

Factors Affecting Internet and e-Commerce Adoption among Small and Medium-Sized Enterprise Non-Traditional Exporters: Case Studies of Ghanaian Handicraft Exporters

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Abstract

This paper examines the factors that affect Internet and E-commerce adoption among small exporting handicraft firms in Ghana. Using interviewing, the study presents an in-depth analysis of the cases of two major Ghanaian Handicraft Exporters that have been using the internet in their business operations. The findings indicate that the internal factors that affected internet and e-commerce adoption of the firms were perceived benefits of the technology from owner/manager characteristics, lack of qualified staff to develop and support e-commerce website from firm characteristics, and limited resources from cost and return on investment. The key external factors affecting the adoption included limited Internet Service Providers (ISP), lack of online payment process, pricing structures, and limited availability of online banking services, power failure, and low competition in the industry. Implications for theory and management have been discussed. The paper contributes to knowledge in internet and e-commerce adoption in developing countries.

Keywords: firm adoption, non-traditional exporters, e-commerce, internet, small and medium-sized enterprise.

1. Introduction

The Internet has become an extremely important modern day technology for business (Sellitto and Martin, 2003). The emergence of the Internet has allowed Small- and Medium-sized Enterprises (SMEs) to compete effectively and efficiently in both domestic and international markets (Schmid et al, 2001). It is a well-known fact that Internet and e-commerce (EC) technologies can benefit an organisation (Akkeren & Cavaye, 1999). The use and application of Internet based technologies in commerce, government and education is claimed to be undergoing extraordinary growth, with the World Wide Web said to be significantly altering the manner that traditional commerce is undertaken (Sandy and Burgess 2003). Moreover, the important question for many businesses is not whether to deploy Internet technology, but how to use the Internet as a competitive part of business strategies that complements the traditional way that they have done business (Porter 2001).

Ghana depends so much on the export sector for its development (Hinson and Sorensen (2006). In the context of Vision 2020, the Government expects that total revenue by the year 2020 should be in the region of about US\$60 billion, and non-traditional exports alone should be contributing about US\$12 billion of the total amount in that year. According to the Hinson and Sorensen (2006), E-business had recognized as a key enabler for the achievement of the Vision 2020 target. This paper considered only the issues pertaining in handicraft sector of the NTEs.

Although, in Ghana the handicraft sector is the smallest among the various sectors of the NTEs, it was doing very well in the early 2000s. For instance, Ghana earned \$14 million from the export of handicrafts in 2002 as against \$12 million in 2001 (The Daily Graphic, 2003). However, in 2007 the sector contributed \$3.79 million representing 0.32 per cent (The Daily Graphic, 2008). This was because major buyers of Ghanaian crafts in the United States of America (USA) turned to the Far-East, especially Indonesia, India and China for handicraft supplies. This low performance of the handicraft sector motivated the researchers to investigate the factors affecting SME handicraft exporters who have adopted the Internet and e-commerce in their exporting activities.

While some SMEs benefit from rapid Internet growth, selling and purchasing over the Internet or experimenting with new business models others are barely interested in the medium (Sadowski et al., 2002). Hinson (2004) developed an SME Internet benefit model and advanced arguments that the Internet has benefits for Ghanaian SME Non-Traditional Exporters (NTEs). The United Nations also hold that “the Internet would enable firms in developing countries including SMEs amongst Ghanaian NTEs at various stages of their internationalization efforts”.

From the literature, a lot of researches have been conducted in the developed countries to examine the factors affecting Internet and EC adoption among SMEs and SME exporters. These researches have looked at owner/manager perspectives, organizational perspectives, and environmental perspectives (Mehrtens et al., 2001; Sekaran, 2000; Beatty et al., 2001 and Han & Noh, 1999). However, their findings could not be generalized due to the differences between developed and

