistent with Mohamad and Ismail (2009) who posited that SMEs are induced to accept ICT in their businesses because of competitors' pressure, personal characteristics of management, perceived benefits and commitment of top management. Additionally, these results are in line with Olise *et al.,* (2014) research findings that indicated external pressure, information processing needs; IT supported ingenuity and performance, pressure from competitors as key drivers of IT complexity among SMEs.

Commonly Used ICT Tools in Business

The information and Communication Technology (ICT) tools used in Businesses could not be overemphasized due to the fact that most of the tools are very expensive inclusive its maintenance and running cost are so exorbitant to the point if not well planned before integrating into any business would adversely affect any business entity especially the Small and Medium Scale enterprises (SMEs). The table depicts the distribution of the available tools in these targeted SMEs.

Table 5. The distribution of the available tools in these targeted SMEs.

ICT tools	**Availability / Status**	**Frequency**	**Percentage**
Computer applications	Most Used	50	83.33
	Used	10	16.67
	Sometimes	00	00
	Least Used	00	00
	Not Used at all	00	00
Total	**5**	**60**	**100**
Laptops	Most Used	40	66.67
	Used	20	33.33
	Sometimes	00	00
	Least Used	00	00
	Not Used at all	00	00
Total	**5**	**60**	**100**
Scanner	Most Used	00	00
	Used	00	00
	Sometimes	00	00
	Least Used	20	33.33
	Not Used at all	40	66.67
Total	**5**	**60**	**100**
Printer	Most Used	40	66.67
	Used	20	33.33
	Sometimes	00	00
	Least Used	00	00
	Not Used at all	00	00
Total	**5**	**60**	**100**
Photocopier	Most Used	00	00
	Used	00	00
	Sometimes	00	00

	Least Used	20	33.33
	Not Used at all	40	66.67
Total	**5**	**60**	**100**
Mobile phones	Most Used	40	66.67
	Used	20	33.33
	Sometimes	00	00
	Least Used	00	00
	Not Used at all	00	00
Total	**5**	**60**	**100**
Internet connection	Most Used	00	00
	Used	00	00
	Sometimes	00	00
	Least Used	20	33.33
	Not Used at all	40	66.67
Total	**5**	**60**	**100**
Website	Most Used	00	00
	Used	00	00
	Sometimes	00	00
	Least Used	20	33.33
	Not Used at all	40	66.67
Total	**5**	**60**	**100**
Enterprise Software	Most Used	40	66.67
	Used	20	33.33
	Sometimes	00	00
	Least Used	00	00
	Not Used at all	00	00
Total	**5**	**60**	**100**

According to the findings majority consented that the availability of ICT tools in their business centers were never in place. Few consented to have laptops and limited number of printers to produce their hard copies of receipts. The study sought to find out the commonly used ICT tools in SMEs. Participants were asked to rate the use of ICT tools in SMEs. Study results are presented in the table above using frequencies and percentages. The rating scale ranged from 5=Most used, 4=Used, 3=Sometimes used, 2=least used, and 1=Not used at all. Findings show that the most used ICT tools in SMEs were computer applications (83.33%) and mobile phones (66.67%). Respondents indicated further that printer (66.6%) were mostly used and laptops were as used frequently. These components were not used at all and internet connection (66.67%) These results demonstrate that most SMEs use basic communication tools in their businesses. These findings are consistent with Mokaya (2012) research that found most proprietors of small enterprises used mobile phones, computer based programmes and Internet. Additionally, the findings are in line with Ongori and Migiro (2010) who posited that mobile phones, personal computers and printers are the mostly used ICT tools in SMEs to improve business competitiveness and operations.

