A FRAMEWORK FOR THE ADOPTION OF ELECTRONIC CUSTOMER RELATIONSHIP MANAGEMENT INFORMATION SYSTEMS IN UGANDA

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ABSTRACT

This study proposes a framework for the adoption of Electronic Customer Relationship Management (e-CRM) information systems in Uganda. Both qualitative and quantitative research methods were used. Primary data were gathered from Small and Medium Enterprises located in 30 districts of Uganda. A self-administered questionnaire was the main data collection tool. Descriptive statistics were used to analyze data and refine the requirements for adoption of e-CRM information systems. The findings indicate that for successful adoption of e-CRM information systems, there should be user sensitization, training and infrastructure. There is also need for top management support and an e-CRM policy to guide usage. The most important features of e-CRM information systems were identified as the ability to ensure customer privacy, presence of a Frequently Asked Questions tool, and high speed. The proposed framework was developed based on Thong (1999) Technology Organizational Environmental Management (TOEM), with refined requirements from primary data. The developed framework was validated using a case study. Validation results indicate that the framework is applicable and can help improve the adoption of e-CRM information systems in Uganda.

Key words: e-CRM framework, e-CRM adoption, e-CRM in Uganda, TOEM, SME

1. INTRODUCTION

Literature has indicated that Electronic Customer Relationship Management (e-CRM) can play a key role in Small and Medium Enterprises (SMEs) as a tool to effectively create and maintain relationships with their customers. E-CRM is being adopted by companies because it increases customer loyalty and customer retention by improving customer satisfaction. This results into long-term profits because organizations using e-CRM incur less costs of recruiting new customers, while experience increases in customer retention. Indeed research into the SMEs activities in developed nations reveals increased adoption and use of e-CRM (Harrigan et. al. 2009). The fact that SMEs operating in Uganda do not have in place e-CRM systems has led to high costs of recruiting new customers, low customer retention, and satisfaction (Amit and Zott, 2001; Cooper et al., 2005).

E-CRM adoption has tended to take varying forms with a multiplicity of features offering different services. Some of these include; ability to complain, email capability, information for first-time users, mailing lists, frequently asked questions, members' benefits, site customization, chat rooms, bulletin boards and site tours among others (Feinberg and Kadam, 2002). In developed countries, the most applicable features of e-CRM have been identified and used by both large and small enterprises to encourage e-CRM adoption as detailed by Feinberg and Kadam (2002). However, since most SMEs in Uganda do not have web presence, the e-CRM features employed are not well known. This may explain why e-CRM adoption rate among SMEs in Uganda has remained low (Achuama and Usoro, 2010; Alam and Ahsan, 2007). Perhaps this scenario can be attributed to lack of knowledge of the

existence and benefits provided by e-CRM features and/or failure to use these features. Moreover, it cannot be generalised nor guaranteed that all common e-CRM features are relevant to SMEs irrespective of differences in technological advancements in the countries where they operate.

Although limited research has been conducted in the area of e-CRM adoption, there are general theories and/or frameworks that have tried to explain technology adoption. One of these is the TOEM (Thong, 1999), which posits that technology adoption is influenced by technological, organizational, environmental and individual factors. Given that these factors are so prevalent in Ugandan SMEs, this study sought to design an adoption framework for e-CRM by SMEs in Uganda based on TOEM. To achieve this, the research focused on exploring e-CRM features used and the challenges that impeded their adoption. A set of requirements for designing the framework were generated. These requirements were validated by reviewing the existing adoption models, frameworks and theories.

1.1 Research Objectives

The specific objectives of this study were:

1. To determine the requirements for better e-CRM adoption by SMEs in Uganda;
2. To design an adoption framework for e-CRM by SMEs based on identified requirements and;
3. To validate the framework for e-CRM adoption in Ugandan SMEs.

1.2 Research Questions

The above objectives were achieved by answering the following research questions:

1. What are the requirements for better e-CRM adoption by SMEs in Uganda?
2. How can a framework for the adoption of e-CRM by SMEs in Uganda be designed?
3. Is the framework for e-CRM adoption in Ugandan SMEs applicable?

1.3 Definition of Key Terms

According to Kotelnikov and Kim (2010), an SME is a firm that employs a maximum of 250 people. Ernst and Young (2010) indicates that much as the definition of small enterprises is known, the definition of medium enterprises in Uganda is not well-known. This is because the upper boundary is not set as it depends mainly on the industry. However, the Bank of Uganda defines Small and Medium Enterprises as those employing 5 to 50 people "with the value of assets, excluding land, building and working capital of less than Ug.shs 50 million (US$ 30,000), and the annual income turnover of between Ugshs.10-50 million (US$6,000 - 30,000)" (Kasekende and Opondo, 2013). In this study, Bank of Uganda definition was adopted but without consideration for asset value as this was difficult to ascertain. Thus the SMEs used in the study included those that employed between 5 and 50 people.

On the other hand, Electronic Customer Relationship Management, also abbreviated as e-CRM is the process of managing customer relations using electronic means via the Internet. e-CRM is used as part of a strategic tool to help an organization to understand, anticipate and manage the needs of its customers. According to Coltman (2007), enterprises can maximize the value they offer their customers by determining where e-CRM augments people and business processes within the enterprise. Harrigan et al. (2009) argues that e-CRM can be used to integrate an organization's communication channels.

