

IMPROVING INFORMATION USE BY SMES IN NORTHERN UGANDA THROUGH INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTS)

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ABSTRACT

Uganda's economy has great potential. Endowed with significant natural resources, including ample fertile land, regular rainfall, and mineral deposits, it appeared poised for rapid economic growth and development at independence. However, chronic political instability and erratic economic management produced a record of persistent economic decline that left Uganda among the world's poorest and least-developed countries (United States, Bureau of African Affairs 2007). Small and Medium Enterprises (SMEs) have an important role in uplifting the economic standards of the

majority of poor people because such enterprises involve little financial investment but much time and effort. The success of SMEs requires investment and use of ICTs, especially the internet, which has become a vital platform for both business information and transactions. Based on the above premise, a study was conducted to establish the ICTs application by SMEs in business transactions in northern Uganda. Using a quantitative descriptive survey design, the study solicited the views of SME managers, information providers and business policy makers in northern Uganda. Both questionnaires and interviews were used as data collection instruments. The aim was to obtain data regarding the ICTs used for business operations, usefulness of different ICTs for business operations, the ICT skills of SMEs business managers, ICTs utilisation for business information access and problems faced in internet utilisation for business and information transactions. This paper reports some of the interesting findings on ICTs utilisation especially the internet in this disadvantaged region of Uganda. Mainly is the fact that SMEs in northern Uganda are lagging behind the trend of applying ICTs to access, use and share pertinent business information. As such they are disadvantage in the current world of e-commerce and web presence. A number of problems that hinder fast-tracking these enterprises into mainstream ICT usage need to be urgently attended to. The study recommends the establishment of integrated ICTs based business information provision strategy that should include: telephone text services, client's based services, interactive business planner, online small business workshops, e-mail services and Talk to Business Information Systems services.

KEYWORDS

Business information services, Small Scale Business Enterprises, Northern Uganda, Information and Communication Technologies, SMEs, Internet utilization

INTRODUCTION

Information is a crucial resource for gaining sustainable and competitive advantage among modern business enterprises (Shokane 2003:55). Thus the value of information to small and medium enterprises (SMEs) need not be over-emphasised (Mutula and Van Brakel 2007). Despite this acknowledged importance and the structural changes in economic development in Uganda, economic agents in northern Uganda operate in a business environment characterised by fragmented and incomplete information - where an awareness of markets, technology, policies, regulations and finance is limited. Businesses in northern Uganda fail to receive timely business information (Cochrane 1996:6; Okello-Obura, Minishi-Majanja and Cloete 2006). There is no meaningful information system in place to facilitate efficient and effective access to business in-

formation by business enterprises. Traders and other small companies are simply “out of the loop” in developing strategic business relationships that occur more frequently in Uganda’s capital city, Kampala (Cochrane 1996:6). A recent study by the Ugandan Bureau of Statistics (2005:30) established that the majority of business enterprises depended on “word of mouth”. This raises a fundamental question on the utilisation of information and communication technologies (ICTs) in business transactions. If ICTs are being used for business transaction by the SMEs in northern Uganda, to what extent are they being used? Do the SME managers and business information providers have the necessary ICTs? What are the problems being experienced in the utilisation? What strategies or measures or interventions are then proposed for the incorporation into any business information system design to enable SMEs in northern Uganda to efficiently utilise ICTs in business transactions? These questions formed the basis of this study of which the objectives were to:

- establish the ICTs used for business operations by SMEs in northern Uganda
- determine the ICT skills of the SME managers and the business information providers in northern Uganda
- establish the extent to which SMEs use internet for business transactions
- determine the problems SMEs faced when using internet as both source of business information and means of accessing business information in northern Uganda
- recommend strategies to be adopted to improve on business information access using ICTs by SMEs in northern Uganda

The study was conducted in northern Uganda, a region that is characterised by its low income levels, distance from Kampala (the physical seat of power and centre of economic activity), constant insecurity and general marginalisation. Although the Uganda government’s initiative to fight poverty through its Poverty Eradication Action Plan (PEAP) and Poverty Action Plan (PAP) is yielding results, there is still evidence of poverty despite the Gross Domestic Product growth. The international poverty line is \$1 per day and, according to the World Bank (2000:64) and Uganda, Ministry of Finance, Planning and Economic Development (2004:12), 37.7% of Ugandans live below the poverty line with the highest incidences being in northern Uganda (63.6%). A third of the chronically poor – and the disproportionate number of households that are moving back into poverty – are in northern Uganda (Mukasa and Masiga 2003). In the rural areas of the north, 81% of the population have a real *per capita* monthly income of less than Uganda Shs6,000 (approximately US \$3.3) which translates to Uganda Shs200 or approximately US \$0.11 per day and 42% have a real *per capita* monthly expenditure of less than Uganda Shs3000 (approximately US \$1.6) – that is Uganda Shs100 or approximately US \$0.05 per day (World Bank 1993:9). The recent survey by the Ugandan Ministry of Finance, Planning and Economic Development (2004:13) indicates that northern Uganda has experienced increasing poverty from 60% in 1997/8 to 63.6% in

2002/3. According to The Uganda Bureau of Statistics (2006:19), on the overall, 70% of the population in northern Uganda live below the poverty line. While most parts of the country shared in the benefits of growth between 1992 and 2000, northern Uganda was left behind (Uganda, Ministry of Finance and Economic Development 2004:18). Also – with respect to the spread of a cash economy – the central, the southern and south-eastern regions of Uganda have more advantages than northern Uganda. Notable among these advantages is that the central, southern and south-eastern regions of Uganda have more direct access to national economic activities with Kenya and Tanzania, rather than with the Sudan and the Democratic Republic of Congo – both before and after independence (Uganda, Ministry of Finance, Planning and Economic Development 2002). The disadvantage that northern Uganda experiences – in not having easy access to many economic activities – is one of the reasons why the focus of this study is on the districts in the northern region.