Table 6. Benefits of ICT Adoption in SMEs

Accessibility to international markets	Strongly Agree	50	83.33
	Agree	05	8.33
	Neutral	05	8.33
	Disagree	00	00
	Strongly Disagree	00	00
Total	**5**	**60**	**100**
Enhance current market intelligence	Strongly Agree	60	100

information gathering	Agree	00	00
	Neutral	00	00
	Disagree	00	00
	Strongly Disagree	00	00
Total	**5**	**60**	**100**
Facilitation of quick flow of information within business from internal and external sources	Strongly Agree	60	100
	Agree	00	00
	Neutral	00	00
	Disagree	00	00
	Strongly Disagree	00	00
Total	**5**	**60**	**100**
Increased productivity in business processes	Strongly Agree	30	50
	Agree	30	50
	Neutral	00	00
	Disagree	00	00
	Strongly Disagree	00	00
Total	**5**	**60**	**100**
Reduced operation costs in running the business	Strongly Agree	30	50
	Agree	30	50
	Neutral	00	00
	Disagree	00	00
	Strongly Disagree	00	00
Total	**5**	**60**	**100**
Link to local and global supply chains and outsourcing opportunities	Strongly Agree	35	58.33
	Agree	20	33.33
	Neutral	05	8.333
	Disagree	00	00
	Strongly Disagree	00	00
Total	**5**	**60**	**100**

The table above depicted the findings accumulated from respondents' responses. Most of the participants consented that there were many benefits derived from the ICT adoption into their businesses selecting from the many options included in the questionnaire. Majority accepted the fact that accessibility to international markets (83.33%) is highly possible and can enhance current market intelligence information gathering (100%), facilitation of quick flow of information within business from internal and external sources (50%) and increased productivity in business processes.

Table 7. Barriers to ICT acceptance by these SMEs in the study area

Barriers	**Scale**	**Frequency**	**Percentage**
High cost of ICTs	Very High	60	100
	High	00	00
	Moderate	00	00
	Low	00	00
	Very Low	00	00
Total	**5**	**60**	**100**
High cost of Internet connection	Very High	55	91.67
	High	05	8.33
	Moderate	00	00
	Low	00	00
	Very Low	00	00
Total	**5**	**60**	**100**

Owner/managers' unawareness of the benefits of ICTs	Very High	55	91.67
	High	05	8.33
	Moderate	00	00
	Low	00	00
	Very Low	00	00
Total	**5**	**60**	**100**
Lack of SMEs' ICTs legal framework	Very High	20	33.33
	High	20	33.33
	Moderate	20	33.33
	Low	00	00
	Very Low	00	00
Total	**5**	**60**	**100**
Lack of financial resources to buy ICT tools	Very High	20	33.33
	High	20	33.33
	Moderate	20	33.33
	Low	00	00
	Very Low	00	00
Total	**5**	**60**	**100**
Frequent power failure/interruptions	Very High	55	91.67
	High	05	8.33
	Moderate	00	00
	Low	00	00
	Very Low	00	00
Total	**5**	**60**	**100**
Difficulty in employing qualified personnel	Very High	20	33.33
	High	20	33.33
	Moderate	20	33.33
	Low	00	00
	Very Low	00	00
Total	**5**	**60**	**100**

Table 8. Strategies to Decrease Barriers to ICTs Adoption

Strategies	**Scale**	**Frequency**	**Percentage**
Human capital development (e.g. training of owner/managers	Very Important	60	100
	Important	00	00
	Least Important	00	00
	Not Sure	00	00
	Not Important at all	00	00
Total	**5**	**60**	**100**
Reduce cost of Internet connection	Very Important	60	100
	Important	00	00
	Least Important	00	00
	Not Sure	00	00
	Not Important at all	00	00
Total	**5**	**60**	**100**
Improve Internet connectivity (speed)	Very Important	60	100
	Important	00	00
	Least Important	00	00
	Not Sure	00	00
	Not Important at all	00	00
Total	**5**	**60**	**100**

Use of alternate power sources	Very Important	60	100
	Important	00	00
	Least Important	00	00
	Not Sure	00	00
	Not Important at all	00	00
Total	**5**	**60**	**100**
Enabling ICT policy (regulatory framework)	Very Important	60	100
	Important	00	00
	Least Important	00	00
	Not Sure	00	00
	Not Important at all	00	00
Total	**5**	**60**	**100**

The majority of surveyed respondents indicated that human capital development (100%) was a very important ICT strategy. The respondents further indicated reducing cost of Internet connection (100%), improved Internet connectivity (100), and enabling ICT policy (100%). These results imply that ICT acceptance and use in SMEs is possible with the availability of physical infrastructure, legal and regulatory frameworks, sufficient research and development of proper ICT policy.