2. LITERATURE REVIEW

2.1 The Case for Technology Organizational Environmental Management Framework

Having reviewed a number of technology adoption models, theories and frameworks e.g. Technology Acceptance Model (Davis et al., 1989), Diffusion of Innovation (Rogers, 1995), Theory of Planned behaviour (Fishbein and Ajzen, 1975), Theory of Reasoned Action (Fishbein and Ajzen 1975), it emerged that Technology Organizational Environmental Management (TOEM) framework (Thong, 1999) was the most appropriate theoretical framework to guide this study. TOEM tries to explain adoption of technology by looking at various factors that may encourage or impede adoption of technology such as technological innovation factors (e.g. perceived benefits, complexity and compatibility, including business strategy), organizational factors (e.g., firm size, technological readiness, IT support, management support, financial readiness), environmental factors (e.g., pressure from clients, competitors and trading partners) and individual factors (e.g., attitude, subjective norm, self-efficacy, innovativeness and technological experience (Thong, 1999).

Thong observed that technological factors that influenced adoption include; perceived ease of use, perceived benefits, and alignment of technology to the overall business strategy. He further observed that management/individual factors that influence technological adoption are people's attitudes, innovativeness and creativity of the workforce. Thong also argued that organizational factors influencing technological adoption were the organization's readiness to partake technological projects, financial capacity and management support of technological projects being introduced. On the environment, Thong argued that pressure from external partners, clients, competitors also influenced adoption (Thong, 1999).

Although Thong's (1999) ideas are brilliant, Chong and Ooi (2008) faulted his framework for not considering inter-organizational factors that affected technological adoption. According to Chong and Ooi (2008) technological adoption is not only influenced by a single organization's factors and that many players, including business partners, clients among others play a significant role in the adoption of new technologies. Chong and Ooi (2008) further suggested communication, collaboration and information sharing as inter-organizational factors that influence technological adoption. However, a critical examination of Chong and Ooi (2008) factors shows that they are not actually factors but rather elements in the process of refining and generating inter-organizational factors.

Although TOEM did not sufficiently cater for Inter Organizational Relationships (IOR), which is an important factor in the adoption of inter-organizational systems like e-CRM, it remained a good ground on which the e-CRM framework could be developed. According to Shang et al. (2005); Chong and Ooi (2008); Chong et al. (2009) collaboration, communication, information sharing, and partners' power constructs of IOR have been found to significantly affect e-CRM adoption in Uganda . For this reason, IOR was introduced in TOEM as an additional requirement for e-CRM. In this study, we examined both Thong (1999) and Chong and Ooi (2008) adoption frameworks and identified the gap. The main gap identified was the lack of real inter-organizational factors that influenced technological adoption. This was duly addressed in the e-CRM framework.

2.2 Description of the Framework

This framework is based on Thong (1999) Technological Organizational Environment and Management (Individual) theoretical technology adoption framework, in which Thong identified four major categories of the factors that influence technological adoption as 1) Technological, 2) Organizational 3) Management and 4) Environmental.

The new e-CRM adoption framework assumes existence of two organizations (organization A and B) from where the adoption factors emerge. Both organizations have the probability of producing the technological, organizational, individual and environmental factors. However, it is possible for a given organization to lack some of these factors. For example Organization A may not have strong organizational factors such as the financial muscle to implement technological projects. However, the existence of such factors in organization B (Partners Power) helps to close the gap. Through the process of communication, information sharing and collaboration (Chong and Ooi, 2008), both organizations A and B are able to produce a synergy of factors under all the four main categories (Thong, 1999). Eventually adoption of e-CRM takes place. Figure 1 shows the new e-CRM adoption framework:

2.3 Application of the Framework

This framework applies at four different levels 1) Organizational 2) the inter-organizational 3) factor refinement and 4) adoption. The inter-organizational level is where 2 or more organizations work together (Chong and Ooi, 2008) and take advantage of their combined attributes (synergy) outlined under technological, organizational, individual and environmental levels respectively. As already explained, it may not be possible for each one of the participating organization to have all the listed attributes as an individual but rather collectively. Therefore through a process of attribute refinement, the strength of each participating organization can be derived for purposes of enlisting all the relevant factors/qualities for successful e-CRM adoption. This is achieved through a process i.e. inter-organizational communication, collaboration and information sharing (Chong and Ooi, 2008). The attributes generated from the refining process constitute AandB factors (synergy) that facilitate e-CRM adoption by the participating companies which would otherwise not be the case if they operated as individuals.

2.4 Key Factors for Consideration during Implementation

According to Davis et al. (1989), the key factors selected should be those that enhance perceived ease of use and perceived usefulness. For example training of users is said to be to improve on users' knowledge of the new technology thereby rendering it easy to use. On the other hand, Rogers and Shoemaker (1971) argue that persuasion activities such as sensitization of users are key in influencing adoption.