Geographically, northern Uganda covers 35% of the total land surface of the country. It is the largest region in size, followed by central Uganda – 25%; western Uganda – 23%; and eastern Uganda – 17% (Uganda, Ministry of Finance, Planning and Economic Development 2002:14). Northern Uganda consists of 13 administrative districts, namely, the Ajumani, Apac, Arua, Gulu, Kitgum, Kotido, Lira, Moroto, Moyo, Nakapiripiriti, Nebbi, Pader and Yumbe districts. The Kotido, Moroto and Nakapiripiriti districts make up the Karamoja region; the Kitgum, Gulu and Pader districts form the Acholi region; the Apac and Lira districts constitute the Lango region; the Moyo and Adjumani districts comprise the Madi region; and the Arua, Yumbe and Nebbi districts are districts of the West Nile region. One district from each region was, purposely, selected for this study – based on the number of business enterprises in the district; the security situation in the district; and how old the district is. Districts that were newly created in the 2005/06 financial year were not considered separately, since they still lacked management and administrative structures. The new districts were treated as part of the mother districts where they belonged.

2 LITERATURE REVIEW

Internet access and e-mail are generally considered general-used ICTs. The two other types of ICTs are the production integrating ICTs and market-oriented ICTs (Lucchetti and Sterlacchini 2004). The production integrating ICTs include for example scanners and relevant software for data processing, while market-oriented ICTs include mobile phones, landline phones, fax, video-conferencing and tele-conferencing facilities. All these ICTs contribute significantly in the efficient transactions of businesses among the SMEs. The ICTs boost productivity by improving efficiency of individuals, firms, sectors and the economy as a whole. In particular, the adoption of these ICTs creates

unprecedented opportunities for businesses in developing countries to overcome the constraints posed by limited access to resources and markets (United Nations 2006). This literature review underpins the study by briefly examining some of the issues relating to ICTs as business incubators, the internet as a source of business information, and the World Wide Web (WWW) as a platform for business transactions.

2.1 ICTS AND BUSINESS INCUBATORS

Although the use of ICTs for improving business services appears to be well-established and represented in the landscape of development, the creation of an environment for ICT utilisation by the SMEs in developing countries is difficult. This difficulty seems to stem from the inability of some developing countries to foster the right kind of environment in which ICT-enabled businesses can succeed (Corps 2005). For example, there are continued difficulties securing stable electricity and dispersed and affordable telecommunications infrastructures in many developing countries – a situation that also exists in northern Uganda. For countries like Uganda, that are still struggling to establish ICT-friendly environments, policy measures are crucial. In countries where an adequate ICT environment has been created, the SMEs require an awareness of the benefits and possibilities of using ICTs for business administration and operation improvements. More ICT education and training as well as general business management skills building will help the SMEs assess the proper levels and methods for integrating new, or upgrading existing ICTs into their businesses. Businesses in developing countries such as Uganda need to recognise the importance of the internet in business, not only as a source of relevant business information, but also as a catalyst in business activities.

2.2 THE INTERNET AS A SOURCE OF BUSINESS INFORMATION AND PLATFORM FOR BUSINESS TRANSACTIONS

Access to electronic information has increasingly become important because more and more information is provided in electronic format (Ellen 1998:2; Thomas et al 2004). Sagi et al (2004:45) observe that “core economic, social, political and cultural activities throughout the planet are structured by and around the internet.” For instance, the United Nations Conference on Trade and Development (UNCTAD) has initiated the Global Trade Point Network (GTPnet) – a computerised networking system linking about two million traders worldwide (Sagi et al 2004:45). In Africa, the United States of America’s Leland Initiative Assistance Programme – also known as the GII Gateway – is beginning to make headway in creating internet connections in Africa (Sagi et al 2004:45). The availability of internet connections has led to the emergence of electronic commerce or e-commerce. Sagi et al (2004:45) defines e-commerce as the use of documents in electronic form – rather than paper – for carrying out functions of business or government, such as finance, logistics, procurement and transportation

that require interchanges of information, obligations or monetary values between organisations and individuals. E-commerce includes activities that could be replaced by electronic media, such as the exchange of documents, telephone calls and faxes and also includes standards for the procurement of manufactured goods by governments and the private sector as well as the participation of firms and individuals in the electronic market place. E-commerce is gaining momentum among businesses, worldwide, both for day-to-day transactions and as an integral part of their marketing strategy (Sagi et al 2004:45). Business information resources that have emerged on the internet can be classified into major business areas, such as company information, economics, finance and investment, international business, real estate and marketing (Liu 2000). According to Liu (2000:234), thousands of small businesses have created their own web pages to market and sell their products and services. Online business databases, web pages of different companies, governments, institutions, investment authorities, financial institutions, etc., act as useful sources of business information for business enterprises. With the advent of globalisation, more business enterprises will have to embrace e-commerce in order to compete, favourably, in the global markets. Informally, the internet is also being used to establish and maintain business contacts, for example through e-mail, logging and even litservs.

The White House (1997) argued that many businesses and consumers are still worried about conducting extensive business over the internet because of the lack of predictable legal environments governing transactions. The legal frameworks have greatly improved since 1997 but in spite of the developments, Sagi et al (2004:45) notes that “the internet raises challenging policy issues of access, privacy, copyright and regulation. It poses cultural problems as information is made available regardless of social and cultural boundaries.” This is, particularly, true for international commercial activity where concerns about cross-border enforcement of contracts, liability, intellectual property protection, privacy, security and other matters have caused businesses and consumers to be cautious. What are the chances that SMEs in northern Uganda have the capacity to navigate these “turbulent waters” of business activity over a platform such as the WWW?