Provision of adequate resources including access to funds or credit by SMEs is important in supporting the implementation of ICT. The researcher found that skills and training, government policy, management support and security are concerns for ICT acceptance and subsequent implementation by SMEs. Additionally, the study results are consistent with the research findings of Ghobakhloo, Hong, Sabouri and Zulkifli (2012) who posited that high knowledge of IT among SME owners/managers would help implement new technologies.

Discussion, Implications, Recommendations

This chapter covers three sections. The first section presents a summary of results and points to the purpose of the study and the objectives of the study. The second section provides a discussion of the results, and in-depth discussion of conclusions in relation to literature of study. The third and final section provides the limitations, the implications of the research, proposes recommendations for further study and provides conclusion.

Summary of Results

Information communication technology (ICT) is a force in the economic growth equation of both developed and developing countries across the world. Additionally, ICT may help small and medium enterprises to promote their business strategy, performance, and growth. However, by not accepting and using ICT tools, these SMEs struggle to overcome constrains they face, and that prevent them from realizing potential growth opportunities. This study sought to answer research questions including 1) What factors influence SME owners/managers to accept? 2) What is the relationship between ICT acceptance and SMEs retail business growth in Sierra Leone?, and 3) What is the relationship between ICT usage and SMEs retail business growth in Sierra Leone?

The study drew literature from key prior researches about ICT adoption and usage in SMEs. The primary researches used as basis of this study include Ongori and Migiro (2010), Ladokun *et al.*, (2013). Therefore, based on this understanding, research was requisite on ICT acceptance and use by Sierra Leone SMEs as the country seeks to achieve economic growth similar to that envisaged in the policy document of Sierra Leone 2030. The principal purpose of this study was to investigate factors that influence acceptance and use of ICT by Sierra Leonean SMEs.

In order to achieve the objectives of this study, the researcher sought to answer research questions by obtaining information from respondents about ICT acceptance and its use in SMEs.

The researcher used a survey instrument to solicit information about factors that influence SME owners/managers to accept and use ICT. Additionally, the researcher obtained information on commonly used ICT tools, benefits, barriers, strategies, and roles of the government in supporting ICT acceptance and use in SMEs. The study applied the theory of reasoned action (TRA) as a framework to explore the factors responsible for ICT acceptance and use in SMEs. The study methodology used was quantitative research design. Sixty owners/managers of SMEs completed the survey instrument. The survey instrument was based on Ongori and Migiro (2011) study about understanding the determinants of ICT adoption and use in SMEs. The results obtained from primary data analysis implied that both internal factors (customer services, cost reduction, internal efficiency, management of information, sales increase, business control, business growth and developing new markets), and external factors (business relationships, demands from SMEs associations, competitors pressure and pressure from trade associations) influenced the acceptance and use of ICT by SMEs. Additionally, the findings revealed that there was a strong positive relationship between ICT acceptance and SME growth, and a moderate positive relationship between ICT usage and SME growth. The study further revealed primary barriers of ICT acceptance, the strategies to accept and use ICT and the role of the government in supporting ICT acceptance and use in SMEs.

Discussion of the Results, Conclusions in Relation to the Literature and the Field

Discussions of study results in this section follow a systematic evaluation of the researcher's work, providing insights into and interpretation of these results. The researcher presents a wider perspective of the study to the field of practice, to prior research, and to the interested communities. Therefore, the researcher provides discussions of the study results and conclusions based on perspective of variables contained in the research questions.

SME`s Demographics and Profile

The study considered a number of characteristics of SME owners/managers that influenced their ICT acceptance in business operations including gender, age, academic qualification, and years of experience in business, form of business, age of business and number of employees. The study findings revealed that men own more than two-thirds of thriving SMEs. These findings are plausible because men generally like to diversify their income sources to carter for family needs. The few thriving SMEs owned by women, are explainable by their involvement in household and other domestic responsibilities, therefore, they may be unable to dedicate their entire time squarely to run businesses. The level of education is relatively low. These results are consistent with research of Ongori and Migiro (2011) who found that majority of owners/managers of SMEs held BECE academic qualification. The low level of education held by the majority of SME owners/managers may contribute to low understanding of the need to accept and use ICT in business. Additionally, this explains the reason for not fully embracing ICT in SMEs. The study findings indicate that the majority of owners/managers of SMEs had reasonable business experience of 6-10 years and hence were able to see the need of accepting and using ICT.