developing countries (such as available infrastructure, social and cultural issues) (Kapurubandara and Lawson, 2006). Even though, research in several developing countries like South Africa, Egypt, Uganda, China, India, Sri Lanka and Singapore on Internet and EC adoption among SMEs show that SMEs have been slower to adopt e-commerce than their larger counterparts but the rate of the Internet usage in SMEs is growing quite rapidly (Cloete et al., 2002). This suggests that SMEs face significant and unique challenges in adopting e-commerce (Marshall et al., 2000). Furthermore, compared to the extensive literature on the benefits and potential of the Internet as a component of the exporting business, Internet and EC adoption among SMEs in general and SME exporter in particular, research on the Internet and EC adoption by handicraft SME exporters in the developing countries is limited and sketchy. The majority of publications, press articles, journals, textbooks, and white papers on the Internet and EC adoption by SMEs deal with developed nations (constantinides, 2004). Despite some attempts on Internet use by SMEs, there is a lack of systematic empirical evidence regarding the extent of its use and the role of firm-and-industry-specific factors affecting Internet and EC adoption by SMEs in emerging market economies (Kula & Tatotglu, 2003). It is evident that there is a gap in existing research relating to Internet and EC adoption among SME handicraft exporters. Moreover, there have been many claims regarding the impact the Internet and EC can make on the exporting business of the SMEs. The fact remains that not many empirical studies have been done to show the Internet and EC adoption among Ghanaian handicraft exporters and how they have been successful. Therefore, the purpose of this study is to examine the factors affecting the adoption of Internet and EC among small and medium-sized enterprises (SMEs) non-traditional exporters (NTEs) in Ghana and explore how best they can be solved. The research findings hope to be useful for government agencies responsible to exporting, researchers, business practitioners and other developing countries of a similar nature. Specifically, the objective of the study is to examine the factors that inhibit SMEs in adopting the Internet and e-commerce for their exporting businesses.

2. Literature Review

2.1 *The Research Context: SMEs Non-Traditional Handicraft Exporters in Ghana*

In terms of definition, there is no single, uniformly acceptable one for SMEs (Storey, 1994). Firm differs in their levels of capitalization, sales and employment. Hence, definitions that employ measures of size (numbers of employees, turnover, profitability, net worth etc) when applied to one sector could lead to all firms being described as small, while the same definition when applied to a different sector would lead to different results (Quartey, 2001).

In Ghana, most of the SMEs are into Non-Traditional Exports (NTEs). Over the years, Ghanaian NTEs have been performing very well based on the revenue accrued to the nation. In Ghana the handicraft sector is the smallest among the three sectors of the NTEs but it has many products categories, such as Straw and basket wares, wood carvings, furniture and accessories, Traditional musical instruments, Traditional jewelry and accessories, Pottery and ceramics, Painting and decorations, Leather products, Cane products, Metal products and others (Directory of Exporters, 2007 and GEPC, 2008). Although, handicraft sector has been the smallest among the three NTEs, it was doing very well in the early 2000s. For instance, Ghana earned \$14 million from the export of handicrafts in 2002 as against \$12 million in 2001 (The Daily Graphic, 2003). However, in 2007 the sector contributed \$3.79 million representing 0.32 per cent (The Daily Graphic, 2008).

2.2 *Internet and E-commerce in Exporting*

The use of the Internet and e-commerce for export marketing enables export firms to leapfrog the conventional stages, as it removes all geographical constraints, permits the instant establishment of virtual branches throughout the world, and allows direct and immediate foreign market entry to the smallest of businesses. Bennett (1997) envisages that the conventional model of obtaining export orders by information seeping out of a firm through formal and informal contacts with buyers, suppliers and like is not particularly relevant in the present Internet era. Also customers care little about the physical size or remoteness of a supplier, provided high quality products at fair prices are delivered (Maloff, 1995). There can be little doubt that the Internet will transform international business and although the majority of users are still based in developed countries, the Internet has become truly global in scope.

2.3 *Factors Affecting Internet and E-Commerce Adoption among SME Exporters*

Much research that investigates the factors affecting Internet and e-commerce adoption among SMEs has been done. Unfortunately only few of the studies are done on SMEs exporters, whilst majority are done on SMEs in developing countries in general and SMEs in particular.

Regarding the factors that affect internet and e-commerce adoption in developing countries, Iacovou et al. (1995) found that the owner's lack of awareness of the technology, the current level of technology usage within the organization and perceived

benefits are the major factors to adopt Internet and e-commerce. Akkeren and Cavaye (1999) identified lack of time to implement e-commerce, concerns about security of e-commerce/payment systems and high costs of investment/implementation, connection, start up or usage. Other studies such as Drew (2003), Hinson (2005), Houghton and Winklhofer (2004), Knol & Stroeken (2001), Sorensen and Buatsi (2002) and Scupola (2003) have found these factors: lack of technical skill and IT knowledge among employees, heavy reliance on external consultants (who are considered by small businesses to be inadequate) to provide necessary expertise, small business require short term ROI and e-commerce is a long term and mistrust of IT industry, the lack of knowledge on how to use the technology and the low computer literacy are other contributory factors for not adopting Internet and e-commerce, equipment and the connectivity costs, culture barriers, low access and speed of the Internet, insufficient funding, a high level of perceived risk, among others. Hinson (2005) identified power failures as a macro factor and general lack of knowledge about usage of the technologies as a micro factor that affect Ghanaian SME Non-traditional exporters' inability to adopt Internet and E-commerce for their export businesses. The study examines how these factors affect the SMEs handicraft exporters in Ghana.