According to Schimmel et al. (2010), websites are key information sharing and collaborative tools. They argue that while implementing e-CRM, organizations should develop and deploy website and email as a foundation for e-CRM.

In addition, Sivakumar (2002) argue that security in e-CRM systems helps gain clients confidence, thereby positively influencing them to adopt. It is therefore important that organizations implementing e-CRM pay special attention to security and ensure that customers' information is safe and can only be accessed by authorized users. Ahmadi and Salami (2010) argue that in addition to security, organizations need adequate resources for successful e-CRM adoption. In this framework, the resources can be amalgamated from a number of participating organizations hence enhanced resource availability. For example computers and software are needed for the actual usage of e-CRM by both staff and clients. These can be acquired given a strong financial position of implementing organizations. Further to this Ali and Alshawi (2003) argue that without appropriate policies and laws, implementation of new technologies may become a big challenge. In addition, they advocate for an enabling environment in form of incentives that encourage specific technology adoption. The World Bank carried out a study and observed that where there was government

subsidies, ICT projects tended to succeed, while in situations where government subsidies were lacking there was a persistent failure to adopt (World Bank, 2004). Thus there is need for favorable government policies; guidelines and regulations to drive the e-CRM adoption among SMEs in Uganda.

3. RESEARCH DESIGN

Investigating any research problem requires studying and documenting various steps that are generally adopted by the researcher along with the logic behind them (Kothari, 2009). It involves building a road-map that gives direction and identifies appropriate tools/techniques to be used in the research (Al Badi et al., 2010). In this study, a deductive research strategy was adopted since the problems faced by SMEs adapting to e-CRM information systems were largely unknown. Thus the study sought to examine these problems, review the existing frameworks with the aim of identifying the gap(s) and thereafter confirm and/or come up with a modified framework that was relevant to SMEs in Uganda.

To achieve the above, both quantitative and qualitative research methods were used for data collection and analysis. The choice of a mixed research approach was to enable a holistic examination of TOEM and extend its boundaries by creating a new and more applicable e-CRM framework in the prevailing e-CRM adoption conditions. This approach is praised by scholars e.g. (Peffers et al., 2007) for addressing important and unresolved problems in a unique, innovative and most effective way.

The research procedure involved identification and description of the problem; demonstration that no adequate solution existed; design of the research instrument; data collection and analysis; development and presentation of the solution in the form of a framework; evaluation of the framework; articulation of contribution to the knowledge-base and to practice; explanation of implications to management and practice.

3.1 Sample Design

A total of 450 respondents were selected from 30 districts of Uganda to participate in the study. A maximum of 5 SMEs were selected from each participating district purposively to ensure that all regions participated and also to ensure that different sizes of SMEs were fairly represented. From each SME, 3 respondents including the owner (Managing Director) and 2 employees were selected purposively to fill-in the questionnaire. Purposive sampling method was chosen because the list of all SMEs operating in the country was not available. This is attributed to the fact that most SMEs in Uganda operate informally without proper registration records. In addition, purposive sampling enabled the researchers to target only those respondents who were deemed fit and valuable to the study in a bid to avoid time and other resources wastage.

3.2 Data Collection and Analysis

Data were collected using a self-administered questionnaire and an interview guide. Questionnaire data were coded and analyzed quantitatively using descriptive statistics such as means, frequencies and percentages. The researchers used descriptive statistics because they are easy to understand even by readers with little knowledge of statistics. SPSS software was the main analysis tool used for questionnaire data.

On the other hand, interview data was collected using an interview guide. Interviews were recorded and later transcribed into text. Content analysis, which is a form of qualitative data analysis methods, was used to analyze interview data.

3.3 Validation of the Framework

The researchers used survey to validate the developed framework. A sample of 30 employees from participating SMEs was randomly selected to participate in validation exercise. The respondents were given the framework to interact with. Thereafter, they were asked to give responses by filling in a self-administered questionnaire and answering questions on the interview guide. Validation results were analyzed both quantitatively and qualitatively.

To test for the applicability of the framework, case study method was used. Digitex Business Solutions Ltd, a local software development company was selected to use the proposed framework in implementing their e-CRM system. A short training was conducted with 12 employees who were responsible for the project. This was done in order to familiarize them with the constructs of the proposed framework and enable them use it effectively. After the training, the researchers distanced themselves from the actual implementation exercise which took about 6 weeks, although they kept a close eye on the activities being conducted. This was done deliberately to avoid bias and also to ensure the proposed framework can be used independent of the authors. After the implementation exercise, the researchers meet the 12 employees with a checklist to examine how applicable and useful the framework was to the organization during the implementation. Some interviews were also conducted with the Project Manager. The ideas collected were later incorporated in the framework to reflect what actually took place. Therefore the framework presented herein is a refined product after validation exercise. This method of validation had been used by Makoya and Amulen (2012) and yielded good results.