2.3 BUSINESS TRANSACTIONS AND THE WORLD WIDE WEB (WWW)

The World Wide Web (WWW) is the most popular application on the internet and it is used for many diverse business purposes, including direct sales, advertising and customer support (Cheung 1998: 172; Kula and Tatoglu 2003). According to Cockburn and Wilson (1995:2), and later to Kula and Tatoglu (2003), the WWW appears to be an ideal medium for businesses attempting to promote themselves and their wares. Setting up a site on the WWW and, thereby, gaining instant access and visibility to millions of people all over the globe can be achieved at a fraction of the cost of using

more conventional methods. Direct on-line selling is now possible with the WWW. It is also already possible to visit “virtual malls” full of “virtual shops”; browse through catalogues and examine various products in detail – all courtesy of the WWW. This has been made possible by the multi-media capabilities that the WWW provides (Minio 1994:11). Companies – especially those involved in research and development – can now use the WWW as an additional resource for collecting information. When links are formed between companies, it is easy for them to communicate through the internet. There has been continued speculation, from a wide range of sources that the internet and, more specifically, the WWW will be the business tool of the future and that companies which do not expand in this direction will be left at the side of the information superhighway (Cockburn and Wilson 1995:2; Kula and Tatoglu 2003). All the benefits that are derived from the application of internet and WWW in business activities, give a company or a commercial entity a new look in the business world. However, to adequately harness the internet and the WWW, ICT skills are a prerequisite, which inevitably requires that the business enterprises in northern Uganda are willing to adopt a new strategic outlook by using the internet in their business transaction. Business enterprises in northern Uganda not only need to make an investment in acquiring ICT resources, but also to have the necessary ICT skills to exploit the business benefits offered by the internet and the WWW. This study investigates these issues and reports the findings in section 4 of this paper.

3 METHODOLOGY

A descriptive research design based on survey techniques was used. The study targeted two sets of stakeholders, namely SMEs, ostensibly represented by their managers and information providers in northern Uganda. The main information providers included non-governmental organisations, internet cafes, radio stations, financial institutions, educational institutions, public libraries, resource centres and telecentres. Thus views from both the consumers of business information and providers of business information were included. The study’s total sample size was 251 SMEs and 75 business information providers. The study covered the districts of Ajumani for Madi sub-region; Nebbi for West Nile region; Gulu for Acholi sub-region; Lira for Lango sub-region and Kotido for Karamoja sub-region. Data were collected using structured questionnaires and interviews and examining literature relevant to business information provision and SMEs in Uganda. To cover the expanse of northern Uganda for representativeness, the questionnaires were administered by the research assistants under careful supervision of the researchers. To ensure consistency in data collection and considering the disparities in education levels of respondents, the research assistants were intensively trained for 3 days. To ensure quality of data collected, meetings were held between the researchers and the research assistants at the end of every day’s data collection

process. After the questionnaires were returned, editing was done – district by district – to ensure legibility and accuracy.

Of the targeted sample of 251 SMEs, 219 participated in the study, giving a response rate of 87.3%. Of the targeted 75 information providers, 54 participated, giving a response rate of 72%. Generally, the rates indicate a very positive response from the respondents. Besides qualitative analysis, the coded responses from the questionnaires were analysed quantitatively, using Epi Info and SPSS software and the results are presented below.

4 FINDINGS

The results of the study include a profile of the respondents, which provides a backdrop to the findings. The findings are presented in four sections, focussing on the preferred ICTs, ICT skills, internet utilisation in business and the major problems associated with ICT use.

4.1. PROFILE OF THE RESPONDENTS

Gender disparity was noted among respondents who are SME managers, in that 73.4% were male and 26.6% female and likewise among the information providers 81.1% were male and 18.9% were female. The findings show that there are still very few females in managerial positions even among the SME and information services provision. Another notable finding relates to age of respondents whereby the largest portion of the 219 SMEs managers (46.3%) fell in the age bracket of 21-30 years, followed by 31-40 years (27.1%) and the least 51 years and above (5%). This may suggest that the younger generation start in these SMEs and probably move to bigger enterprises as they grow older. However, this matter was not investigated further. Among information providers, it was notable that they start even younger but only tentatively with the age grouping of 15-20 years being 9.3%, 21-30 years taking the majority again, i.e. 53.7%, 31-40 years having 20.3%, 41-50 years 9.3% and 51 years and above 7.4%. It was encouraging to note that the majority of both the SME managers and the information providers are within what is often regarded as the active and most productive age bracket of 21-30 years. This might have suggested that these would be people whose uptake of ICTs is high as in the developed countries, where they would be counted as straddling the X and Y (Net) generations, who are generally techno-savvy generations. As far as the educational levels for SME managers are concerned, it was established that 6.4% never went to school, 7.3% obtained primary school level education, 33.5% had secondary school level of education, 12.8% had technical college education, 5.6% had teacher education, 12.8% had university level education and 21.6% had obtained business college education. These percentages generally imply that the majority of re-

spondents are literate, and capable of comprehending business issues and concerns with ease. Language proficiency of the SME managers was considered an important area of focus because often the language of ICTs is English. In Uganda, English is the official language but there is also one national language and a myriad of local languages, 3 of which are widely spoken in northern Uganda. The findings indicated that 87.7% of the respondents can read English quite well, while 32.9% can read Kiswahili – Uganda’s national language – quite well. Of the local languages given, 56.2% of the respondents can read Luo quite well, 6.4% – Lugbara, 5.0% – Ngakarimojong and 16.9% can read another language. The fact that the majority are proficient in English was encouraging, since this is one of the main languages of ICTs and more specifically, of the internet.

There is a common saying that “experience is the best teacher.” The SME managers are able to learn from their business experience to access or scan the environment for relevant information. Business information providers can also learn from their experience – acquired in the provision of information to determine not only the information needs of their users, but also the problems they face in accessing quality information. This study, therefore, established the extent of business experience of the SME managers and the information provision experience of information providers by the number of years the respondents had been in business. The results are graphically presented in Figure 1.