Implications

Findings of this study are valuable as they contribute knowledge to the existing literature pertaining to acceptance and use of ICT in SMEs in developing countries. Stakeholders including the sponsors, government, and financial institutions might use the study findings to develop workable policy frameworks that support plausible and sustainable business enterprises. Potential entrepreneurs may gain useful knowledge for making informed decision about investing in ICT and formulating effective business strategies. The study findings are of significant value to SME owners/managers, and IT professionals who may use them to intensify efforts of deploying ICT in business organizations. The findings enlighten the workforce on the roles, and benefits derived when they accept ICT in their business. This study provides SME owners/managers with the knowledge about ICT, which is vital for accomplishing a number of goals. These goals include developing strategic sales based on market information, reaching global clients, facilitating competent and rapid operations, communicating with customers and suppliers, obtaining quotations for variety of

products, and providing satisfactory services to business stakeholders. The study findings are valuable as they may provide policy makers and development officials with technological information that is effective and essential for SMEs in their process of adopting ICT. Consequently, application of the TRA model supports understanding the environment of ICT acceptance among SMEs. The study findings are valuable to SMEs that use ICT tools, and hence provides them confidence backed by previous experience to use new technology; Employees of SMEs may gain motivation to determine their willingness to adopt and use new technology or to reject it. Executive intention to accept ICT depends on subjective norms and their attitude towards ICT, which defines the core idea of TRA (Alam *et al.*, 2012). Therefore, in order to improve the executive intention and belief, it is important for government and NGOs to work collectively and arrange training for executives to better their ICT understanding.

Recommendations for Further Study

This study recommends SME owners/managers to form and register with associations to enable them access funds from financial institutions for purchasing and implementing ICTs in their business. The government should improve infrastructural facilities such as reliable power (electricity) supply to enable the use of ICTs. This is one of the factors affecting ICT usage by SMEs in several parts in Sierra Leone. There is need for concerted efforts from the government and other stakeholders to create awareness and promote the use of available ICT applications that will see market accessibility. On the same note ICT intermediaries such as government ministries need to increase accessible market information for SMEs. The study recommends sponsors and government institutions to promote ICT literacy levels through training in schools and higher learning institutions. This may encourage and equip employees and SME owners to use ICT in enterprises. Additionally, develop programs that are user friendly and accessible by SMEs from different ICT platforms such as mobile phones. Future researchers may want to consider other ICT tools such as e-mails, e-commerce, text messaging and social media platforms that are most adopted by SMEs. They may dive deeper into top ranking internal and external factors and attempt to find out why they influence ICT acceptance in SMEs. This study proposes improvement by increasing sample size that will see a more detailed empirical analysis involving participants in other geographical areas. Future researchers may use more rigorous methodology to analyze the relationship between study variables.

Conclusion

The purpose of this study was to investigate factors that influence SME owners/managers to accept and use ICT in Sierra Leone. In order to achieve the study objectives, the researcher explored relationships between ICT acceptance and SME growth, and ICT usage and SME growth. The increasing rate of ICT infrastructure development and its subsequent effect on socio-economic activities is difficult to exaggerate. The integration of global economic activities resulting from advanced ICT and decrease in trade barriers provide vast opportunities for small businesses. Therefore accepting ICT enables businesses to compete globally, coupled with enhanced efficiency and closer customer and supplier relationships. Further, ICT is one of the forces in the economic growth equation and therefore a reason for SMEs to accept it in order to promote their business strategy, performance, and growth. The study literature provides insights from prior research about ICT adoption in SMEs. The study addressed views of different researchers concerning ICT adoption by SMEs focusing on the developing nations such as Ghana, Malaysia, Nigeria and Sierra Leone. Based on TRA theory, the researcher explained the factors and barriers affecting owners/managers in their process of ICT acceptance and use. The study identified a ‘gap’ in the insights provided in the literature and used similar quantitative methods: correlation study of previous researches, to conduct research. As such, the study applied stratified random sampling to select sample of 60 SMEs. Results of this study revealed two categories of factors that affect SME acceptance. On one hand the study revealed the main internal factors that influence ICT acceptance including, to improve customer services cost reduction, improve internal efficiency, management of information flow, increase in sales facilitate business control, facilitate business growth, and to develop new markets.

