A Framework for the Adoption of Electronic Customer Relationship Management Information Systems in Developing Countries

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Abstract: *Managing customer relationships electronically has become one of the most crucial activities organizations are undertaking so as to remain competitive in business. This is more critical, especially for Small and Medium Enterprises (SMEs) that have limited resources compared to large corporations. However, many Electronic Customer Relationship Management (e-CRM) information systems have failed to achieve their objectives due to adoption problems. This is partly attributed to the lack of appropriate e-CRM adoption frameworks. A few frameworks that exist are too broad and general to cater for the unique adoption requirements of developing countries such as poor regulations, poor and/or lack of internet connectivity, and poor infrastructure including software and hardware.*

This study developed a framework for the adoption of e-CRM information systems in developing countries. A cross-sectional research approach involving design science and survey research methods were used. Primary data were gathered from SMEs 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 key findings from the study indicate that for successful adoptions of e-CRM information systems, there should be user sensitization, training and well established infrastructure. The findings also indicate that there is a need for e-CRM Policy in addition to establishment of organizational websites on which the system should run. Management support and establishment of adequate data security measures were also highlighted as key factors. 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. In addition, the findings revealed that e-CRM information systems should provide quick ordering services and have bulletin boards.

The above requirements were merged with those from empirically tested adoption theories and/or frameworks to develop the e-CRM framework. The physical structure of the framework was borrowed from the Technological Organizational Environment and Management adoption theory. Four contracts of Technological Organizational Environment and Management (TOEM) adoption theory, from which the four constructs of Technological, Organizational, Management and Environmental factors were expounded and incorporated into the new e-CRM framework.

Key words: e-CRM framework, e-CRM adoption, developing countries, TOEM

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 developing countries do not have in place e-CRM systems has led to high costs of recruiting new customers, low customer retention, and satisfaction (Amit & 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, member's 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 et al. (2002). However, since most SMEs in developing countries 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 developing countries has remained low (Achuama and Usoro, 2010; Alam & Ahsan, 2007). Perhaps this scenario can be attributed to lack of knowledge of the existence and benefits e-CRM features and/or failure to use these features. More 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. This study therefore designed an adoption framework for e-CRM by SMEs in developing countries. 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. Specifically, the study aimed to 1) **d**etermine the requirements for better e-CRM adoption by SMEs in developing countries 2) design an adoption framework for e-CRM by SMEs based on identified requirements and 3) validate the framework for e-CRM adoption in SMEs.

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 & Ajzen 1975), it immerged 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 (1999) ideas are brilliant, Chong and Ooi (2008) faltered 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 developing countries. 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.

RESEARCH METHODOLOGY

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 that were used in the research (Al-Majeeni & Mayhew, 2010). In this study, design Science research paradigm, which is a problem solving approach with its roots in engineering and the sciences of the artificial intelligence, was used. Hevner et al. (2004) posits that design science is one of the methods that have gained popularity especially in information systems research. The seven guidelines proposed include design as an artifact, problem relevance, research rigor, a search process, artifact, design evaluation, research contributions, and research communication (Hevner et al. 2004).

Design science research strategy adopted for the study

The research adopted design science's deductive research strategy where the study sought to either confirm or criticize the existing frameworks and finally come up with a modified framework that was relevant to SMEs in developing countries. Both Quantitative and Qualitative techniques for data collection were applied. The choice of Design Science for this study was based on the fact that the study sought to extend the boundaries of TOEM by creating new and innovative artifacts applicable in the current prevailing e-CRM adoption conditions. This approach is praised by scholars e.g. (Peffers et. al 2008) for addressing important and unresolved problems in a unique, innovative and most effective way. Design science aims at producing artifacts that contribute to the body of knowledge and are relevant to the community (Winter, 2000). Artifacts refer to constructs (vocabulary and symbols), models (abstractions and representations), methods (algorithms and practices), and instantiations (implemented and prototyped systems). Therefore, using design science approach, the researchers were able to create an innovative artifact in form of adoption framework for e-CRM adoption by SMEs in developing countries. The step-by step approach used included the following; identification and description of the problem; demonstration that no adequate solution existed; development and presentation of problem adequate artifact as a solution (e-CRM framework); evaluation of the solution; articulation of contribution to the knowledge-base and to the practice; explanation of implications to management and practice.

Sample design

A total of 450 respondents were selected from 30 districts of Uganda to participate in the study. 5 SMEs were selected from 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 target only those respondents who were deemed fit and valuable to study in a bid to avoid time and other resources wastage.

Validation of the framework

The researchers used case study method 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 it and their after answered a self-administered questionnaire. Validation results were analyzed and have been presented later in this paper.

FINDINGS FROM THE STUDY

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:

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**

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

Results in Table 1 show that respondents in age bracket 26-30 years old constituted 39.7%, 18-25 years old 26.5%, 31-40 years old 23.3%, 41-50 years old, 5.8% while 51 years and above contributed only 4.7%.