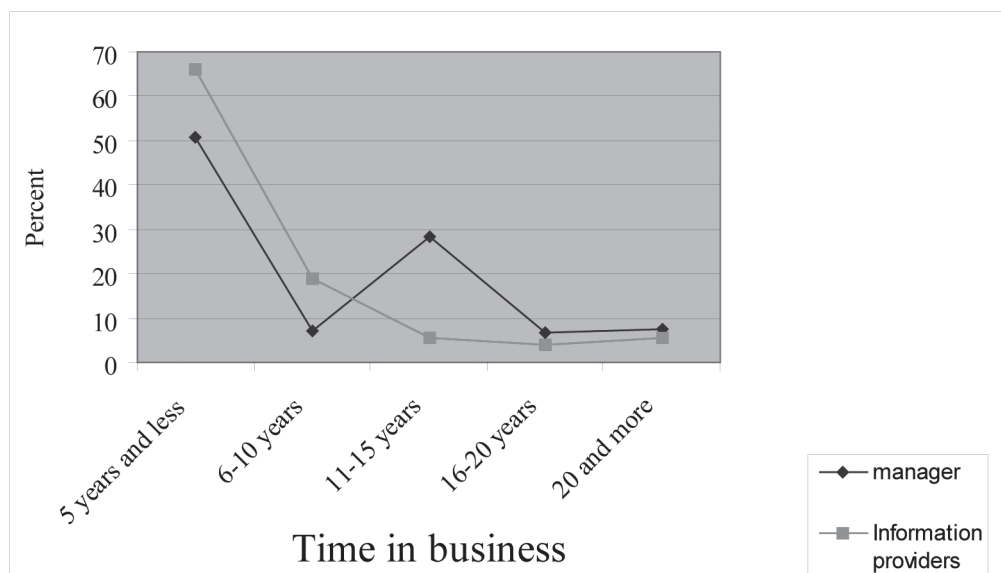


Figure 1: SME managers’ business experience and information providers’ experience in information provision

The results show that the majority of both the SMEs and information providers have 5 years or less experience in business operations and information provision, respectively. The findings indicate that the majority have little experience.

The profile of the SMEs themselves is also a necessary backdrop to the findings that will be discussed later. The study found that most SMEs in northern Uganda are of Sole Proprietorship, i.e. 51.4%, while 20.6% are Limited Liability Companies, 16.8% are Partnerships, 5.1% are Cooperative Companies, 2.8% are Government-owned, 2.3 are owned by Religious Organisations and 0.9 by other categories of ownership. Two-hundred-and-seventeen SMEs answered the question on registration and it was found that 78.3% are registered business enterprises while 21.7% are not registered. Most of these SMEs, 87.7%, are located in urban areas while a few, 12.3% are located in rural areas. Likewise, most (83.3%) of the information providers who participated are located in urban areas and only 16.7% are in rural areas. However, only 66.2% of the SMEs use electricity, while the rest do not. The use of electricity is significant for online information provision. Finally, regarding the SMEs, they are involved in diverse business activities including transport services – 21.5%; Construction – 21%; Lodging Services – 18.3%; and Property Management – 15%, the details of which are as shown in Figure 2.

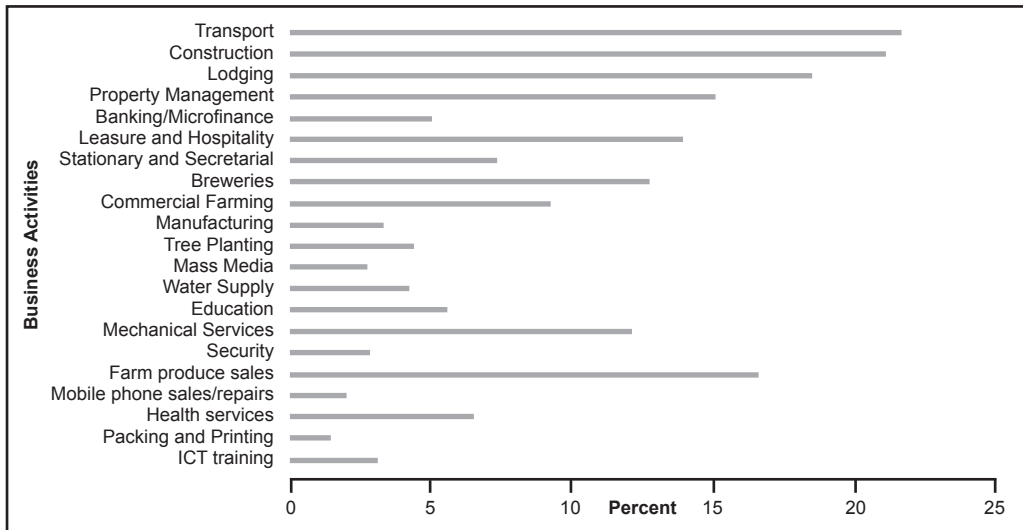


Figure 2: SMEs business enterprises in northern Uganda

The findings show that business activities carried out in northern Uganda are diverse, with the majority being in the service sector.

4.2 PREFERRED ICTS FOR BUSINESS OPERATIONS

ICTs are now critical for the success of business operations and it was necessary to determine the ICTs that SMEs find most useful in transacting business; the ICT skills that the SME managers have; the use of the internet in business transactions; problems faced in using ICTs; and whether the SMEs have websites. It was revealed that the

most useful ICTs that are used by the SMEs are mobile (cell) telephones (79.4%), and the rest as can be seen in Table 1.