On the other hand, the study found key external factors consisting of competitors' pressure, improve business relationships, demands from SMEs associations, and pressure from trade associations. The study examined and revealed a strong positive relationship between ICT acceptance and SME growth, and a moderate positive relationship between ICT usage and SME growth. The study found that high cost of ICTs, frequent power failure/interruptions had very high effect on ICT acceptance in SMEs. High cost of Internet connection, lack of financial resources, lack of ICT related support, lack of ICT security, and slow Internet connection had high effect. Lack of ICT information, high cost of training employees, lack of defined strategy to encourage ICT acceptance, difficulty in employing qualified personnel, cost of ICT maintenance, lack of SME's legal ICT framework, and lack of understanding of ICTs by staff presented moderate effect.

The study found human capital development and collaborative use of ICT tools as very important ICT strategies. Reducing the cost of Internet connection, improving Internet connectivity, enabling ICT policy, addressing security issues related to ICT use, and increasing access to credit were found to be important ICT strategies. Liberalization of telecommunication sector was the least important strategy. Finding of this study are valuable to SME owners/managers and policy makers regarding ICT usage and SME growth in Sierra Leone. The results suggest investment in ICT by SME owners/managers. These SMEs stand better competitive position when they use ICT enabling them to reach a wide market for their products and services. The study recommends that policy makers responsible for SME development should use the results to offer intensive education about benefits of ICT and organize programs for training SMEs on ICT. Finally, the government should provide enabling environments that support implementation of ICT in SMEs.

Survey Instrument/Questionnaire

From Understanding the drivers of information and communication technologies (ICTs) that serves as factors influencing it`s acceptance and use in small and medium scale enterprises (SMEs).

Demographic Profile

1. Business ownership

Select YES, if you are the owner of the business or NO to decline
YES/NO

If you select NO, then do not complete the survey. The researcher ends collecting data.

2. Gender

Male/Female

3. Age group

18-25years / 26-35years / 36-45years / 46-55years / Over 55year's

4. What is your highest academic qualification?

Certificate / Diploma / Degree / Postgraduate degree

5. Years of experience in business

1-5years / 6-10years / 11-15years / 16-20years / Over 20year's

Business Profile

6. Form of business- ownership

Sole proprietor / Partnership / Private limited Company

7. Age of the business:

1-5 / 6-10 / 11-15 / 16-20 / Over 20

Drivers	5	4	3	2	1
Customer demands	5	4	3	2	1
Cost reduction	5	4	3	2	1
Improve customer services	5	4	3	2	1
Increase sales	5	4	3	2	1
Improve internal efficiency	5	4	3	2	1
Facilitate the control of business	5	4	3	2	1
Improve relations with other business partners	5	4	3	2	1
Availability of skilled manpower	5	4	3	2	1
Facilitate growth of the business	5	4	3	2	1
Managing Large volume of information	5	4	3	2	1

8. Driving forces of ICTs adoption by SMEs

Which of these factors drive your decision to adopt ICTs in your business? Rate them using a scale of (5= strongly agree, 4= Agree, 3=Neutral, 2=Disagree, and1=strongly disagree).

Others (Please specify)----------

9. ICT tools used in business

Please indicate below by ticking the ICT(s) tool (s) used in your business. Rate them using a 5 point scale of (5=Most used, 4=Used, 3=sometimes used, 2=least used, 1=not used at all).

ICT tools and usage	5	4	3	2	1
Computer applications	5	4	3	2	1
Laptops	5	4	3	2	1
Scanner	5	4	3	2	1
Printer	5	4	3	2	1
Photocopier	5	4	3	2	1
Mobile phones	5	4	3	2	1
Internet connection	5	4	3	2	1
Website	5	4	3	2	1
Enterprise Software	5	4	3	2	1

Others (please specify----------

10. Benefits of ICTs adoption in SMEs

Adoption of ICT tools will offer the business the following benefits. Rate the benefits using a 5-point scale of (5=strongly agree, 4=agree, 3=neutral, 2=disagree, 1= strongly disagree).