3. Methodology

This paper is an exploratory study of Internet and e-Commerce adoption among Small and Medium-Sized Enterprise Non-Traditional Exporters of handicraft in Ghana. It was a case study involving two SME firms. semi-structured interviews were carried out with two SME managers; one in Accra (Fritete African Art Works) and the other in Kumasi (Kofitall Games – The Oware Enterprise). Interviews are important to provide a thorough understanding of the most relevant concepts and detailed insights into the issues that responses are properly understood (Scupola, 2003). The companies were selected from the West Africa Trade Hub handbook.

The owners of the companies were contacted on the telephone and the researchers discussed the study with them and they booked appointment with them for in-depth interviews. Purposive sampling was used since the selected organisations were wood carving firms and they have been using the Internet in their export activities.

The study was delimited to selected companies in Accra and Kumasi since the researchers cannot contact all companies in the country due to time and financial constraints. The following criteria were used to select the sample:

- Registered Handicraft exporting firm
- Base in Ghana
- Had reliable phone numbers, fax and e-mail addresses

The study used in-depth interviews to gather primary data from the two selected companies and secondary data from the Ghana Exports Promotion Council, Internet, University of Ghana Business School and the proprietors of the two companies (e.g. leaflets).

The researchers visited the owner of Fritete African Art Works in Accra to conduct the in-depth interview which took place at his office. The researchers used semi-structured interview guide to conduct the interview. After the interview, we had a discussion with him and he gave us other information for the study. The owner of Kofitall Games - oware enterprise, agreed to meet the researchers at a specified location for the interview. In each case, face to face interviews were conducted personally and lasted for approximately two hours.

4. Findings

Content analysis approach was adopted to examine the factors that affect internet and e-commerce adoption using within and cross-case analysis.

4.1 Factors affecting Internet and E-commerce Adoption among SMEs Exporters

4.1.1 Within case

- *Fritete African Art Works (FAAW)*

Fritete African Art Works (FAAW) is a Ghanaian Company that produces and exports Ghanaian home décor and other wooden handcrafted item to mainly markets in the United States as well as Germany, Italy, Spain etc. The company is one of the major suppliers of handcrafted items to 'Targets', 'AMC' Pier 1 and Cost Plus'. Again, FAAW plays the role of agent for retailers such as Target and Cost Plus; it also manages large volume orders from his own and other production outlets in Ghana. The following are the internal factors that affect the firm's internet and e-commerce adoption:

Owner/Manager Characteristics: Perceived benefits of the technology was the only factor affecting the owner of FAAW. Low computer literacy among SME owners is not applicable to him but he agreed that it was a major factor affecting others in adopting the technologies.

Firm Characteristics: The only factor from this side which affected FAAW was lack of qualified staff to develop and support e-commerce website but the rest did not.

Cost and Return on Investment: FAAW agreed that limited resources in terms of finance, time and personnel were a factor

affecting its ability to adopt the Internet and e-commerce.

The following are the external factors that affect the firm's internet and e-commerce adoption:

Technological Infrastructure: High costs of development of Internet connectivity and website, high costs of computers and networking technologies for e-commerce, inadequate transportation and delivery network, inadequate telecommunications infrastructure and poor Internet connectivity were the factors inhibiting FAAW's ability to adopt the technologies.

Socio-economic: The socio-economic factors affecting FAAW include the following: lack of online payment process, pricing structures, and limited availability of online banking services, financial infrastructure and power failure.

Cultural: Face-to-face interaction during shopping is a cultural practice in Ghana and therefore, it affects FAAW.

Political: FAAW agreed that government's role is a factor since whenever there is a change of government in Ghana; the new administration does not normally continue the policies, projects, programs etc left behind by the old one.

Legal and Regulatory: Lack of developed legal and regulatory and poor Internet security, e.g. Internet fraud happened to be factors affecting FAAW.

- *KOFITALL GAMES - The Oware Enterprise*

Kofitall game (KTG) is a one-man-enterprise that works with about eight subcontractors. His dream was, however, to bring them all under one roof and build a company that can produce the game products in large quantities and more efficiently. KTG has been an ATAG-trade-network-member since 1995 in which it had gained better market access and also capacity building through ATAG seminars and training. The company started its international operations in 1996, with its main markets in Britain and United States of America with Oxfam (Britain) and Earthly Treasures (USA) as its foreign customers, both of which are retailers.