Table 1: Usefulness of ICTs in business transactions (n=218)

ICTs	Most useful %	Sometimes useful %	Least useful %	Not useful at all %
Mobile telephone	79.4	7.8	4.5	8.3
Landline telephone	21.6	25.7	27.5	25.2
Internet	12.8	10.1	31.7	45.4
e-mail	10.2	13.4	28.7	47.7
Computers to assist manufacturing	9.7	10.6	24.4	55.3
Fax	9.3	11.5	23.6	55.6
Accounting software	7.4	11.1	26.9	54.6
Video conferencing	3.7	8.3	29.0	59.0
Teleconferencing	1.8	8.8	31.3	58.1

Concurrently, even though with lower margin, information providers also identified the mobile telephones as the preferred type of ICT they use to provide information to the business enterprises. Their responses are given in Table 2.

Table 2: ICT facilities information providers use to provide information to business enterprises (n=54)

ICTs	Most useful %	Sometimes useful %	Least useful %	Not useful at all %
Mobile telephone	51.9	16.6	13.0	18.5
Internet	27.8	7.4	29.6	35.2
e-mail	24.1	9.2	31.5	35.2
Landline telephone	20.4	22.2	35.2	22.2
Scanner	16.7	3.7	29.6	50.0
Fax machine	13.0	3.6	24.1	59.3
Video-conferencing	5.6	5.5	31.5	57.4
Tele-conferencing	3.7	5.6	40.7	50.0

However, as can be deduced from Table 2, the internet and its email feature are jointly also considered to be very useful by information providers. Tele-conferencing, video-conferencing are tools that are scarcely useful in northern Uganda.

4.3 ICT SKILLS NECESSARY FOR BUSINESS

The effective use of ICTs for information acquisition and access requires adequate skills. For an information system to adopt particular ICTs for information provision,

an ability to use ICT skills among the users of the system is important. Chief among these skill are computer skills, ranging from simple keyboard skills to internet skills. In terms of these abilities, it was necessary to establish some of the ICT skills of both the SME managers and the information providers. The results are displayed in Figure 4.

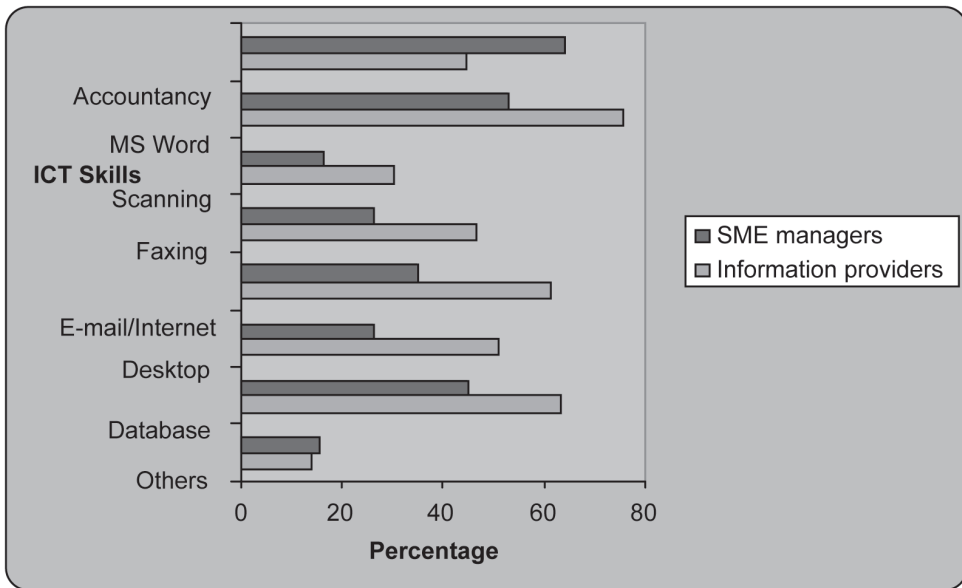


Figure 4: ICT skills of the SME managers and information providers in northern Uganda

Figure 4 shows that the majority of the SME managers have skills in word-processing, accounting packages and some database related skills, while the information providers are highly skilled in word-processing, e-mail/internet, database management and accountancy packages. Very few in either group have skills in scanning. Generally, it seems that the information providers have better ICT skills than the SME managers.

4.4 INTERNET UTILISATION FOR BUSINESS

As noted in the literature review, many business activities are conducted on the internet. It was necessary to establish the extent to which the SMEs in northern Uganda use Internet services and the results are presented in Figure 5.

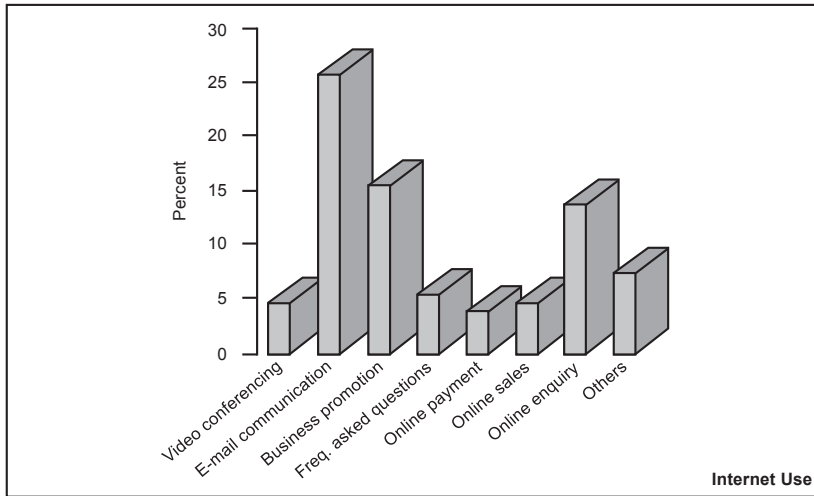


Figure 5: Services for which SMEs use the internet: views of the SME managers

An analysis of Figure 5 shows that e-mail communication and business promotion are the most common internet services used by the SMEs. This could be attributed to the privatisation of the Ugandan economy which brought many businesses into play, resulting into competition. Thus many businesses are encouraged to devise marketing strategies which has led to the utilisation of ICTs in communication and business promotion.