An analysis of respondents' knowledge of e-CRM revealed that most respondents were not knowledgeable about e-CRM (44.7%). 29.2% were somewhat knowledgeable, 12.5% were neutral, 8.9% were knowledgeable while only 4.7% were very knowledgeable about e-CRM.

In addition, an analysis on respondents' job titles revealed that most respondents were marketers and customer relation officers (45.5%). Information Systems manager & Information Technology technicians followed with 16.7%. Administrators contributed 16.7% as well, while Public Relations Officers contributed 15.6%. Chief Executive Officers and Accountants contributed 5.5%.

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:

e-CRM feature	N	Min	Max	Mean
Our e-CRM system allows customers to complain about our services	257	1	5	2.07
Our e-CRM system ensures customer privacy	257	1	5	4.44
Our e-CRM system allows e-mail communication	257	1	5	4.41
Our e-CRM system has problem solving mechanisms	257	1	5	2.19
Our e-CRM system allows online purchasing	257	1	5	2.32
Our e-CRM system allows membership registration	257	1	5	3.16
Our e-CRM system has a mailing list	257	1	5	4.41
Our e-CRM system allows product customization	257	1	5	2.22
Our e-CRM system has a tool for Frequently Asked Questions (FAQ)	257	1	5	3.81
Our e-CRM system allows order tracking	257	1	5	2.51
Our e-CRM system gives member benefits	257	1	5	3.19
Our e-CRM system allows quick order	257	1	5	3.28
Our e-CRM system has a find stores tool	257	1	5	2.16
Our e-CRM system offers gift certificates	257	1	5	2.40
Our e-CRM system has a request catalogue facility	257	1	5	2.16
Our e-CRM system has a chat facility	257	1	5	2.31
Our e-CRM system has a bulletin board	257	1	5	3.25
Our e-CRM system has VoIP	257	1	5	2.29
Valid N (listwise)	257			

Table 2: Organization's e-CRM features

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).

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 2.

Problem	N	Min	Max	Mean
Lack of knowledge and skills	257	2	5	4.57
Poor organizational culture	257	1	5	4.46
Poor change management strategies	257	3	5	4.53
Poor infrastructure e.g. e-CRM software and hardware	257	1	5	4.44
Lack of e-CRM policy	257	1	5	4.58
Lack of a website	257	2	5	4.42
Lack of awareness	257	2	5	4.46
Valid N (listwise)	257			

Table 3: Problems faced

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.

Requirements for e-CRM adoption

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

Requirements	N	Min	Max	Mean

Create awareness	257	1	5	4.58
ICT skills development	257	2	5	4.61
Infrastructural development	257	1	5	4.72
e-CRM Policy	257	1	5	4.42
Website	257	1	5	4.44
Enhance relative advantage	257	2	5	4.46
Harmonize costs	257	1	5	4.42
e-CRM laws	257	1	5	4.48
Information security	257	1	5	4.66
Management support	257	1	5	4.46
Valid N (listwise)	257			

Table 4: Requirements for e-CRM adoption

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.

DISCUSSION OF FINDINGS

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, blogs did not score highly. Chess Media Group & 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.

e-CRM adoption challenges in developing countries

the challenges hindering adoption of e-CRM information systems in developing countries 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.

Requirements for better e-CRM adoption in developing countries

Requirements for better e-CRM adoption in Uganda were suggested as creation of awareness, training to improve ICT skills, infrastructural development, e-CRM Policy, 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 (1973) and Davis et al. (1989) had suggested that training and sensitization were important requirements.

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.

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 5 shows derived variables:

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 & Shoemaker (1973), 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	Ajzen (1985)

	— beliefs that determine adoption	
Technology Organizational Environmental Management (TOEM)	Factors that affect the adoption of innovation; — technological, — economical, — environmental and — management	Tornatzky and Klein, (1982); Tornatzky and Fleischer (1990); Thong (1999)
Social Customer Relationship (SCRM)	Social Customer Relationship (SCRM) — Face book — Twitter — Blogs	Chess Media Group & Mitch Lieberman (2010)

Table 5: Ideas adopted from literature

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)

Table 6: Variables derived from primary data

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 which the adoption factors emerge. Both organizations have the probability of producing the factors and 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 & 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:

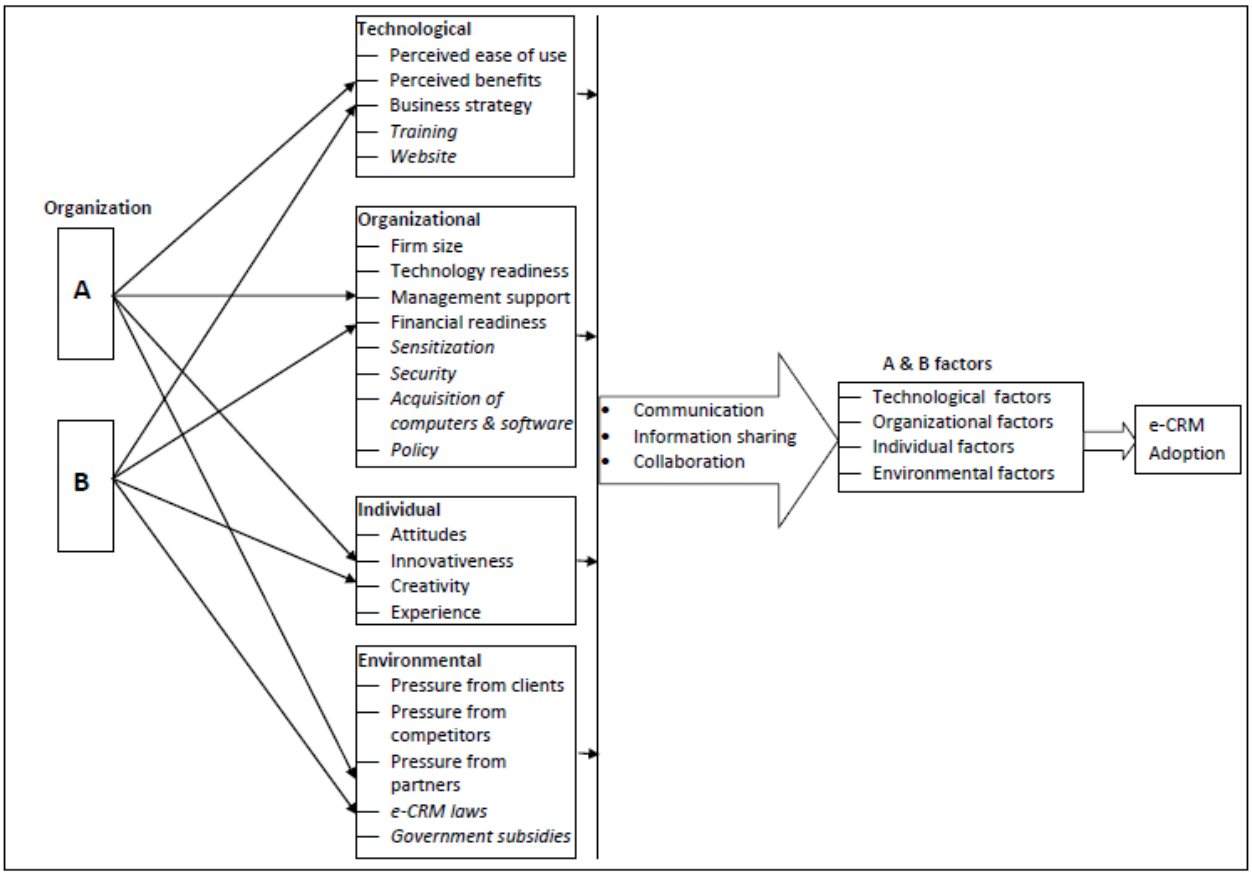

Figure 1: A framework for e-CRM adoption

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 & 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 A&B factors (synergy) that facilitate e-CRM adoption by the participating companies which would otherwise not be the case if they operated as individuals.

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 (1973) 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 (2010) 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 Maged 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 report, 2004). Thus there is need for favorable government policies; guidelines and regulations to drive the e-CRM adoption among SMEs in developing countries.

VALIDATION RESULTS

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:

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

Table 7: Validation Questionnaire pre-test results

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.

PRESENTATION OF VALIDATION FINDINGS

This section presents the findings from the validation exercise.

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 as to make reliable conclusions. Respondents' personal attributes are presented in table 8:

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**

Table 8: Age, level of education, job title and work experience

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.

Adherence to design requirements

Frequencies and percentages were used to determine whether the framework met or adhered to the design requirements as seen Table 9 below:

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

Table 9: Design requirements

Results in Table 9 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.

Applicability in e-CRM

Frequencies and percentages were also used to determine whether the framework was applicable in e-CRM as seen Table 10:

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

Table 10: Applicability in e-CRM

Results in Table 10 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.

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 generate 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 as explained in chapter five.

RECOMMENDATIONS

This framework mainly concentrated on inter-organizational factors influencing e-CRM adoption in Uganda. 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 the country. Even for the ICTs generally, the laws are at their infancy and more so the scholarly work in this area is still lacking. 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 the Ugandan SMEs and those from other developing countries generally.

LIMITATIONS

Findings indicated that majority of the respondents were not knowledgeable about e-CRM, and also that a good number of them had never used e-CRM information systems 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 the key issues under investigation in order to enable the respondents ably answer the questionnaire.

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