The following are the internal factors that affect the firm's internet and e-commerce adoption:

Owner/Manager Characteristics: Owners' lack of awareness of the technology was not a factor affecting the owner of KTG since he was computer literate; however, perceived benefits of the technology were applicable to him. He accepted that distrust on the use of credit cards was a factor inhibiting his ability to adopt the technologies. He also agreed that Low computer literacy among SME owners was a factor.

Firm Characteristics: Lack of qualified staff to develop and support ecommerce website, low Internet and e-commerce usage by customers, suppliers and competitors as well as lack of access to computer, software and hardware were applicable to the company. However, lack of skills among consumers needed in order to use the Internet, low bank account and credit card penetration and also unconvincing benefits to the company were not applicable to KTG.

Cost and Return on Investment: Limited resources in terms of finance, time and personnel happened to be barriers affecting KTG in adopting the technologies but Internet and e-commerce cannot give a financial gain was not applicable.

The following are the external factors that affect the firm's internet and e-commerce adoption:

Technological Infrastructure: High costs of development of Internet connectivity and website, high costs of computers and networking technologies for e-commerce, inadequate transportation and delivery network, inadequate telecommunications infrastructure, poor Internet connectivity and inadequate Internet Service Providers (ISP) were all applicable to KTG.

Socio-economic: KTG did not respond to lack of online payment process and limited availability of online banking services but agreed that pricing structures, financial infrastructure and power failure were factors inhibiting its ability to adopt the technologies.

Cultural: KTG accepted that face-to-face interaction during shopping was a factor.

Political: KTG said that government's role as a factor was applicable whilst it did not respond to uncertain taxation rules.

Legal and Regulatory: KTG did not respond to lack of developed legal and regulatory but accepted poor Internet security, e.g. Internet fraud was a barrier.

(3)

4.1.2 Comparisons of the two Companies

Owner/Manager Characteristics: Owners' lack of awareness of the technology was not applicable to any of the company. However, perceived benefits of the technology are applicable to both companies. The owner of FAAW did not respond to this factor - distrust on the use of credit cards since he was not having website and therefore, he was not into e-commerce but the owner of KTG agreed that it was applicable because the company is hosted on a distributor's website (www.novica.com). Low computer literacy among SME owners was a factor which did not affect FAAW's ability to adopt the Internet and e-commerce due to the fact that the owner has more knowledge in the use of computer as well as the Internet. Meanwhile, the owner of KTG agreed that it was applicable to him for the reason being that he did not have computer for his business which would enable him to have enough knowledge in the use of the computer but he had little knowledge in the use of the Internet and therefore, he accessed the Internet at Café.

Firm Characteristics: Both companies accepted that lack of qualified staff to develop and support ecommerce website was a factor affecting them. Low Internet and e-commerce usage by customers, suppliers and competitors was not applicable to

FAAW because most of its major customers used the technologies. This factor affects KTG even though the company has foreign customers, since some of its customers, suppliers and competitors are local people who have low usage of the technologies. Lack of skills among consumers needed in order to use the Internet did not affect any of the company. Lack of access to computer, software and hardware did not affect FAAW however, they did affect KTG. Again, low bank account and credit card penetration as well as unconvincing benefits to the company were not applicable to any of the company.

Cost and Return on Investment: Limited resources in terms of finance, time and personnel were applicable to both company but Internet and e-commerce cannot give a financial gain was not applicable.

Technological Infrastructure: High costs of development of Internet connectivity and website, high costs of computers and networking technologies for e-commerce, inadequate transportation and delivery network, inadequate telecommunications infrastructure and poor Internet connectivity affect FAAW except inadequate Internet Service Providers (ISP). All the factors affect KTG.

Socio-economic: FAAW and KTG did not response to lack of online payment process and limited availability of online banking services since they do not have website by themselves, but they confirmed that financial infrastructure and power failure do affect them.

Cultural: Face-to-face interaction during shopping affected both companies.

Political: Both companies accepted government's role was a factor because whenever there is a change of government, the new government hardly continues policies, projects, programs etc. started by the old government. But they did not respond to uncertain taxation rules.

Legal and Regulatory: Lack of developed legal and regulatory and poor Internet security, e.g. Internet fraud happened to be factors affecting a lot of SMEs in their quest in adopting the technology.