The information providers were asked to indicate what the business community uses the internet for. The results are indicated in Figure 6.

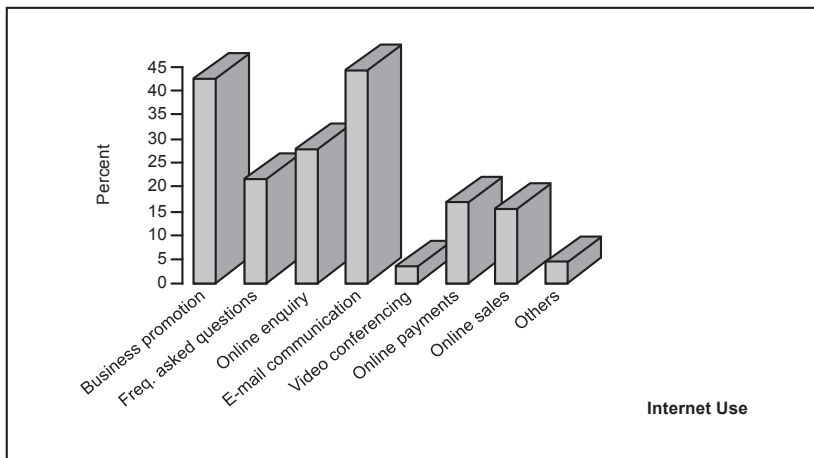


Figure 6: Services for which SMEs use the internet: views of the information providers

The findings indicate that business promotion and e-mail communication are the services that require most use of the internet as depicted in Figures 5 and 6.

4.5 MAJOR PROBLEMS IDENTIFIED WITH INTERNET UTILISATION

Respondents – the SMEs managers – who use the internet for their businesses were asked to state the problems they faced when using the internet as a source and means of accessing business information. Of the 251 respondents, the results of 189 who responded to the question are the following:

- a lack of appropriate skills for the use of the internet – 42.3%
- a lack of access to internet facilities – 28%
- a lack of competent information providers – 22.8%
- other - 6.9%.

When respondents – the SMEs – were asked to indicate whether they had a website, 87.7% said “No”, 11.4% answered in the affirmative and 0.9% did not respond. When those who said that they did not have a website were asked whether they would like to have a website for their companies, 75.8% said “Yes” while 13.2% did not see the need for one and 11% did not respond at all.

In pursuit of a better understanding of the problems the SMEs face in using the internet as a source and means of accessing of business information, information providers were asked to give the problems that the SMEs face in their use of the internet. The results are as follows:

- a lack of appropriate skills to use the internet – approximately 63%
- power (electricity) load shedding – 59.3%
- a lack of places to access internet facilities – 55.6%
- inadequate ICT facilities to facilitate internet access – 51.9%
- a lack of translation facilities/services for internet-based resources for the business community – 22.2%.

Although the majority did not see too much information overload – supplied by the internet – as a problem, 20.4% of the information providers considered this to be a problem.

5 DISCUSSION

The foregoing results of data collected in northern Uganda from SMEs and information providers indicate that the use of ICTs in business transaction is still very low. Advances in computing and communication technology are shaping global information networking in ways that allow for a reduction in costs, the time taken, and the distances involved. In an effort to embrace electronic commerce (e-commerce), computerised information and

records management systems and the internet are crucial today. Sharma and Bhagwat (2006) argue that information technology (IT) plays a vital role in the sustained growth of business organisations. The use of the internet for e-commerce (technologically mediated exchanges) has grown rapidly in relation to the increase in commercial web sites (Gilmore, Gallagher and Henry 2007). The benefits of the information revolution are not limited to large businesses only, but can also be exploited by the SMEs to make contacts; to check prices; to display goods; and to enter into contracts. For example, using internet technology, companies can gather information from consumers which helps them to improve the quality of products; develop new products; and adopt an attitude of flexible response to the wants and needs of their potential customers (Mochrie and Galloway 2005). Web-based business can be an extremely attractive option for most of the SMEs (Tetteh and Burn 2001).

5.1 APPLICATION OF ICTS IN BUSINESS TRANSACTIONS BY SMEs IN NORTHERN UGANDA

It is clear from the findings of this study that the SMEs in northern Uganda are, relatively, lagging behind in the use of ICTs in businesses (see Table 1). The SMEs in northern Uganda do not consider internet, e-mail, fax and accounting packages very useful even though they are the global ICTs used by business enterprises in the transaction of business activities. There is a lack of familiarity with the constantly changing technology, especially the internet, among the SMEs in northern Uganda. Only 12.8% find the internet most useful to access business information and this reflects the low internet penetration rates in the SMEs sector. The 45.4% response of “not useful at all” can be interpreted in different ways. Most likely, it can be argued that the SMEs do not realise the immense potential of ICTs and the benefits of getting worldwide visibility. This concurs with the argument of authors, such as Hawkins and Prencipe (2000); Fillis, Johansson and Wagner (2003); and Jones, Hecker and Holland (2003), who argue that the SMEs tend to lag behind larger firms “both in terms of awareness and implementation” of ICTs use. The lag in the use of the internet, specifically, is even more marked (Mochrie and Galloway 2005).