4. FINDINGS FROM THE STUDY

4.1 Sample Attributes

Percentages and frequencies were used to determine the attributes of respondents such as age, knowledge of e-CRM, and job titles. This was done in order to understand the kind of people who participated in the study. Table 1 shows sample attributes:

Table 1: Age, knowledge of e-CRM and job title

Age			Knowledge of e-CRM			Job title		
Age bracket	**F**	**%**	**Knowledge**	**F**	**%**	**Job title**	**F**	**%**
18-25 years old	68	26.5	Not knowledgeable	115	44.7	IS manager & IT technician	43	16.7
26-30 years old	102	39.7	Somewhat knowledgeable	75	29.2	Administrator	43	16.7
31-40 years old	60	23.3	Neutral	32	12.5	Marketers and CR Officers	117	45.5
41-50 years old	15	5.8	Knowledgeable	23	8.9	Public Relations Officer	40	15.6
51 years and above	12	4.7	Very knowledgeable	12	4.7	CEO and Accountants	14	5.50
Total	**257**	**100.0**	**Total**	**257**	**100.0**	**Total**	**257**	**100.0**

4.2 Organization's e-CRM Features

Descriptive statistics were used to determine the e-CRM features that were present in the organizations' e-CRM information system. The data were analyzed using means on a 5 point scale where means close to 5 represented strong agreement, while the means close to 1 represented strong disagreement as seen in Table 2:

Table 2: Organization's e-CRM Features

e-CRM feature	Min	Max	Mean	SDV
Our e-CRM system allows customers to complain about our services	1	5	2.07	.021
Our e-CRM system ensures customer privacy	1	5	4.44	.055
Our e-CRM system allows e-mail communication	1	5	4.41	.010
Our e-CRM system has problem solving mechanisms	1	5	2.19	.812
Our e-CRM system allows online purchasing	1	5	2.32	.004
Our e-CRM system allows membership registration	1	5	3.16	.031
Our e-CRM system has a mailing list	1	5	4.41	.011
Our e-CRM system allows product customization	1	5	2.22	.008
Our e-CRM system has a tool for Frequently Asked Questions (FAQ)	1	5	3.81	.005
Our e-CRM system allows order tracking	1	5	2.51	.092
Our e-CRM system gives member benefits	1	5	3.19	.006
Our e-CRM system allows quick order	1	5	3.28	.034
Our e-CRM system has a find stores tool	1	5	2.16	.044
Our e-CRM system offers gift certificates	1	5	2.40	004
Our e-CRM system has a request catalogue facility	1	5	2.16	.002
Our e-CRM system has a chat facility	1	5	2.31	.041
Our e-CRM system has a bulletin board	1	5	3.25	.032
Our e-CRM system has VoIP	1	5	2.29	.022

Results in Table 2 indicate that respondents strongly agreed that their e-CRM system ensured customer privacy (Mean=4.44), had a mailing list (Mean=4.41) and allows e-mail communication (Mean=4.41). The respondents also agreed that their e-CRM system had a tool for Frequently Asked Questions (FAQ) (Mean=3.81), allowed quick order (3.28) and had a bulletin board (Mean=3.25). The respondents were neutral on whether their e-CRM system gave member benefits (Mean=3.19), allowed membership registration (Mean=3.16).

However, the respondents disagreed on whether the e-CRM system allowed customers to complain about their services (Mean=2.07), had a problem solving mechanisms (Mean=2.19), allowed online purchasing (Mean=2.32), allowed product customization (Mean=2.22), allowed order tracking (Mean=2.51). The respondents further disagreed that their e-CRM system had a find stores tool (Mean=2.16), offered gift certificates (Mean=2.40), had a request catalogue facility (Mean=2.16), had social media tools like face book, twitter and blogs (Mean=2.31) and that their e-CRM systems had VoIP (Mean=2.29).

Given a standard deviation of less than 0.5 (SDV<0.5) for most items in the analysis, except one (Our e-CRM system has problem solving mechanisms SDV=.812), the respondents were almost in agreement on all items analyzed. The deviation is insignificant. Therefore these findings can be generalized with the exception of the only item that had a high standard deviation.

4.3 Problems Faced by e-CRM Users

Similarly, descriptive means were also used to examine the problems faced by e-CRM users and implementing organizations as seen in Table 3.

Table 3: Problems Faced

Problem	Min	Max	Mean	SDV
Lack of knowledge and skills	2	5	4.57	.001
Poor organizational culture	1	5	4.46	.042
Poor change management strategies	3	5	4.53	.008
Poor infrastructure e.g. e-CRM software and hardware	1	5	4.44	.001
Lack of e-CRM policy	1	5	4.58	.014
Lack of a website	2	5	4.42	.029
Lack of awareness	2	5	4.46	.006

The results on e-CRM problems faced as seen in Table 3 show that lack of knowledge and skills (Mean=4.57), poor organizational culture (Mean=4.46), poor change management strategies (Mean=4.53), poor infrastructure e.g. e-CRM software and hardware (Mean=4.44), lack of e-CRM policy (Mean=4.58), lack of a website (Mean=4.42), lack of awareness (Mean=4.46) all contributed to the failure to adopt e-CRM with means>4.4 for all factors.

The responses given in table 3 above can be generalized since they all have a low standard deviation. This means that respondents seemed to agree in their responses on all items analyzed under problems faced by users in adopting e-CRM.