5. Discussion of findings

The factors affecting adoption may differ from firm to firm. It was therefore; very important to understand what factors that affect individual firm's ability to accept the technology (Cloete et al., 2002). As a result, the factors affecting FAAW were different from that of KTG. The internal factors which affected FAAW include perceived benefits of the technology from owner/manager characteristics. The owner of FAAW said that "*the Internet is an inevitable tool for his business*" and agreed that there were benefits he had been getting from using the Internet. Internet had really increased his production by making him able to deliver the goods on time and according to specifications indicated by his customers. He also stressed that usage of Internet saved a lot of money and time since there was no need to travel but conduct business within split of seconds anywhere (convenience). Internet enabled him to have access to business information and also a tool for conducting research in his respective trade to know what others were doing, modern trends in the trade and various competitors.

Another factor was lack of qualified staff to develop and support e-commerce website from firm characteristics. FAAW agreed that most of the staff of SMEs were semi-literates without much knowledge in the use of the technology. Akkeren and Cavaye (1999) identified that organizational resistance to change because of fear of new technology among employees. Unfortunately, majority of SMEs have financial difficulties in soliciting the services of the experts. The owner of FAAW said that the experts in the country were inadequate for the Internet connectivity and website design. Therefore, the few experts were not willing to work for SMEs rather they prefer to work with large firms. Lawrence (1997) in her study of factors affecting the utilization of e-commerce facilities in Tasmanian SMEs, found many factors which include heavy reliance on external consultants (who are often considered by small businesses to be inadequate) to provide necessary expertise. Another study by OECD (1998) identified lack of human resources and skills to be barriers affecting Internet and e-commerce adoption.

Moreover, limited resources in terms of finance, time and personnel were factors from cost and return on investment that affected SMESs. FAAW accepted that these factors did inhibit its effort to adopt the technology. Although, the owner of FAAW agreed that the technologies had a lot of benefit for SMEs, they are unable to adopt them due to their financial situation, lack of human resources and skills, as well as lack of time to implement e-commerce (Lawrence (1997); Crawford (1998); Akkeren and Cavaye (1999); Cloete et al. (2001)).

For KTG, the owner also agreed that perceived benefits of the technology were a factor. He confirmed that "*the Internet is a platform for his business*". The respondent admitted that the Internet had a lot of benefits for the SMEs. He also stated that the Internet had made transfer of documents in connection with his business transactions abroad easy and fast due to its speed, and also responses were received instantly. In addition, distrust on the use of credit cards and low computer literacy among SME owners were factors. The owner said that it was true that most handicraft SME owners/managers level of education were very low making them difficult to accept the technology easily.

Furthermore, lack of qualified staff to develop and support e-commerce website, low Internet and e-commerce usage by customers, suppliers and competitors as well as lack of access to computer, software and hardware were factors from firm

characteristics which affected KTG. The respondent admitted some of his staff, customers, suppliers and competitors were not familiar with the technology. Purao and Campbell (1998) suggested that one of the main issues that SMEs face involved unfamiliarity with the internet. Cloete et al (2001) reported several factors which affected the adoption of e-commerce which include lack of access to computers, lack of access to hardware and software.

The owner of KTG accepted that limited resources in terms of finance, time and personnel from cost and return on investment factor inhibited his ability to adopt the technologies. He said that due to his financial difficulties, he had not been able to buy computer for his firm much more to connect Internet and have website. The respondent admitted that he could not access loan from the bank to finance his firm because he did not have collateral security. Akkeren and Cavaye (1999) identified factors like concern about return on investment (ROI) and reluctance by SMEs to make substantial investments when short term returns are not guaranteed.

The external factors had five indicators. The first indicator being technological infrastructure had six dimensions which included high costs of development of Internet connectivity and website, high costs of computers and networking technologies for e-commerce, inadequate transportation and delivery network, inadequate telecommunications infrastructure, poor Internet connectivity and lack of Internet Service Providers (ISP).

The owner of FAAW agreed that these factors except lack of Internet Service Providers (ISP) affected his effort in adopting the technology. He agreed that start up costs of development of Internet connectivity and website were very expensive for most SMEs and this factor happened to be one of the main issues that SMEs face in adopting Internet and e-commerce (OECD (1998); Purao and Campbell (1998)). The respondent confirmed that his firm did not have website because his foreign customers who are intermediaries did not want him to have one. The owner of FAAW said that the costs of computers and networking technologies were expensive for most SMEs especially the small firms to purchase. He gave an example that he bought a modem which was expensive and got spoiled within one month. El-Nawawy and Ismail (1999) in their study of e-commerce adoption by SMEs in Egypt reported that the some of the factors affecting SMEs revolve around high cost of e-commerce and telecommunications infrastructure. Dedrick and Kraemer (2001) found that inadequate transportation and delivery were among other factors which inhibit the uptake of e-commerce by SMEs.