But the prevalence of mobile phones indicates that there are other issues at stake, especially regarding the use of the internet. The fact that the mobile telephone service has overtaken the conventional governmental fixed line telephone services is an indication that people are willing to pay for and use ICT given a conducive framework of ownership, rational pricing system and more user control. The ‘pre-paid’ mobile telephone service has become ubiquitous, with a wider reach than the landlines and PCs, reaching areas that were previously considered too remote for telephone, let alone internet services. In particular, the text messages services, commonly referred

to as sms could be credited for the cell or mobile telephones' popularity. It is cheap and quick and provides an easy way of keeping in touch with family members and business associates almost at any place. The mobile telephone service is personalised, thus allowing specifically directed contact to the desirable person. Kingston (2004) suggests that the mobile telephones are the perfect way to stay in contact with others and to provide the user with a sense of security. In the event of a business emergency, having a cell phone can help reach a person quickly and could, possibly, save business losses. In Uganda, the mobile telephone service has a wide penetration. Modern mobile phones are capable of internet access and sending and receiving photos and files. Marginalised areas such as northern Uganda also stand to benefit from developments within the internet, especially software technology, which is now developing towards more wireless and "small-screen/gadget" use. All these benefits make the telephone text message format a preferred one.

Another important issue that may explain the low uptake of the internet by SMEs in northern Uganda could be the lack of relevant content. This study did not further investigate this aspect but it is possible that there is a dearth of local content, which makes SMEs to view the technology as being irrelevant for them. This becomes a chicken-and-egg situation because it is such local businesses that need to populate the internet with locally relevant information. The problem then shifts to issues of affordability and capacity in knowledge and skills. 42.3% of the SME managers decried the lack of skills to manage and utilise such technologies and the remoteness of some of the areas from which the SMEs operate. As Kargbo (1997) further points out, many competitors, especially in rural areas, are confronted with problems, such as a lack of strategic capacities to access business information as well as sufficient and sustainable structures needed to get connected to the internet.

Regardless of the issues, the SMEs in northern Uganda need to adopt internet utilisation because of its enormous benefits. Liu (2000:234) observes that while the traditional ways of doing business are still in existence, e-commerce has opened up a new frontier for individuals and companies to engage in economic, business, and trade activities. The fast-growing use of the internet has not only dramatically changed the way in which businesses are conducted, but it has also had a tremendous impact on the way business information is provided and used. Business information resources that have emerged on the internet can be classified into major business areas, such as company information, economics, finance and investment, international business, real estate and marketing (Liu 2000:236). Those kinds of business information resources could be useful to some of the SMEs if internet utilisation in businesses is adopted. Shokane (2003), in support of this view, recommends that the increasing use of internet, particularly the World Wide Web by modern business enterprises, including the SMEs, should make those

who are lagging behind to consider investing in web technology to enhance their business activities and to increase productivity. Encouragingly, the majority of the SMEs in northern Uganda indicated an interest in having websites. This willingness of the SMEs in northern Uganda to embrace the application of ICTs as sources and means of access to business information for business transactions would be an important step in developing competency in the use of ICTs. Nevertheless, the process will be slow because of a number of impediments that were identified by the study.

5.2 PROBLEMS THE SMEs FACED IN INTERNET UTILISATION

In section 4.5 above, it is noted that both the SME managers and information providers cited a lack of appropriate internet skills as the most serious problem in internet applications for business transactions in northern Uganda. Duan et al (2002:430) warn that the potential benefits of e-commerce and e-business for the SMEs would only be realised by capable managers who could deal, wisely, with the emerging technology and implement the technologies. This warning should be taken seriously. E-mail and internet skills are prerequisites in ICTs application in businesses by the SMEs. Research by Nath et al (1998) and Duan et al (2002:430) reveal that training and a lack of skilled personnel are the main impediments in implementing the internet and e-commerce among the SMEs. An analysis of the findings in Figure 4 shows that there are also many information providers – above 35% – who are not skilled in internet applications. It is difficult to imagine, then, how business information can be provided through the internet by these information providers. The implication here is that tailor-made training and sensitisation in ICTs and, especially, the internet is required for both the SMEs managers and information providers in northern Uganda. Apart from the general lack of skills as expressed by the SME managers, there is also lack of technological and administrative support for ICT-based services. Internet services for instance require a strong and reliable telephone system, which is neither well penetrated nor efficient in northern Uganda. The bandwidth required to display some of the useful data and/or cites and for fast speed connectivity is hardly sufficient. In terms of technological support, most of the companies that support internet services are situated far away in Kampala where they have sufficient clientele for business. The transport service to, from and within the region is slow because of the state of roads and lack of alternative means of transportation, making it difficult for technicians to respond timeously to technological breakdowns. Finally, electricity supply and use is another impediment. All in all, it is difficult for individual SMEs to be able to harness and use relevant ICTs that would improve their business success. Hence some broader interventions may be necessary as suggested below.

6 RECOMMENDATIONS

With the rapid expansion of ICTs and an increased use of the internet to carry out business transaction, the SMEs should no longer be disadvantaged in the “knowledge economy” as they should be able to access a wide variety of business information to generate knowledge. This study proposes a number of steps that will facilitate easy access to business information.

6.1 BUSINESS INFORMATION SYSTEM CENTRE (BISC)

A Business Information System Centre (BISC) should be set up in one of the districts in northern Uganda. This centre would serve as a hub for both the information providers and SMEs, providing them with the technology and the information. Such a centre would also provide technical support and training to improve the competencies. Even though the Lira district would be the ideal location for the centre in terms of security, superior infrastructure and the accessibility to a large number of SMEs, it is not centrally located to effectively cater for the entire northern Uganda. Thus Gulu district is recommended. Gulu is centrally located to cover all the sub-regions in northern Uganda and according to Uganda Communication Commission (2003), though generally insecure in some parts, most activities take place within Gulu town, which is secure. It is also believed that the problem of insecurity will soon come to end with the Lord’s Resistance Army movement and the government of Uganda participating in peace talks – currently being mediated in the Juba district by Dr Riek Machar, the Vice President of Southern Sudan. Secondly, the Gulu district has long been considered the capital of northern Uganda with an adequate infrastructure (Uganda Communication Commission 2003).

6.2 TRAINING IN BUSINESS INFORMATION SEEKING AND SEARCHING

In order to promote the efficient utilisation of the available services, the SME managers in northern Uganda need to have appropriate training in business information seeking and searching – for example, environmental scanning; and in the ICT skills and applications in businesses – especially internet and e-mail usage. The information providers, on the other hand, need to have training in these aspects as well as in business information repackaging and in business information filtering mechanisms for specialised users.