4.4 Requirements for e-CRM Adoption

In order to identify the requirements for e-CRM adoption in Uganda, data were and analyzed using means as seen in Table 4:

Table 4: Requirements for e-CRM adoption

Requirements	Min	Max	Mean	SDV
Create awareness	1	5	4.58	.011
ICT skills development	2	5	4.61	.002
Infrastructural development	1	5	4.72	.002
e-CRM Policy	1	5	4.42	.087
Website	1	5	4.44	.025
Enhance relative advantage	2	5	4.46	.088
Harmonize costs	1	5	4.42	.031
e-CRM laws	1	5	4.48	.061
Information security	1	5	4.66	.004
Management support	1	5	4.46	.001

The requirements for adoption of e-CRM were given in table 4 as the need to create awareness (Mean=4.58), promote ICT skills development (Mean=4.61), infrastructural development (Mean=4.72), e-CRM policy (Mean=4.42), deployment of websites (Mean=4.44), enhancement of relative advantage (Mean=4.46), harmonization of costs (Mean=4.42), enactment of e-CRM laws (Mean=4.48), improvement of information security (Mean=4.66) and increased management support (Mean=4.46). All of these requirements scored means>4.4, meaning that respondents strongly agreed.

The responses given in table 4 can also be generalized since they all have a low standard deviation. This means that respondents seemed to agree in their responses on all requirements analyzed.

5. DISCUSSION OF FINDINGS

5.1 E-CRM Features Present in the System

The most prevalent e-CRM features among SMEs surveyed were given as customer privacy, mailing lists, e-mail communication, Frequently Asked Questions. These findings indicate that most of the SMEs use e-mails as a mode of communication with their customers. Given the limited resources associated with SMEs including technical capacity and finance, majority of the SMEs find it prudent to use e-mail, mailing lists and bulletin boards. SMEs are reluctant to adopt complex, costly and time consuming features like online purchasing, product customization, order tracking, catalogue facility and VoIP. These findings are all in line with Harrigan et al. (2009); Feinberg and Kadam (2002) who assert that e-CRM features can be used as tools to increase competitiveness among SMEs.

On the other hand, social media like face book, twitter and blogs did not score highly. Chess Media Group and Mitch Lieberman (2010) highlighted the important role that social media is now playing in extending the role of customer relationship management hence the rise of Social Customer Relationship Management (SCRM). Businesses that have adopted

SCRM are able to provide better services and products because social media makes it possible for businesses to engage customers in building relationships that can last longer.

5.2 e-CRM Adoption Challenges in Uganda

The challenges hindering adoption of e-CRM information systems in Uganda such as limited skills, resistance to change by both staff and management, had been suggested by literature e.g. see Ritchie and Brindley (2005). These are all in agreement with findings from primary data.

5.3 Requirements for Better e-CRM Adoption in Uganda

Requirements for better e-CRM adoption in Uganda were suggested as creation of awareness, training to improve ICT skills, infrastructural development, e-CRM Policy and top management support, enhancement of relative advantage, reduced costs, e-CRM laws, information security and organizational websites. Few of these had been suggested by literature. For example, Harrigan et al. (2009), Chong and Ooi (2008) and (Thong, 1999) had hinted on the need to deploy websites, while Rogers and Shoemaker (1971) and Davis et al. (1989) had suggested that training and sensitization were important requirements.

6. DEVELOPMENT OF THE FRAMEWORK

This section covers framework development. The first part examines the variables used in the new framework, while the last part shows how the framework can be applied. Some important theoretical literature has been used to support the applicability of the framework.

6.1 Framework Variables

There are both adopted and derived variables used in this framework. Adopted variables are generated from frameworks/theories and/or models developed by other scholars, while derived variables were generated from primary data. Table 5 shows the adopted variables, while Table 6 shows derived variables:

Table 5: Ideas adopted from literature

FRAMEWORK	Variable/ideas/constructs	Author(s)
Technology Acceptance Model. (TAM)	— strong behavioral element — perceived usefulness — perceived ease of use — intention to adopt	Davis (1989)
Diffusion of Innovation (DOI)	— stages of adopting innovation	Rogers and Shoemaker (1971), Rogers (1995)
Theory of Planned Behavior (TPB)	— behavioral control aspect — involvement of everybody — Organizations' support for adoption.	Fishbein and Ajzen, (1975)
Theory of Reasoned Action (TRA)	Individual social factors; — Attitude — beliefs that determine adoption	Ajzen (1985)
Technology	Factors that affect the adoption of	Tornatzky and Klein,

Organizational Environmental Management (TOEM)	innovation; — technological, — economical, — environmental and — management	(1982); Tornatzky and Fleischer (1990); Thong (1999)
Social Customer Relationship (SCRM)	Social Customer Relationship (SCRM) — Face book — Twitter — Blogs	Chess Media Group and Mitch Lieberman (2010)

The theories and models in Table 5 were used to theoretically ground the developed framework. This was done especially to link the proposed framework to previous works e-CRM and technology adoption. It is important to note that the proposed framework is not an invention but rather an extension of existing work with modifications to cover the gap of e-CRM adoption in Ugandan SMEs. For example, constructs of the Technology Acceptance Model (Davis, 1989) and Diffusion of Innovation (Rogers and Shoemaker, 1971; Rogers, 1995) in various adoption stages make a significant contribution in successful adoption of new technologies. For the case of e-CRM, strong behavioral element, perceived usefulness, perceived ease of use, intention to adopt are key factors influencing adoption. Therefore, the SMEs implementing e-CRM should ensure that they carry out activities that increase perceived usefulness, perceived ease of use, for there to be successful adoption of e-CRM in their organizations.