The second indicator was socio-economic which was made of lack of online payment process, pricing structures, and limited availability of online banking services. Others include financial infrastructure and power failure. The owner of FAAW accepted that pricing structures affect his effort in adopting e-commerce for his export business. As earlier said, his foreign customers had discouraged him from having website because of pricing structures. He said that if he should have website, he had to either under or over quote the prices of products on the website which would be to the disadvantage of the foreign customers who are retailers. Financial infrastructure was also a factor which inhibited FAAW's ability to adopt the technologies. The respondent lamented that most SMEs struggled before they are able to secure loans for the export businesses because they did not have collateral security. Access to sufficient financial resources is generally acknowledged as a factor that enables adoption. For example, only firms that have adequate financial resources are likely to adopt IT (Grandon & Pearson, 2004; Iacovou et al., 1995; Thong, 1999). Although the cost of technology adoption can vary widely, limited financial resources can inhibit uptake, especially for small firms.

Government initiatives and support as well as support from non-competitive industry players may also encourage adoption (e.g., Pollard, 2003; Scupola, 2003). For example, Scupola (2003) found that government interventions by way of subsidies, state support, financial incentives (e.g., tax breaks) and training encouraged e-service usage. Changes in public administration operations (e.g., using the Internet to provide citizen and company information or administer tax systems) were also found to encourage Internet adoption.

6. Implications

The focus of the research question was to find out the factors that affect small exporting handicraft firms in Ghana. As it was found in the literature, there were various factors which affect SMEs ability to adopt Internet and e-commerce for their exporting activities. These factors have been grouped into two categories namely internal and external. From the data collected we saw that both companies faced these factors in their attempt to adopt Internet and e-commerce for their exporting activities. However, there were some differences. With regards to owner/manager characteristics, there were not much problems since the two companies accepted that SMEs are aware of the technologies except that there are some SMEs owner/managers who are computer illiteracy.

On firm characteristics, it was observed that some of the factors do not affect SMEs ability to adopt the Internet and e-commerce. But factor such as lack of qualified staff affected both companies, whilst there were two other factors which affected only KofiTall (Low Internet and e-commerce usage by customers, suppliers and competitors as well as Lack of access to computer, software and hardware). There was one factor which neither of them responded (Low bank account and credit card penetration). With regards to cost and returns on investment, it was observed that both companies agree

that limited resources form one of the major hindrances to their inability to adopt the Internet and e-commerce.

It is also important to note that most of the factors affecting Internet and e-commerce adoption among small exporting handicraft firms in Ghana were that of the external. It was observed that factors under technological infrastructure seriously affect both companies ability to adopt the Internet and e-commerce for their exporting businesses. Both companies stated that they would like to use the e-commerce for their exporting activities but due to the high cost and scarcity nature of some of the telecommunications infrastructure scared them.

Both companies lamented that getting financial assistance from the banks or any financial institutions in Ghana is very difficult and frustrating. Because of this problem, they sometimes delay in producing the orders they get from their customers which affect their operations in the long run. They reveal that some of the customers have now switched to the Middle East, specifically China, India, and Bangladesh for their supplies since these countries are able to deliver on time.

A wonderful revelation was made by one of the interviewees narrating the incident that on three occasions when handicraft exporters were attending an international exhibitions and fairs; the handicraft association has to foot the travelling bills of the government officials who were leading the group for the function. He pointed out that over the years; the government has not been involved in finding out what were happening in the sector. It had been the individual players in the sector who had been putting things together for the association to run on. Therefore, when these individuals felt that they had served for more than a decade and wanted a change in the leadership, the association could not survive. In addition, other handicraft exporters that we had contacted for information during the pilot test made similar comments and they were very aggrieve, sad, discourage and unhappy about this issue. Some even said that the government had allowed the Chinese, Indians and other foreigners to export their wares into the country collapsing their businesses.

Even though, the government is supporting the growth of the private sector in general and SMEs in particular, the support for the handicraft sector under the Non-traditional export (NTE) is not encouraging at all. Much has to be done for the sector to ensure it vibrates. Also, the government should ensure that Ghana Export Promotion Council is working effectively hand-in-hand with the handicraft exporters to put the various structures in place for the efficient running of the association. For instance, a study was conducted by Stansfield and Grant (2003) to investigate into the impact of government policy on Internet facilities and connectivity as well as the adoption among small and medium-sized enterprises (SMEs). They found that many Governments attempt to dismantle some of the barriers faced by SMEs in adopting EC. Despite the existence of these barriers, SMEs have no option but to adopt the technology. It is a prerequisite for competing well in markets (MacGregor and Vrazalic, 2005a) and if the company does not exist on the Internet, it does not exist (Ihlstrum et al, 2003).