6.3 TOLL-FREE TELEPHONE ENQUIRY SERVICE

In each district in northern Uganda, a toll-free telephone inquiry service should be established by the government of Uganda as a one-stop service centre for business information. In addition, the BISC should offer a single, national toll-free number for

business inquiries. This national/regional toll-free number should automatically direct the call to the BISC in the Gulu district. The essence of a toll-free service is important as a subsidy to the SMEs operating in northern Uganda, given the deplorable circumstances in which the SMEs operate in northern Uganda. It should be noted that a toll-free service is proposed as a short term measure, given the situation in northern Uganda. A long term measure as well as the issue of sustainability could be further explored.

6.4 SHORT TEXT MESSAGES (SMSs)

Short text messages should be introduced in the provision of business information. The government of Uganda should register all SMEs in northern Uganda with their cellular phone contacts so as to provide short text messages on topical business opportunities existing in the country. An arrangement could be made with MTN-Uganda or Celtel-Uganda and UTL-Uganda through their telephone networks to provide lower tariffs for government information dissemination. This will make SMEs in northern Uganda compete favourably with other SMEs in other parts of the country.

6.5 BUSINESS INFORMATION OFFICERS

Knowledgeable business information officers, using a variety of databases accessible on their computers, should serve business clients. Information officers should promote web-based information sources, provide contact information and explanation verbally and also offer to deliver information via the most appropriate format for the user. Questions are frequently complex and may even require investigation and research using BISC resource collections. To manage this assembled knowledge efficiently, each question and answer should be retained in a database for future reference by the BISC network and its regional access centres.

6.6 FAX ON DEMAND SERVICE

A toll-free, fax-on-demand service could be instituted to allow callers to order business information catalogues and documents which were available. This is an alternative to serve areas where internet access is not adequate and for the SMEs who only have access to fax machines.

6.7 INTERNET-BASED SERVICES

The BISC should provide easy access to a comprehensive inventory of districts, regional/national and international government programmes; regulatory requirements; services; and other sources of business information. This web site should be organised from the business clients' perspectives – with topics and search options to suit various

needs. It is hoped that the BISC's web-based information resources would contribute, substantially, as a gateway for Uganda business on the international information portals. The BISC should have the following:

- An interactive business planner: This is a version of award-winning interactive business planning software.
- An online small business workshop: This web-based workshop provides techniques and information for developing a business idea; starting, marketing and financing a new venture; and improving an existing small business.
- The business start-up assistant: This new on-line product is specifically aimed at the information needs of entrepreneurs in the start-up phase.
- Info-guides: Brief overviews, describing how services and programmes are organised by topic – exporting, electronic commerce, lodgings, tree planting, construction, etc.
- An e-mail service: This service provides clients with another method of requesting and obtaining business-related information. Clients who use the service need to be assured of a response within one business day.
- 'Talk to BISC!': This study proposes this unique service which could, equally, be described as part of telephone services where both the web and the telephone are used simultaneously to help business clients find information on the internet. Although the internet is aimed at self-service, the amount of information available can often lead to failed searches and frustrated SME managers. 'Talk to BISC' will allow the BISC officers to use the internet to deliver web-based information to clients while refining search parameters with them on the telephone. The potential of this enhanced user support is tremendous, as it extends the benefits of personal assistance to the internet delivery channel and it helps people who are not comfortable in searching the internet.
- Creation of webpages for SMEs: All SMEs in northern Uganda should be encouraged to create webpages of their business enterprises. This will increase international visibility and creation of international linkages with other SMEs operating worldwide.

The government of Uganda has prioritised the development of information and communication infrastructures through privatisation over the last few years. The establishment of the Uganda Communications Commission (UCC) to oversee the privatisation of Uganda Telecom and the introduction of private sector competitors to provide fixed and mobile telecommunications infrastructures has resulted in dramatic improvements in telecommunication, especially in urban areas. This is in line with a recognised position that business performance improves with good telecommunications – both by saving costs and by making information more available. However, the concentration in the urban areas and the current teledensity of 1 telephone per 100 people on average, disguises wide regional disparities. Therefore, a concerted effort should be made to ensure

that an adequate telecommunications infrastructure in rural areas – and internet points of presence – is available throughout most parts of northern Uganda. This will facilitate the enhancement of ICT usage in the region. Secondly, in relation to ICTs and telephone usage, the government of Uganda – through the Uganda Communications Commission (UCC) – should negotiate with telephone companies for a subsidised telephone rate for village telephone calls or a toll-free service. For example, if mobile phone calls are charged at Uganda Shs 450 per minute, a village telephone booth could charge Uganda Shs 100 per minute. This should be for all telephone booths in northern Uganda. The argument for this is that the SMEs in northern Uganda rely heavily on the telephone to transact their business and it is the mean of access that they prefer above all.

7 CONCLUSION

This study has attempted to address the information use problem and concludes that there is a need for Uganda and in particular northern Uganda to develop a strategy for business information access by the SMEs that emphasises the use of ICTs. The World Trade Organisation (WTO) has influenced most countries which are opening their economies to greater international competition. The SMEs need to be provided with more comprehensive services to ensure a successful adaptation to this changing scenario. Larger firms have the capacity to absorb costs or to quickly restructure their business operations. The SMEs, on the other hand, are not placed in this way. Consequently, the SMEs deserve special attention to receive services to enable them to face challenges and remain competitive in the e-business world.

In view of the above, the study concludes that SMEs in northern Uganda need a post-modern approach to business. The post-modern approach to business refers to a new paradigm which encourages information systems to play a central role in business and which anticipates and accommodates a high level of inevitable change by use of ICTs, especially the internet.

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