Further, the Theory of Planned Behavior (Fishbein and Ajzen, 1975) and Theory of Reasoned Action (Ajzen, (1985) posit that for there to be successful adoption, user behavior should be controlled and responsible person should be involved in the implementation process, there is need for management support in addition to addressing individual user social factors such as attitude and beliefs that influence adoption. The technological, economic, environmental and management factors that affect adoption suggested by (Tornatzky and Klein, 1982) should also be considered for successful adoption of e-CRM systems by SMEs in Uganda.

Finally, features of e-CRM such as incorporation of Facebook, Twitter, Blogs among others as argued by Chess Media Group and Mitch Lieberman (2010) can help improve adoption. This is because today, many customers are active users of social media sites and spend significant time using those tools. Incorporation therefore would make it easy for such customers and other users to access and use the e-CRM system.

Table 6: Variables Derived from Primary Data

Variable	Description	Source
Create awareness	Sensitize staff and customers so that they embrace changes in technology	Table 4 (Mean=4.58)
ICT skills development	Train staff in order to improve their ICT skills	Table 4 (Mean=4.61)
Infrastructural development	Acquisition of computers and software for implementing e-CRM	Table 4 (Mean=4.72)
e-CRM Policy	Management should design a policy to guide e-CRM usage in this organization.	Table 4 (Mean=4.42)
Website	Organizations should develop and deploy websites	Table 4 (Mean=4.44)
Enhance relative advantage	Clients and staff should be told the benefits of using e-CRM	Table 4 (Mean=4.46)
Harmonize costs	The cost of e-CRM technology should be reduced	Table 4 (Mean=4.42)
e-CRM laws	Governments should enact e-CRM/e-business laws	Table 4 (Mean=4.48)
Information security	There is need for information security to improve clients' confidence in e-CRM	Table 4 (Mean=4.66)
Management support	There is need for top management support for e-CRM	Table 4 (Mean=4.46)

SMEs implementing e-CRM should create awareness to users through activities such as sensitization so that they embrace the new technology and use it. There is also need to improve ICT skills through training. This enables staff to use the e-CRM system effectively and reduces the rate of rejection. Davis (1989) argues that once the users perceive the new technology as being not easy use, they tend to reject such technology. However, users are more willing to adopt a technology if they perceive it to be easy to use. Sensitization programmes should also be aimed at improving relative advantage such that the users know the benefits of the new technology hence adoption. This is because most users no little about the advantages of e-CRM. Therefore their actions may be out of lack of knowledge and/or ignorance.

Further, the SMEs implementing e-CRM should put in place relevant infrastructure such as computer hardware and software for implementing e-CRM. Establishment of a company website was also found to be very important in e-CRM adoption.

In addition to the above, the government should set up relevant policies to govern the use of ICTs and the Internet in business. Establishment of an e-CRM policy would foster its adoption since most SMEs do not want to use e-CRM on the basis of lack of relevant policies and laws governing its usage. Issues of information security, high costs and top management

support should also be taken care of if there is to be successful adoption of e-CRM information systems.

6.2 The e-CRM Adoption Framework

Figure 1 presents the proposed framework for the adoption of e-CRM Ugandan SMEs:

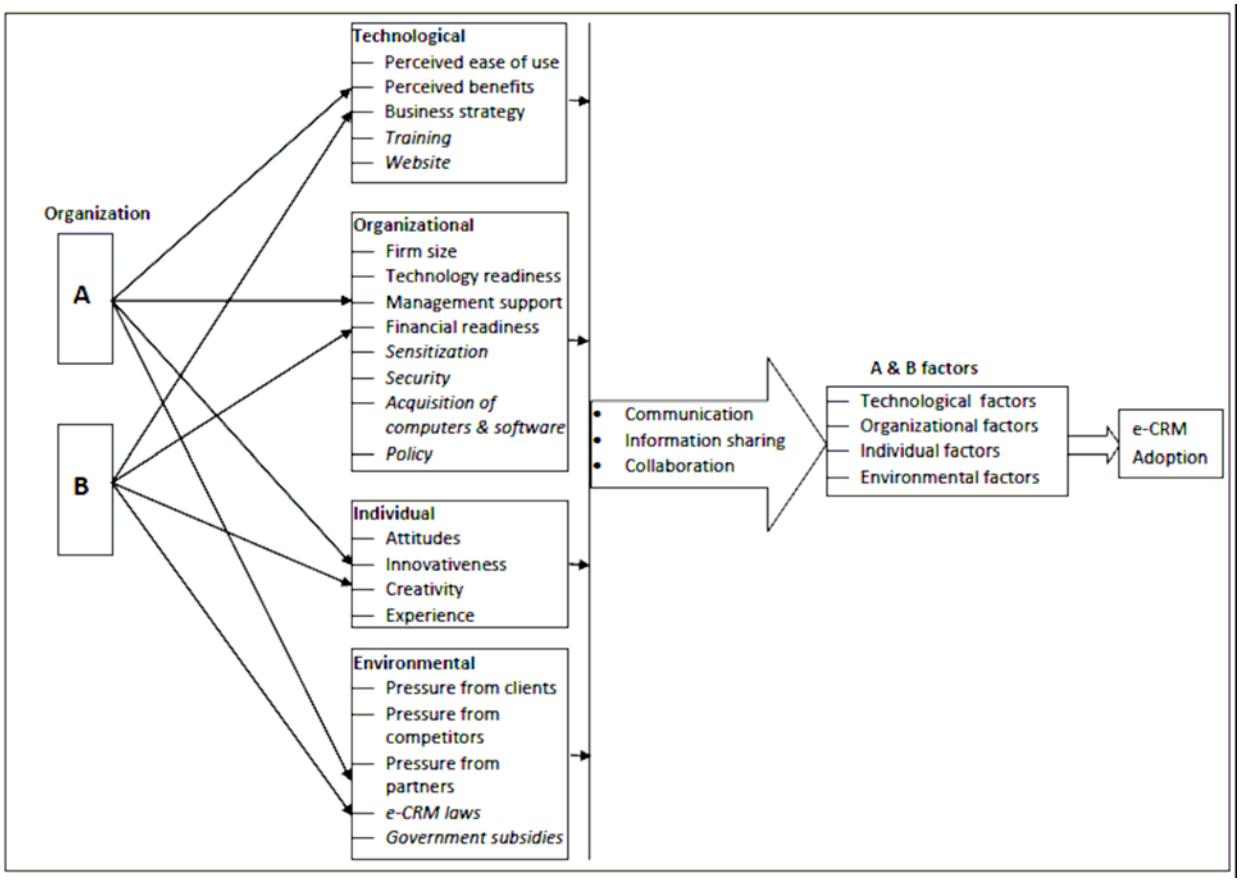

Figure 1: A Framework for e-CRM Adoption

7. VALIDATION RESULTS

This section presents the findings from the validation exercise.

7.1 Questionnaire Validation

Before the validation questionnaire was administered, content validity and reliability tests were applied to the questionnaire and were found to be valid and reliable. Validity and reliability test results were generated as seen in Table 7:

Table 7: Validation Questionnaire pre-test results

Variable	Cronbach Alpha Coefficient	CVI
Conformity to design requirements	0.652	0.674
Applicability in e-CRM	0.674	0.712

The validation results in Table 7 show that the questionnaire was both valid and reliable as it had a Cronbach Alpha Coefficient and Content Validity Index above 0.6.

7.2 Validation Sample Characteristics

Percentages and frequencies were used to determine the attributes of validation sample such as age, level of education, professional experience of respondents. This was done in order to understand the kind of people who evaluated the framework as to make reliable conclusions. Respondents' personal attributes are presented in Table 8:

Table 8: Age, Level of Education, Job Title and Work Experience

Age			Level of education			Job title			Work experience		
Age	**N**	**%**	**Level**	**N**	**%**	**Title**	**N**	**%**	**Years**	**N**	**%**
18-25	12	40.0	Primary level	0	0.0	Marketer	13	43.3	0-1	0	0.0
26-30	8	26.7	Secondary level	0	0.0	IT Officer	4	13.3	1-2	13	43.3
31-40	9	30.0	Diploma level	17	40.0	PRO	8	26.7	2-5	10	33.3
41-50	1	3.3	Undergraduate	13	43.3	Administrator	3	10.0	5-10	7	23.3
>=51	0	0.0	Postgraduate	0	0.0	Accountant	2	6.7	>=10	0	0.0
Total	**30**	**100.0**	**Total**	**30**	**100.0**	**Total**	**30**	**100.0**	**Total**	**30**	**100.0**

The results in Table 8 indicate that the majority respondents were aged between 18 and 25 (40%). 26.7% of the respondents were aged between 26 and 30, 30% aged between 31 and 40 and 3.3% of the respondents were aged between 41 and 50. There were no respondents aged 51 and above.

In addition, the results show that there were no respondents with primary, secondary and postgraduate level qualifications, while those respondents diplomas were 17 and undergraduates were 13.

On job titles and work experience, there were 13 marketers, 4 IT officers, 8 PROs, 3 administrators and 2 accountant respondents. While 0 respondents had experience of 1 year, 13 had experience of 2 years, 10 had experience of 5 years and 7 had experience of 10 years. There were no respondents with work experience of 10 years and above.

The above attributes show that the people who validated the framework possessed a reasonable level education, work experience and were mature; therefore one can conclude that they were able to understand and comprehend the questions on the questionnaire. This makes the validation findings more reliable.