Despite the fact that certain laws and regulations have been enacted in the country concerning Internet and e-commerce, much education had not been given to the citizenry especially the exporters. Most exporters have keen interest in using the technologies for their business activities but the fear that some of their international business partners might deceive them through the Internet because of the cyber crime which is rampant.

7. Conclusion

Research has shown that internal and external factors are significant factors influencing small firms' decision to adopt the Internet (Kapurubandara & Lawson, 2006). More specifically, such research identifies owner/manager characteristics, firm characteristics, cost & return on investment, technological infrastructure, socio-economic, cultural, political and legal & regulatory as factors influencing the small firms adoption decision. However, as many small firms have not adopted sophisticated Internet technologies, a major research opportunity exists to improve the understanding of how small firms can successfully become more sophisticated users of the Internet.

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Table 1: Internal factors affecting SMEs Internet and E-commerce adoption

Internal Factors	Details
Owner/Manager Characteristics	<ul style="list-style-type: none"> - Owner's lack of awareness of the technology - Perceived benefits - Low company literacy among SME owners - Distrust on the use of credit cards
Firm's Characteristics	<ul style="list-style-type: none"> - Low level of technology usage within the organization - Low use of Internet and e-commerce by customers, suppliers and competitors - Unconvincing benefits to the company - Lack of qualified staff to develop and support e-commerce site - Lack of access to computer, software and hardware - Low bank account and credit card penetration - Lack of skills among consumers needed in order to use the Internet
Cost and Return on Investment	<ul style="list-style-type: none"> - Limited resources in terms of financial, time and personnel - Internet and e-commerce cannot give a financial gain

SOURCE: Based on Kapurubandara and Lawson, 2006 and Cloete et al., 2002; Hinson and Sorenson, 2006 and 2007.

Table 2: External Factors Affecting SMEs Internal and E-commerce Adoption

External Factors	Indicators
Technological Infrastructure	<ul style="list-style-type: none"> - High costs of development of Internet connectivity and website - High costs of computers and networking technologies for e-commerce - Inadequate transportation and delivery network - Inadequate telecommunications infrastructure such as poor Internet connectivity, inadequate fixed telephone lines for end users dial-up access, accessibility and speed - Inadequate Internet Service Providers (ISP)
Socio-economic	<ul style="list-style-type: none"> - Lack of online payment process - Pricing structures - Limited availability of online banking services - Financial infrastructure - Power failure
Cultural	<ul style="list-style-type: none"> - Face-to-face interaction during shopping. - Lack of popularity for online marketing and sales
Political	<ul style="list-style-type: none"> - Government's role - Uncertain taxation rules
Legal and Regulatory	<ul style="list-style-type: none"> - Lack of developed legal and regulatory systems - Internet fraud

SOURCE: Based on Kapurubandara and Lawson, 2006 and Cloete et al., 2002; Hinson and Sorenson, 2006 and 2007.