Benefits	5	4	3	2	1
Accessibility to international markets	5	4	3	2	1
Enhance current market intelligence information gathering	5	4	3	2	1
Facilitation of quick flow of information within business from internal and external sources	5	4	3	2	1
Increased productivity in business processes	5	4	3	2	1
Reduced operation costs in running the business	5	4	3	2	1
Link to local and global supply chains and outsourcing opportunities	5	4	3	2	1
Encouragement of inter-intra business transactions	5	4	3	2	1
Improvement of information and knowledge management	5	4	3	2	1

Sharing and learning of new business practices	5	4	3	2	1
Compliance with government requirements such as business registration and filling tax returns.	5	4	3	2	1
Increased efficiency	5	4	3	2	1
Facilitation of payments to third parties	5	4	3	2	1
Enhancing the company image (Webpage)	5	4	3	2	1
Reduced cost of communication	5	4	3	2	1
Achievement of more customer satisfaction	5	4	3	2	1
Monitoring the performance of competitors	5	4	3	2	1
Reduction of the overall workload of employees	5	4	3	2	1
Monitoring of quality control systems	5	4	3	2	1
Decreases in sales staff travel time	5	4	3	2	1
Flexibility/adaptability of organizational activities	5	4	3	2	1
Improved labor/employee relations	5	4	3	2	1
Gain competitive advantage	5	4	3	2	1
Increase returns on investments	5	4	3	2	1

Other (Please specify)----------

11. Barriers to ICT(s) adoption in your business

In the table below, indicate the extent to which the following factors serve as barriers to adoption of ICTs usage in your business. Rate them using a 5 point scale of (5=very high, 4=high, 3=moderate, 2=low, 1= very low)

Barriers	5	4	3	2	1
High cost of ICTs	5	4	3	2	1
High cost of Internet connection	5	4	3	2	1
Slow Internet connection	5	4	3	2	1
Lack of ICTs-related support	5	4	3	2	1
Staff not understanding the use of ICTs	5	4	3	2	1
Lack of security in the use of ICTs	5	4	3	2	1
Owner/managers' unawareness of the benefits of ICTs	5	4	3	2	1
Lack of SMEs' ICTs legal framework	5	4	3	2	1
Cost of ICT maintenance	5	4	3	2	1
Lack of financial resources to buy ICT tools	5	4	3	2	1
Frequent power failure/interruptions	5	4	3	2	1
Difficulty in employing qualified personnel	5	4	3	2	1
Lack of defined strategy to encourage ICTs adoption	5	4	3	2	1
ICTs do not satisfy the needs of the business	5	4	3	2	1
Not sure what ICT tool to adopt	5	4	3	2	1
Resistance to change (old way of working)	5	4	3	2	1
High cost of training employees	5	4	3	2	1
Lack of information on the benefits of adopting ICT tools in business	5	4	3	2	1

Other (please specify)----------

12. Strategies to resolve barriers to ICTs adoption and assimilation in SMEs

Which of the following strategies would you implement to address barriers to ICTs adoption in your business? Please rate them in order of importance (5=very important, 4=Important, 3= least important, 2= Not sure and 1=not important at all).

Strategies to decrease barriers to ICTs adoption	5	4	3	2	1
Human capital development (e.g. training of owner/managers	5	4	3	2	1
Reduce cost of Internet connection	5	4	3	2	1
Addressing security issues on the use of ICT tools	5	4	3	2	1
Improve Internet connectivity(speed)	5	4	3	2	1
Increase access to credit (e.g. from government, banks)	5	4	3	2	1
Use of alternate power sources	5	4	3	2	1
Enabling ICT policy (regulatory framework)	5	4	3	2	1
Liberalization of telecommunication sector	5	4	3	2	1
Collaborative use of ICT s tools	5	4	3	2	1

Other (please specify)----------

THANK YOU FOR COMPLETING THE SURVEY

Conflicts of interest

There is no conflict of interest of any kind.

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