7.3 Knowledge of e-CRM

Descriptive statistics were used to assess the knowledge validation respondents about e-CRM. Table 9 presents the results:

Table 9: Validation Sample Knowledge

Knowledge of e-CRM		
Knowledge	**F**	**%**
Not knowledgeable	0	0.0
Somewhat knowledgeable	5	16.7
Neutral	1	3.3
Knowledgeable	19	63.3
Very knowledgeable	5	16.7
Total	**30**	**100.0**

Results in Table 9 show that most respondents were knowledgeable (freq=19). A total of 5 respondents were very knowledgeable and somewhat knowledgeable about e-CRM respectively (freq=5 for each). Only 1 respondent was neutral and 0 were not knowledgeable about e-CRM.

7.4 Adherence to Design Requirements

Frequencies and percentages were used to determine whether the framework met or adhered to the design requirements as seen in Table 10:

Table 10: Design Requirements

Descriptive Statistics	**Yes**		**No**	
	N	%	N	%
The framework is compatibility	30	100.0	0	0.0
The framework is re-usable	28	93.3	2	10.0
The framework is simplicity and clear	27	90.0	3	10.0
The framework is reliability	27	90.0	3	10.0
Average	28	93.3	2	7.5

Results in Table 10 above indicate that the framework was compatible (100%), re-usable (93.3%), simple and clear (90%) and reliable (90%).

Overall, majority of the respondents indicated that the framework met the design requirements (93.3%), while only 7.5% of the respondents indicated that the framework did not meet design requirements.

7.5 Applicability in e-CRM

Frequencies and percentages were also used to determine whether the framework was applicable in e-CRM as seen in Table 11:

Table 11: Applicability in e-CRM

Descriptive Statistics	Yes		No	
	N	%	N	%
The components of the framework are well explained	27	90	3	10
The framework components are interactive	24	80	3	10
The framework is easy to use	21	70	2	7
Components of the framework are interdependent on each other	22	73	2	7
The framework is easy to understand	23	77	3	10
The framework uses simple language	25	83	2	7
The steps in the framework are logically arranged	20	67	3	10
Average	27	90	3	10

Results in Table 11 show that the components of the framework are well explained (freq=27), the framework components are interactive (freq=24), the framework is easy to use (freq=21), components of the framework are interdependent on each other (freq=22), the framework is easy to understand (freq=23), the framework uses simple language (freq=25) and that the steps in the framework are logically arranged (freq=20).

Overall, 90% of the respondents indicated that the developed framework was applicable in e-CRM, while only 10% indicated that it was not applicable.

7.6 Validation Results from the Case Study

The validation results from the case study to a larger extent were in agreement with survey findings. On average 9 out of 12 respondents ticked Yes on all the items in table 10. In other words, they indicated that the framework was compatible, re-usable, simple to use, clear and reliable. Only 2 respondents ticked No. Similarly, 8 respondents in the case study ticked Yes on all items in table 11, indicating that the framework components were well explained, interactive, easy to understand and use, interdependent on each other, used simple language and also that the steps in the framework were logically arranged.

8. CONCLUSION

The framework presented in this study has highlighted key e-CRM features and factors relevant and applicable to Ugandan SMEs. The study examined and identified TOEM Inter-organizational factors for e-CRM adoption and discussed how these interact in the process of collaboration, communication and information sharing. The framework was validated and the validation results indicated that the framework was applicable in e-CRM and meets design requirements. If well implemented, the framework can help organizations improve on their e-CRM adoption.

9. RECOMMENDATIONS

This study sought to 1) determine the requirements for better e-CRM adoption by SMEs in Uganda 2) design an adoption framework for e-CRM by SMEs based on identified requirements and 3) validate the framework for e-CRM adoption in Ugandan SMEs. The

findings indicated that the requirements for successful adoption of e-CRM information systems were user sensitization, training, infrastructural development, top management support and the need for appropriate policies. Further, the study recommends that e-CRM information systems should be designed in such a way that they improve on customer privacy, have a Frequently Asked Questions facility and should be faster for better adoption.

The proposed framework was designed with an emphasis on inter-organizational factors influencing e-CRM adoption since it was found that e-CRM systems that linked to other external resources were most used. Therefore, for improved adoption and optimum usage of e-CRM information systems, there is need to incorporate them with systems of other organizations such as facebook, twitter and online newspapers among other high traffic web sites. This creates a multiplier effect and hence faster adoption.

10. LIMITATIONS

Findings indicated that majority of the respondents were not knowledgeable about e-CRM. In addition, good number of them had never used an e-CRM information system though they had vivid ideas about its existence. It was also established that very few respondents were very experienced about e-CRM usage. Most of the respondents had used e-CRM for a period less than 2 years. Based on these statistics, one can easily assert that the data collected and used may not have been fully reliable. However the researchers took time and explained all key issues under investigation in order to enable respondents ably answer questions on the questionnaire.

Further, even though issues such as policy and laws have been suggested as key in influencing e-CRM adoption, these policies and laws do not exist in Uganda at the moment, even for the ICTs generally. Many of these are just being enacted. More so, the scholarly work in this area is still lacking. Therefore, there is need for empirical studies aimed at generating national e-CRM policy guidelines, regulations and standards for e-CRM adoption and proper usage in the country. This will be very instrumental in fostering e-CRM adoption and usage among Ugandan SMEs.

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