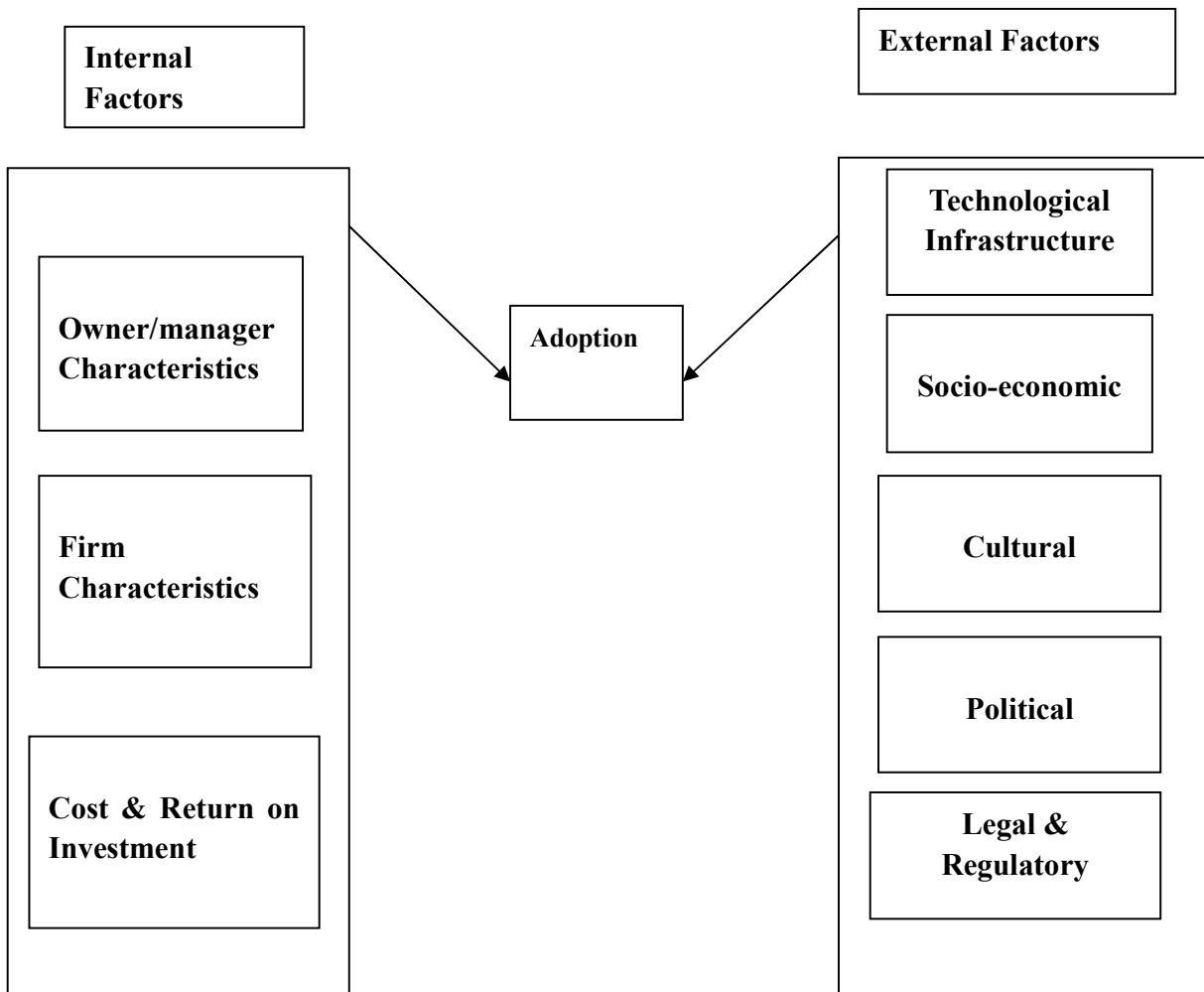


Figure 1 Conceptual framework

Table 3: Internal factors affecting Internet and E-commerce Adoption

Internal Factors	Fritete African Art Works (FAAW)	kofi Tall Games (KTG)
Owner/Manager Characteristics		
Owners' lack of awareness of the technology	-	-
Perceived benefits of the technology	+	+
Distrust on the use of credit cards	*	+
Low computer literacy among SME owners	-	+
Firm Characteristics		
Lack of qualified staff to develop and support ecommerce website	+	+
Low Internet and e-commerce usage by customers, suppliers and competitors	-	+
Lack of skills among consumers needed in order to use the Internet	-	-
Lack of access to computer, software and hardware	-	+
Low bank account and credit card penetration	*	*
Unconvincing benefits to the company	-	-
Cost and Return on Investment		
Limited resources in terms of finance, time and personnel	+	+
Internet and e-commerce cannot give a financial gain	-	-

SOURCE: Based on Cloete et al.(2002); Hinson & Sorenson, 2006 and 2007 and Kapurubandara & Lawson, 2006

+ Applicable,

- Not applicable,

* No response

Table 4: External factors affecting Internet and E-commerce Adoption

EXTERNAL FACTORS AFFECTING INTERNET & E-COMMERCE	FRITETE AFRICAN ART WORK	KOFITALL GAME (KTG)
Technological Infrastructure		
High costs of development of Internet connectivity and website	+	+
High costs of computers and networking technologies for e-commerce	+	+
Inadequate transportation and delivery network	+	+
Inadequate telecommunications infrastructure	+	+
Poor Internet connectivity	+	+
Lack of Internet Service Providers (ISP)	-	+
Socio-economic		
Lack of online payment process	*	*
Pricing structures	+	-
Limited availability of online banking services	*	*
Financial infrastructure	+	+
Power failure	+	+
Cultural		
Face-to-face interaction during shopping	+	+
Political		
Government's role	+	+
Uncertain taxation rules	*	*
Legal and Regulatory		
Lack of developed legal and regulatory	+	*
Poor Internet security, e.g. Internet fraud	+	+

+ Applicable

- Not applicable

* No response

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